

Douglas A. Ducey
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY



Henry R. Darwin
Director

ARIZONA HAZARDOUS WASTE MANAGEMENT ACT PERMIT

EPA ID NUMBER AZD 980 735 500 (LTF # 56468)

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:

FACILITY NAME: World Resources Company (WRC)

FACILITY ADDRESS: 8113 West Sherman Street
Tolleson, Arizona 85353

EPA ID NUMBER: AZD 980 735 500

PROPERTY OWNER: World Resources Company

FACILITY OPERATOR: World Resources Company

WRC is a commercial hazardous waste management facility located at 8113 West Sherman Street, Tolleson, AZ. WRC is permitted to receive, treat and store hazardous wastes from electroplating and metal finishing operations. In general, hazardous wastes managed at the Tolleson, AZ, facility includes recyclable hazardous wastewater treatment sludge and filter media, which is treated at the facility and shipped to metal smelting facilities. Characteristic hazardous waste toxic metals and listed hazardous wastes, F006 and F019, from 40 CFR § 261, Subpart C and D, respectively, may be present in wastes accepted at WRC as indicated in Section III.B and IV.B of this Permit.

This Permit authorizes the treatment and storage of hazardous wastes in four Subpart X – miscellaneous units, one container treatment unit and one container storage area. This Permit does not authorize the disposal of hazardous waste or on-site treatment other than that described in this Permit. This Permit authorizes storage and treatment of hazardous wastes in Subpart X – miscellaneous units and containers only. The Permit does not authorize the use of tanks, containment buildings, drip pads, incinerators, units for the storage of hazardous waste munitions and explosives, boilers and industrial furnaces, landfills, waste piles, surface impoundments or land treatment units.

Unless modified, 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

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pursuant to A.A.C. R18-8-270.A (40 CFR §270 Subpart C), K, L, M, N, O, P, and Q. 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. 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. R18-8-270.A (40 CFR §270.41, 270.42 and 270.43) and A.A.C. R18-8-271.D and potential enforcement action.

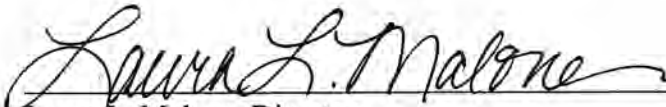
The Permittee shall inform the Director of any deviation from or changes in the information in the application which would affect the Permittee's ability to comply with the applicable regulations or permit conditions.

This Permit is effective as of 1/22, 2015 and shall remain in effect for ten (10) 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 (40 CFR §270.51(a)).

For the Arizona Department of Environmental Quality,

Signed this 22nd day of January, 2015

by



Laura L. Malone, Director
Waste Programs Division
Arizona Department of Environmental Quality

FINAL AHWMA PERMIT

**WORLD RESOURCES COMPANY
8113 WEST SHERMAN STREET
TOLLESON, ARIZONA 85353
EPA ID NO. AZD 980 735 500**

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PART I – GENERAL PERMIT CONDITIONS

A. EFFECT OF PERMIT

The Permittee is allowed to store and treat hazardous waste in accordance with the conditions of this Permit. Any additional storage, treatment, and/or disposal of hazardous waste not specifically authorized in this Permit are prohibited. Subject to Arizona Administrative Code (A.A.C.) R18-8-270.A and 40 Code of Federal Regulations (CFR) 270.4, compliance with this Permit generally constitutes compliance, for purposes of enforcement, with the Arizona Hazardous Waste Management Act (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 (42 U.S.C. 6921 et seq.); 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 Parts 124, 260, 264, 266, 268, and 270), unless this Permit specifically provides otherwise (see alphabetized terms below); 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.

1. A.A.C. means the Arizona Administrative Code Title 18, Chapter 8, Article 2 (A.A.C. R18-8-201 et seq.), effective June 30, 2012 (Permit Attachment 17 (“Arizona Administrative Code”)).
2. ADEQ Contact means the Arizona Department of Environmental Quality, Permits and Plan Review Unit.
3. AHWMA means Arizona Hazardous Waste Management Act.
4. Area of Concern or AOC defined as:
 - * Hazardous product storage unit or area.
 - * Any area where a one-time hazardous waste (product or waste) spill event occurred.
 - * Any hazardous waste 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).

5. CFR means the Code of Federal Regulations as originally adopted for this permit by the June 30, 2012 supplement of *18 A.A.C. 8, Article 2*.
6. Director means the Director of ADEQ or the Director's designee or authorized representative.
7. Example means, unless otherwise specified, that the form is a blank form that is mandatory to be used or followed. This term does not convey to the Permittee that the statements are optional to be performed or are at the user's discretion. "Example" presents, unless otherwise specified, minimum acceptable.
8. Facility means all contiguous land and structures, and 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 V of this Permit, "facility" means all contiguous property under the control of the owner or operator and subject to this Permit and AHWMA.
9. Hazardous Constituent means any constituent identified in A.A.C. R18-8-261.A (Appendix VIII of 40 CFR Part 261), or any constituent identified in A.A.C. R18-8-264 (Appendix IX of 40 CFR Part 264).
10. Hazard Classification means the Department of Transportation (DOT) hazard classification given to a designated material for the purpose of classifying the material for transport.
11. Hazardous Waste means a solid waste, or combination of solid wastes, as defined at 40 CFR 261.3, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, an 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.
12. Learning Sites means all existing public schools, charter schools and private schools at the K-12 level, and all planned sites for schools approved by the Arizona School Facilities Board.
13. Malfunction means any sudden and unavoidable failure of air pollution control equipment, process equipment or a process to operate in a normal and usual manner, but do not include failures that are caused by poor maintenance, careless operation or any other preventable upset condition or equipment breakdown which could have been prevented by the exercise of reasonable care.
14. Miscellaneous Unit means a hazardous waste management unit where hazardous waste is treated, stored, or disposed of and that is not a container, tank, surface

impoundment, pile, land treatment unit, landfill, incinerator, boiler, industrial furnace, underground injection well with appropriate technical standards under part 146 of this chapter, containment building, corrective action management unit, unit eligible for a research, development, and demonstration permit under 40 CFR 270.65, or staging pile.

15. Performance-Oriented Packaging (POP) means those containers meeting the performance-oriented packaging standards as defined by the Department of Transportation HM-181 Standards document.
16. 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.
17. Recyclable Materials (in this Permit) may include listed hazardous waste metals-bearing sludge having waste codes F006 and F019, or characteristic hazardous wastes, that are treated onsite at the facility. They are considered and managed as hazardous waste until they are shipped off-site, as long as they are accepted for recycling by metal smelting facilities; otherwise, they must be shipped off-site as hazardous waste.
18. 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.
19. Release includes the definitions of “discharge” and “disposal” as found in A.A.C. R18-8-260.A (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 of barrels, containers, and other closed receptacles containing hazardous wastes or hazardous constituents) or into secondary containment.
20. Shall, Must, Will, and factual statements denote a mandatory requirement.
21. Should or May denotes a recommendation or permission, respectively, which is not mandatory.
22. 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 RCRA [see A.A.C. R18-8-264.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 wastewater treatment units, and areas contaminated by routine, systematic, and deliberate discharges from process areas.

23. Startup means the setting into operation of any air pollution control equipment or process equipment for any purpose except routine phasing in of process equipment.
24. Treatment means any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste, or so as to recover energy or material resources from the waste, or so as to render such waste non-hazardous, or less hazardous; safer to transport, store, or dispose of; or amenable for recovery, amenable for storage, or reduced in volume.
25. Variance means FR 67 52617, the conditional exclusion from the definition of solid waste granted by the United States Environmental Protection Agency (U.S. EPA) on August 13, 2002, to World Resources Company for dried and blended concentrates produced at its Phoenix facility. The variance is contained in Attachment 16 of this Permit.

C. PERMIT ACTIONS

1. Permit Modification, Revocation and Reissuance, and Termination

- (a) 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.
- (b) In accordance with Arizona Revised Statutes (A.R.S.), Title 41, Chapter 6, Article 10, a final determination regarding any Permit Modification (the approval of the Permittee's Permit Modification request, the approval of the Permittee's Permit Modification request with changes, the denial of the Permittee's Permit Modification request, or the final decision on any agency-initiated Permit Modifications) made by the Director is an appealable agency action. Such appeals shall include the appellant's right to request an informal settlement conference (see A.R.S. §41-1092.06).

[A.A.C. R18-8-270.A, 40 CFR 270.4(a) and 270.30(f), and A.R.S. §41-1092 et seq.]

2. Permit Renewal

This Permit may be renewed as specified in A.A.C. R18-8-270.A, 40 CFR 270.30(b) and Permit Condition I.E.3. 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 federal Hazardous and Solid Waste Amendments (HSWA) Sec. 212]

D. RESERVED

E. DUTIES AND REQUIREMENTS

The following conditions apply, pursuant to A.A.C. R18-8-270.A and 40 CFR 270.30:

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/or RCRA 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. 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) calendar days prior to Permit expiration.

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

3. 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 270.10, 270.13 through 270.29)

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

4. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the Permitted activity in order to maintain compliance with the conditions of this Permit.

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

5. Duty to Mitigate

In the event of noncompliance with this Permit, the Permittee shall take all reasonable steps to minimize releases to the environment and shall carry out such measures, as are reasonable, to prevent significant adverse impacts on human health or the environment.

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

6. Proper Operation and Maintenance

The Permittee shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance and quality control (QA/QC) 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 and 40 CFR 270.30(e)]

7. Property Rights

This Permit does not convey any property rights of any sort, or any exclusive privilege.

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

8. 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 and 270.A, and 40 CFR 264.74(a) and 270.30(h)]

9. Inspection and Entry

Permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents, as maybe required by law, 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 and RCRA, any substances or parameters at any location.

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

10. 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, U.S. EPA Publication SW-846 (current edition), or an equivalent or better method, as specified in the Waste Analysis Plan (see Permit Attachment 5) or as 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, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and records required by this Permit, the certification required by A.A.C. R-18-264.A and 40 CFR 264.73(b)(9), and records of all data used to complete the application for this Permit for a period of three (3) years from the date of the sample, measurement, report, record, certification, or application. 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 and 270.A, and 40 CFR 264.74(b) and 270.30(j)(2)]

- (c) Pursuant to A.A.C. R18-8-270.A and 40 CFR 270.30(j)(3), records of monitoring information shall specify:

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

[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 (including the Permittee's Quality Control Laboratory) can perform for Hazardous Waste analysis to comply with the requirements of the Permit must be licensed (certified) by the Arizona Department of Health Services (ADHS) [A.R.S. Title 36, Chapter 4.3, Article 1, Section 36-495.01]. Additionally, if a contract laboratory is used to perform analyses, then the Permittee shall maintain documentation showing the resolution of any inconsistency between the laboratory's proposed services and the applicable conditions of this Permit.

11. 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))]

12. Reporting Requirements

(a) 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 and 270(L) (40 CFR 270.30(l)(1))]

(b) Anticipated Noncompliance

The Permittee shall give advance notice to the Director of any planned changes (e.g., physical alterations) in the permitted facility or activity which may result in noncompliance with Permit requirements.

[A.A.C. R18-8-270.A and 270(L) (40 CFR 270.30(l)(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 such other requirements as necessary pursuant to A.A.C. R18-8-270.A and 40 CFR 270.40.

[A.A.C. R18-8-270.A and 270(L) (40 CFR 270.30(l)(3)); 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 and 270(L) (40 CFR 270.30(l)(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(l)(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 (15)

calendar 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(l)(7)),A.A.C. R18-2-264.A(40 CFR§264.72)]

(g) Unmanifested Waste Report

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

[A.A.C. R18-8-270.A (40 CFR §270.30(l)(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.I (40 CFR 264.75).

(i) Other Noncompliance

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

[A.A.C. R18-8-270(K) and 270(L) (40 CFR 270.30(l)(10))]

13. 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) calendar day written notice requirement in favor of a written report within fifteen (15) calendar days.

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

14. 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 270(L) (40 CFR 270.30(l)(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

The Permittee may claim confidential any information required to be submitted by this Permit.

[A.A.C. R18-8-270.A (40 CFR 270.12)]

G. DOCUMENTS TO BE MAINTAINED AT THE FACILITY

The Permittee shall maintain at the facility, until closure is completed and certified by a qualified Arizona Registered Professional Engineer, 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. Annually adjusted cost estimate for facility closure, as required by A.A.C. R18-8-264.A, 40 CFR 264.142(d) and this Permit;
8. All other documents required by Permit Condition I.E.10 (Monitoring and Records), except those records need only be maintained for a period of three (3) years.
9. A signed duplicate copy of the liability policy required under Permit Condition II.N.

H. PERMIT MODIFICATIONS

1. General Conditions

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

- (a) Permit Condition I.C.1. (Permit Modification, Revocation, Reissuance, and Termination);
- (b) Permit Condition I.E.12(b) (Reporting Requirements – Anticipated Noncompliance);
- (c) Permit Condition I.E.12 (a) (Reporting Requirements – Planned Changes);
- (d) Permit Condition II.A (Design and Operation of Facility);
- (e) Signatory and document liability certification requirements as described in Permit Condition I.E.11 (Signatory and Certification Requirements);
- (f) Confidentiality rules, if desired, pursuant to Permit Condition I.F. (Confidential Information); and
- (g) Fees required to be submitted with the application for Permit modification as required by A.A.C. R18-8-270(G).

- (h) Follow procedures, as applicable, for changing the emergency contingency plan or hazardous waste codes and changing key employees.

2. Facility Mailing List

The Permittee shall obtain (from the Arizona Department of Environmental Quality (ADEQ) Contact) and use an updated current facility mailing list, pursuant to A.A.C. R18-8-270.A and 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 submit to the ADEQ Contact an ADEQ Character/Background Reference Form:

- (a) Signatories – See Permit Condition I.E.11 (Signatory and Certification Requirements);
- (b) Emergency Coordinators – See Permit Attachment 10 (Contingency Plan).
[A.R.S. 49-922.C; A.A.C. R18-8-270(J)(270.14(b)(20))]

4. Changes to Contingency Plan

Modifications to Permit Attachment 10 (“Contingency Plan”) have additional notification requirements as described in that plan.

[40 CFR 264.37(a)(4) and A.A.C. R18-8-264.A]

PART II – GENERAL FACILITY CONDITIONS

A. DESIGN AND OPERATION OF FACILITY

The Permittee shall construct, maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned, sudden or non-sudden release of hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

[A.A.C. R18-8-264.A and 40 CFR 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. Notice of subsequent shipments of the same waste from the same foreign source is not required.

[A.A.C. R18-8-264.A and 40 CFR 264.12(a)]

2. Hazardous Waste from Off-Site Sources

When the Permittee is to receive hazardous waste from an off-site source, he/she must inform the generator in writing that he/she has the appropriate Permits, 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 and 40 CFR 264.12(b)]

3. Treatment, Storage and Disposal Facility (TSDF) Registration and Fees

As of the effective date of this Permit, the Permittee shall register annually as a TSDF and provide annual fees in accordance with A.R.S. § 49-929.

C. GENERAL WASTE ANALYSIS

The Permittee shall follow the waste analysis procedures, as described in the Waste Analysis Plan (Permit Attachment 5). The Permittee shall conduct any additional sampling and analysis that the Director determines necessary to ensure that there are no significant impacts on human health or the environment. Such a determination by the Director shall be in writing and shall provide the basis for such a determination.

