



Janet Napolitano
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

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Stephen A. Owens
Director

ARIZONA HAZARDOUS WASTE MANAGEMENT ACT PERMIT APPROVAL FORM

In accordance with the State of Arizona Administrative Code (A.A.C.), Title 18, Chapter 8, Article 2, R18-8-260 et. seq. (hereinafter called Article 2), and pursuant to the Arizona Hazardous Waste Management Act, A.R.S. § 49-921 et seq. (hereinafter called AHWMA), this Permit is issued to the following (hereinafter called the Permittee):

FACILITY NAME: Veolia ES Technical Solutions, L.L.C. (VES)

FACILITY ADDRESS: 5736 W. Jefferson Street
Phoenix, Arizona 85043

FACILITY ID NUMBER: EPA ID No. AZ0 000 337 360

PROPERTY OWNER: Jewel Investment Company

FACILITY OPERATOR: Veolia ES Technical Solutions, L.L.C.

VES, located at 5736 West Jefferson Street, at the northeast corner of 59th Avenue and Jefferson Street, is a large quantity generator of hazardous wastes and serves as a destination facility for universal waste. VES is permitted to store fluorescent and high intensity discharge (HID) lamps and other mercury containing manufactured articles (MCMA) such as batteries, inorganic mercury compounds, dental amalgams, clean up articles, personal protection equipment, gas regulators, and lab packs.

The facility consists of a series of four (4) processing buildings and one free-standing storage area. VES's mercury operations are conducted in Building 1 of the complex and the free standing building located north of Building 1 is used to store mercury containing waste. Building 1 is water tight and has double epoxy coated floors and the free-standing storage building has asphalt floors and berms to prevent run on and run off of water. This Permit authorizes storage of hazardous wastes in the free-standing storage building and two storage areas inside Building 1. This Permit does not authorize treatment, disposal, or the use of landfills, waste piles, surface impoundments, or land treatment units. Unless incorporated in VES's recycling processes, this permit does not authorize treatment in tanks. Specific information on the storage areas is provided in Part III of this Permit.

The Permittee must comply with all terms and conditions of this Permit. This Permit consists of the conditions contained herein (including those in any attachments) and the applicable regulations contained in Article 2 as specified in the Permit. This Permit does not, in any way, release the Permittee from complying with the applicable requirements of any of the provisions of Article 2, AHWMA, or any other applicable state requirement promulgated by rule or statute.

Northern Regional Office
1801 W. Route 66 • Suite 117 • Flagstaff, AZ 86001
(928) 779-0313

Southern Regional Office
400 West Congress Street • Suite 433 • Tucson, AZ 85701
(520) 628-6733

Applicable regulations are those which are in effect on the date of issuance of this Permit pursuant to A.A.C. R18-8-264, 270 and 271, and the conditions therein are specified pursuant to A.A.C. R18-8-270.A (40 CFR§ 270 Subpart C), L, M, N, O and P. All references to 40 CFR in this Permit refer to those regulations as adopted and modified by Article 2.

This Permit is based on the assumption that the information contained in the permit application is accurate, and that the facility is constructed and operated as specified in the permit attachments and appendices. Any inaccuracies found in this information may be grounds for the termination, modification, or revocation and reissuance of this Permit pursuant to A.A.C. R18-8-264, 270.A (40 CFR §§ 270.41, 270.42, and 270.43) and potential enforcement action. The Permittee shall inform the Director of any deviation from or changes in the information in the application which would affect the Permittee's ability to comply with the applicable regulations or permit conditions.

This Permit is effective as of December 12, 2006 and shall remain in effect for ten years from this date, unless revoked and reissued, or terminated pursuant to A.A.C. R18-8-270.A (40 CFR §§ 270.41, and 270.43) or continued in accordance with A.A.C. R18-8-270.A (40 CFR § 270.51) and P.

For the Arizona Department of Environmental Quality:

Issued this 12th day of December, 2006

by


Amanda Stone, Director
Waste Programs Division
Arizona Department of Environmental Quality

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ATTACHMENT I: ARIZONA ADMINISTRATIVE CODE

Arizona Administrative Code, Title 18, Chapter 8, Article 2, A.A.C.R18-8-260 et seq.
December 31, 2005, and Arizona Administrative Register - Volume 12, Issue 34, August
25, 2006.

ATTACHMENT J: 49 CODE OF FEDERAL REGISTER (CFR) 173.152

PART I - GENERAL PERMIT CONDITIONS

A. EFFECT OF PERMIT

The Permittee is allowed to store on-site hazardous waste in accordance with the conditions of this Permit. Any storage, treatment, and/or disposal of hazardous waste not authorized in this Permit are prohibited. Subject to A.A.C. R18-8-270.A (40 CFR § 270.4), compliance with this Permit generally constitutes compliance, for purposes of enforcement with the AHWMA. Issuance of this Permit does not convey any property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of state or local law or regulations. Compliance with the terms of this Permit does not constitute a defense to any order issued or any action brought under Sections 3008(a), 3008(h), 3013, or 7003 of RCRA; Sections 106(a), 104 or 107 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601 et seq., commonly known as CERCLA), or any other law providing for protection of public health or the environment.

[A.A.C. R18-8-270.A (40 CFR 270.4, 270.30(g))]

B. DEFINITIONS

For purposes of this Permit, terms used herein shall have the same meaning as those in A.A.C. R18-8-260 et seq. (40 CFR §§124, 260, 264, 266, 268, 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.

- "A.A.C." and "C.F.R." means the Arizona Administrative Code, Title 18, Chapter 8, Article 2 (A.A.C. R18-8-260 et seq.), updated December 30, 2005, which adopts and modifies portions of Title 40 Code of Federal Regulations Part 260 (40 CFR Part 260 et seq.), July 1, 2004 edition (See Attachment I).
- "AHWMA" means Arizona Hazardous Waste Management Act
- "Area of Concern" or "AOC" means any of the following:
 1. Hazardous Product storage unit or area;
 2. One time hazardous material (product or waste) spill event;
 3. Hazardous material unit or area where management may have occurred whether the potential for release may have existed, but where insufficient evidence was found during the RCRA Facility Assessment (RFA) to verify the existence of a definable Solid Waste Management Unit (SWMU).
- "Director" means the Director of ADEQ or the Director's designee or authorized representative.

- "Example" means that the form is a blank form that is mandatory to be used or followed. This form does not convey to the Permittee that the statements are optional to be performed at the user's discretion. "Example", presents, unless otherwise specified, minimum acceptable.
- "Regulated Facility" or "Regulated Unit" means any hazardous waste management facility or unit regulated under A.A.C.R18-8-264.A and 270.A, and 40 CFR 264 and 270. As applicable, it could also mean those units defined by 40 CFR 264.90(a)(2), although those units are not permitted herein.
- "Facility" means all contiguous land 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 units. For the purpose of implementing corrective action under Part IV of this Permit, facility means all contiguous property under the control of the owner or operator and subject to this Permit and the AHWMA.
- "Hazardous waste" means a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, and increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed. The term hazardous waste includes hazardous constituent as defined above.
- "Hazardous Constituents" means any constituent identified in Appendix VIII of 40 CFR 261, or any constituent identified in Appendix IX of 40 CFR 264.
- "Qualified" means that the individual or group shall have the same training, education, experience, and other necessary skills, as required by this Permit, as the person(s) or group who normally performs that function has.
- "Release" includes the definitions of 'discharge' and 'disposal' in 40 CFR 260.10 and means any spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping, or disposing of hazardous wastes(including hazardous constituents) into the environment (including the abandonment or discarding or barrels, containers, and other closed receptacles containing hazardous wastes or hazardous constituents) or into secondary containment.
- "Shall", "Must", "Will", and "factual statements" denotes a mandatory requirement.
- "Should" or "May" denotes a recommendation or permission which is not mandatory.
- "Solid Waste Management Unit" or "SWMU" means any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was

intended for the management of solid or hazardous waste. SWMUs include those units defined as “regulated units” under A.A.C.R18-8-270.A(40 CFR 264.90(a)(2))), as well as other units which have generally been exempted from standards applicable to hazardous waste management units, such as recycling units and waste water treatment units, and areas contaminated by routine, systematic, and deliberate discharge from process areas.

C. PERMIT ACTIONS

1. Permit Modification, Revocation and Reissuance, and Termination

This Permit may be modified, revoked and reissued, or terminated for cause, as specified in A.A.C. R18-8-270.A, 40 CFR 270.41, 270.42, and 270.43. The Permit may be modified by the Director at any time, following procedures outlined in A.A.C. R18-8-271.D in order to ensure compliance with applicable state and federal requirements. 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.

[A.A.C. R18-8-270.A (40 CFR 270.4(a) and 270.30(f))]

2. Permit Renewal

This Permit may be renewed as specified in A.A.C. R18-8-270.A, 40 CFR 270.30(b) and Condition E.3 of this Permit Part. 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.

[A.A.C. R18-8-270.A (40 CFR 270.30(b)), and HSWA Sec. 212]

D. SEVERABILITY

The provisions of this Permit are severable, and if any provision of this Permit, or 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.

[A.A.C.R18-8-270.A (40 CFR 124.16(a))]

E. DUTIES AND REQUIREMENTS

1. Duty to Comply

The Permittee shall comply with all conditions of this Permit, except to the extent and for the duration such noncompliance is authorized by an Emergency Permit. Any Permit noncompliance, other than noncompliance authorized by an Emergency Permit, constitutes a violation of AHWMA and is grounds for enforcement action; for Permit termination, revocation and reissuance, or

modification; or for denial of a Permit renewal application.

[A.A.C. R18-8-270.A and 40 CFR 270.30(a)]

2. Noncompliance, Delayed, or Inadequate Information

This Permit contains requirements for plans, reports, schedules, duties, and other information submittals applicable to the Permittee. Any noncompliance with approved plans and schedules, failure to submit required information, delayed or inadequate performance of duties, or falsification of any submitted information, shall be termed noncompliance with this Permit. Noncompliance by the Permittee is grounds for termination pursuant to Condition E.1 of this Permit Part (Duty to Comply). To avoid noncompliance with established schedules, extensions of due dates for submittals may be granted by the Director upon written request in accordance with the modification processes established in Condition E.10 of this Permit Part (Document Approval and Permit Modification).

3. Duty to Reapply

If the Permittee wishes to continue an activity allowed by this Permit after the expiration date of this Permit, the Permittee shall submit a complete application for a new Permit at least one hundred eighty (180) days prior to Permit expiration.

[A.A.C. R18-8-270.A (40 CFR 270.10(h), and 270.30(b))]

4. Permit Expiration

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 permit application for renewal and through no fault of the Permittee, the Director has not issued a new Permit. For purposes of this requirement a complete application for renewal must be in accordance with requirements of A.A.C. R18-8-270.A, E, F, G, H, I, and J (40 CFR 270.19, 270.13 through 270.29)

[A.A.C.R18-8-270.A (40 CFR 270.50(a), 40 CFR 270.51)]

5. 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. [A.A.C. R18-8-270.A (40 CFR270.30(c))]

6. 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.

[A.A.C. R18-8-270.A (40 CFR 270.30(d))]

7. Proper Operation and Maintenance

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

[A.A.C. R18-8-270.A (40 CFR 270.30(e))]

8. Property Rights

This Permit does not convey any property rights of any sort, or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or infringement of state or local law or regulations.

[A.A.C. R18-8-270.A (40 CFR 270.4(b), §270.4(c) and §270.30(g))]

9. Duty to Provide Information

The Permittee shall furnish to the Director, within a reasonable time, any relevant information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this Permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this Permit.

[A.A.C. R18-8-264.A (40 CFR 264.74(a)) and A.A.C.R18-8-270.A (270.30(h))]

10. Document Approval and Permit Modification

- a. All plans and schedules required by the conditions of this Permit are, upon approval of the Director, incorporated herein by reference and become an enforceable part of this Permit.
- b. If the Director determines that further actions beyond those provided in this Permit, or changes to that which is stated herein, are warranted, the Director shall modify this Permit according to the process described in Permit Condition I.C.1 (Permit Actions).
- c. Modifications that are initiated and finalized by the Director according to the procedure set in this Permit shall not be subject to administrative appeal. Modifications to this Permit do not constitute a reissuance of the Permit.

[A.A.C.R18-8-270.A (40 CFR 270.41)]

11. Inspection and Entry

The Permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents, as may be required by law, and in accordance with the access, escort, and safety procedures indicated in the Permit, to:

- a. Enter at reasonable times upon the Permittee's premises where a regulated waste management unit or activity is located or conducted, or where records must be kept under the conditions of this Permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;
- c. Inspect at reasonable times any waste management unit, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and
- d. Sample or monitor, at reasonable times, for the purposes of assuring Permit compliance or as otherwise authorized by AHWMA, any substances or parameters at any location.

[A.A.C. R18-8-270.A (40 CFR§270.30(i))]

12. On-Site and Off-Site Access

The Permittee shall demonstrate good faith and best efforts towards gaining access to off-site property not owned by the Permittee.

13. Monitoring and Records

- a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity (e.g., air emissions). The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from A.A.C. R18-8-261.A, Appendix I of 40 CFR 261 or an equivalent or better method approved by the Director. Laboratory methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, EPA Publication SW-846 (current edition), or an equivalent or better method, as specified in the Waste Analysis Plan (Attachment C) or approved by the Director.

[A.A.C. R18-8-270.A (40 CFR 270.30(j)(1))]

- b. The Permittee shall retain records of all monitoring information for a period of at least 3 years from the date of the sample, measurement, report, record, certification, or application. Records to be maintained include:

- i. All calibration and maintenance records;

- ii. All original strip chart recordings for continuous monitoring instrumentation;
- iii. Copies of all reports and records required by this Permit;
- iv. The certification required by A.A.C. R18-8-264.A (40 CFR 264.73(b)(9)), and
- v. Records of all data used to complete the application for this Permit.