1. Annual Waste Stream Evaluation

The Permittee shall verify the analysis of each waste stream annually as part of its quality assurance program, in accordance with Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, U.S. EPA Publication SW-846 (current edition), or equivalent or better methods approved by the Director. At a minimum, the Permittee shall maintain proper functioning instruments, use approved sampling and analytical methods, verify the validity of sampling and analytical procedures, and perform correct calculations. If the Permittee uses a contract laboratory to perform analyses, then the Permittee shall inform the laboratory in

writing that it must operate under the waste analysis conditions set forth in this Permit.

[A.A.C. R18-8-264.A and 40 CFR 264.13]

2. ADHS Certification

All testing performed as required by this Permit at onsite or off-site laboratories, in-state or out-of-state, must be conducted by laboratories licensed (certified) by the ADHS for the applicable analytical methods in use at the onsite or offsite laboratory.

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

3. Annual Waste Stream Re-certification – Notification of Generator

Analysis of incoming waste streams shall be re-certified at least annually; the re-certification process must be documented and include notification to the generator that, as a minimum, annual re-certification of waste profiles is required.

[40 CFR 264.13(b)(4)]

4. Waste Stream Certification – Applicable Time Limits

For waste that fails the variance criteria (i.e., after an initial sequence of non-conforming loads), the Permittee must analyze a new sample of the generator's sludge to verify compliance with the variance, before resuming shipments of the generator's waste stream. The analysis of the next four loads of this waste stream that will be set-aside on the HWMU shall be completed within seventy-two (72) hours after arrival of this waste at the facility.

[40 CFR 264.13(c)(1)]

D. SECURITY

The Permittee shall comply with the security provisions of A.A.C. R18-8-264.A, 40 CFR 264.14(b)(1) and (2) and those contained in Permit Attachment 7 ("Procedures to Prevent Hazards").

E. GENERAL INSPECTION REQUIREMENTS

The Permittee shall follow the inspection schedule set out in the Inspections attachment (Permit Attachment 6). The Permittee shall remedy any deterioration or malfunction discovered by an inspection, as required by A.A.C. R18-8-264.A and 40 CFR 264.15(c). Records of inspection shall be kept, as required by A.A.C. R18-8-264.A and 40 CFR 264.15(d).

F. PERSONNEL TRAINING

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

G. SPECIAL PROVISIONS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE, AND BULKING OF WASTES

1. The Permittee shall comply with the requirements of A.A.C. R18-8-264.A and 40 CFR 264.17. The Permittee shall follow the procedures for handling ignitable, reactive, and incompatible wastes set forth in the Procedures to Prevent Hazards (Permit Attachment 7, Section 7.4).
2. The Permittee shall ensure that at least one of the following titled personnel, properly trained in waste receipt and determination of waste compatibility, is on-site and available to oversee any compatibility determination that is made for the purposes of receiving, bulking, combining, or transferring wastes: General Manager, Operations Manager, Assistant Operations Manager, Manager of Environmental, Health & Safety Affairs, Laboratory Manager, and Laboratory Assistant Manager.
3. Compatibility Testing, as identified within the Waste Analysis Plan (Permit Attachment 5, Sections 5.2.2, 5.2.3 and 5.3), Procedures to Prevent Hazards (Permit Attachment 7, Section 7.4), Training Plan (Permit Attachment 8-B) and the Contingency Plan (Attachment 10, Sections 1.3.1, 2.2, 2.4 and 5.2.2), is satisfied through the pre-acceptance screening (e.g., cyanide) the Permittee conducts on all incoming loads. The results of this screening is recorded and maintained as part of the facility operating record. The Material Received Evaluation (Form FM-M02) found in the Waste Analysis Plan (Permit Attachment 5-B) documents the determination of compatibility. It shall be reviewed and approved (signed) by a properly authorized individual as identified in Section II.G.2 above.

H. PREPAREDNESS AND PREVENTION

1. Required Equipment

At a minimum, the Permittee shall maintain at the facility the equipment set forth in the Procedures to Prevent Hazards and the Contingency Plan (Permit Attachment 5, Sections 5.3.1.1, 5.3.1.2 and 5.3.1.3, Permit Attachment 7, Section 7.2.1, Permit Attachment 9, Section 9.3.3.1, 9.4.2.1, and 9.4.3.4 and Permit Attachment 10, Section 3).

[A.A.C. R18-8-264.A (40 CFR 264.32)]

2. Testing and Maintenance of Equipment

The Permittee shall test and maintain the equipment specified in Permit Condition II.H.1, as necessary, to assure its proper operation in time of emergency.

[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.

[A.A.C. R18-8-264.A (40 CFR 264.34)]

4. Required Aisle Space

At a minimum, the Permittee shall maintain aisle space in accordance with and the plans and specifications contained in Permit Part III.A (“Container Management Summary”), Permit Part IV.C(1)(a) (“Hazardous Waste Treatment and Storage in Subpart X – Miscellaneous Units”) and Attachment 7 (“Procedures to Prevent Hazards”), Section 7.2.2.

[A.A.C. R18-8-264.A (40 CFR 264.35)]

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 and 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.

[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 (Permit Attachment 10), and follow the emergency procedures described by A.A.C. R18-8-264.A and G, and 40 CFR 264.56 whenever there is a fire, explosion, or release of hazardous waste or constituents which could threaten human health or the environment.

[A.A.C. R18-8-264.A (40 CFR 264.51(b))]

(b) As part of the remedial action taken in response to a fire, release or unplanned explosion of hazardous wastes, the Permittee shall sample and analyze, to detect the extent and depth of any soil contamination. Sample types, locations, analytes, and methods may be subject to the approval of the Director. The sampling and analytical methods used must be consistent with those published in Test Methods for Evaluating Solid Waste: Physical/ Chemical Methods, U.S. 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.

Each parameter test that the in-state or out-of-state laboratory can perform for hazardous waste analysis must be licensed by ADHS.

[A.R.S. 36-495.01]

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. Documentation of timely submittal of Contingency Plans and revisions shall be in the form of a certified mail receipt, or similar documentation, and retained in the facility operating record.

[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 whenever:

- (i) The Permit is revised;
- (ii) The Contingency Plan fails in an emergency;
- (iii) The facility changes – in its design, construction, operation, maintenance, or other circumstances – in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency.
- (iv) The list of emergency coordinators changes;
- (v) The list of emergency equipment changes.

[A.A.C. R18-8-264.A (40 CFR 264.54)]

4. Emergency Coordinator

A trained emergency coordinator (thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of wastes handled, the location of all records within the facility, the facility layout, and the authority to commit the resources needed to carry out the contingency plan) shall be on the facility premises or on call (must be able to immediately reach the facility) in case of an emergency, as required by A.A.C. R18-8-264.A and 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 Permit Attachment 10 ("Contingency Plan"), shall be supplied to the Director as a Class 1 Permit Modification request, in accordance with Permit Condition I.H.3.

[A.A.C. R18-8-264.A (40 CFR 264.52(d) and 40 CFR 264.55)]

5. List of Learning Sites

The Permittee must maintain a contact list of Learning Sites within 1.0 mile of the facility. The list shall include the Learning Site name, address, telephone number, and the name of a primary contact at each Learning Site. 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 and be verified and updated annually, with verification documentation submitted to the Director. A Permit Modification is not required for this submittal.

[A.A.C. R18-8-264.A (40 CFR 264.601) and A.A.C. R18-8-270.A, M, N
and O (40 CFR 270.32)]

J. RECORD KEEPING AND REPORTING

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

1. Operating Record

The Permittee shall maintain a written (or electronic as noted below) operating record at the facility in accordance with A.A.C. R18-8-264.A and 40 CFR 264.73 and the terms of this Permit, to include but not be limited to:

- (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 (this may be a written record or an electronic record with written report provided upon request by the Director's authorized representative);
[A.A.C. R18-8-264.A (40 CFR 264.73(b)(1) including Appendix I in §264)]
- (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 (this may be a written record or an electronic record with written report provided upon request by the Director's authorized representative);
[A.A.C. R18-8-264.A (40 CFR 264.73(b)(2))]
- (c) The records and results of waste analyses and waste determinations (this may be a written record or an electronic record with written report provided upon request by the Director's authorized representative);
[A.A.C. R18-8-264.A (40 CFR 264.73(b)(3))]
- (d) The summary reports and details of all incidents that require implementing the contingency plan (this may be a written record or an electronic record with written report provided upon request by the Director's authorized representative);
[A.A.C. R18-8-264.A (40 CFR 264.73(b)(4))]
- (e) The records and results of inspections (this may be a written or an electronic record, however electronic records of any checklist must be identical electronic images of the original written record);
[A.A.C. R18-8-264.A (40 CFR 264.73(b)(5))]
- (f) The monitoring, testing or analytical data, and corrective action (this may be a written record or an electronic record with written report provided upon request by the Director's authorized representative);
[A.A.C. R18-8-264.A (40 CFR 264.73(b)(6))]

- (g) All closure cost estimates (this may be a written record or an electronic record with a written report provided upon request by the Director's authorized representative);
[A.A.C. R18-8-264.A (40 CFR 264.73(b)(8))]
- (h) Copies of waste minimization documents required in Permit Condition II.S (this may be a written record or an electronic record with a written report provided upon request by the Director's authorized representative. However, waste minimization certifications must be an identical electronic image of the original written record).
[A.A.C. R18-8-264.A (40 CFR 264.73(b)(9))]
- (i) The notices, certification and demonstration, if applicable, required of generators (this may be a written record or an electronic record, however they must be an identical electronic image of the original written record).
[A.A.C. R18-8-264.A (40 CFR 264.73(b)(7))]
- (j) Records supporting variance requirements were adhered to or failed and how the shipment was managed as a result.
[Permit Part IV and Permit Attachments 2 and 16]
- (k) Operational control records for the hazardous waste units showing that the facility is compliant in meeting maximum allowable contaminant level requirements (e.g., Concrete Management Program, HWMU sweeping schedule, operation of TCU, fabric mesh canopy maintenance, other emission controls, etc.).
[A.A.C. R18-8-264.A (40 CFR § 264.602) / Permit Part IV]

2. Annual Reports

- (a) The Permittee shall comply with the Annual Report requirements of A.A.C. R18-8-264.I (40 CFR 264.75).
- (b) The Permittee shall comply with the Annual Ambient Air Monitoring Report requirements in Part II.U.
- (c) The Permittee shall comply with the Annual Operations Report requirements in Part IV.C
- (d) The Permittee shall comply with the Annual Thermal Concentrating Unit (TCU) Operations Report requirements for the TCU in Part IV.D.
- (e) The Permittee shall comply with the Annual Concrete Management Report requirements in Part IV.E.
- (f) The Permittee shall comply with the Annual Audit and Report requirements in Part IV.K.

- (g) The Permittee shall comply with the Annual Groundwater Monitoring Report requirements in Part V.D.

[A.A.C. R18-8-264.A (40 CFR 264.602), A.A.C. R18-8-270.A (40 CFR 270.31(c)) and A.A.C. R18-8-270.A, M, N and O (40 CFR 270.32)]

3. Inspection of Records

The Permittee shall make applicable records available to any authorized representative of the Director conducting an inspection pursuant to Permit Condition I.E.9 (Inspection and Entry).

4. Manifests

The Permittee shall comply with the manifest requirements of A.A.C. R18-8-264.H and J and 40 CFR 264.71, 264.72, and 264.76.

K. GENERAL CLOSURE REQUIREMENTS

1. Performance Standard

The Permittee shall close the facility, as required by A.A.C. R18-264.A, 40 CFR 264.111, and in accordance with the Closure Plan (Permit Attachment 11).

2. Amendment to Closure Plan

The Permittee shall amend the Closure Plan (Permit Attachment 11), in accordance with A.A.C. R18-8-264.A and 40 CFR 264.112(c), whenever necessary, and as required by Permit Condition II.K.1.

3. Notification of Closure

The Permittee shall notify the Director in writing at least forty-five (45) calendar days prior to the date on which he/she expects to begin partial closure of any permitted unit or units, or final closure of the facility. Partial Closure activities will follow the same steps as identified under Permit Condition II.K.1, except that partial closure plans and notifications shall be specific to the unit or units to be closed at that time.

[A.A.C. R18-8-264.A (40 CFR 264.112(d))]

4. Time Allowed for Closure

Within ninety (90) calendar days after receiving the final volume of hazardous waste, the Permittee shall remove from the 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 Closure Plan (Permit Attachment 11).

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

The Permittee shall decontaminate and/or dispose of all contaminated equipment, structures, and soils, as required by A.A.C. R18-8-264.A, 40 CFR 264.114 and the Closure Plan (Permit Attachment 11).

Each parameter test that the in-state or out-of-state laboratory performs for Hazardous Waste analysis during closure must be licensed (certified) by ADHS.

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

6. Closure Report

Within sixty (60) calendar 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. This should include data summary tables that include the applicable regulatory standards or limits, if applicable.
- (b) A detailed discussion of the closure procedures followed for each unit. 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.

Also include drawings and photographs where appropriate and identify 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, Land Disposal Restriction (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.

7. Certification of Closure

The Permittee shall certify that the facility has been closed in accordance with the specifications in the Closure Plan (Permit Attachment 11).

[A.A.C. R18-8-264.A and 40 CFR 264.115]

L. COST ESTIMATE FOR FACILITY CLOSURE AND CORRECTIVE ACTION

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(a), is specified in Permit Attachment 13 ("Closure Cost Estimate").

2. Cost Adjustments

The Permittee must adjust the closure cost estimates within sixty (60) calendar days prior to the anniversary date of the establishment of the financial instrument(s), and submit evidence of such an increase to the ADEQ Contact within sixty (60) calendar days after the adjustment.

[A.A.C. R18-8-264.A and 40 CFR 264.142(b)]

3. Cost Revisions

The Permittee must revise the closure cost estimate whenever there is a change in the facility's Closure Plan.

[A.A.C. R18-8-264.A and 40 CFR 264.142(c)]

4. Maintenance of Cost Revisions

The Permittee must keep at the facility the latest closure cost estimates.

[A.A.C. R18-8-264.A and 40 CFR 264.142(d)]

5. Submittal of Cost Revision

Any revisions made to the closure cost estimates per L.2 or L.3, above shall be submitted to the ADEQ Contact within thirty (30) calendar days of revision. The submittal shall provide the updated and prior cost estimates and show the method and calculations used in the update. The submittal shall be made as a Class 1 permit modification request with Director approval.

M. FINANCIAL ASSURANCE FOR FACILITY CLOSURE

The Permittee shall demonstrate continuous compliance with this Permit Condition by providing documentation of financial assurance, as required by A.A.C. R18-8-264.A and 40 CFR 264.143 and 264.151 and 264.101, in at least the amount of the cost estimates required by Permit Condition II.L. Changes in financial assurance mechanisms, including new providers, must be approved by the Director pursuant to A.A.C. R18-8-264.A and L and 40 CFR 264.143 and be submitted as a Class 1 permit modification request for Director approval in accordance with 40 CFR 270.42. See Attachment 12 ("Financial Assurance Documentation").

N. LIABILITY REQUIREMENTS

The Permittee shall demonstrate continuous compliance with the requirement of A.A.C. R18-8-264.A, N and O and 40 CFR 264.147(a) to have and maintain liability coverage for sudden and non-sudden accidental occurrences in the amount of at least \$4 million per occurrence, with an annual aggregate of at least \$8 million, exclusive of legal defense costs. The wording of the certificate of liability insurance must be identical to the wording specified in A.A.C. R18-8-260.A, E and F, 264.A, N and O and 40 CFR 264.151(i) for a liability endorsement and (j) for a certificate of liability insurance. See Attachment 12 (“Financial Assurance Documentation”).

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

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

P. LAND DISPOSAL RESTRICTIONS

The Permittee shall comply with all the applicable LDR requirements of 40 CFR Part 268, including: the required notices, use of the hazardous waste debris rule, and storage prohibitions of A.A.C. R18-8-268.A, and 40 CFR 268.7, 268.45, and 268.50.

Q. AIR EMISSIONS STANDARDS FOR TANKS AND CONTAINERS

The Permittee currently does not have equipment, tanks or containers associated with the permitted units that shall comply with the requirements of A.A.C. R18-8-264.A [40 CFR Part 264, Subpart BB (for equipment leaks) and Subpart CC (for tanks and containers)].

R. TRANSPORTATION ROUTES FOR HAZARDOUS WASTE SHIPMENTS

The Permittee shall instruct each of its drivers of hazardous waste to avoid as much as is practicable the use of any routes that pass through residential areas or that pass by Learning Sites.

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

S. WASTE MINIMIZATION CERTIFICATION

1. Annual Certification

The Permittee shall annually certify:

- (a) That the Permittee has a program in place to reduce the volume and toxicity of all hazardous wastes 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.

- (c) The annual certification shall be submitted no later than April 1 of each calendar year.

[A.A.C. R18-8-264.A (40 CFR 264.73(b)(9))]

2. Signatory Requirements

This certification shall be retained with the facility's operating record and shall comply with the signatory requirement of Permit Condition I.E.11 (Signatory and Certification Requirements).

T. RESERVED

U. AMBIENT AIR MONITORING

The Permittee shall monitor for particulates and metals from the Permittee's processing of metal-bearing hazardous wastes.

1. The Permittee shall maintain, operate and sample metals and total PM₁₀ concentrations in ambient air around the facility using four continuous flow, ambient high volume air samplers (HVAS), or alternative samplers, optimized along the four, compass-direction boundaries of the Facility, in accordance with Permit Attachment 4 ("Miscellaneous Units Description"), Section 4.3, Permit Attachment 7 ("Procedures to Prevent Hazards"), Section 7.3.6, and Attachment 14 ("Ambient Air Monitoring Program").
2. Permittee shall submit an annual ambient air monitoring report to the ADEQ Contact by no later than April 1 of each calendar year as required in accordance with Permit Part II.J.

[A.A.C. R18-8-264.A (40 CFR 264.601), A.A.C. R18-8-270.A (40 CFR 270.31) and A.A.C. R18-8-270.A, M, N and O (40 CFR 270.32)]

V. SCHEDULE OF COMPLIANCE

1. The Permittee shall provide the following information to the Director for approval within the timeframes specified after the effective date of this Permit. These documents shall be submitted as a Class 1 Permit modification request with Director approval:

(a) Ambient Air Monitoring Program Study:

- (i) Within sixty (60) calendar days of Permit issuance, the Permittee shall submit a work plan with schedule of compliance milestones for an ambient-air monitoring program study. The work plan shall be designed to develop the following specific performance goals:
 - Collection and analysis of additional site-specific air monitoring data to ensure that model predictions for metallic constituents are not underestimated;

- Selection of the appropriate type and strategic location of the monitoring devices;
 - Appropriate time scales and time intervals for comparison with facility-specific exposure scenarios,
 - Adequate QA/QC monitoring mechanisms, and
 - Specific response outcomes consistent with risk-based decision making.
- (ii) If necessary to demonstrate compliance with the conditions of this Permit, air dispersion and deposition modeling of facility sources shall be included in the Ambient Air Monitoring Program Study. Such air dispersion and deposition modeling shall incorporate the U.S. EPA approved and recommended air dispersion model, AERMOD.
- (iii) The work plan shall be submitted as a Class 1 Permit modification request for Director approval, for inclusion in Permit Attachment 14 (“Ambient Air Monitoring Program”).

[A.A.C. R18-8-264.A (40 CFR 264.601), A.A.C. R18-8-270.A, M, N and O (40 CFR 270.32) and 40 CFR 270.33]

(b) Ambient Air Monitoring Plan:

- (i) Within ninety (90) calendar days of completion of the Ambient Air Monitoring Program Study, the Permittee shall submit an Ambient Air Monitoring Plan, detailing the Permittee’s updated Ambient Air Monitoring Program for compliance with approved ambient air quality benchmarks. The updated Ambient Air Monitoring Program shall represent a performance standard metric by which emission criteria for the Facility are to be evaluated.
- (ii) The Ambient Air Monitoring Plan shall include:
- Monitoring equipment design and operation details;
 - Monitoring equipment location;
 - Sampling and analysis methods;
 - Frequency of sampling;
 - Ambient Air Quality Benchmarks;
 - QA/QC methods and procedures;
 - Response outcomes consistent with established benchmarks;

- Equipment maintenance;
 - Data management procedures;
 - Reporting
- (iii) If necessary to demonstrate compliance with the conditions of this Permit, air dispersion and deposition modeling of facility sources shall be included in the Ambient Air Monitoring Plan. Such air dispersion and deposition modeling shall incorporate the U.S. EPA approved and recommended air dispersion model, AERMOD.
- (iv) The Ambient Air Monitoring Plan shall be submitted as a Class 1 permit modification request for Director approval, for inclusion in Permit Attachment 14 (“Ambient Air Monitoring Program”).

[A.A.C. R18-8-264.A (40 CFR 264.601), A.A.C. R18-8-270.A, M, N and O (40 CFR 270.32) and 40 CFR 270.33]

(c) Groundwater Monitoring Well Installation:

- (i) Within ninety (90) calendar days of Permit Issuance, Permittee shall submit a work plan to install a new ground water monitoring well, in accordance with Permit Attachment 9 (“Groundwater Detection Monitoring Program (GDMP)”), Section 9.2.B
- (ii) One new well shall be installed in the eastern portion of the facility within one year of permit issuance
- (iii) Monitoring will be required for a minimum frequency of quarterly for two years for the new well;
- (iv) The required analytes are identified in Table 9-4, Sampling Plan Summary for Initial Phase of Detection Monitoring Program (Permit Attachment 9, Section 9.3.3.4);
- (v) Monitoring reports must be submitted in accordance Section 9.6.7 (Permit Attachment 9) and the final approved work plan;
- (vi) The new well information will be added to Table 9-6 in the Groundwater Detection Monitoring Program (GDMP) (Permit Attachment 9);
- (vii) The work plan shall be submitted as a Class 1 Permit modification request for Director approval, for inclusion in Permit Attachment 9.

[A.A.C. R18-8-264.A (40 CFR 264.97(a)), A.A.C. R18-8-264.A (40 CFR 264.601), A.A.C. R18-8-270.A, M, N and O (40 CFR 270.32) and 40 CFR 270.33]

PART III – HAZARDOUS WASTE STORAGE AND TREATMENT IN CONTAINERS

This permit authorizes the storage of hazardous wastes in containers on the hazardous waste management unit (HWMU) in accordance with 40 CFR 264 Subpart I. In addition, Hazardous Debris Container Treatment in containers is authorized under this Permit. The Hazardous Debris Container Treatment Unit process is only to be performed for equipment and debris that cannot be shredded. The accepted incoming hazardous wastes are compatible solids including D004, D005, D006, D007, D008, D009, D010, D011, F006 and F019.

Subpart X Miscellaneous Unit storage and treatment activities conducted in the HWMU are authorized and described under Part IV of this Permit.

No disposal activities are authorized under this Permit.

A. CONTAINER MANAGEMENT SUMMARY

The Permittee's container storage and treatment description, design and plans are described in the attachments and appendices.

Container (e.g., drums, totes, treatment containers) storage areas allowed on the HWMU are associated with: Incoming hazardous waste (Attachment 3, Material Handling, Treatment and Records, Section 3.1.1), Hazardous Debris Container Treatment Unit (Attachment 3, Material Handling, Treatment and Records, Section 3.1.7); (mechanical shredding/size reducer unit (MSU) (Attachment 4, Section 4.1.3); mechanical blender (Attachment 3, Section 3.1.4); and TCU (Attachment 3, Section 3.1.5). Containers may be stored on the HWMU at locations described in Part III.B (1)(a) and (2)(a). Any free liquids must include secondary containment (i.e., portable secondary containment) along with the HWMU secondary containment berms.

Total hazardous waste storage capacity of all container storage in the HWMU is limited to 50 cubic yards.

B. PERMITTED AND PROHIBITED WASTE STORAGE

1. Container Storage Summary

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

Table III-A Hazardous Waste Container Storage at the Facility

Unit or Process	Description of Hazardous Waste	U.S. EPA Hazardous Waste Code	Maximum Amount*	Type of Containers
HWMU Non-Free Liquid Container Storage	Hazardous waste metals-bearing sludges and debris containing listed hazardous waste F006 and F019 and characteristic waste codes with no free liquids.	Compatible solids including D004, D005, D006, D007, D008, D009, D010, D011, F006 and F019.	Must meet maximum container and facility storage requirements.	DOT-approved shipping containers: Intermediate bulk containers; roll-off containers; corrugated boxes with covers on pallets; metal or plastic drums with locking lids; and polyethylene bulk bins with fitted covers. Containers may or may not have liners.
HWMU Free Liquid Container Storage *	Hazardous waste metals-bearing and/or corrosive decontamination fluids, hazardous debris wash water and rinsate, clean-up fluids from releases and groundwater monitoring fluids containing listed hazardous waste F006 and F019 and characteristic waste codes.	Compatible liquids including D004, D005, D006, D007, D008, D009, D010, D011, F006, F019 and D002.	300 gallons maximum.	DOT-approved shipping containers meeting POP standards. 55-gallon drums or 300-gallon storage or treatment containers.
Hazardous Debris Container Treatment Unit Container Storage	Non-shreddable equipment and debris (metal, glass, plastic, and rubber) that is separated from hazardous waste metals-bearing sludges and cannot be shredded that is contaminated with listed waste codes F006 and F019 and characteristic waste codes. This debris also includes equipment resulting from waste operations (e.g., maintenance). No free liquids are allowed.	Compatible solids including D004, D005, D006, D007, D008, D009, D010, D011, F006 and F019.	Must meet maximum container and facility storage requirements.	300-gallon totes (or equivalent containers) for on-site management of debris. DOT-approved shipping containers meeting POP standards or roll-off bins received or for transport off-site for debris or other wastes.
Hazardous Debris Container Storage	Shreddable debris (i.e., filters, PPE) that is separated from hazardous waste metals-bearing sludges and can be shredded, which is contaminated with listed waste codes F006 and F019 and characteristic waste codes. No free liquids are allowed.	Compatible solids including D004, D005, D006, D007, D008, D009, D010, D011, F006 and F019.	Must meet maximum container and facility storage requirements.	300-gallon polyethylene totes (or equivalent containers) for on-site management of debris.
* The hazardous waste containerized storage capacity is not to exceed 50 cubic yards. Of the total amount allowed, a maximum of 300 gallons of free-liquid facility generated waste may be stored in containers.				

- (b) The Permittee is prohibited from storing or treating hazardous waste in containers that is not identified in permit Condition III.B.1(a).

2. Container Storage Description and General Requirements

The Permittee may store the following wastes in USDOT-approved containers on the HWMU, subject to the terms of this Permit and as follows:

- (a) Facility container storage is located within the HWMU. See Exhibit 1-4 (Attachment 1, Facility Description) for the general location of container storage, although the storage containers may be located anywhere on the HWMU to provide flexibility with management of waste on the HWMU.
- (b) A maximum of 50 cubic yards of non-liquid containerized hazardous waste may be stored on the HWMU. Container storage may include incoming hazardous waste, hazardous shreddable and non-shreddable debris and facility-generated hazardous waste or debris.
- (c) A maximum of 300 gallons of the container storage capacity may be used for facility-generated free-liquid container storage, including: treatment fluids; decontamination wash water and rinsate; emergency-related clean-up fluids; when a required waste determination in accordance with Permit Attachment 5 (“Waste Analysis Plan”) shows that the free liquid is hazardous waste.
[A.A.C. R18-8-264.A (40 CFR 264.601) and A.A.C. R18-8-270.A, M, N and O (40 CFR 270.32)]
- (d) Shreddable hazardous waste debris (e.g., personal protective equipment (PPE), filters) that has been separated out from the incoming recyclable materials loads received from generators is stored in 300-gallon totes or equivalent containers on the HWMU until treated in the MSU. The totes must be closed except for adding or removing debris.
- (e) The non-shreddable equipment and debris (e.g., metal, glass, plastic, and rubber) that has been separated out from the recyclable materials loads received from the generators is accumulated in 300-gallon totes or equivalent containers. It is then treated using the Hazardous Debris Container Treatment Unit process (Permit Attachment 3, Section 3.1.7).
- (f) Other containerized hazardous debris may include: spent filter media from the TCU, mechanical blender and on-site Waste Water Treatment Unit (WWTU); HWMU, TCU, MSU and mechanical blender treatment, operation and maintenance materials and residue; WWTU residue; emergency-related clean-up material and residue; and closure-related debris and residue.
- (g) Other containerized hazardous debris may include: spent filter media from the TCU, mechanical blender and on-site Waste Water Treatment Unit (WWTU); HWMU, TCU, MSU and mechanical blender treatment, operation and maintenance materials and residue; WWTU residue;

emergency-related clean-up material and residue; and closure-related debris and residue.

- (h) The storage of materials on the HWMU is limited to only those chemicals that are known to be compatible with the concrete sealant, crack fill material and joint caulk used on the HWMU as evaluated by a qualified Arizona registered engineer.

3. Waste Maximum Container Storage Volumes

The Permittee shall not store more than 50 cubic yards of containerized hazardous waste on the HWMU at any time. This includes a maximum of 300 gallons of free-liquid hazardous waste in containers.

4. Waste Segregation, Labels, and Container Types

- (a) The Permittee shall store hazardous waste only in US Department of Transportation (DOT) Performance Oriented Packaging (POPs)-approved containers as shown in Permit Condition III.B.1 for incoming and outgoing hazardous waste.
- (b) Hazardous debris managed within the HWMU is stored in 300-gallon polyethylene totes or equivalent containers.
- (c) All hazardous waste containers shall have a “Hazardous Waste” or “Hazardous Debris” label to indicate their contents even when only managed within the HWMU.
- (d) All hazardous waste containers that are used to accumulate hazardous waste shall have an accumulation start date.
- (e) All hazardous waste containers used to accumulate debris separated from the hazardous waste or debris generated within the process should be labeled with the date of incoming acceptance onto the HWMU.
- (f) Beryllium-containing material shall be separated from the rest of the F006 waste in accordance with Permit Attachment 3, Material Handling, Treatment and Records, Section 3.1.1. Introductory worker training must include the beryllium-related module listed in Attachment 8, Training Program, Attachment 8-B, under introductory training of employment.

5. Container Configuration, Spacing, Stacking, Location

The Permittee shall store containers in the configurations shown on the plans contained Attachment 1 (“Facility Description”), and as described in Attachment 3 (“Material Handling, Treatment and Records”), Attachment 4 (“Miscellaneous Units Description”), Attachment 5 (“Waste Analysis Plan”), Attachment 6 (“Inspection Schedule”), and Attachment 7 (“Procedures to Prevent Hazards”).

- (a) Maintain at least 24 inches of space between containers and other aisle spacing considerations required by Permit Attachment 7 ("Preparedness and Prevention").
- (b) Container stacking height is limited to no more than two containers per stack. Should a stack consist solely of 5-gallon pails, then the stack shall not exceed 4 stacked containers in height.
- (c) Containers shall be placed on pallets and moved with hand carts, forklift trucks equipped with drum grappling tongs or forks, and pallet jacks in and out of the HWMU.