These periods may be extended by request of the Director at any time and are automatically extended during the course of any unresolved enforcement action regarding this facility.

[A.A.C. R18-8-264.A (40 CFR 264.74(b)) and 270.A (270.30(j)(2))]

- c. All records of monitoring information shall include:
 - i. The dates, exact place, and times of sampling or measurements;
 - ii. The individual(s) who performed the sampling or measurements;
 - iii. The dates analyses were performed;
 - iv. The individual(s) who performed the analyses;
 - v. The analytical techniques or methods used; and
 - vi. The results of such analyses.

[A.A.C. R18-8-270.A (40 CFR 270.30(j)(3))]

- d. Each parameter test that an in-state or out-of-state laboratory can perform for Hazardous Waste analysis must be licensed (certified) by the Arizona Department of Health Services (ADHS). Additionally, if a contract laboratory is used to perform analyses, then the Permittee shall inform the laboratory in writing that it must operate under the conditions set forth in this Permit. For notification and verification purposes, a copy of that letter and verification of receipt by the laboratory must be maintained on file by the permittee.

[Arizona Revised Statutes (A.R.S.) 36-495.01]

14. Additional Requirements for Monitoring

The Permittee shall ensure that this Permit includes and specifies the following information:

- a. Requirements concerning the proper use, maintenance, and installation,

when appropriate, of monitoring equipment or methods;

- b. Required monitoring including type, intervals, and frequency sufficient to yield data which are representative of the monitored activity including, when appropriate, continuous monitoring; and
- c. Applicable reporting requirements based upon the impact of the regulated activity and as specified in A.A.C. R18-8-264.A and 40 CFR Part 264.
[A.A.C. R18-8-270.A (40 CFR 270.31)]

15. Signatory and Certification Requirements

All applications, reports, or information submitted to or requested by the Director, his/her designee, or authorized representative, shall be signed and certified in accordance with A.A.C. R18-8-270.A and 40 CFR 270.11.
[A.A.C. R18-8-270.A (40 CFR 270.30(k))]

16. Reporting Requirements

a. Reporting Planned Changes

The Permittee shall give notice to the Director, as soon as possible, of any planned physical alterations or additions to the Permitted facility.
[A.A.C. R18-8-270.A (40 CFR 270.30(1)(1))]

b. Anticipated noncompliance

The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
[A.A.C. R18-8-270.A (40 CFR §270.30(1)(2))]

c. Transfers

This Permit is not transferable to any person or any other corporation, except after notice to the Director. The Director may require modification or revocation and reissuance of the Permit to change the name of the Permittee and incorporate other requirements as may be necessary by RCRA.
[A.A.C. R18-8-270.A (40 CFR 270.40), A.A.C. R18-8-270.A, 270.L (40 CFR 270.30(1)(3)) and A.A.C. R18-8-264.A (40 CFR 264.12(c))]

d. Monitoring Reports

Monitoring results shall be reported at the intervals specified elsewhere in this Permit.
[A.A.C. R18-8-270.A (40 CFR 270.30(1)(4))]

e. Compliance Schedules

Reports of compliance, or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than fourteen (14) calendar days following each schedule date. [A.A.C. R18-8-270.A (40 CFR 270.30(1)(5))]

f. 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 days, the Permittee must submit a letter report, including a copy of the manifest, to the Director.

[A.A.C.R18-8-270.A (40CFR§270.30(1)(7)),A.A.C.R18-2-264.A(40 CFR§264.72)]

g. Un-manifested Waste Report

The Permittee shall submit an unmanifested waste report to the Director within 15 days of the receipt of unmanifested waste.

[A.A.C.R18-8-270.A (40 CFR §270.30(1)(8)), A.A.C.R18-2-264.A(40 CFR§264.76)]

h. Annual Report

The Permittee must submit an Annual Report pursuant to, and as described in A.A.C. R18-8-264.H (40 CFR 264.75) and 270.L(40 CFR 270.30(1)(9)).

i. Other Noncompliance

The Permittee shall report all instances of noncompliance not required under A.A.C. R18-8-270.A(40 CFR 270.30(1)(4), (1)(5) and (1)(6)), at the time monitoring (including annual) reports are submitted. Reports shall contain the information listed in A.A.C. R18-8-270.A (40 CFR 270.30(1)(6)). [A.A.C. R18-8-270.K (40 CFR 270.30(1)(10))]

17. Twenty-Four Hour Reporting

The Permittee shall immediately report to the Director any noncompliance which may endanger health or the environment. Any such information shall be reported orally within twenty-four (24) hours from the time the Permittee becomes aware of the circumstances. The report shall include the following:

- a. Information concerning the release of any hazardous waste that may cause an endangerment to public drinking water supplies.
- b. Any information of a release or discharge of hazardous waste, or of a fire or explosion from the hazardous waste management facility which could

threaten the environment or human health outside the facility. The description of the occurrence and its cause shall include:

- i. Name, address, and telephone number of the owner or operator;
 - ii. Name, address, and telephone number of the facility;
 - iii. Date, time, and type of incident;
 - iv. Name and quantity of material(s) involved;
 - v. The extent of injuries, if any;
 - vi. An assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and
 - vii. Estimated quantity and disposition of recovered material that resulted from the incident.
- c. A written submission of the occurrence shall also be provided within five (5) calendar days of the time the Permittee becomes aware of the circumstances. The written submission shall contain:
- i. A description of the noncompliance and its cause;
 - ii. The period(s) of noncompliance (including exact dates and times);
 - iii. Whether the noncompliance has been corrected; and, if not corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

The Director may waive the five (5) day written notice requirement in favor of a written report within fifteen (15) days.

[A.A.C.R18-8-270.A (40 CFR §270.30(1)(6))]

18. Other Information

- a. Whenever the Permittee becomes aware that it failed to submit any relevant facts in the Permit application, or submitted incorrect information in a Permit application or in any report to the Director, the Permittee shall promptly submit such facts or information.
[A.A.C. R18-8-270.A and 40 CFR 270.30(1)(11)]
- b. Noncompliance with terms and conditions of the Permit that result in letters of warning, compliance orders from the Director, a civil consent judgment, or criminal enforcement of environmental laws by the State of

Arizona shall be used to document the reliability, expertise, integrity and competence of the Permittee, pursuant to A.A.C. R18-8-270.J, and would be considered by the Director in making future changes to the Permit, pursuant to A.A.C. R18-8-270.A (40 CFR 270 Subpart D), and when issuing a new Permit as set forth in A.A.C. R18-8-270.A (40 CFR 270.51).

F. CONFIDENTIAL INFORMATION

In accordance with A.A.C. R18-8-270.A and A.A.C.R18-8-270.H (40 CFR 270.12) the Permittee may claim confidential any information required to be submitted by this Permit.

G. DOCUMENTS TO BE MAINTAINED AT THE FACILITY

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

1. Waste Analysis Plan, as required by A.A.C. R18-8-264.A, 40 CFR 264.13 and this Permit;
2. Inspection schedules, as required by A.A.C. R18-8-264.A, 40 CFR 264.15(b) and this Permit;
3. Personnel training documents and records, as required by A.A.C. R18-8-264.A, 40 CFR 264.16(d) and this Permit;
4. Emergency Contingency Plan, as required by A.A.C. R18-8-264.A, 40 CFR 264.53(a) and this Permit;
5. Operating record, as required by A.A.C. R18-8-264.A, 40 CFR 264.73 and this Permit;
6. Closure Plan, as required by A.A.C. R18-8-264.A, 40 CFR 264.112(a) and this Permit;
7. All documents required by Condition E.13 of this Permit Part.

H. PERMIT MODIFICATIONS

1. General Conditions

For Permit modifications (including re-applications), the Permittee shall follow A.A.C. R18-8-270.A (40 CFR 270.42) and, as applicable:

- a. Condition C.1.of Permit Part I (Permit Modification, Revocation and

Reissuance, and Termination);

- b. Condition E.16.b of Permit Part I (Reporting Anticipated Noncompliance);
- c. Condition E.16.a of Permit Part I (Reporting Planned Changes);
- d. Condition A of Permit Part II (Design and Operation of Facility);
- e. Signatory and document liability certification requirements as described in Condition I.E.15 of Permit Part I (Signatory and Certification Requirements); and
- f. Confidentiality rules, if desired, pursuant to Condition F of Permit Part I (Confidential Information);
- g. Fees required to be submitted with the application for Permit modification as required by A.A.C. R18-8-270.G.
- h. Procedures for updating the facility mailing list, changing the emergency contingency plan or hazardous waste codes, and changing key employees.

2. Facility Mailing List

The Permittee shall use the most recent mailing list provided by ADEQ pursuant to A.A.C. R18-8-270.A (40 CFR 270.42) when processing all Permittee requested Permit modifications. [A.R.S. 49-941, A.A.C. R18-8-271.I (c)]

3. Changes to Key Employee(s)

For the following key personnel changes, the Permittee shall also submit an Arizona Department of Environmental Quality (ADEQ) Character/Background Reference Form: [A.R.S. 49-922.C; A.A.C. R18-8-270.J (270.14(b)(20))]

- a. Training Director - See Permit Attachment F (Training Plan);
- b. Signatories – See Condition E.15 of Permit Part I (Signatory and Certification Requirements);
- c. Emergency Coordinators. See Permit Attachment E (Contingency Plan)

4. Changes to Contingency Plan

Modifications to Permit Attachment E (Contingency Plan) must be sent to the agencies listed in Exhibit E-1 of this Permit.

PART II - GENERAL FACILITY CONDITIONS

A. DESIGN AND OPERATION OF FACILITY

The Permittee shall maintain and operate the facility to minimize the possibility of fire, unplanned 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. [A.A.C.R18-8-264.A (40CFR 264.31)]

B. REQUIRED NOTICES

1. Hazardous Waste Imports

The Permittee shall notify the Director, in writing, at least four weeks in advance of the date the Permittee expects to receive hazardous waste from a foreign source.

2. Hazardous Waste from Off-Site Sources

When the Permittee is to receive hazardous waste from an off-site source, the Permittee must inform the generator in writing that Permittee has the appropriate Permit, and will accept the waste the generator is having transported. The Permittee must keep a copy of this written notice as part of the operating record. [A.A.C. R18-8-264.A (40 CFR 264.12(b))]

C. GENERAL WASTE ANALYSIS

The Permittee shall follow the waste analysis procedures, as described in the Waste Analysis Plan (Attachment C) and in accordance with requirements of 264.A (40 CFR 264.13). The Permittee shall conduct any additional sampling and analysis, determined necessary by the Director, to ensure that there are no significant impacts on human health or environment.

The Permittee shall verify the analysis of each waste stream in accordance with the schedules specified in Attachment C (Waste Analysis Plan) as part of its quality assurance program in accordance with Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, EPA Publication SW-846, or equivalent or better methods approved by the Director. At a minimum, the Permittee shall maintain proper functional instruments, use approved sampling and analytical methods, verify the validity of sampling and analytical procedures, and perform correct calculations.

If the Permittee uses a contact 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. Each in-state or out-of-state laboratory performing hazardous waste analysis must be licensed (certified) by the Arizona Department of Health Services

(ADHS). [(A.A.C. R18-8-264.A (40 CFR 264.13), A.R.S. § 36-495.01]

D. SECURITY

The Permittee shall comply with the security provisions of A.A.C. R18-8-264.A (40 CFR 264.14(b)(2) and (c)) and those contained in Attachment A (Facility Description) and Attachment B (Procedures to Prevent Hazard) of this Permit.

E. GENERAL INSPECTION REQUIREMENTS

The Permittee shall follow the inspection schedule as provided in Attachment D of this permit. The Permittee shall remedy any deterioration or malfunction discovered by an inspection as required by A.A.C. R18-8-264.A (40 CFR 264.15(c)). Records of inspections shall be kept as required by A.A.C. R18-8-264.A (40 CFR 264.15(d)).

[A.A.C.R18-8-264.A (40 CFR§264.15)]

F. PERSONNEL TRAINING

The Permittee shall conduct personnel training, as required by A.A.C. R18-8-264.A (40 CFR 264.16). This training program shall follow the protocol defined in the Training Plan (Attachment F). The Permittee shall maintain training documents and records, as required by A.A.C. R18-8-264.A (40 CFR 264.16(d) and (e)).

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

The Permittee shall comply with the requirements of A.A.C. R18-8-264.A (40 CFR 264.17). The Permittee shall follow the procedures for handling ignitable, reactive, and incompatible wastes set forth in the Waste Analysis Plan (Attachment C).

H. PREPAREDNESS AND PREVENTION

1. Required Equipment

At a minimum, the Permittee shall maintain at the facility the equipment set forth in the Contingency Plan (Attachment E) and as required by A.A.C. R18-8-264.A(40 CFR 264.32).

2. Testing and Maintenance of Equipment

The Permittee shall test and maintain, as necessary, the equipment specified in Condition H.1 of this Permit Part, to assure its proper operation in time of emergency, as required by A.A.C. R18-8-264.A(40 CFR 264.33).

3. Access to Communications or Alarm System

The Permittee shall maintain access to the communications or alarm system, as required by A.A.C. R18-8-264.A (40 CFR 264.34).

4. Required Aisle Space

At a minimum, the Permittee shall maintain aisle space, as required by A.A.C. R18-8-264.A (40 CFR §264.35) and the plans and specifications contained in Permit Part III, "Container Management Summary", and in Attachment A (Facility Description) of this Permit.

5. Arrangements with Local Authorities

The Permittee shall maintain arrangements with state and local authorities, as required by A.A.C. R18-8-264.A (40 CFR 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. All correspondence related to these arrangements must be kept with the Contingency Plan as required by A.A.C. R18-8-264.A (40 CFR 264.52(c)).

I. CONTINGENCY PLAN

1. Implementation of Plan

- a. The Permittee shall immediately carry out the provisions of the Contingency plan (Attachment E), and follow the emergency procedures described by A.A.C. R18-8-264.A and C(40CFR 264.56) whenever there is a fire, explosion, or release of hazardous waste or constituents which could threaten human health or the environment.
- b. As part of the remedial action taken in response to a fire, release or unplanned explosion of hazardous materials, the Permittee shall sample and analyze, to detect the extent and depth of any soil contamination. The sampling and analytical methods used must be consistent with those published in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, EPA Publication SW-846 (current edition). A report of the sampling and analysis must be kept on file. The report shall include:
 - i. The number of samples taken,
 - ii. The location and size of each sample,
 - iii. The depth of each sample,
 - iv. The specific analytical methods used,

- v. A description of the sampling tools, containers, filling, sealing, and preservation methods.

In addition, each parameter test that the in-state or out-of-state laboratory can perform for hazardous waste analysis must be licensed (certified) by ADHS. [A.R.S. Title 36, Chapter 4.3, Article 1, Section 36-495.01]

If the samples indicate that there is soil contamination, then the report must also include the following information:

- i. Description of the statistical methods used,
 - ii. Soil type and permeability information,
 - iii. Groundwater depth and quality information,
 - iv. Procedures for establishing background contaminant concentrations.
- c. If a release, fire, or explosion occurs, the emergency coordinator must immediately identify the character, exact source, amount, and a real extent of any released materials in accordance with A.A.C. R18-8-264.A and E, and 40 CFR 264.56(b).
 - d. The emergency coordinator must assess all possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of a release, fire, or explosion in accordance with A.A.C. R18-8-264.A and E, and 40 CFR 264.56(c).
 - e. If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment, outside the facility, the Permittee must immediately notify the Director, and either the government official designated as the on-scene coordinator for that geographical area, or the National Response Center in accordance with A.A.C. R18-8-264.A and E, and 40 CFR 264.56(d).

2. Copies of Plan

The Permittee shall maintain a copy of the Contingency Plan at the facility and shall provide a copy to all police departments, fire departments, hospitals, and State and local emergency response teams that may be asked to provide emergency assistance. The Permittee must comply with all requirements of A.A.C. R18-8-264.A (40 CFR 264.53).

3. Amendments to Plan

The Permittee shall review and immediately amend, if necessary, the Contingency Plan, as required by A.A.C. R18-8-264.A (40 CFR 264.54).

4. Emergency Coordinator

A trained emergency coordinator shall be available at all times in case of an emergency, as required by A.A.C. R18-8-264.A (40 CFR 264.55). Any change to the names, addresses, and phone numbers of all persons qualified to act as emergency coordinators, as listed in the Contingency Plan (Attachment E), shall be supplied to the Director as a Permit modification pursuant to Condition E.10 of Permit Part I.
[A.A.C.R18-8-264.A and 40 CFR 264.52(d)]

5. Learning Sites

The Permittee shall generate and maintain a list of operating Learning Sites. The list shall include the address, telephone number, and the name of a primary contact at each Learning Site. In the event of a spill or fire, and upon implementation of the emergency provisions of the contingency plan, the Permittee shall make this information available to the fire department. This list shall also be included in the Contingency Plan (Attachment E).
[A.A.C.R18-8-270.A and 40 CFR 270.32(b)]

J. MANIFEST SYSTEMS

The Permittee shall comply with the manifest requirements of A.A.C.R18-8-264.A and G (40 CFR §§264.71, 72, and 76) and an annual report shall be submitted to the Director as required by A.A.C. R18-8-264.H.

K. RECORD KEEPING AND REPORTING

In addition to the record keeping and reporting requirements specified in Permit Part I, A.A.C. R18-8-264.A(40 CFR 264.77), the Permittee shall do the following:

1. Operating Record

The Permittee shall maintain a written operating record at the facility, in accordance with A.A.C. R18-8-264.A(40 CFR 264.73), to include:

- a. A description and the quantity of each hazardous waste received and the method(s) and date(s) of its treatment, storage, and/or disposal at the facility as required by A.A.C. R18-8-264.A(40 CFR 264.73(b)(1)) (including 40 CFR 264 Appendix I);

- b. The location of each hazardous waste within the facility, the quantity at each location, and cross references to specific manifest document numbers, if the waste was accompanied by a manifest, in accordance with A.A.C. R18-8-264.A(40 CFR 264.73(b)(2));
- c. The records and results of waste analyses performed pursuant to A.A.C. R18-8-264.A (40 CFR 264.73(b)(3));
- d. The summary reports and details of all incidents pursuant to A.A.C. R18-8-264.A (40 CFR 264.73(b)(4));
- e. The records and results of inspections pursuant to A.A.C. R18-8-264.A (40 CFR 264.73(b) (5));
- f. The monitoring, testing or analytical data, and corrective action pursuant to A.A.C. R18-8-264.A (40 CFR 264.73(b)(6));
- g. Copies of waste minimization documents required in Permit Part II, Condition S;
- h. The notices, certification and demonstration, if applicable, required of generators (on-site treatment facility) pursuant to A.A.C. R18-8-264.A (40 CFR 264.73(b) (12));
- i. Notices to generators pursuant to A.A.C.R18-8-264.A (40 CFR 264.73(b)(7)).

2. Annual Report

The Permittee shall comply with the Annual Report requirements of A.A.C. R18-8-264.H.

3. Mercury Action Level Report

The Permittee shall submit to the Director a written report whenever mercury vapor concentration measurements at the two carbon filter systems are above VES's Action Level for three consecutive readings, the initial reading and the two subsequent verification readings. The report shall specify the location (carbon filter system), date, time, and measurements. The report shall be submitted within 7 days of when the measurements were taken and must be certified in accordance with A.A.C. R18-8-270.A (40 CFR 270.11(d)(1)).

4. Inspections of Records

The Permittee shall make applicable records available to any authorized representative of the Director conducting an inspection pursuant to Condition E.11 of Permit Part I (Inspection and Entry).

L. GENERAL CLOSURE REQUIREMENTS

1. ADEQ Approval of Final Closure Plan Prior to Implementation of Final Closure

A Draft Closure Plan is presented in Attachment H. At the time when the Permittee decides to close the hazardous waste storage areas, the Permittee must submit a revised closure plan to ADEQ in accordance with the permit modification procedures of R18-8-270.A (40 CFR 270.41, 40 CFR 270.42 et seq.) Upon approval of the submitted Closure Plan by the Director, this modified closure plan shall become the Final Closure Plan for the facility. The Permittee shall not commence any of the steps (e.g., notification of closure) of Final Closure of the facility without first having the Final Closure Plan approved by the Director.

2. Performance Standard

The Permittee shall close the facility, as required by A.A.C. R18-264.A (40 CFR 264.111).

3. Amendment to Closure Plan

The Permittee shall amend the Draft Closure Plan, in accordance with A.A.C. R18-8-264.A (40 CFR 264.112(c)).

4. Notification of Closure

The Permittee shall notify the Director in writing at least forty-five (45) days prior to the date on which the Permittee expects to begin final closure of the hazardous waste storage areas, as required by A.A.C. R18-8-264.A (40 CFR 264.112(d)). The Permittee can provide notification of final closure to the Director only after approval of the Final Closure Plan by ADEQ.

5. Time Allowed For Closure

Within ninety (90) days after receiving the final volume of hazardous waste, the Permittee shall treat, remove from the unit or facility all hazardous waste and shall complete closure activities, in accordance with A.A.C. R18-8-264.A (40 CFR 264.113) and the schedules specified in the Final Closure Plan.

6. 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 A.A.C. R18-8-264.A(40 CFR 264.114) and the Closure Plan (Attachment H). Each parameter test that the in-state or out-of-state laboratory can perform for Hazardous Waste analysis during closure must be licensed (certified) by Arizona Department of Health Services (ADHS).

[A.R.S. Title 36, Chapter 4.3, Article 1, Section 36-495.01]

7. Closure Report

Within sixty (60) days of completion of closure of the unit(s), the Permittee shall submit a closure report that includes at least the following information:

- a. A summary of results, significant observations, and conclusions,
- b. A detailed discussion of the closure procedures followed for each unit to include a description of:
 - i. The procedures followed for decontamination of the hazardous waste management unit (including disposition of residues),
 - ii. The equipment used for decontamination of the hazardous waste management unit,
 - iii. The sampling procedures used,
 - iv. The equipment used for sampling,
 - v. The remedial procedures (if applicable) used,
 - vi. The equipment used for remediation (if applicable),
 - vii. The analytical procedures and methods used,
 - viii. The analytical equipment used,
 - ix. The quality assurance program used,
 - x. The procedures used to prevent hazards and protect field personnel during closure,
 - xi. The equipment used to prevent hazards and protect field personnel during closure,
 - xii. Drawings and photographs where appropriate,
 - xiii. Description of any deviations from the approved plan.

- c. Data generated from sampling and analysis activities performed pursuant to the plan, including field notes, manifests, bills of lading, LDR forms, laboratory submittal forms, chain-of-custody forms, laboratory reports, and drilling logs,
 - d. Risk assessment discussion (if applicable), including methodology, data, references, and assumptions,
 - e. Certifications from the engineer and owner/operator,
 - f. Other information requested by the Director,
8. Certification of Closure

The Permittee shall certify that the facility has been closed in accordance with the specifications set forth in the Final Closure Plan, as required by A.A.C. R18-8-264.A (40 CFR 264.115).

M. LAND DISPOSAL RESTRICTIONS

The Permittee shall comply with all the applicable Land Disposal Restriction (LDR) requirements of 40 CFR Part 268, including but not limited to: the required notices, use of the hazardous waste debris rule, and storage prohibitions of A.A.C. R18-8-268.A(40 CFR 268.7, 268.45, and 268.50)

N. COST ESTIMATE FOR FACILITY CLOSURE

1. Cost Estimates

The Permittee's most recent closure cost estimate, prepared in accordance with A.A.C. R18-8-264.A (40 CFR 264.142 and 264.197(c)(3)), is included in Attachment H of this Permit.

2. Cost Adjustments

The Permittee must adjust the closure cost estimate for inflation within 60 days prior to the anniversary of the financial instrument used to comply with A.A.C. R18-8-264.A (40 CFR 264.143 and 40 CFR 264.142(b)).

3. Cost Revisions

The Permittee must revise the closure cost whenever there is a change in the

facility's Closure Plan, as required by A.A.C. R18-8-264.A (40 CFR §264.142(c)).

4. Maintenance of Cost Revisions

The Permittee shall maintain at the facility the latest closure cost estimate prepared in accordance with A.A.C. R18-8-264.A (40 CFR 264.142(a) and (c)), and, if the closure cost estimated was adjusted, the date of the adjustment in the facility operating record during the operating life of the facility as required by A.A.C. R18-8-264.A (40 CFR 264.142(d)).

O. FINANCIAL ASSURANCE FOR FACILITY CLOSURE

The Permittee shall demonstrate compliance with this Permit Condition by submitting the required documentation to the Director at least 60 days before first receiving hazardous waste for storage, and thereafter demonstrating continuous compliance with A.A.C. R18-8-264.A (40 CFR § 264.143 and 264.146) by providing documentation of financial assurance, as required by A.A.C. R18-8-264.A (40 CFR § 264.151), in at least the amount of the cost estimates required by Permit Condition II.N. Changes in financial assurance mechanisms must be approved by the Director pursuant to A.A.C. R18-8-264.A (40 CFR § 264.143). [A.A.C.R18-8-264.A (40 CFR 264.143)]

P. LIABILITY REQUIREMENTS

The Permittee must maintain continuously liability coverage for sudden 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. This liability coverage may be demonstrated as specified in A.A.C. R18-8-264.A (40 CFR 264.147(a)). [A.A.C. R18-8-264.A (40 CFR 264.147)]

Q. INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS

The Permittee shall comply with A.A.C. R18-8-264.A (40 CFR 264.148) whenever necessary.