6. Further Storage and Land Disposal Prohibitions

- (a) Storage of accumulated hazardous waste in containers shall not exceed one year from its date of receipt or start of accumulation, as listed in A.A.C. R18-8-268 (40 CFR 268.50). If the Permittee stores waste beyond one year solely for the purpose of accumulation of such quantities of hazardous waste as are necessary to facilitate proper recovery, treatment or disposal, the Permittee shall submit a written justification to the ADEQ Contact for each waste that exceeds the storage time limit. The start date for accumulation for hazardous debris is the date when the debris is determined to require storage, treatment or disposal.
- (b) The Permittee is prohibited from storing the following wastes:
 - (i) Medical waste as defined in A.R.S. §49-701.19 or biohazardous medical waste (see A.A.C. R18-13-1401(5)) unless Solid Waste Facility Plan approval is obtained pursuant to A.R.S. §49-762 and A.A.C. R18-13-1410;
 - (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);
 - (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; and
 - (iv) DOT Class 1.1, 1.2, and 1.3 explosives.
[A.A.C. R18-8-264.A (40 CFR 264.16, 264.31, 264.177), and 270.A (40 CFR 270.32(b))]

C. CONDITION OF CONTAINERS

- 1. In addition to routine documented inspections, containers are to be visually inspected each operating day for signs of leakage, deterioration, or incompatibility amongst the container and its contents in accordance with Attachment 7 ("Procedures to Prevent Hazards").

[A.A.C. R18-8-264.A (40 CFR § 264.175(b)(5))]

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

[A.A.C. R18-8-264.A (40 CFR 264.171)]

D. COMPATIBILITY OF WASTE WITH CONTAINERS

The Permittee shall assure that the ability of the container to contain the waste is not impaired, as required.

[A.A.C. R18-8-264.A (40 CFR 264.172)]

E. MANAGEMENT OF CONTAINERS

1. The Permittee shall keep all containers closed during storage, except when it is necessary to add or remove waste, and shall not open, handle, or store containers in a manner which may rupture the container or cause it to leak.

[A.A.C. R18-8-264.A (40 CFR 264.173)]

2. Any containers or inner liners which formerly held acutely hazardous waste are to be triple-rinsed with a suitable solvent capable of removing the residual acute hazardous waste, or the container or inner liner is to be disposed of as a regulated hazardous waste.

[A.A.C. R18-8-264.A (40 CFR 261.7(b)(3))]

3. All containers are to be managed in accordance with the emission control requirements provided at 40 CFR 264 Subpart CC, if applicable.

[A.A.C. R18-8-264.A (40 CFR 264.179)]

F. CONTAINMENT SYSTEMS

1. The Permittee shall maintain the secondary containment system for the Hazardous Debris Container Treatment Unit process to be free of cracks or gaps and sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed.

[A.A.C. R18-8-264.A (40 CFR § 264.175)]

2. Portable containment systems shall be used for containers holding free-liquids and shall be maintained to be free of cracks or gaps and sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed.

[A.A.C. R18-8-264.A (40 CFR 264.601) and A.A.C. R18-8-270.A, M, N
and O (40 CFR 270.32)]

G. INSPECTION SCHEDULES AND PROCEDURES

1. The Permittee shall inspect the containers and container storage areas in accordance with the inspection schedule and procedures contained in Permit Part IV.C, Permit Part IV.F, Permit Attachment 6 (“Inspection Schedule”), and Attachment 7 (“Procedures to Prevent Hazards”), to detect leaking containers and units, and deterioration of containers and units and the containment system caused by corrosion and other factors.

[A.A.C. R18-8-264.A (40 CFR § 264.174) and Permit Attachments 6 and 7]

2. The Permittee shall inspect each container storage area on each operating day for visible signs of release, and shall remove all visible signs of residue from the floor surface each operating day. If there are extenuating circumstances where it is not practical to remove the residue within one (1) operating day of discovery, the Permittee will document the situation with an explanation in the operating record.

[A.A.C. R18-8-264.A (40 CFR § 264.175(b)(5)) and Permit Attachment 6]

H. RECORD KEEPING

1. The Permittee shall place the results of all waste analyses and trial tests and any other documentation showing compliance with the requirements of Permit Conditions III.K.1 and III.K.2 and A.A.C. R18-8-264.A (40 CFR 264.17(b) and 264.177) in the facility operating record.
2. The Permittee shall place the results of all waste analyses and tests and any other documentation showing compliance with requirements of Permit Conditions III.B.1 and III.B.5 and Permit Attachment 5 (“Waste Analysis Plan”), in the facility operation record, including, but not limited to, the variance, pilot shipments, incoming shipments and pre-acceptable screening.

[A.A.C. R18-8-264.A (40 CFR 264.73)]

I. CLOSURE

At closure of the container storage and treatment areas, the Permittee shall remove all hazardous waste and hazardous waste residues from the containment system, in accordance with the procedures in the Closure Plan, Permit Attachment 11 (“Closure Plan”), including Permit Attachment 11-A (“Equipment Decontamination and Removal Plan”).

[A.A.C. R18-8-264.A (40 CFR 264.178)]

J. SPECIAL CONTAINER PROVISIONS FOR IGNITABLE OR REACTIVE WASTE

1. The Permittee shall not locate shipments or 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 ignitable or reactive waste and follow the procedures specified in Permit

Attachment 5 (“Waste Analysis Plan”), Section 5.2, Attachment 7 (“Procedures to Prevent Hazards”), Section 7.4, Attachment 8 (“Training Plan”) and Attachment 10 (“Contingency Plan”).

[A.A.C. R18-8-264.A (40 CFR 264.17(a) and 264.176)]

3. The Permittee shall locate containers holding water reactive wastes in areas not subject to water contact.

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

K. SPECIAL CONTAINER PROVISIONS FOR INCOMPATIBLE WASTE

1. 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))]

2. 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))]

3. The Permittee shall separate containers of incompatible wastes.

[A.A.C. R18-8-264.A (40 CFR 264.177(c))]

L. HAZARDOUS DEBRIS CONTAINER TREATMENT UNIT – QUANTITY LIMITATIONS

1. The Permittee is permitted to treat three short tons per hour maximum of solid hazardous waste in the Hazardous Debris Container Treatment Unit process.

[A.A.C. R18-8-270.A (40 CFR 270.13)]

2. The Permittee shall pump spent acid solution and rinse water to the on-site WWTU.

**PART IV – HAZARDOUS WASTE TREATMENT AND STORAGE IN SUBPART X –
MISCELLANEOUS UNITS**

A. SUBPART X – MISCELLANEOUS UNIT SUMMARY

This permit authorizes the treatment and storage of hazardous waste in Subpart X – Miscellaneous Units (“Subpart X Units”) in accordance with R18-8-264.A [40 CFR 264, Subpart X (40 CFR 264.601 – 603)]. Treatment includes solar and/or thermal drying, shredding, blending and debris decontamination. The accepted incoming hazardous wastes are compatible solids including D004, D005, D006, D007, D008, D009, D010, D011, F006 and F019. The Subpart X Units are:

1. Hazardous Waste Management Unit (HWMU)

The HWMU is where hazardous waste is treated and stored prior to shipment off-site to smelters. This is an approximately 300 feet by 570 feet concrete pad (approximately four acres) bounded by a concrete-filled masonry containment berm. Hazardous waste is blended and dried using passive solar drying. The HWMU is located in the central portion of the facility. It has an overhead fabric mesh canopy supported by steel columns designed for wind reduction. There is a railroad spur along the east side for outgoing material. The area is engineered such that drainage will flow towards the south end where five stormwater pick-up points are located, which allow for pumping of fluid to the facility’s on-site WWTU.

For additional information, see Attachment 1, Site Plan SP-S01 and Exhibit 1-4, Permit Attachment 3, Section 3.1.2, Permit Attachment 4, Section 4.1.1. Permit Attachment 4 describes the HWMU details.

2. Thermal Concentrating Unit (TCU)

The TCU is where hazardous waste is thermally dried and then blended on the HWMU. The TCU is located in the northwest corner of the HWMU. It is a natural gas fired fluidized bed drying system with a baghouse filter and secondary filtration unit to control emissions. It is used when conditions are not conducive for passive thermal drying on the HWMU.

For additional information, see Permit Attachment 1, Site Plan SP-S01 and Exhibits 1-3 and 1-4, Permit Attachment 3, Section 3.1.5 and Permit Attachment 4, Section 4.1.2.

3. Mechanical Shredding/Size Reducer Unit (MSU)

The MSU is where debris is shredded prior to adding it back into the waste stream on the HWMU. The MSU is a mechanical shredder located in the northwest corner of the HWMU, east of the TCU. This unit is used to shred filter media and other shreddable debris that has been separated out from hazardous waste loads received from the generators, as well as facility-generated hazardous debris (i.e.,

PPE). The shredded materials are returned to the recyclable material on the HWMU.

For additional information, see Permit Attachment 1, Facility Description, Exhibits 1-1 and 1-4, Permit Attachment 3, Section 3.1.3, Attachment 4, Sections 4.1.3 and 4.3, and Permit Attachment 5, Section 5.2.4.

4. Mechanical Blender

The mechanical blender unit is where hazardous waste may be blended, as an alternative to manual blending on the HWMU. The mechanical blender is located in the northwest corner of the HWMU, east of the TCU.

For additional information, see Permit Attachment 1, Facility Description, Site Plan SP-S01 and Exhibits 1-2 and 1-4, Permit Attachment 3, Section 3.1.4, and Permit Attachment 4, Sections 4.1.4 and 4.3.

An additional treatment process, Hazardous Debris Container Treatment Unit, is conducted on the HWMU and described in Part III of this Permit. Container storage is allowed on the HWMU, and is also described in Permit Part III.

All of the treatment processes and container storage are located on the HWMU.

The Permittee's Subpart X Units' descriptions, designs and plans are included in Permit Attachments 1 ("Facility Description"), 3 ("Material Handling, Treatment, and Records"), and 4 ("Miscellaneous Unit Description"), and are found in Appendices A through K (Appendices L through S are confidential) of the permit application. Regulations under A.A.C. R18-8-264.A (40 CFR 264 Subpart X) apply to these units.

B. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

1. The Permittee may store and treat the following hazardous wastes in Subpart X Units, subject to the terms of this Permit, its attachments and appendices and as described in Table IV-A, below.
2. The Permittee is prohibited from storing or treating hazardous waste that is not identified in Permit Condition IV.B.1.

Table IV-A Summary of Subpart X Unit Treatment and Storage

Unit or Process	Description of Hazardous Waste	U.S. EPA Hazardous Waste Code	Maximum Amount *
HWMU	Hazardous waste – Listed hazardous waste metals-bearing sludges and shredded debris containing F006 and F019 and characteristic waste codes. No free-liquids are accepted as incoming waste. A limited amount of facility-generated free-liquid container storage is permitted (see Permit Part III).	Compatible solids including D004, D005, D006, D007, D008, D009, D010, D011, F006 and F019.	Maximum of 34,191 cubic yards (28,032 tons) per year may be treated Maximum of 4634.9 cubic yards (approximately 3,800 tons) may be stored at a time.
TCU	Hazardous waste – Listed hazardous waste metals-bearing sludges containing F006 and F019 and characteristic waste codes.	Compatible solids including D004, D005, D006, D007, D008, D009, D010, D011, F006 and F019.	Six short tons per hour maximum may be treated (20,592 tons/year).
MSU	Hazardous waste – Listed hazardous waste metals-bearing debris containing F006 and F019 and characteristic waste codes.	Compatible solids including D004, D005, D006, D007, D008, D009, D010, D011, F006 and F019.	Two short tons per hour maximum may be treated (416 tons/year).
Mechanical Blender	Hazardous waste – Listed hazardous waste metals-bearing sludges and debris containing F006 and F019 and characteristic waste codes.	Compatible solids including D004, D005, D006, D007, D008, D009, D010, D011, F006 and F019.	Four short tons per hour maximum may be treated (1,248 tons/year).
* The total facility-wide hazardous waste, material and debris storage limit on the HWMU is 4,684.9 cubic yards (3,800 tons), which includes a maximum of 50 cubic yards of containerized storage, 300 gallons of which may be facility-generated free-liquid container storage.			

C. DESIGN, CONSTRUCTION AND OPERATING REQUIREMENTS

1. Subpart X Units

(a) HWMU

- (i) The Permittee shall maintain the existing liner so as to prevent any migration of wastes out of the HWMU, in accordance with the design plans and specifications contained in Permit Attachment 4 (“Miscellaneous Units Description”), Permit Attachment 5 (“Waste Analysis Plan”), Permit Attachment 7 (“Procedures to Prevent Hazards”) and Permit Attachment 15 (“Concrete Management Plan”).
- (ii) The Permittee shall operate and maintain the run-on control system in accordance with the design plans, specifications and operating practices contained in Permit Attachment 4 (“Miscellaneous Units Description”) and Permit Attachment 7 (“Procedures to Prevent Hazards”). This control system must be capable of preventing flow onto the active portion of the HWMU during peak discharge from at least a 25-year 24-hour storm event.

[A.A.C. R18-8-264.A (40 CFR 264.251(c))]

- (iii) The Permittee shall operate and maintain a run-off management system in accordance with the design plans, specifications and operating practices contained in Permit Attachment 4 (“Miscellaneous Units Description”) and Permit Attachment 7 (“Procedures to Prevent Hazards”) and Attachment 19 (“Stormwater Calculations”). This management system must be capable of collecting and controlling at least the water volume resulting from a 25-year 24-hour storm event.
[A.A.C. R18-8-264.A (40 CFR 264.251(d))]
- (iv) The Permittee is permitted to treat a maximum of 34,191 cubic yards (28,032 tons) per year through passive solar drying on the concrete pad of the HWMU.
- (v) The Permittee is permitted to store a maximum of 4,634.9 cubic yards of un-containerized hazardous waste on the HWMU, and up to 50 cubic yards of containerized hazardous waste.
- (vi) Free-liquids are not accepted for management on the HWMU, with the exception of facility-generated free-liquids or free liquids used in the Hazardous Debris Container Treatment Unit process. All containers containing free liquid require additional secondary containment (e.g., portable secondary containment).
- (vii) The Permittee must inspect the HWMU and repair or replace slabs if they are compromised (e.g., cracks, deterioration) in accordance with Permit Attachment 4, Section 4.4, Attachment 7, Section 7.3.3, and Attachment 15 (“Concrete Management Program”).
- (viii) All hazardous waste and other materials stored on the HWMU must be compatible with the containment including concrete sealant, crack fill material and joint caulk. If a spill occurs from containers holding any incompatible material, the spill must be cleaned up immediately upon discovery followed by inspection of the concrete surface, joints and cracks in accordance with Permit Attachment 3, Section 3.1.7. Repairs will be made in accordance with Permit Attachment 4, Section 4.4 and Permit Attachment 6, Sections 6.3, 6.4 and 6.5.
- (ix) The Permittee shall cover or otherwise manage the HWMU to control wind dispersal of particulate matter in accordance with the methods contained in this Permit Part and Permit Attachment 3 (“Material Handling, Treatment and Records”), Permit Attachment 4 (“Miscellaneous Units Description”) and Permit Attachment 7 (“Procedures to Prevent Hazards”).

- (x) HWMU sweeping is permitted from 10 a.m. through 2 p.m. and 5 p.m. through 11 p.m., for a maximum of nine (9) hours per operating day and up to five (5) days per week.
- (xi) HWMU sweeping must be done by a vacuum-type mobile sweeper with a high-efficiency filter.
- (xii) Contents of the mobile sweeper must be discharged into a dust prevention enclosure.
- (xiii) The side brush on the mobile sweeper may be used only when necessary.
- (xiv) Fabric mesh canopy doors must be closed when not in use.
- (xv) Raking and depositing activities are permitted on the HWMU from 6 a.m. through 5 p.m., eleven (11) hours per operating day maximum and up to six (6) days per week.
- (xvi) Truck unloading is permitted from 6 a.m. through 12 p.m. each operating day, for a maximum of six (6) hours per operating day and up to six (6) days per week (312 days per year). The maximum unloading rate shall be 40 tons per hour and no more than 54,600 tons per year.
- (xvii) The Permittee must clean truck roll-off interiors, spill plates, wheel wells and tires with water spray, and must examine and ensure all tires and wheel wells are free of residue prior to allowing any vehicle to leave the HWMU. The loading/unloading areas must be cleaned once the truck leaves. Any rinsate accumulated on the pad, in the sumps or in the stormwater/rainwater collection areas must be transferred to the WWTU collection area immediately.
- (xviii) Loader buckets must be kept low to the ground when unloading material.
- (xix) Railcar loading is permitted from 4 p.m. through 12 a.m. each operating day, for a maximum of eight (8) hours per operating day and up to six (6) days per week (312 days per year). The maximum loading rate is forty (40) tons per hour into a maximum of three (3) railcars per operating day, for up to 100 tons each operating day. The maximum annual railcar loading shall be 24,750 tons into a maximum of 275 rail cars per year.
- (xx) The Permittee shall clean railcar interiors after receiving loads with water spray and clean the loading/unloading area around the rail spur after receiving and shipping loads with a sweeper prior to

leaving the HWMU. Rinsate must be transferred to the on-site WWTU immediately.

- (xxi) Any hazardous waste generated by the Permittee that is treated on the HWMU must meet the conditions of the variance, Permit Attachment 2 (“Variance Requirements”) and Permit Attachment 16 (“U.S. EPA Variance”).
- (xxii) Flooring and berms shall be maintained free of cracks, holes, fissures, or other surface anomalies that may result in the migration of wastes or materials to the surface soil, sub-surface soil or groundwater.

[A.A.C. R18-8-264.A (40 CFR 264.251(j)), A.A.C. R18-8-260.A, E, and F (40 CFR 260.10, *Treatment*) and A.A.C. R18-8-261.A (40 CFR 261.2(a)(1)), A.A.C. R18-8-264.A (40 CFR 264.601 and 602) and A.A.C. R18-8-270.A, M, N and O (40 CFR 270.32)]

(b) TCU

- (i) The Permittee is permitted to treat a maximum of six short tons per hour (20,592 tons per year) for eleven (11) hours per operating day maximum and up to six (6) days per week (312 days per year) through the TCU;
- (ii) The Permittee is permitted to operate the TCU from 6 a.m. through 5 p.m. per operating day.
- (iii) The Permittee shall ensure the baghouse and secondary filtration units are in place and operational while the TCU is operating. These filters must be properly maintained.
- (iv) The Permittee shall add agglomerating agent as needed to hazardous waste discharged from the TCU in order to minimize the release of hazardous waste in fugitive air emissions.

[A.A.C. R18-8-264.A (40 CFR 264.601 and 264.602), A.A.C. R18-8-270.A (40 CFR 270.31) and A.A.C. R18-8-270.A, M, N and O (40 CFR 270.32)]

(c) MSU

- (i) The Permittee is permitted to treat two short tons per hour maximum (416 tons per year maximum) for up to four hours per week (208 hours per year) through the MSU;
- (ii) The Permittee is permitted to operate the MSU from 8 a.m. through 5 p.m.
- (iii) The Permittee must operate the MSU with the filter in place. The filter must be maintained to ensure an emissions control efficiency at least 90%.

- (iv) When the MSU is shut down for servicing or when it is not in use, the Permittee must remove visible debris and place it in a container that will be closed, except when adding or removing waste. The container will be labeled as Hazardous Waste and stored on the HWMU.

[A.A.C. R18-8-264.A (40 CFR 264.601 and 264.602), A.A.C. R18-8-270.A (40 CFR 270.31) and A.A.C. R18-8-270.A, M, N and O (40 CFR 270.32)]

(d) Mechanical Blender

- (i) The Permittee is permitted to treat a maximum of four short tons per hour (1,248 tons maximum per year) for no more than six hours per week (312 hours per year maximum) through the mechanical blender.
- (ii) The Permittee is permitted to operate the mechanical blender from 8 a.m. through 5 p.m.
- (iii) The Permittee shall operate the mechanical blender with the maintained filter in place, even though no control efficiency has been determined.
- (iv) The Permittee shall add agglomerating agent to hazardous waste in the mechanical blender in order to minimize the release of hazardous waste in fugitive air emissions.

[A.A.C. R18-8-264.A (40 CFR 264.601 and 264.602), A.A.C. R18-8-270.A (40 CFR 270.31) and A.A.C. R18-8-270.A, M, N and O (40 CFR 270.32)]

2. Waste Segregation and Identification

- (a) The Permittee must manage the hazardous waste on the HWMU to ensure the piles are segregated and are tracked through the entire process in accordance with Permit Attachment 2, Variance Requirements, Section 2.1, Permit Attachment 3, Section 3.1.1, Permit Attachment 5, Sections 5.4 and 5.6 and Attachment 16. Each shipment is designated with a shipment number to track the specific lots/piles, including tracing them to specific analytical results.
- (b) Beryllium-containing material shall be separated from the rest of the F006 waste in accordance with Permit Attachment 3 ("Material Handling, Treatment and Records"), Section 3.1.1. Introductory worker training must include the beryllium-related module listed in Attachment 8 ("Training Program"), Attachment 8-B, under introductory training of employment.

3. Further Storage and Land Disposal Prohibitions

- (a) Storage of accumulated hazardous waste or hazardous debris on the HWMU shall not exceed one year from its date of receipt, as listed in

A.A.C. R18-8-268 (40 CFR 268.50). The receipt date for hazardous debris is the date when the debris is accepted for storage or treatment with requirements in accordance with Permit Part III.B(4).

- (b) The Permittee is prohibited from storing the following wastes:
 - (i) Medical waste as defined in A.R.S. §49-701.19 or biohazardous medical waste (see A.A.C. R18-13-1401(5)) unless Solid Waste Facility Plan approval is obtained pursuant to A.R.S. §49-762 and A.A.C. R18-13-1410;
 - (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);
 - (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;
- (c) Materials incompatible with the containment system, structure or materials (e.g., acidic solutions) without additional secondary containment (e.g., portable secondary containment); and

4. Annual Operations Report

By April 1 of each calendar year the Permittee must submit an Annual Operations Report providing information and data that support that operation limitations identified in Part IV.C.1 were adhered to during the previous year.

D. MANAGEMENT OF SUBPART X UNITS

- 1. The Permittee shall manage the Subpart X units to store and treat hazardous waste, hazardous wastes and hazardous debris in a manner which will not cause a release.

[A.A.C. R18-8-264.A (40 CFR 264.601)]
- 2. The Permittee shall manage Subpart X units in accordance with emission control requirements provided in Permit Attachment 4 (“Miscellaneous Units Description”), Sections 4.3 and 4.5.2 and Permit Attachment 7 (“Procedures to Prevent Hazards”), Section 7.3.6.
- 3. The Permittee shall operate and maintain the HWMU, TCU, MSU and mechanical blender to minimize the release of hazardous waste from the facility.
- 4. The Permittee must apply agglomerating agents to the hazardous waste on the HWMU, at the discharge of the TCU and during operating of the mechanical

blender so as to minimize the release of hazardous waste, in accordance with Permit Attachment 3, Material Handling, Treatment and Records, Sections 3.1.5 and 3.1.6 and Permit Attachment 7, Procedures to Prevent Hazards, Section 7.3.6.

[A.A.C. R18-8-264.A (40 CFR 264.251(j)), A.A.C. R18-8-264.A (40 CFR 264.601 and 602), A.A.C. R18-8-270.A (40 CFR 270.31), and A.A.C. R18-8-270.A, M, N and O (40 CFR 270.32)]

5. The Permittee must ensure agglomerating agents used on the HWMU and in the TCU and mechanical blender, are compatible with the containment structure. New agglomerating agents other than those specified in Permit Attachment 3 ("Material Handling, Treatment, and Records"), 3.1.6, are prohibited and must be approved by ADEQ. A Class 1 permit modification request with Director approval is required to be submitted.
6. The Permittee must conduct weekly opacity testing of the TCU stack and discharge location(s) when the TCU is in operation. Opacity must be an average of 5% or less as determined by a six-minute observation using U.S. EPA Reference Method 9 (see Permit Attachment 20). TCU shutdown is required in the event of an exceedance at the stack or discharge.

[A.A.C. R18-8-264.A (40 CFR 264.601 and 264.602), A.A.C. R18-8-270.A (40 CFR 270.31) and A.A.C. R18-8-270.A, M, N and O (40 CFR 270.32)]
7. The Permittee must submit an Annual TCU Operations Report as required in accordance with Part II.J. It must be submitted by no later than April 1 of each calendar year. It shall contain a list of TCU shutdowns due to exceedances of the opacity limitation, or resulting from malfunctions. A brief description of the condition that resulted in a shutdown must be included with the date, time, duration, emission point where the excess emission occurred, the magnitude of the emission exceedance if applicable, and the action(s) taken to correct the malfunction prior to start-up.
8. The Permittee must conduct an emissions test of the TCU stack (stack test) within five years of Permit Issuance. Particulates shall be characterized for antimony, arsenic, barium, beryllium, cadmium, total chromium (as Cr III), hexavalent chromium, lead, nickel, selenium, silver, and zinc.
 - (a) The Permittee shall submit a stack test plan for Director approval 180 calendar days prior to the date of the stack test. The stack test plan shall follow the information requirements of Exhibit 1.2-1 of the Arizona Testing Manual for Air Pollutant Emissions, Revision F (March 1992).
 - (b) The Permittee shall submit a stack test report summarizing the results of the stack test within ninety (90) days of completion of the stack test. The stack test report shall follow the requirements of Exhibit 1.4.3-1 of the Arizona Testing Manual for Air Pollutant Emissions, Revision F (March 1992).

[A.A.C. R18-8-264.A (40 CFR 264.601 and 264.602), A.A.C. R18-8-270.A (40 CFR 270.31) and A.A.C. R18-8-270.A, M, N and O (40 CFR 270.32)].

E. CONTAINMENT SYSTEMS

1. The Permittee shall maintain the HWMU and containment systems in accordance with the descriptions and requirements contained in Attachment 4 (“Miscellaneous Units Description”), Section 4.4, Permit Attachment 5 (“Waste Analysis Plan”), Section 5.2.1, and Attachment 7 (“Procedures to Prevent Hazards”), Section 7.3.3.
[A.A.C. R18-8-264.A (40 CFR § 264.601)]
2. The Permittee must ensure HWMU and containment systems are sealed with a penetrant sealant and fill materials (e.g., caulk and/or joint/crack fill material) in accordance with Permit Attachment 4, Sections 4.4.2 and 4.4.3 and Permit Attachment 6, Sections 6.3, 6.4 and 6.5.
3. The Permittee shall inspect the HWMU and all containment systems on a weekly basis and sumps and stormwater/rainwater collection areas each operating day, in accordance with Part IV.G and Permit Attachment 6 (“Inspection Schedule”), and Permit Attachment 7 (“Procedures to Prevent Hazards”). Accumulated liquids in the sumps and stormwater/rainwater collection areas shall be removed each operating day. If there are extenuating circumstances where it is not practical to remove accumulated precipitation due to lengthy storm events (e.g., it may take up to 40 hours to remove precipitation from a 24-hour, 25-year storm), the Permittee will document the situation with an explanation in the operating record.
[A.A.C. R18-8-264.A (40 CFR 264.601 and 602) and A.A.C. R18-8-270.A, M, N and O (40 CFR 270.32)]
4. For major concrete replacement (greater than 70 cubic yards), the Permittee must provide a 7-calendar-day advance notification to ADEQ and ensure the work is performed under a qualified Arizona registered engineer in accordance with Permit Attachment 4 (“Miscellaneous Units Description”), Section 4.4.3 and 40 CFR § 264.601 and 602.
5. The Permittee must submit an Annual Concrete Management Report in accordance with the Concrete Management Program in accordance with Permit Attachment 6 and Permit Attachment 15 no later than April 1 of the following year. The report will include the results of the Concrete Management Program sampling and analysis activities. Within thirty (30) calendar days of the receipt of a final laboratory report, the Permittee will notify ADEQ in writing when a constituent concentration exceeds the action criteria listed in Table 2-1 of Attachment 15 (“Concrete Management Program”). Upon exceedance of Stage 3 action criteria, the Permittee must remove impacted soil or prepare contingent closure and/or post-closure plans as a Class 1 permit modification request with Director approval.
6. Damage to the Subpart X Units - Should the Subpart X Units become damaged during operation at the facility, resulting in releases or potential releases, the Permittee shall immediately remove the unit from service and verbally notify the

ADEQ Contact of the damaged status of the unit in accordance with Part I.E.6 (Proper Operation and Maintenance) of this Permit. A written notification shall be filed with the ADEQ Contact within five (5) calendar days of the event. This notification shall document the event damaging the unit, and describe the extent of the physical damage to the unit. The Permittee shall also provide a brief summary of the manner/methods anticipated to be employed in repairing the unit, an estimate on the length of time the repair will take, and/or notification of the removal of the unit from service. If it is the Permittee's intent to remove the unit from service permanently, the Permittee must receive an approval from the Director of a permit modification request in accordance with Part I.H (Permit Modifications) of this Permit, and must develop and implement a partial closure plan for that unit.

"Damage" is defined as any physical deformation that compromises the structural soundness and/or integrity of the unit. With regard to the HWMU, "damage" includes physical or chemical deformation that compromises the integrity and capacity of the HWMU and containment structure and systems or integrity of the mesh fabric canopy structure and dust control capability. Damage also includes any deformation that compromises the TCU, MSU and mechanical blender systems, including the filter systems associated with them. Surficial cracks which are readily repaired and do not breach the HWMU and containment are not considered reportable damage under this provision; however, repair to such surficial cracks shall be made in accordance with Permit Attachment 4 ("Miscellaneous Unit Description"), Section 4.4, and Attachment 15 ("Concrete Management Plan").

[A.A.C. R18-8-264.A (40 CFR 264.601) and A.A.C. R18-8-270.A, M, N and O (40 CFR 270.32)]

F. INSPECTION SCHEDULES AND PROCEDURES

1. The Permittee shall inspect the HWMU each operating day in accordance with Permit Attachment 6 ("Inspection Schedule"), Section 6.3 and immediately after a storm event (for the purpose of this inspection requirement "immediately" means the start of the next operating day following the storm event, or after discovery during any weekend or holiday site check) to detect evidence of the following:
 - (i) Deterioration, malfunctions or improper operation of the run-on and run-off control system; and
 - (ii) Proper functioning of the wind dispersal control system.

[A.A.C. R18-8-264.A (40 CFR 264.251(j)), A.A.C. R18-8-264.A (40 CFR 264.601 and 602) and A.A.C. R18-8-270.A, M, N and O (40 CFR 270.32)]
2. The Permittee shall inspect the TCU, MSU and mechanical blender on a weekly basis and immediately after storms to detect evidence of deterioration, malfunctions or improper operation of the control systems.