R. SOURCE REDUCTION PLANS AND REPORTS

1. Source Reduction Evaluation Review and Plan

Within one (1) year of the effective date of this Permit, and every four (4) years thereafter, the Permittee shall submit a source reduction evaluation review and plan to the Director. The review and plan should be conducted and prepared in accordance with the procedures and format provided in the EPA Facility Pollution Prevention Guide dated May 1992 (EPA/600/R-92/088) or other equivalent or

better source reduction guidance. Additional industry specific source reduction guidance is available from both the EPA and ADEQ. The review and plan shall include at a minimum the following:

[A.A.C. R18-8-270.A, 40 CFR 270.32(b), and A.A.C. R18-8-270.N (40 CFR 270.32(b))]

- a. The name and location of the facility,
- b. The North American Industry Classification System (NAICS) code of the facility,
- c. A copy of any written company policy or statement that outlines the general goals, objectives, and methods of source reduction to be implemented within the next five (5) years,
- d. Identification of all routinely generated waste streams which result from ongoing processes or operations. Waste streams to be identified include both hazardous and solid waste which are discharged or emitted to the air, and to the solid and aqueous environmental mediums. For the purposes of this paragraph, a solid waste stream is to be included if it is generated from ongoing processes or operations and has a yearly volume exceeding five (5) percent of the total yearly volume of solid waste generated at the facility. A hazardous waste stream is to be included if it is generated on an ongoing basis and meets the following criteria:
 - i. It is a hazardous waste stream processed in a wastewater treatment unit which discharges to a Publicly Owned Treatment Works (POTW) or under a National Pollutant Discharge Elimination System (NPDES) Permit and its weight before treatment exceeds five (5) percent of the weight of the total yearly volume of hazardous waste generated at the site,
 - ii. It is a hazardous waste stream which is not processed in a wastewater treatment unit and its weight exceeds five (5) percent of the weight of the total yearly volume of hazardous waste generated at the site, less the weight of any hazardous waste stream identified in Condition R.1 (d).i of this Permit Part.
- e. For each waste stream identified in Condition R.1 (d) of this Permit Part the following information shall be included:
 - i. An estimate of the quantity of waste generated,
 - ii. An evaluation of source reduction approaches available to the Permittee which are potentially viable. The evaluation shall consider at a minimum the following source reduction approaches:

-
- 1) Input change,
 - 2) Operational improvement,
 - 3) Production process change,
 - 4) Product reformulation.
- f. Any source reduction and/or recycling measure implemented by the Permittee in the last five (5) years;
- g. A specification of, and a rationale for, the technically feasible and economically practicable source reduction measures which will be taken by the Permittee with respect to each waste stream identified. The review and plan shall fully document any statement explaining the Permittee's rationale for rejecting any available source reduction approach identified in Condition R.1 (e) of this Permit Part. Note: ADEQ does not consider a source reduction method to be valid if it merely switched the waste load from one environmental medium (air, water, or land) to another;
- h. (For offsite facilities only) A detailed description of any programs the Permittee may have to assist generators of hazardous waste in reducing the volume or quantity and toxicity of waste they produce;
- i. An evaluation, and, to the extent practicable, a quantification, of the effects of the chosen source reduction method on emissions and discharges to the air, water, or land environmental mediums;
- j. A description of employee training programs and employee incentive programs for source reduction which may be in effect at the facility;
- k. A timetable for making reasonable and measurable progress towards implementation of the selected source reduction measures identified in Condition R.1 (g) of this Permit Part;
- l. A summary of the source reduction evaluation review and plan;
- m. Certification of the review and plan and the summary by a professional engineer, or by an individual who is responsible for the processes and operation of the facility, or by an environmental assessor, who has demonstrated expertise in hazardous waste management. The engineer, individual, or assessor shall certify the review and plan and the summary only if the review and plan and the summary meet all the requirements of Condition R.1 of this Permit Part.
2. Certification of Plan Implementation

At the time the review and plan required by Condition R.1 of this Permit Part is

submitted to the Director, the Permittee shall also submit a written statement from a responsible official of the facility certifying that the Permittee has implemented, is implementing, or will be implementing, the source reduction measures identified in the plan according to the implementation schedule contained in the plan.

The Permittee may determine not to implement a measure selected pursuant to Condition R.1 (g) of this Permit Part only if the Permittee determines, upon conducting further analysis or due to unexpected circumstances, that the selected measure is not technically feasible or economically practicable, or if attempts to implement that measure reveal that the measure would result in, or has resulted in, any of the following: [A.A.C. R18-8-264.A and 40 CFR 264.73(b)(9)]

- a. An increase in the generation of waste (hazardous and solid),
- b. An increase in the release of hazardous chemicals to other environmental media,
- c. Adverse impacts on product quality,
- d. A significant increase in the risk of an adverse impact to human health or the environment.

3. Plan and Plan Summary Amendments

If the Permittee elects not to implement the measures selected pursuant to Condition R.1(f) of this Permit Part, the Permittee shall amend its review and plan, and its summary to reflect this rejection and include in the review and plan, and in the summary, proper documentation identifying the rationale for this rejection. Any amendments to the review and plan or the plan summary shall be submitted to the Director no later than thirty (30) days prior to implementation of the changes. [A.A.C. R18-8-270.A and 270.N (40 CFR 270.32(b))]

4. Waste Management Performance Report

Within one (1) year of the effective date of this Permit and every year thereafter, the Permittee shall prepare a waste management performance report documenting waste management approaches implemented at the facility. The report shall be prepared in accordance with the EPA Facility Pollution Prevention Guide dated May 1992 (EPA/600/R-92/088) or other equivalent or better source reduction guidance. The report shall include at a minimum the following:

[A.A.C. R18-8-270.A and A.A.C. R18-8-270.N (40 CFR 270.32(b))]

- a. The name and location of the facility,
- b. The NAICS code for the facility,

- c. The following information for each waste stream identified pursuant to Condition R.1(d) of this Permit Part.
- i. An estimate of the quantity of waste (hazardous and solid) generated and the quantity of waste managed by the Permittee during the current reporting year and the baseline year. The current reporting year is the calendar year immediately preceding the year in which the report is to be prepared. For the initial report, the baseline year is any calendar year selected by the Permittee for which substantial data is available on waste generation, or onsite or offsite management. Alternatively, the Permittee may select the current reporting year as the initial baseline year. For all subsequent reports, the baseline year is the current reporting year of the immediately preceding report.
 - ii. An assessment of the effect, during the current year, of each waste management measure implemented since the baseline year, upon the generation and the onsite and offsite management of waste. For the initial report, the assessment of the effect required by this condition shall be made for the current year in general terms for any waste management measures implemented in the preceding five (5) years. The report shall consider, but shall not be limited to, measures which use the following approaches:
 - a) Source reduction,
 - b) Recycling,
 - c) Treatment
 - iii. A description of factors during the current reporting year that have affected waste generation and onsite and offsite waste management since the baseline year. For the initial report, the description of factors shall be made in general terms for those factors affecting generation and management in the preceding five (5) years. The description shall include, but not be limited to, any of the following:
 - a) Changes in business activity,
 - b) Changes in waste classification,
 - c) Natural phenomena,
 - d) Other factors that have affected either the quantity of waste generated or onsite and offsite waste management requirements.
 - iv. A description of any factors which may have prevented implementation of any aspect of the source reduction plan
- d. A summary of the waste management performance report,

- e. Certification of the report and summary by a professional engineer, or by an individual who is responsible for the processes and operations of the facility, or by an environmental assessor, who has demonstrated expertise in hazardous waste management. The engineer, individual, or assessor shall certify the report and summary only if the report and summary meet all requirements of Condition R.4 of this Permit Part.

S. WASTE MINIMIZATION CERTIFICATION

1. The Permittee shall annually certify pursuant to A.A.C. R18-8-264.A and 40 CFR 264.73(b)(9):
 - a. That the Permittee has a program in place to reduce the volume and toxicity of all hazardous waste which are generated by the facility operations to the degree, determined by the Permittee, to be economically practicable; and,
 - b. That the method of treatment, storage, or disposal is the only practicable method or combination of methods currently available to the facility which minimizes the present and future threat to human health and the environment.
2. This certification shall be retained with the facility's operating record and shall comply with the signatory requirement of Condition E.15 of Permit Part I (Signatory and Certification Requirements) pursuant to A.A.C. R18-8-264.A (40 CFR264.73(b)(9)).

T. TOXICITY CHARACTERISTICS

The Permittee must use the Toxicity Characteristic Leaching Procedures (TCLP) (Appendix II of 40 CFR Part 261), or use knowledge of the waste to determine whether a waste exhibits the characteristics of toxicity, as defined in A.A.C.R18-8-261.A(40 CFR §261.24).

PART III - CONTAINER STORAGE

A. CONTAINER MANAGEMENT SUMMARY

Veolia ES Technical Solutions, L.L.C. (hereafter referred to as VES), formerly known as Onyx Environmental Services, L.L.C., stores fluorescent and high intensity discharge (HID) lamps, Mercury Containing Manufactured Articles (MCMAs), ignitable wastes (D001) that meet the definition of oxidizer, and mercury cyanide(D003) wastes in three designated storage areas. All the stored wastes are disassembled and mercury is reclaimed.

1. Description of Container Storage Areas

VES stores all the waste material in three storage areas: Storage Area 1, Storage Area 2, and Storage Area 3. Since material may be received in any combination of boxes, drums and pallets, the actual layout of three storage areas will change in accordance with the inventory on-hand. The floor space within a defined storage location is not marked or delineated into specific rows. Aisles are allowed a minimum of 2 feet, with any given storage configuration, to allow for inspection of material in storage, and for emergency access/egress. Boxes are double stacked to the height of approximately 10 feet. All three storage areas may store lamps and/or MCMA.

- a. Storage Area 1: Storage Area 1 is a free-standing building north of Building 1, measuring 80'x 30'x10'. The building is constructed of sheet metal walls and roofing. Run-on of water from the surrounding yard is prevented by a berm at the base perimeter of the building. Access to the building is ramped (also to prevent run-on), and is secured with a lock. Hazardous waste placards are on the building in both English and Spanish, legible from a distance of at least 25 feet. This building may store both lamps and MCMA. Storage Area 1 has the capacity to store 128 pallets of lamps at any given time. Each pallet has the capacity to hold up to 650 lamps providing the total of 83,200 lamps at any time. Storage Area 1 has the capacity to store 448 55 gallon drums of MCMA.
- b. Storage Area 2: This Area is located within Building 1 and measures 34'x14'x10', with the capacity to store 30 pallets. Each pallet can hold up to 650 lamps amounting to 19,500 total lamps that can be stored within this storage area. Maximum number of drums of MCMA that can be stored in this area is 140 55 gallon drums at any given time. Storage Area 2 is delineated within Building 1 with visible yellow lines.
- c. Storage Area 3: This area is also located within Building 1, measuring 37'x26'x10'. Storage Area 3 has the capacity to store 72 pallets containing 650 lamps each which totals to 46,800 lamps. This area will also store 288 55 gallon drums of MCMA. Storage Area 3 is delineated within Building 1 with visible yellow lines.

A map of the storage areas are provided in Exhibit A-1 of this Permit.

2. Description of Containers

Stored wastes are packaged in boxes on pallets, or are contained in fiber or steel drums. All containers are compatible with the material being stored and if required will comply with Department of Transportation (DOT) guidelines.

3. Secondary Containment

VES will use secondary containments in the event that liquid hazardous waste or waste, containing free liquid, is to be stored in any one of the storage areas. Since Storage Area 1 does not have any form of secondary containment, portable secondary containment will be used in this area. VES will also use portable secondary containment in Storage Area 2 and Storage Area 3 to prevent transfer of liquid hazardous material between storage and process areas.

B. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

1. Permitted Waste

- a. The Permittee may store the wastes listed in Table III.1, in the designated storage areas. All hazardous wastes shall be stored in containers, compatible with the material being stored, subject to the terms of this Permit and consistent with the Process Description provided in Attachment B and the Waste Analysis Plan provided in Attachment C of this Permit.

Table III.1: Permitted Hazardous Wastes

DESCRIPTION OF HAZARDOUS WASTE	EPA HAZARDOUS WASTE CODE	MAXIMUM VOLUME	TYPE OF CONTAINERS
LAMPS: Fluorescent Lamps; Circular fluorescent Lamps; Compact fluorescent Lamps; Crushed Lamps; Shielded Fluorescent Lamps; U-Tube Lamps; UV Fluorescent Lamps; HID Lamps; Metal Halide Lamps; Miscellaneous Specialty Lamps; Mercury Vapor Lamps; Neon Lamps; High Pressure Sodium Lamps	Cadmium (D006); Lead (D008); Mercury (D009); Reactive (D003)	100,000 lamp units	USDOT approved Containers, in accordance with DOT guidelines.
Mercury Containing Manufactured Articles; Mercury Batteries; Inorganic Mercury Compounds; Dental Amalgam;	Oxidizers (D001); Corrosive (D002); Reactive (D003); Arsenic (D004);	125 Drums (55 gallon)	Drums (US DOT approved and in accordance with DOT guidelines)

DESCRIPTION OF HAZARDOUS WASTE	EPA HAZARDOUS WASTE CODE	MAXIMUM VOLUME	TYPE OF CONTAINERS
Mercury Contaminated Clean-up Articles and PPE; Mercury; Mercury Containing Gas Regulators; Mercury Containing Lab packs; Mercury Containing Articles; Phosphor Powder	Barium (D005); Cadmium (D006); Chromium (D007); Lead (D008); Mercury (D009); Selenium (D010); Silver (D011); Elemental Mercury (U151)		

2. Stored Waste Maximum Capacities

- a. Maximum inventory of stored lamps shall not exceed a total of 100,000 lamp units in the container storage areas at any given time.
- b. Maximum inventory of stored MCMA drums shall not exceed 125 55-gallon drums of Mercury Containing Manufactured Articles (MCMA) in the storage area at any given time.
- c. Maximum total of corrosive hazardous wastes (D002) shall not exceed total of 345 gallons at any given time.
- d. Maximum combined total of oxidizing (D001) and/or reactive (D003) hazardous waste stored at the facility shall not exceed total of 70 gallons at any given time.

3. Prohibited Waste

- a. The Permittee shall only store hazardous waste included and identified in Table III.1 of this Permit.
- b. The Permittee shall not accept or store reactive waste that does not meet the specifications described in the Waste Analysis Plan (Attachment C).
- c. The Permittee shall not store the following materials:
 - i. Medical waste as defined in A.R.S.49-701.19 or biohazardous medical waste (see A.A.C. R18-13-1401(5));
 - ii. Mixed waste (wastes that contain both a hazardous component regulated under AHWMA and a radioactive component consisting of source, special nuclear, or byproduct material regulated under the Atomic Energy Act); and
 - iii. Polychlorinated biphenyls of a type or level regulated by the Toxic Substances Control Act (TSCA) (see 40 CFR Part 761), unless exempted, excluded or otherwise authorized pursuant to TSCA regulations.

- d. The Permittee shall not store non-permitted hazardous waste in the container storage area.
- e. The Permittee shall follow the prohibition on storage of hazardous waste in containers, including the storage time limitation, as listed in A.A.C.R18-8-268(40CFR§268.50).