A.A.C. R18-8-264.A (40 CFR 264.601 and 264.602), A.A.C. R18-8-270.A (40 CFR 270.31) and
A.A.C. R18-8-270.A, M, N and O (40 CFR 270.32)]

3. The Permittee shall adhere to the inspection schedule and procedures contained in Permit Attachment 6 (“Inspection Schedule”), and Permit Attachment 7 (“Procedures to Prevent Hazards”).

[A.A.C. R18-8-264.A (40 CFR § 264.602)]

4. The Permittee shall inspect and ensure flooring and berms of the HWMU are maintained free of cracks, holes, fissures, or other surface anomalies and deterioration of the concrete, sealant or fill materials that may result in the migration of wastes or materials to the surface soil, sub-surface soil or groundwater. Repairs and replacement shall be scheduled in accordance with Permit Attachment 4 (“Miscellaneous Unit Description”), Section 4.4 and Permit Attachment 6 (“Inspection Schedule”), Section 6.3.

5. The Permittee must inspect and maintain the fabric mesh canopy and support system to ensure effective wind dispersal control. The fabric mesh canopy doors must be closed unless in use. Within seven (7) calendar days of discovery, the Permittee shall commence the repair of any rip, tear, or other flaws, in the canopy that have an approximate linear dimension greater than six (6) inches. Repairs are made in accordance with Permit Attachment 6 (“Inspection Schedule”), Section 6.3. Details about the fabric mesh canopy are found in Attachment 1, Site Plan SP-S01 and Exhibit 1-4, Permit Attachment 4, Sections 4.1.1 and 4.3 and Permit Attachment 7 (“Procedures to prevent Hazards”), Section 7.3.6.

[A.A.C. R18-8-264.A (40 CFR 264.251(j)), A.A.C. R18-8-264.A (40 CFR 264.601 and 602) and A.A.C. R18-8-270.A, M, N and O (40 CFR 270.32)]

6. The Permittee must inspect the HWMU on all operating days for visible signs of leachate, including, but not limited to, spills, wash water, precipitation and liquids seeping from hazardous waste, and shall remove visible signs of the free-liquid from the floor surface, sumps and stormwater/rainwater collection areas each operating day in accordance with Permit Attachment 4 (“Miscellaneous Units Description”), Section 4.2.2 and Permit Attachment 6 (“Inspection Schedule”).

[A.A.C. R18-8-264.A (40 CFR 264.601 and 602) and A.A.C. R18-8-270.A, M, N and O (40 CFR 270.32)]

G. RECORDKEEPING

The Permittee shall record and maintain in the operating record for this Permit all monitoring, testing and inspection data compiled under the requirements of this permit.

[A.A.C. R18-8-264.A (40 CFR § 264.73 and 40 CFR § 264.601)]

H. CLOSURE

1. At closure of each storage or treatment unit, the Permittee shall follow the procedures in the Permit Attachment 11 (“Closure Plan”).

[A.A.C. R18-8-264.A (40 CFR § 264.601)]

2. If after closure, the Permittee finds that not all contaminated soils can be practically removed or decontaminated in accordance with the Closure Plan, then the Permittee shall close the Subpart X units and perform post-closure care following procedures in the contingency portions of Permit Attachment 11 ("Closure Plan") and Permit Attachment 15 ("Concrete Management Program").

I. SPECIAL PROVISIONS FOR IGNITABLE OR REACTIVE WASTE

1. The Permittee shall not place ignitable or reactive waste in the HWMU unless the procedures specified in Permit Attachment 5 ("Waste Analysis Plan"), Section 5.2, Attachment 7 ("Procedures to Prevent Hazards"), Section 7.4, Attachment 8 ("Training Plan"), and Attachment 10 ("Contingency Plan") are followed.
[A.A.C. R18-8-264.A (40 CFR 264.601)]
2. The Permittee shall not locate shipments or containers holding ignitable or reactive waste within 15 meters (50 feet) of the facility's property line. This includes any shipments awaiting disposition or assignment to an alternate destination due to non-compliance with the variance, pre-acceptance screening or incoming analysis in accordance with Attachment 5 that may include these waste codes.

[A.A.C. R18-8-264.A (40 CFR § 264.601)]

J. SPECIAL PROVISIONS FOR INCOMPATIBLE WASTE

1. The Permittee shall not place incompatible wastes, or incompatible wastes and materials in the same pile, unless the procedures described in Permit Attachment 5 ("Waste Analysis Plan"), Section 5.2, are followed.
[A.A.C. R18-8-264.A (40 CFR 264.257(a))]
2. The Permittee shall separate any piles of incompatible hazardous waste or other materials stored nearby in containers, or protect such the piles or materials by construction of a dike, berm, wall, or other similar device.
[A.A.C. R18-8-264.A (40 CFR 264.257(b))]
3. The Permittee shall not place hazardous wastes on the same base where incompatible wastes or materials were previously piled, unless the base has been decontaminated sufficiently to ensure compliance with A.A.C. R18-8-264.A (40 CFR 264.17(b)).
4. No corrosives shall be stored on the HWMU, with the exception of limited volumes, within additional secondary containment, described in Permit Parts III.A and III.F.

K. VARIANCE

1. The Permittee was granted a variance by U.S. EPA (Attachment 16 ("U.S. EPA Variance")). The conditions of the variance are as follows and must be adhered to by the Permittee:

- (a) Metal-bearing sludge F006 and F019 accepted by the facility from offsite and used in the production of the partially reclaimed concentrate materials must have a metals concentration level of no less than two percent on a dry weight basis, or an equivalent economic value in precious metals (*e.g.*, gold, silver, platinum, or palladium). In addition, the facility may only process two shipments of listed sludge materials that do not meet the two percent metals concentration level from a single generator within a fourteen (14) calendar day time period before taking action to ensure that subsequent shipments will meet the minimum metal content. Specifically, the Permittee may not accept more than one non-conforming shipment from a generator, unless the second nonconforming shipment is received within fourteen (14) calendar days following the first event. Thereafter, the Permittee may not accept additional materials from that generator until the Permittee determines that the generator's subsequent sludge shipments will meet the minimum metal content requirements of this condition.
- (b) The Permittee shall provide to ADEQ an annual audit, performed by an independent third party mutually acceptable to the Permittee and ADEQ, to be completed within the six months following the end of each calendar year. The scope of the annual audit will cover The Permittee's concentrate shipments during the year to certify that all shipments were: (1) Made to metal smelting facilities; (2) documented and shipped in accordance with all applicable U.S. Department of Transportation regulations; and (3) documented to have reached the designated destination. Reference Permit Part II.J, Permit Attachment 2 ("Variance Requirements"), Section 2.1, and Permit Attachment 16 ("U.S. EPA Variance").
- (c) The partially reclaimed concentrate materials must have a cyanide concentration of no greater than 590 ppm and may not be placed on the land at metal smelting facilities. Cyanide must be analyzed using method 9010 or 9012 found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", U.S. EPA Publication SW-846, as incorporated by reference in 40 CFR 260.11, with a sample size of 10 grams and a distillation time of one hour and fifteen minutes.
- (d) The Permittee must send a one-time notification of the variance and its conditions to any foreign country where metal smelters accepting The Permittee's concentrate are located. In addition, the Permittee must include on its material safety data sheet (MSDS) shipped with the concentrate a notification that the concentrate may contain up to 590 ppm cyanide and that low pH environments can result in the production of hydrogen cyanide gas.
- (e) To ensure that its customers handle the processed concentrates as valuable commodities in a manner that minimizes loss, the Permittee must place a provision stipulating no land placement of the materials in its contractual agreements with smelting facilities.

- (f) The variance takes effect at the point at which the concentrate is loaded for shipment.
- 2. In the event that the Permittee accepts non-variance qualified hazardous waste, a tracking system must be in place to separate the variance-qualified and non-variance-qualified waste streams from each other from receipt until the hazardous waste is shipped off-site. The system must include procedures for identifying and maintaining these hazardous wastes according to their qualification under the variance throughout the entire process and reporting capability to demonstrate compliance.
- 3. If a non-conforming load is received, the Permittee must notify the generator, determine if there has been a change to the generator's processes, and provide notification that any future shipments cannot be accepted until the Permittee determines that the generator's next shipment will meet the minimum metal-content requirement.

For waste that fails the variance criteria (i.e., after an initial sequence of non-conforming loads), the Permittee must analyze a new sample of the generator's sludge to verify compliance with the variance, before resuming shipments of the generator's waste stream. The next four loads of that waste stream from that generator will be placed on the HWMU, as a set-aside with appropriate labeling and segregation, until analysis is completed that demonstrates the waste stream passes the variance criteria. If all four loads pass the variance criteria, future loads from the generator will no longer be set aside on the HWMU, but will be managed as was the case prior to the initial non-conforming load. If, however, any one of the four loads fails the variance criteria, the Permittee must, first, determine within five (5) operating days either (a) to send the load as a hazardous waste to a smelter for recycling or (b) to reject the load in accordance with the procedures set forth in Permit Attachment 5 (Waste Analysis Plan), Section 5.3.2, and, second, suspend further shipments of that waste stream.

[A.A.C. R18-8-260.A and J (40 CFR 260.30 and 40 CFR 260.31) and
A.A.C. R18-8-261.A (40 CFR 261.2(a)(1))]

PART V – GROUNDWATER MONITORING

A. DETECTION MONITORING PLAN

1. The Permittee shall operate the Facility so as to prevent the migration of any hazardous constituents into the ground water.
[A.A.C. R18-8-264.A (40 CFR 264.251(b) and 601)]
2. The Permittee shall conduct groundwater monitoring, well field measurements, sampling, analysis, additional actions, and reporting according to parameters and frequencies specified in Permit Attachment 9 (“Groundwater Detection Monitoring Program (GDMP)”). The Permittee shall use this GDMP, which includes a quality assurance plan (QAP), until revisions of these plans are required and approved by ADEQ as necessary to comply with the requirements of A.A.C. R18-8-264.A, 40 CFR 264.97 and 264.99 [see R18-8-264.A (40 CFR 264.100(d))]. Revisions to these documents are considered modifications of this Permit pursuant to Permit Condition I.H of this Permit).
 - (a) If the Permittee believes the groundwater detection monitoring program no longer satisfies the requirements of the regulations, the Permittee shall, within ninety (90) calendar days of the determination, submit a Permit modification request requiring the Director’s approval, to make any appropriate changes to the program that will satisfy the regulations. The Permit modification request shall be submitted in accordance with Permit Condition I.H.
[A.A.C. R18-8-264.A (40 CFR 264.98(h))]
 - (b) Based on data collected from groundwater monitoring or other investigation results required by this Permit, the Permittee shall make changes to the GWMP as necessary in order to protect human health and the environment. Such changes may include the addition of monitoring wells or change to monitoring frequency.
[A.A.C. R18-8-101 (40 CFR 264.101)]

B. WELL LOCATIONS, INSTALLATION AND CONSTRUCTION

The Permittee shall maintain the existing groundwater monitoring system to comply with applicable requirements of A.A.C. R18-8-264.A (40 CFR 264 Subpart F), A.A.C. R18-8-270A (40 CFR 270.31) and as specified below.

1. The Permittee shall maintain groundwater monitoring wells at the locations specified on Table 9-6 in the GDMP (Permit Attachment 9). Well locations will be added as directed by ADEQ, or at the discretion of the Permittee, using installation methods and procedures approved by the Director. Wells may only be removed from the network or modified following the Director’s written approval.
2. All wells removed from the groundwater monitoring system shall be abandoned in accordance with procedures approved by the Arizona Department of Water

Resources. Well abandonment methods and certification shall be submitted to ADEQ within ninety (90) calendar days from the date the well is removed from the network.

3. Any changes to the GDMP must be made as a Permit modification request, requiring the Director's approval, and submitted in accordance with Permit Condition I.H.

C. GROUNDWATER SAMPLING AND ANALYSIS

The Permittee shall comply with the requirements of the GDMP (Attachment 9).

[A.A.C. R18-8-264.A (40 CFR 264.97(d) and (e))]

1. Groundwater sampling shall be conducted for the wells identified in Table 9-6 of the GDMP (Permit Attachment 9) and collected, preserved, and shipped in accordance with the procedures specified in the Permit Attachment 9.6.
2. The Permittee shall ensure that the groundwater samples are collected annually (April) in accordance with the GDMP (Permit Attachment 9, Section 9.6.1). New wells will require monitoring for a minimum frequency of quarterly for at least two years, unless otherwise approved by the Director.
3. Groundwater samples shall be tracked and controlled using the chain-of-custody procedure specified in Permit Attachment 9 (Section 9.3.3.8).
4. Samples shall be analyzed according to the Permit Attachment 9 ("Groundwater Detection Monitoring Program"), Section 9.6.2, Ongoing DMP Analytical Program, for key indicators and requirements. This includes analyses identified under Table 9-7 or under the most current final version of U.S. EPA Test Methods for Evaluating Solid Waste SW-846.
5. Depth to water level measurements will be performed and groundwater quality field measurements will be collected at each sampling event at all wells identified in Table 9-6 according to Permit Attachment 9, Sections 9.3.3 and 9.6.4.
6. QAP requirements are described in Attachment 9, Section 9.4 and 9.6.5.
7. Changes in groundwater quality will be assessed and further steps taken pursuant to Permit Attachment 9, Sections 9.6.6 and 9.7.
8. In the event that it is determined that an exceedance occurred during detection monitoring as described in Attachment 9, Section 9.7, subsequent measures or actions may be required.

D. REPORTING AND RECORDKEEPING

1. The Permittee shall enter all monitoring, testing, and analytical data obtained pursuant to this Permit in the operating record. The data must include all computations and data validation.
[A.A.C. R18-8-264.A (40 CFR 264.73(b)(6))]
2. The Permittee shall submit to ADEQ an annual groundwater report as required by Part II.J providing water level and groundwater quality data collected in the previous twelve months. This report shall be submitted to ADEQ no later than ninety (90) calendar days after receipt of the final laboratory analytical results for each annual sampling event. The report shall be prepared pursuant to the specific requirements of Section 9.6.7 of the GDMP (Permit Attachment 9).
A.A.C. R18-8-270.A (40 CFR 270.31)]

E. MANAGEMENT OF IDW

1. All Investigation-Derived Waste (IDW) must be collected, containerized, and stored in closed containers. To the greatest extent possible, fluids, soils, and solid wastes such as Personal Protection Equipment must be containerized separately from each other. Soil shall be placed in roll-off containers or drums. Fluids shall be placed in drums or tanks. PPE, disposable sampling equipment, and other refuse that are not classified as hazardous waste and are generated during field work shall be placed in sealed containers.
2. If kept on site, containers of IDW shall be stored in a secure location, with the containers labeled with information needed for future handling purposes. Permittee shall record the date, type, and quantity of IDW for inclusion in the facility operating reports. In no event shall IDW remain stored in containers on site for greater than ninety (90) calendar days.
3. Permittee shall perform a waste determination on all IDW. The determination may be based on laboratory analysis, MSDS or other similar information provided by the manufacturer, or by using generator knowledge.
4. IDW shall be removed for disposal within ninety (90) calendar days of generation. IDW fluids shall be transported in closed containers. IDW soils will be transported in closed containers or in covered loads so as to minimize loss. IDW solid waste (other than soils) shall be kept in sealed containers and transported to a landfill or commercial solid waste receptacle as appropriate.
[A.A.C. R18-8-270.M, N, and O (40 CFR 270.32)]
5. Purge water from groundwater monitoring shall also adhere to the requirements in Attachment 9, Section 9.3.3.10.

**PART VI – 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 264, Subpart S) requires that Permits issued after November 8, 1984, address corrective action for releases of hazardous waste and hazardous waste constituents from any SWMU at the facility, regardless of when the waste was placed in the unit.

When the Permittee discovers a new SWMU or an 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 PREVIOUS CORRECTIVE ACTION ACTIVITIES

RCRA Facility Assessment

An RFA was conducted and prepared for the Permittee by ADEQ with a draft report summarizing the findings and recommendations on May 30, 2007. Three (3) SWMUs and two (2) areas of concern (AOCs) were identified. Maps of all identified SWMUs and AOCs are provided as Figures SP-S01 and SP-MW01 in Attachment 4 of this Permit.

(a) SWMU 1: Hazardous Waste Management Unit, North central portion of the facility, north of the wastewater treatment unit

The main operational structure is comprised of a large concrete pad measuring approximately 300 feet by 570 feet with a surface area of approximately 4 acres) bounded by a masonry containment berm and a particulate control enclosure (fabric mesh canopy) where the Permittee conducts hazardous waste treatment through a combination of drying, mixing and blending processes. A rail spur lies along the east side of the HWMU for bulk loading and unloading. There is also a Hazardous Debris Container Treatment Unit and Hazardous Waste Container Storage located within the HWMU.

The HWMU containment berm is designed to contain a 25-year, 24-hour storm with 100% of the pad capacity filled with material. The HWMU is sloped to the southern edge where there are storm water pick-up points that pump off the storm water for treatment at the facility’s onsite wastewater treatment unit. There is currently a liner system comprised of soil, aggregate base coarse (ABC) material, sand and flexible membrane liners, configured differently below the east and west portions of the HWMU. The rail spur also has a liner system similar to the west portion of the HWMU. The HWMU was operational prior the installation of the liner system. The joints of the concrete pad are caulked and the pad sealed as a result of daily inspections and scheduled maintenance. Soil samples are collected and analyzed whenever a section of the concrete pad requires replacement. Air monitoring stations are located along each of the four side of the facility boundary

to capture heavy metal particulate data and monitor any off-site releases. Agglomerating agents are applied to the hazardous waste materials to minimize dust on the HWMU.

(b) **SWMU 2: Thermal Concentrating Unit (TCU), Northwest corner of the HWMU**

The TCU is an auxiliary gas-fired hazardous waste drying unit located in the northwest corner of the HWMU. Hazardous Waste is processed through the TCU, primarily when solar drying cannot be accomplished effectively on the HWMU based on dew point.

The MAC Filter baghouse and secondary filtration unit control emissions from the TCU while the fabric mesh canopy minimizes particulate emissions. An agglomerating agent dust suppression system has been installed to reduce emissions from the concentrate discharge of the dryer. The TCU is located on the HWMU away from areas where standing water would be present during a storm event.

No evidence of release to environment exists. Potential of release to soil, groundwater and air is low and no potential for release to surface water exists. However, the TCU must be managed to minimize any releases.

(c) **SWMU 3: Mechanical Shredder Unit, Northwest corner of the HWMU**

The MSU has been designed to reduce bulky hazardous waste material to an acceptable process size. It is located in the northwest corner of the HWMU.

A dust collector is used to reduce particulate emissions. The MSU is located on the HWMU away from areas where standing water would be present during a storm event.

No evidence of release to environment exists. Potential of release to soil, groundwater and air is low and no potential for release to surface water exists. However, the MSU must be managed to minimize any releases.

(d) **SWMU 4: Mechanical Blender, Northwest corner of the HWMU**

The mechanical blender (“blender”) has been designed to blend recyclable materials that comprise each of the various concentrate product produced by the Permittee. The blender is located in the northwest corner of the HWMU.

The blender has not been used by WRC A dust collector minimizes particulate emissions. The blender is located on the HWMU away from areas where standing water would be present during a storm event.

No evidence of release to environment exists. Potential of release to soil, groundwater and air is low and no potential for release to surface water exists. However, the blender must be managed to minimize any releases.

(e) **AOC 1: Storm Water Discharge Area 1 (East), North central of the HWMU to the southernmost facility parcel**

A drainage system collects storm water from the southeast portion of the truck delivery area, parking lots and other asphalt or paved concrete areas on the facility property to a catch basin located near the southeast corner of the truck delivery area north of the HWMU. The storm water is directed through a storm water discharge pipe/conveyance to a concrete lined ditch along the southeast property line that leads to the storm water retention area at the south end of the property. A plug is used to cover the inlet of the storm water conveyance, in the unlikely event of a spill during delivery of hazardous waste and the presence of storm water in the front of the facility.

Due to concerns regarding possible releases to the storm water discharge area, soil sampling was conducted on September 22, 1999. Volatile organic compounds (VOCs) were not detected above laboratory reporting limits in the samples analyzed from this area. Detectable concentrations of metals did not exceed Arizona residential soil remediation levels (R-SRLs) or minimum groundwater protection levels (GPLs).

During the July 28, 2006 visual site investigation, the unlined drainage contour next to the pipe terminus directed storm water off-site into a neighboring ditch instead of into the onsite retention area. Subsequently, the drainage ditches were lined with concrete.

Release to soil, ground water and surface water from the unit may have occurred. Potential of release to soil, groundwater and surface water is moderate. The system must be managed to minimize any releases.

(f) **AOC 2: Storm Water Discharge Area 2 (West), Northwest of the HWMU to the southernmost facility parcel**

Stormwater is collected in a catch basin located at the southwest portion of the truck delivery area. It is transported through a storm conveyance system around the HWMU and along the southwest property line in a concrete lined ditch to the storm water retention area at the south end of the property. WRC employs a PIG® DrainBlocker® Drain Cover to cover the approximately 3 feet by 3 feet ground-level grate at the inlet of the storm water conveyance in the unlikely event of a spill during delivery of hazardous waste and the presence of storm water in the front of the facility.

Due to concerns regarding possible releases to the storm water discharge area, soil sampling was conducted on September 22, 1999. VOCs were not detected above

laboratory reporting limits in the samples analyzed from this area. Detectable concentrations of metals did not exceed Arizona R-SRLs or minimum GPLs.

No evidence of release to environment exists. A moderate potential of release to soil, ground water and surface water exists. The system must be managed to minimize any releases.

C. SPECIFIC CORRECTIVE ACTION REQUIREMENTS

There are no specific corrective action requirements.

[A.A.C. R18-8-264.A (40 CFR 264.101), A.A.C. R18-8-270.A, M, N, and O (40 CFR 270.32), and A.A.C. R18-8-270.A (40 CFR 270.33)]

D. GENERAL CORRECTIVE ACTION REQUIREMENTS

1. Record Keeping

As stated in Permit Condition I.E.10 (Monitoring and Records), 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.

2. Reporting, Notifications and Submittals

- (a) The Permittee shall submit to the Director signed quarterly progress reports of all activities (i.e., SWMU Assessment, Interim Corrective Measures, RFI, CMS, Corrective Measures Implementation (CMI)) conducted pursuant to the provisions of this CASOC, beginning no later than ninety (90) calendar days after the Permittee is first required to begin implementation of any requirement herein. These reports 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 with a detailed schedule for this work.
- (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. These assessments, investigations or studies may be required following review of the Permittee's RFI Reports, Groundwater Monitoring and Investigation Work Plans, CMS Work Plan (see VI.I.3), or CMS Report (see VI.I.6), or

CMI Program Plan (See VI.K), which will be submitted as Class 1 Permit modification requests requiring Director approval.

- (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 Permit Condition I.C (Permit Actions), I.E.11 (Signatory and Certification Requirements), and other applicable conditions. Technical work submitted to the Director shall be stamped by a qualified professional Geologist and/or Engineer, as appropriate, registered in the State of Arizona.

3. Contamination that has Migrated Beyond the Facility Boundary, if Applicable

The Permittee shall implement corrective actions beyond the Facility boundary where necessary to protect human health and the environment, unless the Permittee demonstrates to the satisfaction of the Director that, despite the Permittee's best efforts, as determined by the Director, the Permittee was unable to obtain the necessary permission to undertake such actions. The Permittee is not relieved of all responsibility to clean up a release that has migrated beyond the Facility boundary where off-site access is denied. On-site measures to address such releases will be determined on a case-by-case basis. Assurances of financial responsibility for completion of off-site corrective action will be required. Any determination by the Director requiring the Permittee to address such releases, including any associated financial responsibility requirements, will be made as a Permit modification request, requiring the Director's approval.

4. Quality Assurance and Control

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

(a) Sample Collection and Management

Any sampling plan required under this Part shall comply with all relevant portions of U.S. EPA SW-846, A.A.C. R18-8-260 et seq. (40 CFR Part 260 et seq.) and relevant provisions of this Permit, including Part I.E.10 and Parts VI.L.1 and L.2, 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; and
- Sample management procedures for the field notebook, collection form, preservatives and capping, and other chain-of-custody components.

(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

In addition, the Permittee shall:

- Inform the Director's Project Coordinator which laboratories will be used by the Permittee.
- Ensure that all laboratories used by the Permittee for its analyses participate in a QA/QC program equivalent to that described in U.S. 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 licensed by the ADHS to perform the specific analyses for the specific analyte(s) of concern.

(c) Evaluation of Sampling Data

The Permittee shall ensure that sampling plans contain provisions for review of all field and laboratory QA/QC notes and results, and shall use U.S. EPA SW-846 to evaluate all data developed in compliance with this Permit. Sampling plans must demonstrate the use of representative samples and must include parameters sufficient to identify migration of hazardous waste and hazardous constituents to the environment.

5. 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 ADEQ Contact in writing of the Project Coordinator it has selected. The Permittee's Project Coordinator shall be responsible for overseeing the implementing 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. ADEQ will also designate a Project Coordinator. All communications between the Permittee and ADEQ, 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 ADEQ prior to changing the Project Coordinator.

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

1. Notification of Newly Identified SWMU(s) or AOC(s)

The Permittee shall notify the Director in writing of any newly identified SWMUs or AOCs (i.e., a unit not specifically identified during the RFA), discovered

during the course of the groundwater monitoring, field investigations, environmental audits, or other means, no later than fifteen (15) calendar days after its discovery. The notification shall include, at a minimum, the location of the SWMU or AOC and all available information pertaining to the nature of the release (e.g., media affected, hazardous constituents released, magnitude of release).

2. Request for SWMU Assessment Plan

After such notification, the Director may require in writing, that the Permittee prepare a SWMU Assessment Plan and a proposed schedule of implementation and completion of the SWMU Assessment Plan for any additional SWMU(s) or AOC(s) discovered subsequent to the issuance of this Permit. This plan will be submitted as a Class 1 Permit modification request requiring Director approval.

3. Content and Submittal of SWMU Assessment Plan

Within sixty (60) calendar days after receipt of the Director's request for a SWMU Assessment Plan, the Permittee shall prepare and submit a SWMU Assessment Plan for determining past and present operations at the unit, as well as any sampling and analysis of groundwater, land surface and subsurface strata, and surface water or air, as necessary to determine whether a release of hazardous waste including hazardous constituents from such unit(s) occurred, is likely to have occurred, or is likely to occur. The SWMU Assessment Plan must demonstrate that the sampling and analysis program, if applicable, is capable of yielding representative sampling and must include parameters sufficient to identify migration of hazardous waste including hazardous constituents from the newly discovered SWMU(s) to the environment.

4. Review and Approval or Disapproval of SWMU Assessment Plan

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

- (a) Notify the Permittee in writing of the SWMU Assessment Plan deficiencies and specify a due date for submittal of a revised SWMU Assessment Plan, or
- (b) Revise the SWMU Assessment Plan and notify the Permittee of the revisions. The Director-revised SWMU Assessment Plan becomes the approved SWMU Assessment Plan, and constitutes the approval of the Class 1 Permit modification request specified in Condition E.2, above.
- (c) The approved SWMU Assessment Plan shall be incorporated into Permit Attachment 18 (CASOC - Approved Work Plans and Reports).

5. Implementation of the SWMU Assessment Plan

The Permittee shall implement the SWMU Assessment Plan within fifteen (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 forty-five (45) calendar days from completion of work specified in the approved SWMU Assessment Plan. The Report will be submitted as Class 1 Permit modification request, requiring the Director's approval. The SAR shall describe all results obtained from the implementation of the approved SWMU Assessment Plan. At a minimum, the SAR shall provide the following information for each newly identified SWMU:

- (a) The location of the newly identified SWMU in relation to other SWMUs;
- (b) The type and function of the unit;
- (c) The general dimensions, capacities, and structural description of the unit, including any available drawings;
- (d) The period during which the unit was operated;
- (e) The specifics on all wastes that have been or are being managed at the SWMU, to the extent available; and
- (f) The results of any sampling and analysis required for the purpose of determining whether releases of hazardous waste including hazardous constituents have occurred, are occurring, or are likely to occur from the unit.

7. SAR Approval and Determination of Further RFI Action

- (a) Based on the results of the SAR, the Director shall determine the need for further investigations at specified unit(s) covered in the SWMU Assessment, and may require the Permittee to prepare an RFI Work Plan or a Site Assessment Plan (SP) [see Condition VI.L (Site Assessment and Remedy) of this Permit part] for such investigations. If the Director determines that investigations are needed, the Director shall incorporate his determination into the SAR approval. The SAR and SAR Approval shall constitute approval of the Permittee's Class 1 Permit modification request. The final approved SAR shall then be incorporated into Permit Attachment 18 (CASOC - Approved Work Plans and Reports).
- (b) The RFI Work Plan or SP described in Condition VI.E.7(a) will be reviewed for approval pursuant to Condition VI.H (RFI Work Plan and Reports) or Condition VI.L (Site Assessment and Remedy) of this Permit

Part, as specified by the Director. The RFI Work Plan will be submitted to the Director as a Class 1 Permit modification request, requiring the Director's approval.

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, discovered during the course of groundwater monitoring, field investigation, environmental auditing, or other activities undertaken after commencement of the RFI or the SP [see Condition L (Site Assessment and Remedy) of this Permit part], no later than fifteen (15) calendar days after their 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 RFI or the SP.

In the event the Permittee identifies a current and/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.

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 VI.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. The Work Plan shall be submitted as a Class 1 request, requiring the Director's approval. The approved IM Work Plan constitutes approval of the Permit modification request. The approved IM Work Plan shall be incorporated into Permit Attachment 18 (CASOC – Approved Work Plans and Reports).

3. Further Investigations

The Director may require further investigation of newly identified release(s). A plan for such investigation will be submitted by the Permittee as a Class 1 Permit Modification request, requiring the Director's approval. The Plan shall be reviewed pursuant to Condition VI.H (RFI Work Plan and Report) or Condition VI.L (Site Assessment and Remedy) of this Permit, as specified by the Director.

G. INTERIM MEASURES

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 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. Interim stabilization measures consistent with final remedy may be deployed during ongoing investigations. The following factors should be considered in this determination:

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

2. Specifying Interim Measures and Actions

- (a) When it is determined that interim measures are needed, an Interim Measures (IM) Work Plan shall be developed that will include, but not be limited to, the following elements:
 - (i) What interim measures need to be taken;
 - (ii) Specific action(s) that must be taken to implement the interim measure;
 - (iii) Schedule for their implementation; and
 - (iv) Parameters or measurements by which to judge the completion of the measures.

- (b) Either the Director or the Permittee shall develop the IM Work Plan as follows:
 - (i) The Director may notify the Permittee in writing of the requirement to perform specific interim measures. If the Permittee concurs, 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 H of Permit Part I (Permit Modification). Interim Measures do not require a public comment period until the measures are incorporated into the CMS Work Plan and Report described in Condition VI.I of this Permit.
 - (ii) The Director may notify the Permittee in writing that the Permittee is required to develop an IM Work Plan. In this event, the Permittee shall submit the IM Work Plan within thirty (30) calendar days after request. The IM Work Plan shall be submitted as a Class 1 Permit modification request, requiring the Director's approval.