C. CONTAINERS

1. Condition of Containers

- a. The Permittee shall ensure that all containers are in good condition (no severe rusting, no apparent structural damage). If a container holding hazardous waste is not in good condition or if the container begins to leak or rupture, the Permittee shall:
 - i. Transfer the waste from such a container into a container that is in good condition; or
 - ii. Manage the waste in some other way that complies with this Permit and the requirements of 40 CFR 267.171(a). [A.A.C. R18-8-264.A (40 CFR 264.171)]
- b. The Permittee shall assure that the ability of the container to contain the waste is not impaired. The Permittee shall store hazardous waste in containers made of or lined with materials which will not react with, and are otherwise compatible with, the waste to be stored. [A.A.C.R18-8-264.A (40 CFR 264.172)]

2. Container Configuration, Labels, and Container Types

- a. The Permittee shall maintain two (2) feet of aisle space in between stored containers to allow for the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation.
- b. The Permittee shall not store containers exceeding a reasonable and safe stacking height. Maximum storage height in the storage areas shall not exceed (10) feet.
- c. The Permittee shall not mix waste on site. All hazardous waste containers shall have a "Hazardous Waste" label to indicate their content.

3. Management of Containers

- a. Material handling equipment such as hand carts, dollies, drum handlers or fork lifts or other specialized equipment shall be used to move containers in and out of containment areas.

- b. Damaged containers shall be repaired or the contents of the container will be repackaged in a new container prior to placement at the storage area.
- c. The Permittee shall keep all containers closed during storage, except when it is necessary to add, remove, or sample waste from the container.
[A.A.C. R18-8-264.A (40 CFR 264.173(a))]
- d. The Permittee shall not open, handle, or store a container holding hazardous waste in a manner that may rupture the container or cause the container to leak.
[A.A.C.R18-8-264.A (40CFR 264.173(b))]
- e. When waste containers are opened for waste addition, volume reduction, and/or repackaging, the containers shall be opened within a work enclosure that provides waste confinement and prevents release of waste constituents.
- f. The Permittee shall remove any lamp broken during shipment or during processing immediately and place it into hazardous waste accumulation drums for processing. The Permittee shall use a Mercury Recovery Vacuum or similar device to contain and clean up all mercury spills.

D. CONTAINMENT SYSTEMS

- 1. The Permittee shall store liquid hazardous waste only in areas equipped with secondary containment. Portable secondary containment and containment pallets may be used in all three storage areas to store liquid hazardous waste or hazardous waste containing free liquids.
- 2. The Permittee shall maintain the base to the containment systems free of cracks and gaps and ensure that the base remains impervious to leaks, spills, and accumulated precipitation;
- 3. The base to the containment systems must be designed and operated in a manner to drain and remove liquids resulting from leaks, spills, or precipitation, or the containers must be elevated or protected from contact with accumulated liquids;
- 4. The containment systems must have sufficient capacity to contain 10% of the volume of the containers or the volume of the largest container, whichever is greater;
- 5. Run-on into the containment systems must be prevented unless the containment systems have sufficient excess capacity in addition to required containment capacity indicated in Condition D.4 of this Permit Part to contain any run-on which might enter the system; and
- 6. The Permittee shall remove all spilled or leaked waste in a timely manner.
[A.A.C. R18-8-264.A (40 CFR § 264.175.a and b)]

E. INSPECTION OF CONTAINERS

1. The Permittee shall inspect the container storage area on all work days, in accordance with the inspection schedule and procedures contained in Inspection Schedules (Attachment D) to detect leaking containers, and deterioration of containers and the secondary containment system caused by erosion and other factors.
[A.A.C.R18-8-264.A (40 CFR 264.15, 264.172)]
2. The Permittee shall inspect the container storage area on all work days for visible signs of residue, and shall remove all visible signs of residue from the floor surface on a daily basis.

F. SPECIAL CONTAINER PROVISIONS FOR IGNITABLE OR REACTIVE WASTE

1. The Permittee shall not locate containers holding ignitable or reactive waste within 15 meters (50 feet) of the facility's property line. [A.A.C. R18-8-264.A (40 CFR 264.176)]
2. The Permittee shall take precautions to prevent accidental ignition or reaction of reactive waste. Reactive waste shall be separated and protected from sources of ignition or reactions. [A.A.C. R18-8-264.A (40 CFR 264.17(a))]
3. The Permittee shall take precautions to prevent reactions which:
 - a. Generate extreme heat or pressure, fire or explosions, or violent reactions;
 - b. Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;
 - c. Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;
 - d. Damage the structural integrity of the device or facility;
 - e. Through other like means threaten human health or the environment.

[A.A.C. R18-8-264A (40 CFR 264.17(b))]

G. SPECIAL CONTAINER PROVISIONS FOR INCOMPATIBLE WASTE

1. The Permittee shall use a container made of or lined with materials which will not react with and are otherwise compatible with the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.
[A.A.C. R18-8-264.A (40 CFR 264.172)]
2. The Permittee shall not place incompatible wastes, or incompatible wastes and materials, in the same container. [A.A.C. R18-8-264.A (40 CFR 264.177(a))]
3. The Permittee shall not place hazardous waste in an unwashed container that

-
- previously held an incompatible waste or material.
[A.A.C. R18-8-264.A (40 CFR 264.177(b))]
4. Storage containers with incompatible wastes shall be separated from other material or shall be protected from other materials by means of berms, dike, wall, or other devices.
[A.A.C. R18-8-264.A (40 CFR 264.177(c))]
 5. The Permittee shall ensure that all containers within a secondary containment system are compatible with all wastes within that containment system. The Permittee shall ensure compliance with this requirement by conducting pre-acceptance characterization of waste, as specified in the Waste Analysis Plan (Attachment C) of this Permit.

H. RECORD KEEPING

The Permittee shall place all documentation showing compliance with the requirements of this part and A.A.C. R18-8-264.A (40 CFR 264.17(c) and 264.177) in the facility operating record.
[A.A.C. R18-8-264.A (40 CFR 264.73)]

I. CLOSURE

Upon closure of the container area, the Permittee shall remove all hazardous waste and hazardous waste residues from the containment system, in accordance with the procedures described in the final and approved closure plan.
[A.A.C. R18-8-264.A (40 CFR 264.178)]

**PART IV - CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS –
SCHEDULE OF COMPLIANCE**

A. AUTHORITY

RCRA Section 3004(u), as amended by the HSWA, and A.A.C. R18-8-264.A (40 CFR 264.101 and 40 CFR Subpart S 264.552) requires that Permits issued after November 8, 1984, address corrective action for releases of hazardous waste, and hazardous waste constituents from any Solid Waste Management Unit (SWMU) at the facility, regardless of when the waste was placed in the unit.

When the Permittee discovers a new SWMU or an area of concern (AOC) at the facility, or determines a release has occurred, the facility will be governed by the conditions of this Permit Part (hereinafter referred to as the “Corrective Action Schedule of Compliance” or “CASOC”).

B. SUMMARY OF RCRA FACILITY ASSESSMENT (RFA) FINDINGS

A RCRA Facility Assessment (RFA) was conducted for Veolia ES Technical Solutions, L.L.C. (VES), formerly known as Onyx Environmental Services, Inc., located at 5736 W. Jefferson Street, Phoenix, Arizona. Eight (8) solid waste management units (SWMU) and one (1) area of concern (AOC) were identified in the RFA report. A map of all identified SWMUs and AOC is provided as Figure 1 in Attachment G of this Permit.

1. SWMU 1: Former Lamp Storage ICU Area

Northwest corner of the facility, north of building one

ICU units, each measuring 40x8x8 feet, were used to store lamp, MCMA and outgoing waste prior to construction of the hazardous waste storage building. These ICUs were stored at the northwest corner of the property where the present hazardous waste storage building is located. The ICUs were weather-tight and retrofitted with stainless steel containment pans with 6-inch curb. During the April 2001 inspection, ADEQ and EPA observed three boxes of leaking batteries inside one of the ICUs. However, no evidence of release to environment exists. Potential of release to air, soil and ground water from these ICU units were low and no potential for release to surface water existed.

No further investigation of this area is required at this time.

2. SWMU 2: Present Lamp Storage Building (Storage Area 1)

This building was constructed in November 2002 to store lamps and other MCMA and is located north of building one measuring 80x30x14 feet. The building has asphalt pavement and no constructed floor and is bermed to prevent run-on of water from the surrounding yard. The access to the building is ramped. Potential of release to air, soil and ground water is low and no potential for release

to surface water exists. There is no evidence of release of hazardous material to the environment at this location.

No further investigation of this area is required at this time.

3. SWMU 3: Present Lamp Storage Area in Building 1

Two permitted storage areas are located inside Building 1. Lamps and other MCMAs are stored in these areas. Building 1 is water tight and its floors are double-coated epoxy. Cracks were observed in the floors throughout the building. All spills are cleaned immediately. Prior to application of epoxy a low potential for release to soil may have existed but currently, potential of release to air, soil and ground water is low and no potential for release to surface water exists. There is no evidence of release of hazardous material into the environment at this location.

No further investigation of this area is required at this time.

4. SWMU 4: Drywells South of the Buildings

Three active drywells, (No. 8, No. 10, and No. 11), located south of the buildings, receive runoff from the parking lot south of the building. A berm between Buildings 2 and 3 prevents stormwater from the process areas to enter these drywells.

The 1993 registration indicated that these drywells were covered with steel plates and spacers to allow stormwater to enter the drywells and to discourage illegal dumping of waste material into the drywells. However, during the visual site inspection (VSI), there were no steel plates or spacers on these drywells. VES requires truck drivers to place a cover on the nearest drywell when loading or unloading materials.

In the past, there has been an accidental release of TSCA-regulated material into Drywell No. 11. However, since parking lots are separated from the yard and process areas by berms and/or concrete walls, the present potential for discharge of hazardous waste to these wells are minimal.

There exists a low potential for hazardous waste to be discharged into these wells during loading and unloading. If wastes are discharged into these wells, then soil contamination and possibly groundwater contamination may result. There is no potential for release to surface water. Drywell depths are presented in the table below:

Drywell Number	Drywell Location	Drywell Depth (feet)
8	Southwest of Building 1	Not Available
10	Between Building 2&3	12.25
11	Southeast of Building 4	11

An investigation was conducted on the drywells by Dames and Moore in December of 1999. Soil sample locations are shown on Figure 2 in Attachment G. Analyses of samples from drywells showed no contamination of VOCs, PCBs, BEHP, mercury, and RCRA metals at concentrations exceeding the corresponding SRLs.

No further investigation of this area is required at this time.

5. SWMU 5: Drywells in Truck Wells

Drywell 5, 6, 7 and 9 are located in the truck wells adjacent to the loading docks. These drywells are presently inactive. Storm water may have been discharged from loading docks and surrounding areas to these drywells. The 1993 registration indicated that the liquid accumulated in the truck wells would be sampled and analyzed for PCBs and TPH prior to discharge to drywells. As per 2000 drywell registration, the drywells have been welded and sealed shut and covered with concrete. Broken lamp debris had been observed in the vicinity of the truck wells in a 1998 inspection. There is no potential for release to surface water, soil, and ground water and potential of release to air is minimal. Depths of these wells are listed in the table below:

Drywell Number	Drywell Location	Drywell Depth (feet)
6	West of Building 3	2.9 (35 inch)
5	East of Building 4	3
7	East of Building 2, West of Building 3	Not Available
9	West of Building 1	Not Available

An investigation of soils inside the drywells was conducted by Dames and Moore in December of 1999. Soil sample locations are shown on Figure 2 in Attachment G. Analyses of samples from drywells showed no contamination of VOCs, PCBs, BEHP, mercury, and RCRA metals at concentrations exceeding the corresponding SRLs.

No further investigation of this area is required at this time.

6. SWMU 6: Drywells North of the Buildings

Drywells 1, 2, 3 and 4 are located north of the buildings, in the process area of the

facility. In addition to lamp and MCMA storage, historically, potential sources of VOCs, such as a paint booth, were associated with this area. A 1991 photograph suggests that the wells had a cover similar to the present drywell covers. As per 1993 registration, the wells were equipped with 8 inch risers and Teflon plugs to prevent stormwater from entering the drywells. Stormwater was sampled and analyzed for PCBs and TPH prior to discharge to these wells. Sediment assessment on these wells has shown exceedances of 1,1-DCA and 1,1-DCE. No potential for discharge to surface water exists and potential for release to air is minimal. These four drywells have been welded and sealed shut. Depths of these wells are listed in the table below:

Drywell Number	Drywell Location	Drywell Depth (feet)
1	Northwest of Building 1	Not Available
2	Northeast of Building 2	Not Available
3	Northwest of Building 3	10.6
4	Northeast of Building 4	7.25

A soil investigation was conducted in the soils inside the drywells by Dames and Moore in December of 1999. Soil sample locations are shown on Figure 2 in Attachment G. Analyses of samples from drywells showed no contamination of VOCs, PCBs, BEHP, mercury, and RCRA metals at concentrations exceeding the corresponding SRLs.

No further investigation of this SWMU is required at this time.

7. SWMU 7: Waste Storage Areas in Building 4

Two waste storage areas in Building 4 store battery and hazardous waste generated on site. Waste are palletized, containerized or managed within containment bins. Building 4 is watertight and its floors are double-coated with epoxy. Potential of release to air, soil and ground water is low and no potential for release to surface water exists. No evidence of release of hazardous material into the environment exists at this location.

No further investigation of this SWMU is required at this time.

8. SWMU 8: Former Outdoor Storage Area North of Building 4

Drums of waste oil and/or lubricant were stored on asphalt north of Building 4 in 1991. Open boxes of baghouse filters, drums of lamps and MCMAs, and boxes of retort residue, mercury debris, and PPE have been stored on asphalt north of the buildings and/or along the west fence line. Potential of release to soil and ground water is moderate and no potential for release to surface water exists. Potential of release to air is low.

The Permittee shall address the potential release of hazardous material in a site assessment plan in accordance with Condition L of this Permit Part.

9. AOC 1: Former Outdoor Paint Booth North of Building 1

In 1987, a former occupant of Building 1, Graphic Technical Services applied for an installation permit for a paint booth to be located north of Building 1. A moderate potential of release to soil and ground water and no potential for release to surface water existed.

The Permittee shall investigate the potential release of hazardous material to the soils on the north of Building 1 in a site assessment plan in accordance with Condition L of this Permit Part.

C. SPECIFIC CORRECTIVE ACTION REQUIREMENTS

1. RFI Work Plan and Site Assessment Plan

The Permittee shall either conduct a RCRA Facility Investigation (RFI) or a Site Assessment to address release of any hazardous waste or hazardous waste constituent as specified in Condition B of this Permit Part. The releases of hazardous waste will be addressed in accordance with Condition H or L of this Permit Part, as specified by the Director. A detailed RFI work plan or a Site Assessment plan will be submitted to ADEQ for review within forty five (45) days of issuance of this permit, in accordance with the applicable requirements listed in Condition H.1 and H.2 or L.1 of this Permit Part.

2. Project Coordinator

Within fifteen (15) calendar days of the effective date of this Permit, the Permittee shall designate a Project Coordinator and shall notify the Department in writing of the Project Coordinator it has selected. The Permittee's Project Coordinator shall be responsible for overseeing the implementation of corrective action at the Facility in accordance with this Part of the Permit and for designating a person to act in his/her absence. The Department will also designate a Project Coordinator. All communications between the Permittee and the Department, and all documents, reports, approvals, and other correspondence concerning the activities performed pursuant to this Permit shall be directed through the Project Coordinators. The Permittee must provide at least seven (7) calendar days written notice to the Department prior to changing Project Coordinator.

D. GENERAL CORRECTIVE ACTION REQUIREMENTS

1. Record keeping

All raw data, such as laboratory reports, drilling logs, bench-scale or pilot-scale data, and other supporting information gathered or generated during activities undertaken pursuant to this CASOC shall be maintained at the facility during the term of this Permit, including any reissued Permits, or six years after the Corrective Action, whichever is latest.

2. Reporting, Notifications and Submittals

- a. The Permittee shall submit to the Director signed quarterly or monthly progress reports, as specified by the Director, of all activities (i.e., SWMU Assessment, Interim Corrective Measures, RCRA Facility Investigation, Corrective Measures Study) conducted pursuant to the provisions of this CASOC, beginning no later than (90) calendar days after the Permittee is first required to begin implementation of any requirement herein. The progress report shall contain:
 - i. A description of the work completed,
 - ii. Summaries of all findings, including summaries of laboratory data,
 - iii. Summaries of all problems or potential problems encountered during the reporting period and actions taken to correct the problems, and
 - iv. Projected work for the next reporting period;
- b. Copies of other reports (e.g., inspection reports), drilling logs and laboratory data shall be made available to the Director upon request;
- c. The Director may require the Permittee to conduct new or more extensive assessments, investigations, or studies, as needed, based on information provided in these progress reports or other supporting information;
- d. The Permittee shall ensure that all plans, reports, notifications, and other submissions to the Director required by this Permit are signed, certified, and submitted in accordance with Conditions I.C (Permit Actions) and I.E.15 (Signatory and Certification Requirements), and other applicable conditions. Technical work submitted to the Director shall be stamped by a Professional Geologist and/or Engineer, as appropriate, registered in the State of Arizona.

3. Quality Assurance and Control

When performing Corrective Action, the Permittee shall follow the guidance specified below for any sampling and sample testing:

- a. Sample Collection and Management
The Permittee shall submit a Sampling Plan that includes all elements of

EPA SW-846, and A.A.C. R18-8-260 et seq. (40 CFR 260 et seq.), not limited to:

- Specifying the Sampler and Sampler Procedure for Use;
- Specifying Sampling Points based on a Statistical Basis, Logic, and Strategy;
- Trip Blanks, Duplicates, Spikes, Splits, and Other Field Control Samples;
- Including Sample Management Procedures for the Field Notebook, Collection Form, Preservatives and Capping, and other Chain-of-Custody components;
- Guidance in the EPA Technical Enforcement Guidance Document (TEGD - 09/86);
- Guidance in the ADEQ Quality Assurance Program Plan (QAPP), dated February 13, 2004;
- A.A.C. R18-8-261.A (40 CFR 261.4(d)) “Samples”; and
- A.A.C. R18-8-268.A (40 CFR 268) “Land Disposal Restrictions”.

b. Laboratory Analysis and Chain-of-Custody

Throughout all sample analysis activities, the Permittee shall ensure the use of Director-approved quality assurance, quality control, and chain-of-custody procedures contained in the:

- EPA Technical Enforcement Guidance Document (TEGD - 09/86);
- ADEQ QAPP, dated February 13, 2004.

In addition, the Permittee shall:

- Inform the Director’s Project Coordinator (Condition C.2 of this Permit Part), in advance, which laboratories will be used by the Permittee, and ensure that the Director’s personnel and authorized representatives have reasonable access to the laboratories used for analysis;
- Ensure that laboratories used by Permittee for analyses participate in a quality assurance/quality control program equivalent to that described in EPA SW-846. As part of such a program, and upon request by the Director, such laboratories shall perform analyses of a reasonable number of known samples provided by the Director to demonstrate the quality of the analytical data;
- Ensure that the laboratory used is certified by the Arizona Department of Health Services (ADHS) to perform the specific analyses for the

specific analyte(s) of concern.

c. Evaluation of Sampling Data

The Permittee shall ensure the Sampling Plan contains provisions for review of all field and laboratory QA/QC notes and results, and shall use EPA SW-846 to evaluate all data developed in compliance with this Permit. The Sampling Plan must demonstrate that the sampling and analysis program, if applicable, is capable of yielding representative samples and must include parameters sufficient to identify migration of hazardous waste (including hazardous constituents and perchlorates) to the environment.

E. NOTIFICATION AND ASSESSMENT OF NEWLY-IDENTIFIED SWMU(s)

1. Notification of Newly-Identified SWMU(s)

The Permittee shall notify the Director in writing of any newly-identified Solid Waste Management Units (i.e., a unit not specifically identified during the RFA), discovered during the course of groundwater monitoring, field investigations, environmental audits, or other means, no later than fifteen (15) calendar days after discovery.

2. Request for SWMU Assessment Plan (SAP)

After such notification, the Director may request, in writing, that the Permittee prepare a SWMU Assessment Plan (SAP) and a proposed schedule of implementation and completion of the SAP for any additional SWMU(s) discovered subsequent to the issuance of this Permit.

Note: The SWMU Assessment is equivalent in scope to the RFA. The SWMU Assessment differs from the RFA, however, in that the RFA was conducted by EPA, EPA contractor, and/or the State prior to Permit issuance, whereas the SWMU Assessment will be conducted by the Permittee.

3. Content and Submittal of SWMU Assessment Plan

Within ninety (90) calendar days after receipt of the Director's request for a SAP, the Permittee shall prepare and submit the SAP addressing the following methods and objectives:

a. Objectives of a SWMU Assessment

The SWMU Assessment shall meet the objectives:

- i. Identifies all SWMU's that have operated (or are currently operating) at the facility, including past and present unit operations of:
 - Location of all SWMU's on a topographic map;
 - Type and function of the unit;
 - General unit dimensions, structures described, capacities, any drawings;
 - Period during which the unit was or is operating;
 - Specifics on all wastes that have been or are being managed at the SWMU to the extent available;
 - Migration pathways (e.g., hydrogeologic and geologic setting, atmospheric conditions); and
 - Exposure potential to human health and the environment.
- ii. Screens out SWMU's not a current/potential threat to human health and the environment.
- iii. Collects all existing information on releases including sampling and analysis of groundwater, land surface/subsurface strata, surface water or air, and any other evidence as necessary to determine whether a release of hazardous waste (including hazardous constituents and perchlorates) from such unit(s) has occurred, is likely to have occurred, or is likely to occur. Any sampling and analysis must meet Condition I.D.3 (Quality Assurance and Control) of this Permit Part.
- iv. Identifies which SWMU's, releases and suspected releases of hazardous wastes (including hazardous constituents and perchlorates), and media of concern need further investigation and interim corrective action.
- v. In addition, the SWMU Assessment should discuss:
 - Facility operations (e.g., wastes generated, and treatment, storage, and/or disposal methods);
 - Any emission controls in place;

- Any actions taken (both investigatory and remedial) at the site related to corrective action; and
- Relevant communications with regulating agencies.

b. Phases of the SWMU Assessment

The SWMU Assessment Plan shall address the 3 phases that accomplish these objectives:

- i. Preliminary Review (PR) - The gathering and evaluation of existing file and other information available;
- ii. Visual Site Inspection (VSI) - On-site collection of visual data to obtain potential or actual release information;
- iii. Sampling Visit (SV) - If PR/VSI is not adequate after its completion, the Sampling Visit fills in all data gaps remaining.

4. Review and Approval/Disapproval of SWMU Assessment Plan

After the Permittee submits the SAP, the Director shall either approve or disapprove the SAP in writing. If the Director disapproves of the SAP, the Director shall either:

- a. Notify the Permittee in writing of the SAP deficiencies and specify a due date for submittal of a revised SAP, or
- b. Revise the SAP and notify the Permittee of the revisions. This Director-revised SAP becomes the approved SAP.

5. Implementation of the SWMU Assessment Plan

The Permittee shall implement the SAP within (15) calendar days of receiving written approval.

6. Content and Submittal of SWMU Assessment Report (SAR)

The Permittee shall submit a SWMU Assessment Report (SAR) to the Director no later than twenty-five (25) calendar days from completion of work specified in the approved SAP. The SAR shall describe all results obtained from the implementation of the approved SAP.

7. Determination of Further IM/RFI Actions

Based on the results of this SAR, the Director shall determine the need for further investigations at specific unit(s) covered in the SWMU Assessment. If the Director determines that investigations are needed, the Director may require the Permittee to prepare an RFI Work Plan or Site Assessment Plan (SP) for such investigations. The RFI Work Plan or SP will be reviewed for approval pursuant to Condition H (RCRA Facility Investigation Work Plan and Report) or L (Site Assessment and Remedy) of this Permit Part, as specified by the Director.

F. NEWLY-DISCOVERED RELEASES AND THREATS TO HEALTH AND THE ENVIRONMENT

1. Notification Requirements

The Permittee shall notify the Director, in writing, of any release(s) of hazardous waste (including hazardous constituents and perchlorates) discovered during the course of groundwater monitoring, field investigation, environmental auditing, or other activities undertaken after commencement of the RFI or the SP no later than fifteen (15) calendar days after discovery. Such newly-discovered releases may be from newly-identified units, from units for which, based on the findings of the RFA, the Director had previously determined that no further investigation was necessary, or from units investigated as part of the RFI or the SP.

In the event the Permittee identifies a current or potential threat to human health or the environment, the Permittee shall immediately notify the Director orally, and in writing within seven (7) calendar days, summarizing immediacy and magnitude of these threats.

In the event of a current or potential threat to human health or the environment, adherence to the Contingency Plan is required.

2. Interim Measures for Current or Potential Threats

Within forty-five (45) calendar days of notifying the Director, the Permittee shall submit to the Director for approval an Interim Measures (IM) Work Plan, pursuant to Condition G of this Permit Part (Interim Measures) that identifies interim measures which mitigate this threat and are consistent with, and integrated into, any long term solution at the facility.

3. Further RCRA Facility Investigations

The Director may require further investigation of newly-identified release(s). A plan for such investigation will be reviewed for approval pursuant to Condition H (RCRA Facility Investigation Work Plan and Report) or Condition L (Site

Assessment and Remedy) of this Permit Part, as specified by the Director.

G. INTERIM MEASURES (IM)

1. Determination that Interim Measures are needed:

If during the course of any activity initiated under this CASOC, the Director or Permittee determines that a release or potential release of hazardous waste (including hazardous constituents and perchlorates) from a SWMU poses an actual, imminent, or potential threat to human health or the environment, the Director and Permittee may determine that interim measures are necessary. These interim stabilization measures may be deployed while investigations proceed that are consistent with the final remedy. The following factors should be considered in this determination:

- Time required to develop and implement a final remedy;
- Actual and potential exposure to the environment (e.g., animals, ecosystems) and/or human receptors;
- Actual and potential contamination of drinking water supplies and sensitive ecosystems;
- Potential for further degradation of the medium absent interim measures;
- Presence of hazardous waste in containers that may pose a threat of release;
- Presence and concentration of hazardous waste (including hazardous constituents and perchlorates) in soils having potential to migrate to ground or surface water;
- Weather conditions that may affect the current levels of contamination;
- Risks of fire, explosion, or accident; and
- Other situations that may pose threats to human health and the environment.

2. Specifying Interim Measures and Actions

When it is determined that interim measures are needed, an Interim Measures (IM) Work Plan shall be developed that include, but not be limited to, the following elements from EPA-530/SW-88-028 (RCRA Corrective Action Plan (CAP)), EPA-530/SW-88-029 (RCRA Corrective Action Interim Measures Guidance), and/or EPA-625/4-91-029 (Stabilization Technologies of RCRA Corrective Action), and:

- What interim measures need to be taken;
- Specific action(s) that must be taken to implement the interim measure;
- Schedule for their implementation; and
- Parameters or measurements by which to judge the completion of the measures.

Either the Director or the Permittee shall develop the IM Work Plan as follows:

- If the nature and extent of the required interim measures is simple, the Director shall develop a IM Work Plan. The Director shall notify the Permittee in writing of the requirement to perform such interim measures. The Permittee shall begin to implement the interim actions within fifteen (15) calendar days after receiving notification. The Director shall modify the CASOC according to Condition E.10 of Permit Part I (Document Approval and Permit Modification) to incorporate these measures. Interim Measures (IM) do not require a public comment period, until the measures are incorporated into the Corrective Measures Study (CMS) Work Plan and Report described in Condition I of this Permit Part.
- If the nature and extent of the required Interim Measures is complex, or as requested by the Director, an IM Work Plan developed by the Permittee may be necessary. The Director will request in writing that the Permittee submit an IM Work Plan. The Permittee shall submit the IM Work Plan within thirty (30) calendar days after request.