3. Review and Approval or 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 notify the Permittee of the revisions. The approved IM Work Plan constitutes approval of the Class 1 Permit Modification request specified in Condition VI.G.2(b)(ii). The final approved IM Work Plan shall then be incorporated into Permit Attachment 18 (CASOC – Approved Work Plans and Reports).

4. Implementation of the IM Work Plan

The Permittee shall implement interim actions within fifteen (15) calendar days after receiving approval or notification of any revisions requested by the Director.

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

1. Submittal of RFI Work Plan

The Permittee submitted an RFI Work Plan as described in Condition VI.B of the Permit Part (Summary of Previous Corrective Action Activities). 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

Within sixty (60) calendar days after receiving a request from the Director, the Permittee shall submit a complete RFI Work Plan to the Director. The RFI Work Plan shall be submitted as a Class 1 Permit Modification request, requiring the Director's approval. The Work Plan shall address in detail SWMUs, releases of hazardous waste, hazardous constituents, and media of concern which require further investigations.

- (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 implementation and completing such investigations, the qualifications of personnel performing or directing the investigations, including contractor personnel, and the overall management of the RFI. The Work Plan shall include, but not be limited to:
 - (i) List of contaminants of concern for each media and the associated U.S. EPA Method and standards, or alternate method or standards to be approved by ADEQ;
 - (ii) Adherence to quarterly reporting in accordance with Permit Condition VI.D.2(a);
 - (iii) Copies of any raw lab data submitted to ADEQ within 30 calendar days of a sampling event in accordance with Permit Condition VI.D.2(b); and
 - (iv) Additional activities proposed by the Permittee shall be described in detail for approval by ADEQ.
- (b) The Plan shall discuss sampling and data collection quality assurance and data management procedures listed in Condition D.4 of this Permit Part (Quality Assurance and Control), including formats for documenting and tracking data and other results of investigation, and health and safety procedures.
- (c) Any additional groundwater or soil RFI work plans or reports shall be submitted independently upon completion of the previous investigative steps for a particular media in order to avoid delays in proceeding with a potential CMS and remediation activities for the particular media.

3. Review and Approval or Disapproval of RFI Work Plan

The Director shall review the RFI Work Plan for proper content and 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 and constitutes approval of the Class 1 Permit Modification request in VI.H.2.

The Director shall also review for approval as part of the RFI Work Plan any plans developed addressing further investigations of newly identified SWMUs (Condition F of this Permit Part).

If approved, the RFI Work Plan will be incorporated into Permit Attachment 18 (CASOC – Approved Work Plans and Reports). If the Director approves the RFI Work Plan, the Permittee shall, within ninety (90) calendar days of receipt of approval, send a Class 1 Permit Modification notice to all individuals on the facility mailing list maintained by the Director in accordance with R18-8-270.A and 270(I)(c)(1)(ix) and (x) [40 CFR 124.10(c)(1)(ix) and (x)]. The notice shall include a summary of the approved RFI Work Plan and describe the change made to Permit Attachment 18 (CASOC – Approved Work Plans and Reports).

4. Implementation of RFI Work Plan

No later than thirty (30) calendar days after the Permittee has received written approval from the Director for the RFI Work Plan, the Permittee shall begin implementing the RFI according to the schedules and procedures specified in the RFI Work Plan.

5. Content and Submittal of RFI Interim or 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 Interim or Final Report

The RFI Interim or Final Report shall be submitted as a Class 1 Permit Modification request, requiring the Director's approval. The RFI Interim or Final Report shall describe the procedures, methods, and results of all facility investigations of SWMUs 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 Interim or Final Report shall present all information gathered under the approved RFI Work Plan. The RFI Interim or Final Report must adequately define all

soil or groundwater sources of contamination and contain adequate information to support further corrective action decisions at the facility.

(b) Determination of No Further Actions with Modification

Based on the 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, will be processed pursuant to requirements of Permit Part I and must contain Information demonstrating that there are no releases of hazardous wastes (including hazardous constituents) from SWMUs at the facility that pose a threat to human health and the environment. It must also include information required in A.A.C. R18-8-270.A (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 or Disapproval of RFI Interim or Final Report

The Director shall review the RFI Interim or Final Report submittal (and NFA Determination, if applicable), and either approve or disapprove the Report and NFA Determination in writing.

- (a) If the Director disapproves the RFI 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.
- (b) RFI Interim or Final Report without NFA Determination: If the Director approves the Report, the approval constitutes approval of the Permit Modification request of Condition VI.H.5(a). The Permittee shall, within ninety (90) calendar days of receipt of approval, send a Class 1 Permit Modification notice to all individuals on the facility mailing list maintained by the Director in accordance with A.A.C. R18-8-271.A and 271.I(c)(1)(ix) and (x) [40 CFR 124.10(c)(1)(ix) and (x)]. The notice shall

include a summary of the approved RFI Interim or Final Report and describe the change made to Permit Attachment 18 (CASOC – Approved Work Plans and Reports).

- (c) RFI Interim or Final Report with NFA Determination: If, based upon review of the Permittee's NFA Determination and proposed Class 3 Permit Modification request, the results of the RFI, and other information (including comments received during the public comment period), 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 may grant the requested modification. However, the NFA approval does not preclude the Director from initiating other modifications to the CASOC according to procedures in 40 CFR 270.41 (Director-initiated Permit Modifications) 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) 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 indicates a release or likelihood of a release from a SWMU is likely to pose a threat to human health or the environment.

Upon approval of the RFI Interim or Final Report with NFA Determination and Class 3 Permit Modification request, the RFI Interim or Final Report and NFA Determination will be incorporated into Permit Attachment 18 (CASOC – Approved Work Plans and Reports).

I. CORRECTIVE MEASURES STUDY (CMS) PLAN AND REPORT

1. Call-in of the Corrective Measures Study

- (a) For existing SWMUs: Within forty-five (45) calendar days after the Director's written approval of the RFI Report required by Condition VI.C.1 and VI.C.2 (reviewed and approved in accordance with Condition VI.H), the Permittee shall submit a CMS Work Plan and Class 1 Permit Modification request requiring the Director's approval in accordance with Condition VI.I.2, below.
- (b) For newly-identified SWMUs: If the Director has reason to believe, after review of the RFI Final Report, that a SWMU has released concentrations of hazardous constituents in excess of any action level, or determines that contamination 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 Class 1 Permit Modification for a CMS, and shall so notify the Permittee in writing.

2. Content and Submittal of CMS Plan

The Permittee shall submit a Class 1 Permit Modification request requiring the Director's approval and a CMS Work 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 VI.J (Remedy Selection);
- (d) The schedules for conducting the study;
- (e) Proposed format for presentation of the information; and
- (f) An assessment of the existing data and the additional data needed to evaluate the feasibility of all proposed corrective actions.

3. Review and Approval or Disapproval of CMS Plan

The Director should review the CMS Plan to ensure it contains all necessary contents.

- (a) If the Director disapproves the CMS Plan, the director shall either:
 - (i) Notify the Permittee in writing of the Plan's deficiencies and specify a due date for submittal of a revised Plan, or
 - (ii) Revise the CMS Plan and notify the Permittee of the revisions. This modified CMS Plan becomes the approved CMS Plan.
- (b) If the Director approves the CMS Work Plan, the Permittee shall, within ninety (90) calendar days of receipt of approval, send a Class 1 Permit Modification notice to all individuals on the facility mailing list maintained by the Director in accordance with R18-8-270.A and 270(I)(c)(1)(ix) and (x) [40 CFR 124.10(c)(1)(ix) and (x)]. The notice shall include a summary of the approved CMS Work Plan and describe the change made to Permit Attachment 18 (CASOC – Approved Work Plans and Reports).

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 Work Plan, the Permittee shall implement the CMS Work Plan according to the schedules and procedures specified in the CMS Work 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 Class 1 Permit Modification request requiring the Director's approval and the CMS Report. The CMS 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. The CMS Report shall include all data needed to evaluate the feasibility of the proposed corrective measures or propose additional data collection efforts necessary to evaluate corrective measures;
- (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 with Performance standards streamlined;
- (d) The recommended corrective measure(s), and a justification for selection of the corrective measure(s) recommended.

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

The Director shall approve, approve with modifications, or disapprove the draft CMS Report and will advise the Permittee of the determination in writing. The Director shall select the remedy according to Condition VI.J (Remedy Selection). 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 CMS Report, the Director shall notify the Permittee in writing of deficiencies in the CMS Report and specify a due date for submittal of a revised CMS Report.
- (b) If the Director approves or approves with modifications the CMS Report, the approved CMS Report constitutes approval of the Permit Modification request of Condition VI.I.5). The CMS Report will be incorporated into Permit Attachment 18 (CASOC – Approved Work Plans and Reports). If the Director approves the CMS Report, the Permittee shall, within ninety (90) calendar days of receipt of approval, send the Class 1 Permit Modification notice to all individuals on the facility mailing list maintained by the Director in accordance with R18-8-270.A and 270(I)(c)(1)(ix) and (x) [40 CFR 124.10(c)(1)(ix) and (x)]. The notice shall include a summary of the approved CMS Report and describe the change made to Permit Attachment 18 (CASOC – Approved Work Plans and Reports).
- (c) 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 a CMI Program Plan for the remedy selected pursuant to Condition VI.K (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 protect human health and the environment; meet the concentration levels of hazardous constituents in each medium that the remedy must achieve to be protective of human health and the environment; 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 meet all applicable waste management requirements.

2. Technical Evaluation Factors of Remedy

In approving the recommended remedy(s) 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:

- 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;
- Type and degree of long-term management required, including monitoring, operation and maintenance;
- 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;
- Long-term reliability of the engineering and institutional controls, including uncertainties associated with land disposal of untreated wastes and residuals;
- 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) that shall be considered include:

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

(c) Short-term effectiveness.

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

- Magnitude of reduction of existing risks;
- 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
- 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:

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

(e) Cost.

The types of costs assessed include:

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

K. CORRECTIVE MEASURES IMPLEMENTATION 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 Class 1 Permit Modification request, requiring Director's approval and a draft CMI Program Plan. All Corrective Action requirements of 40 CFR 264.99(h) and 264.100 shall be addressed, not limited to:

(a) CMI Work Plan Description

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's 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 or assessment monitoring program;
- (ii) Requirements and proposals for public involvement;
- (iii) Requirements for removal, decontamination, closure, or post-closure of units, equipment, devices or structures used to implement remedy; and
- (iv) Requirements for achieving compliance with concentration limits and levels;

(b) Corrective Measures Design

Details of the remedy's design, but not limited to:

- (i) Specific design criteria of remedial system(s);
- (ii) Related diagrams; and
- (iii) Required permits.

(c) Corrective Measures Construction

Details of the construction of the specific remedies, but not limited to:

- (i) Construction and test plans of systems;
- (ii) Construction diagrams;
- (iii) Additional well installations; and
- (iv) Inspections.

(d) Operation and Maintenance Plan

Specific operation and maintenance requirements and details, but not limited to:

- (i) Personnel training;
- (ii) Start-up procedures;
- (iii) Operation and maintenance procedures;
- (iv) Applicable drawings and diagrams; and
- (v) Waste management practices.

(e) Monitoring

Specific monitoring requirements for the corrective measures system(s), including for monitoring wells, but not limited to:

- (i) Sampling plans;
- (ii) Data collection and analysis; and
- (iii) Schedules and corrective measure completion criteria.

(f) Standards

Basic standards including, but not limited to:

- (i) Hazardous constituents list;
- (ii) All concentration levels or limits of hazardous constituents in each medium (i.e. soil, groundwater) that the remedy must achieve to protect human health and environment;
- (iii) Compliance points and compliance period;
- (iv) Management of hazardous waste.

(g) Schedule

A schedule for initiating and completing all major technical features and milestones of remedy, and required length of Corrective Actions taken, including when CMI groundwater monitoring is initiated in lieu of post-closure groundwater compliance or assessment monitoring;

(h) Reporting

Requirements for submission of semi-annual reports, completion reports, other information, and modifications if above regulations cannot be met.

2. Review and Approval or 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) If the Director approves (or approves with modifications) the CMI Program Plan, the CMI Program Plan will be incorporated into Permit Attachment 18 (CASOC – Approved Work Plans and Reports). If the Director approves the CMI Program Plan, the Permittee shall, within ninety (90) calendar days of receipt of approval, send the Class 1 Permit Modification notice to all individuals on the facility mailing list maintained by the Director in accordance with R18-8-270.A and 270(I)(c)(1)(ix) and (x) [40 CFR 124.10(c)(1)(ix) and (x)]. The notice shall include a summary of the approved CMI Program Plan and describe the change made to Permit Attachment 18 (CASOC – Approved Work Plans and Reports). The Director's approval of the CMI Program Plan constitutes approval of the Permit Modification request.
- (c) 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.

3. Implementation of CMI Program Plan

No later than fifteen (15) calendar days after the Permittee has received written approval from the Director for the CMI Program Plan, the Permittee shall begin to implement the CMI Program Plan according to the schedules and procedures specified in the CMI Program Plan.

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, CMS, and CMI processes (Permit Sections VI.H through VI.K of this Permit Part) if, during performance of the SP or RP, extensive contamination is found, or if it is found that groundwater may be affected by the historic release.

1. Site Assessment Plan

Any SP submitted by the Permitted in accordance with VI.L shall be submitted as a Class 1 Permit Modification request requiring the Director's 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 or irrigation ditches, canals, etc.);
 - (vi) depth to groundwater;
 - (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 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 and 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 90 calendar 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; and
 - 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 RP, if any hazardous constituents are found above the applicable soil remediation standards of Title 18, Chapter 7, Article 2 or if any hazardous constituents may be expected to migrate to groundwater.
- (k) Provision for a request of a Finding of No Further Action from the Director, if no hazardous constituents are found above the applicable soil remediation standards of Title 18, Chapter 7, Article 2, or if no hazardous constituents may be expected to migrate to groundwater.
- (l) The final approved SP shall be incorporated into Permit Attachment 18 (CASOC – Approved Work Plans and Reports).

2. Remedial Plan

Any RP submitted by the Permittee in accordance with VI.L shall be submitted as a Class 1 permit modification request requiring the Director's approval. The RP shall contain the following:

- (a) A description of the process to be used in the removal of all hazardous waste, hazardous waste constituents, and/or soils determined to be contaminated with hazardous waste or hazardous waste constituents;
- (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 and 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 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;
- (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 confirmatory sampling indicate the presence of hazardous waste or hazardous waste constituents; are found above the applicable soil remediation standards of Title 18, Chapter 7, Article 2 or if any hazardous constituents may be expected to migrate to groundwater;
- (q) Documentation that the site has been "blue staked" prior to remediation;
- (r) Provisions for the submission of a Remedial Report within 90 calendar days of completion of the remedy 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 remain above the applicable soil remediation standards of Title 18, Chapter 7, Article 2, and if no hazardous constituents may be expected to migrate to groundwater;
- (t) The final approved RP shall be incorporated into Permit Attachment 18 (CASOC – Approved Work Plans and Reports).

3. Notification

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.

M. COMPLIANCE SCHEDULE FOR CORRECTIVE ACTION ACTIVITIES

There are no specific corrective action requirements in this Permit.

[A.A.C. R18-8-270.A (40 CFR 270.33)]