3. Review and Approval/Disapproval of IM Work Plan

After the Permittee submits the IM Work Plan, the Director shall either approve or disapprove the IM Work Plan in writing. If the Director disapproves the IM Work Plan, the Director shall either:

- a. Notify the Permittee in writing of the IM Work Plan's deficiencies and specify a due date for submittal of a revised Plan, or
- b. Revise the IM Work Plan (this revised Work Plan becomes the approved IM Work Plan) and notifies the Permittee of the revisions.

Interim Measures do not require public comment and approval.

4. Implementation of the IM Work Plan

The Permittee shall begin to implement interim actions within fifteen (15) calendar days after receiving approval or notification of any Director-revisions. If the Director does not comment on the Work Plan within forty-five (45) calendar days of receipt of the Work Plan, the Permittee may implement interim measures in accordance with the IM Work Plan.

H. RCRA FACILITY INVESTIGATION (RFI) WORK PLAN AND REPORTS

1. Submittal of RFI Work Plan

Based on the RFA and other relevant information available, the Permittee shall submit an RFI Work Plan designed to address the information needed to determine potential or actual impacts on human health and the environment. Additional RFI Work Plans may be required at future times in order to address updated information needed to determine potential or actual impacts on human health and the environment.

2. Content and Submittal of RFI Work Plan

On or before forty-five (45) calendar days after the effective date of this Permit for those SWMU's identified in Condition B of this Permit Part (Summary of RCRA Facility Assessment (RFA) Findings) the Permittee shall submit a complete and detailed Work Plan to the Director to address those units, releases of hazardous waste and hazardous constituents, and media of concern which require further investigation. The RFI shall include Tasks I, II, and III of the Corrective Action Plan (CAP). Task III (RFI Work plan) shall incorporate the CAP's Task VII facility submission summary, providing a schedule for all remaining tasks required under the RFI (CAP Tasks IV through VI). Task VII reporting requirements shall be followed throughout the RFI process. The Permittee may eliminate those specific portions of the CAP which are not applicable to the nature of the releases at the facility. EPA OSWER Directive 9502.00-6D (May 1989) RFI Guidance, or equivalent should be consulted.

- a. The Work Plan shall describe the objectives of the investigation and the overall technical and analytical approach to completing all actions necessary to characterize the nature, direction, rate, movement, and concentration of releases of hazardous waste (including hazardous constituents) from specific units or groups of units, and their actual or potential receptors. The Work plan shall detail all proposed activities and procedures to be conducted at the facility, the schedule for implementing and completing such investigations, the qualifications of personnel performing or directing the investigations, including contractor personnel, and the overall management of the RFI.
- b. The Plan shall discuss sampling and data collection quality assurance and

data management procedures listed in Condition.D.3 of this Permit Part (Quality Assurance and Control), including formats for documenting and tracking data and other results of investigations, and health and safety procedures.

3. Review and Approval/Disapproval of RFI Work Plan

After the Permittee submits the RFI Work Plan, the Director should review it for proper content and include those RFI Work Plan elements applicable to the facility. After review, the Director will either approve or disapprove the RFI Work Plan in writing. If the Director disapproves the RFI Work Plan, the Director shall either:

- a. Notify the Permittee in writing of the RFI Work Plan's deficiencies and specify a due date for submittal of a revised RFI Work Plan; or
- b. Revise the RFI Work Plan and notify the Permittee of the revisions. This modified RFI Work Plan becomes the approved RFI Work plan.

The Director shall also review for approval as part of the RFI Work Plan any plans developed addressing further investigations of newly-identified SWMU's (Condition E of this Permit Part), or addressing new releases from previously-identified units (Condition F of this Permit Part). The Director shall modify the Corrective Action Schedule of Compliance (CASOC) according to procedures in Condition E.10 of Permit Part I (Document Approval and Permit Modification).

4. Implementation of RFI Work Plan

No later than fifteen (15) calendar days after the Permittee has received written approval from the Director for the RFI Work Plan, the Permittee shall begin implementing the RCRA Facility Investigation according to the schedules and procedures specified in the RFI Work Plan. If the Director does not comment within forty-five (45) calendar days of Directors' receipt of the RFI Work Plan, the Permittee shall implement the RFI Tasks according to the schedule of implementation contained in the RFI Work Plan.

5. Content and Submittal of RFI Final Report

Within sixty (60) calendar days after the completion of the RFI Work Plan or other schedule approved by the Director, the Permittee shall submit:

- a. An RFI Final Report.

The RFI Final Report shall describe the procedures, methods, and results of all facility investigations of SWMU's and their releases, including

information on the type and extent of contamination at the facility, sources and migration pathways, and actual or potential receptors. The RFI Final Report shall present all information gathered under the approved RFI Work Plan. The RFI Final Report must contain adequate information to support further corrective action decisions at the facility.

b. [RESERVED]

c. Determination of No Further Action with Modification

Based on results of the RFI and other relevant information, the Permittee may submit an RFI-Based Determination of No Further Action (NFA) with a proposed Class 3 Permit modification to the Director requesting termination of any Corrective Action required. The NFA Determination and proposed Class 3 Permit modification (processed pursuant to Permit Condition C of Permit Part I) must contain information demonstrating that there are no releases of hazardous wastes (including hazardous constituents and perchlorates) from SWMU's at the facility that pose a threat to human health and the environment. It must also include information required in 40 CFR 270.42(c), which incorporates by reference 40 CFR 270.13 through 270.21, 270.62, and 270.63, and state if:

- i. Contamination is found to be non-existent;
- ii. Contaminant levels and subsequent risks are insignificant compared to existing background levels (i.e. levels are naturally occurring);
- iii. Contamination results from releases originating from outside the facility;
- iv. Groundwater is neither a current or potential source of drinking water, impacts potentially vulnerable Class I ground waters, nor is potentially usable for other human purposes;
- v. Contamination is located adjacent to industrialized, non-residential areas.

6. Review and Approval/Disapproval of RFI Final Report

After the Permittee submits the RFI Final Report and as applicable, the NFA Determination with a proposed Class 3 Modification, the Director shall review, and either approve/disapprove the Report and NFA Determination in writing.

a. If the Director determines the RFI Report does not fully detail the

objectives of an RFI Work Plan, the Director may disapprove the RFI Final Report. If the Director disapproves the Report, the Director shall notify the Permittee in writing of the Report's deficiencies and specify a due date for submittal of the revised Report. Within fifteen (15) calendar days of receipt of approval, the Permittee shall mail a notice that summarizes the approved RFI Final Report to all individuals on the facility mailing list established pursuant to 40 CFR 124.10(c)(1)(viii).

- b. If, based upon review of the Permittee's NFA Determination/Proposed Permit Modification, the results of the RFI, and other information (including comments received during the 60-day public comment period for Class 3 modifications), the Director determines that releases or suspected releases which were investigated either are non-existent or do not pose a threat to human health and the environment, the Director will grant the requested modifications. However, the NFA approval does not preclude the Director from initiating other modifications to the CASOC according to procedures in 40 CFR 270.41 that may rescind the determination or require the Permittee to perform:
 - i. Continued or periodic monitoring of air, soil, groundwater, or surface water, when site-specific circumstances indicate that releases of hazardous wastes (including hazardous constituents and perchlorates) are likely to occur, if necessary to protect human health and the environment;
 - ii. Further investigations, studies, or remediation at a later date, if new information or subsequent analysis indicate a release or likelihood of a release from a SWMU is likely to pose a threat to human health or the environment.

I. CORRECTIVE MEASURES STUDY (CMS) PLAN AND REPORT

1. Submittal of CMS Plan

If the Director has reason to believe, after review of the RFI Final Report, that a SWMU has released concentrations of hazardous constituents and/or perchlorates in excess of any action level, or determines that contaminants present at levels below those action levels pose a threat to human health and the environment given site-specific exposure conditions, the Director may require a Corrective Measures Study (CMS) and shall notify the Permittee in writing. The Director's written notice should include a streamlined CMS analysis based on type and extent of environmental problems at the facility which addresses priority problems, and:

- a. Shall identify hazardous constituent(s) and perchlorates exceeding action

levels and those determined to threaten human health and environment given site-specific exposure conditions; and

- b. Shall specify CMS size and scope (how many alternatives are to be evaluated), focusing on plausible remedial options scaled to fit the complexity of the situation. A large and complex cleanup will likely require analysis of a full range of remedial alternatives. In other cases, the appropriate effective and protective remedy may be self-evident.
- c. May specify remedial alternatives to be evaluated by the Permittee during CMS.

2. Content and Submittal of CMS Plan

The Permittee shall submit a CMS Plan to the Director within forty-five (45) calendar days after notification of the requirement to conduct a CMS. The CMS Plan shall provide the following information:

- a. Description of general approach to investigate and evaluate potential remedies;
- b. Definition of the overall study objectives;
- c. The specific plans and factors for evaluating remedies to ensure compliance with remedy standards, as stated in Permit Condition J (Remedy Selection) of this Permit Part;
- d. The schedules for conducting the study; and
- e. Proposed format for presentation of the information.

The CMS Plan shall be based on CAP Tasks VIII, IX, and X. The CMS Plan shall incorporate the CAP Task XI facility submission summary, providing a schedule for all remaining tasks required under the CMS (CAP Tasks VIII through X). Task XI reporting requirements shall be followed throughout the RFI process. Permittee may eliminate specific portions of the CAP which are not applicable to the nature of the releases at the facility. Obvious solutions will not need an exhaustive CMS/Remedy Selection.

3. Review and Approval/Disapproval of CMS Plan

The Director should review the CMS Plan to ensure it contains all necessary contents. If the Director disapproves the CMS Plan, the Director shall either:

- a. Notify the Permittee in writing of the Plan's deficiencies and specify a due

date for submittal of a revised Plan, or

- b. Revise the CMS Plan and notify the Permittee of the revisions. This modified CMS Plan becomes the approved CMS Plan.

4. Implementation of CMS Plan

No later than fifteen (15) calendar days after the Permittee has received written approval from the Director for the CMS Plan, the Permittee shall begin to implement the CMS Plan according to the schedules and procedures specified in the CMS Plan. If the Director does not comment on the CMS Plan, within forty-five (45) calendar days of submittal of the CMS Plan, the Permittee shall implement the CMS tasks according to the schedule of implementation and procedures contained in the CMS Plan.

5. Content and Submittal of CMS Final Report

Within sixty (60) calendar days after the completion of the CMS tasks, the Permittee shall submit a draft CMS Final Report. The draft CMS Final Report must contain adequate information to support the Director in the remedy selection decision-making process and shall include, at a minimum:

- a. A summary of results of investigations, and any bench-scale or pilot tests conducted for each remedy studied;
- b. A description and evaluation of each remedial alternative which passed through the initial screening of corrective measure technologies;
- c. All information gathered under the approved CMS Plan. To streamline, performance standards should be specified rather than detailed design specifications; and
- d. The recommended corrective measure(s), and a justification for selection of the corrective measure(s) recommended.

6. Review and Approval/Disapproval of CMS Final Report and Remedy

The Director shall approve, approve with modifications, or disapprove the draft CMS Final Report and will advise the Permittee of the determination in writing. The Director shall select the remedy according to Condition J (Remedy Selection) of this Permit Part. In all cases, the Director may require the Permittee to evaluate additional remedies or particular elements of the proposed remedies.

- a. If the Director disapproves the draft CMS Final Report, the Director shall notify the Permittee in writing of deficiencies in the Report and specify a

due date for submittal of a revised draft CMS Final Report thirty (30) calendar days after notification.

- b. Within forty-five (45) calendar days of receipt of the Director's approval, or approval with modifications, of the proposed corrective measure(s), the Permittee shall submit to the Director a final CMS report consistent with the Director's written notification. The Permittee shall also submit a Corrective Measures Implementation (CMI) Program Plan for the remedy selected pursuant to Condition K of this Permit Part (Corrective Measures Implementation).

J. REMEDY SELECTION

1. Remedy Standards

Based on results of the CMS and any further evaluations of additional remedies, the Director shall select a remedy from the remedial alternatives evaluated in the CMS that will:

- a. Protect human health and the environment;
- b. Meet the concentration levels of hazardous constituents and perchlorates in each medium that the remedy must achieve to be protective of human health and the environment;
- c. Control the course(s) of release(s) so as to reduce or eliminate, to the maximum extent practicable, further releases that might pose a threat to human health and the environment; and
- d. Meet all applicable waste management requirements.

2. Technical Evaluation Factors of Remedy

In selecting the remedy which meets the standards for remedies established above, the Director shall consider the following evaluation factors, as appropriate:

- a. Long-term reliability and effectiveness

To establish the degree of certainty that the remedy will prove successful, evaluate the:

- i. Magnitude of residual risks in terms of amounts and concentrations of waste remaining following remedy implementation, considering the persistence, toxicity, mobility and propensity to bio-accumulate of such hazardous wastes (including hazardous constituents and

perchlorates);

- ii. Type and degree of long-term management required, including monitoring, operation and maintenance;
- iii. Exposure potential of humans and environmental receptors to remaining wastes, considering potential threats to human health/environment associated with excavation, transportation, re-disposal or containment;
- iv. Long-term reliability of the engineering and institutional controls, including uncertainties associated with land disposal of untreated wastes and residuals;
- v. Potential need for replacement of the remedy.

b. Reduction of toxicity, mobility, and volume

The degree to which a potential remedy employs treatment that reduces toxicity, mobility or volume of hazardous wastes (including hazardous constituents and perchlorates) and that shall be considered include:

- i. The treatment processes the remedy(s) employs and materials it would treat;
- ii. Amount of hazardous wastes (including hazardous constituents and perchlorates) that would be destroyed or treated;
- iii. The degree to which the treatment is irreversible; and
- iv. The residuals that will remain following treatment, considering the persistence, toxicity, mobility and propensity to bio-accumulate of such hazardous wastes (including hazardous constituents and perchlorates).

c. Short-term effectiveness

Assess potential remedy(s) for short-term effectiveness considering:

- i. Magnitude of reduction of existing risks;
- ii. Short-term risks that might be posed on the community, workers, or environment during implementation of such remedy, including potential threats to human health and the environment associated with excavation, transportation, re-disposal or containment; and

iii. Time until full protection is achieved.

d. Implementability

The ease or difficulty of implementing a potential remedy(s) may be assessed by considering the following types of factors:

- i. Degree of difficulty associated with constructing the technology;
- ii. Expected operational reliability of the technologies;
- iii. Need to coordinate/obtain necessary approvals and permits from other agencies;
- v. Availability of necessary equipment and specialists; and
- vi. Available capacity, location of needed treatment, storage and disposal services.

e. Cost

The types of costs assessed include:

- i. Capital, and Operation and Maintenance costs;
- ii. Net present value of capital and operation and maintenance costs; and
- iii. Potential future remedial action costs.

K. CORRECTIVE MEASURES IMPLEMENTATION (CMI) PROGRAM PLAN

1. Content and Submittal of CMI Program Plan

Within forty-five (45) calendar days after receipt of the Director's Remedy Selection, the Permittee shall submit a draft Corrective Measures Implementation (CMI) Program Plan (CAP Task XII). The draft CMI Program Plan shall incorporate the CAP Task XV facility submission summary, and provide a schedule for all remaining tasks required under the CMI (CAP Tasks XIII through XV). Task XV reporting shall be followed during the CMI process. The Permittee may eliminate those portions of the CAP which are not applicable to the nature of releases at the facility. All Corrective Action requirements of 40 CFR 264.99(h) and 264.100 shall be addressed, not limited to:

- a. Details of specific remedies (i.e. remove-and-treat or treat-in-place) to be

taken which achieve compliance with the standards, and a description of remedy technical features that are necessary to achieve the standards, not limited to:

- i. Requirements for quality sampling and analysis; including a plan for CMI groundwater monitoring that demonstrates an effective post-closure compliance/assessment monitoring program;
 - ii. Requirements for removal, decontamination, closure, or post-closure of units, equipment, devices or structures used to implement remedy;
 - iii. Requirements for achieving compliance with concentration limits and levels;
- b. Basic standards including, but not limited to:
- i. Perchlorates and hazardous constituent list;
 - ii. All concentration levels/limits of hazardous constituents and perchlorates in each medium (i.e. soil, groundwater) that the remedy must achieve to protect human health and the environment;
 - iii. Compliance points and compliance period;
 - iv. Management of hazardous waste.
- c. A schedule for initiating and completing all major technical features and milestones of the remedy; and required length of Corrective Actions taken, including when CMI groundwater monitoring is initiated in lieu of post-closure groundwater compliance/assessment monitoring;
- d. Requirements for submission of semi-annual reports, other information, and modifications if above regulations can not be met.

2. Review and Approval/Disapproval of CMI Program Plan

The Director shall approve, approve with modifications, or disapprove the draft CMI Plan and will advise the Permittee of its determination in writing.

- a. If the Director disapproves of the CMI Program Plan, the Director shall notify the Permittee in writing of deficiencies in the CMI Program Plan and specify a due date for submittal of a revised CMI Program Plan thirty (30) calendar days after notification.

- b. Within forty-five (45) calendar days of receipt of Director’s approval, or approval with modifications, of the proposed corrective measure(s), the Permittee shall submit to the Director a final CMI Program Plan consistent with the Director’s written notification. The Director shall incorporate the remedy selected into the Permit either by reference or by detailing it into the Permit. The Class 3 modification will be processed pursuant to Permit Condition E.10 (Document Approval and Permit Modification) of Permit Part I.

3. Implementation of CMI Program Plan

If the Director does not comment, within forty-five (45) days of receipt of the draft CMI Program Plan, the Permittee shall implement the CMI tasks according to the schedule of implementation contained in the CMI Program Plan.

Table IV-1 CORRECTIVE ACTION SCHEDULE OF COMPLIANCE, FACILITY SUBMITTAL SUMMARY

Facility Submittal Requirements	Due Date
Notification of newly-identified SWMUs	fifteen (15) calendar days after discovery
SWMU Assessment Plan for new SWMUs	ninety (90) calendar days after receipt of request
Revised SWMU Assessment Plan	as determined
Implementation of SWMU Assessment Plan	fifteen (15) calendar days after receiving written approval
SWMU Assessment Report	twenty-five (25) calendar days after completion of implementation of SWMU Assessment Plan
Notification of newly-identified releases	fifteen (15) calendar days after discovery
Interim Measures Work Plan for interim measures identified at time of Permit issuance	thirty (30) calendar days after effective date of permit
Interim Measures Work Plan for interim measures required after Permit issuance	forty-five (45) calendar days after notification to Director
Revised Interim Measures Work Plan	as determined
Implementation of Interim Measures Work Plan	fifteen (15) calendar days after receiving written approval
RFI Work Plan for SWMUs identified in Permit Condition IV.C or for any other SWMUs identified before Permit issuance	forty-five (45) calendar days after effective date of permit
Revised RFI Work Plan	as determined
Implementation of RFI Work Plan	fifteen (15) calendar days after receiving written approval
RFI Report and Summary Report	sixty (60) calendar days after completion of RFI or other Director-approved schedule
Final RFI Report and Summary Report	thirty (30) calendar days after notification of deficiency
CMS Plan	forty-five (45) calendar days after notification of requirement to perform CMS
Revised CMS Plan	as determined
Implementation of CMS Plan	fifteen (15) calendar days after receiving written approval
CMS Report	sixty (60) calendar days after completion of CMS

Facility Submittal Requirements	Due Date
Revised CMS Report	thirty (30) calendar days after notification of deficiency
CMI Program Plan	forty-five (45) calendar days after the receipt of the Director's Remedy Selection
Revised CMI Program Plan	as determined
Implementation of CMI Program Plan	within forty-five (45) calendar days of receipt of CMI Program Plan or by Director's response
Progress reports on all activities	quarterly, monthly, etc., no later than ninety (90) calendar days after Permittee is required to begin implementation

L. SITE ASSESSMENT AND REMEDY

Site Assessment and Remedy may be required to assess and possibly remedy sites consisting of suspected historic releases of small area extent and for which no groundwater contamination has occurred or threatens to occur. Site Assessment and Remedy shall consist of a Site Assessment Plan (SP) and, if necessary, a Remedial Plan (RP). At the Director's discretion the Permittee may be required to follow the provisions of the RFI process (Condition H of this Permit Part) if, during performance of the SP or RP, extensive contamination is found, or if groundwater is determined to be threatened by the historic release.

1. A SP shall be submitted to the Director for approval. The SP shall contain the following:
 - a. A description of the purpose for the SP
 - b. A general description of the site including a site diagram or drawing. Identify as applicable:
 - i. property boundaries
 - ii. buildings and fences
 - iii. process and maintenance areas
 - iv. active and inactive waste generation, handling treatment, storage, disposal, and spill areas
 - v. water wells, dry wells, sumps, storm sewers, industrial and sanitary sewers, septic tanks, surface waters (including intermittent washes, discharges/irrigation ditches, canals, etc)
 - vi. depth to ground water
 - vii. soil coverings (asphalt, concrete, vegetation, etc)
 - viii. topography and drainage patterns

- c. Identity of each waste which has been stored, treated, or disposed at the site, and the identity of each hazardous constituent, including perchlorates, present in that waste.
- d. The method(s) used to determine sample locations and depths (random, systematic, biased, or combination) and a rationale for the number of samples taken.
- e. A diagram showing the number, type, and location of samples
- f. Detailed sampling procedures describing:
 - i. Contents of the field notebook
 - ii. Sampling equipment used
 - iii. Sample sizes
 - iv. Use of any sample compositing
 - v. Sample containers, labels, and seals
 - vi. Field/trip blanks
 - vii. Sample preservatives
 - viii. Quality assurance procedures (blind field duplicates, use of a check lab, and chain of custody)
 - ix. Sample packaging and shipment
 - x. Reserved samples (samples to be taken but not immediately analyzed)
 - xi. Backfilling and grouting of sample borings
 - xii. Equipment decontamination procedures, including disposal of spent solutions.
- g. Analytical parameters and the rationale for choosing such parameters
- h. Provision for expanding the SP if contamination is found to have migrated
- i. Provision for the submittal of a Site Assessment Report within 60 days of performance of the SP, providing the following information:
 - i. A summary of results, significant observations, and conclusions.
 - ii. A discussion of the sampling followed for each site, including a description of:
 - the sampling procedures used;
 - the equipment used for sampling;
 - the analytical procedures and methods used;
 - the analytical equipment used;
 - the quality assurance procedures used;

- iii. The procedures used to prevent hazards and protect field personnel;
 - iv. The equipment used to prevent hazards and protect field personnel;
 - v. Drawings and photographs where appropriate;
 - vi. Description of any deviations from the approved SP;
 - vii. Data generated from sampling and analysis activities performed pursuant to the plan, including field notes, manifests, bills of lading, LDR forms, laboratory submittal forms, chain-of-custody forms, laboratory reports, and drilling logs.
- j. Provision for the submittal of a Remedial Plan, if any hazardous constituents or perchlorates are found above the applicable soil remediation standards of Title 18, Chapter 7, Article 2 or if any hazardous constituents or perchlorates may be expected to migrate to ground water.
- k. Provision for a request of a Finding of No Further Action from the Director, if no hazardous constituents or perchlorates are found above the applicable soil remediation standards of Title 18, Chapter 7, Article 2, or if no hazardous constituents or perchlorates may be expected to migrate to ground water.
2. Any RP submitted to the Director for approval shall contain the following:
- a. A general description of the process to be used in the removal of all hazardous waste, hazardous waste constituents, and perchlorates and/or soils determined to be contaminated with hazardous waste, hazardous waste constituents, or perchlorates;
 - b. An estimate of the amount of waste or soils to be generated, including a site map indicating the location and vertical and horizontal extent of the area to be remediated;
 - c. Identification of the personnel to be used during the remediation, including the name of the project officer who will be responsible for managing the site;
 - d. A provision for a site safety plan which will be enforced during the remediation. At a minimum, the site safety plan should specify the precautions to be taken and monitoring to be performed which ensures the safety of the site workers and the surrounding community;
 - e. The method(s) used to determine sample locations and depths (random, systematic, biased, or combination) and a rationale for the number of samples taken;

- f. A diagram showing the number, type, and location of samples to be taken;
- g. Detailed sampling procedures describing:
 - i. Contents of the field notebook
 - ii. Sampling equipment used
 - iii. Sample sizes
 - iv. Use of any sample compositing
 - v. Sample containers, labels, and seals
 - vi. Field/trip blanks
 - vii. Sample preservatives
 - viii. Quality assurance procedures (blind field duplicates, use of a check lab, chain of custody)
 - ix. Sample packaging and shipment
 - x. Reserved samples (samples to be taken but not immediately analyzed)
 - xi. Backfilling and grouting of sample borings
 - xii. Equipment decontamination procedures, including disposal of spent solutions;
- h. Analytical parameters and the rationale for choosing such parameters;
- i. The chain of custody procedures to be followed;
- j. If the remediation may be expected to include the storage of hazardous waste or soils contaminated with hazardous constituents or perchlorates on-site, the storage method, location, and expected duration must be detailed. The description must specify the precautions to be taken to protect the facility and surrounding community from exposure to the waste or soils contaminated with hazardous constituents or perchlorates;
- k. If the remediation entails excavation, the steps which will be taken to limit access to the excavated area must be described;
- l. If the remediation entails the use of imported back-fill, provisions for documenting that the back-fill is clean;
- m. The decontamination procedures and disposal techniques to be employed for all decontaminated solutions and personal protective equipment;
- n. The disposal method and identification of the disposal site(s) of all hazardous wastes and contaminated soils generated during the remediation;

- o. A schedule for performance of the remedy, including provision for prior ADEQ notification (5 days);
 - p. Provisions for amendment of the RP should the conformational sampling indicate the presence of hazardous waste, hazardous waste constituents, or perchlorates are found above the applicable soil remediation standards of Title 18, Chapter 7, Article 2 or if any hazardous constituents or perchlorates may be expected to migrate to ground water;
 - q. Documentation that the site has been “blue staked” prior to remediation;
 - r. Provisions for the submission of a Remedial Report providing:
 - i. A summary of results, significant observations, and conclusions.
 - ii. A discussion of the sampling followed for each site, including a description of:
 - the sampling procedures used;
 - the equipment used for sampling;
 - the analytical procedures and methods used;
 - the analytical equipment used;
 - the quality assurance procedures used;
 - iii. The procedures used to prevent hazards and protect field personnel;
 - iv. The equipment used to prevent hazards and protect field personnel
 - v. Drawings and photographs where appropriate
 - vi. Description of any deviations from the approved RP.
 - vii. Data generated from the remedy and confirmatory sampling and analysis activities performed pursuant to the RP, including field notes, manifests, bills of lading, LDR forms, laboratory submittal forms, chain-of-custody forms, laboratory reports, and drilling logs;
 - s. Provision for a request of a Finding of No Further Action from the Director, if no hazardous constituents or perchlorates remain above the applicable soil remediation standards of Title 18, Chapter 7, Article 2, and if no hazardous constituents or perchlorates may be expected to migrate to ground water;
3. Within thirty (30) calendar days of submittal of the RP to the Director, the Permittee shall send a notice of the RP to all persons on the facility mailing list maintained by the Director in accordance with R18-8-270.I (40 CFR 124.10) and to appropriate units of state and local government. The notice shall briefly describe the RP and provide facility and ADEQ contacts.

