



Douglas A. Ducey
Governor

ARIZONA DEPARTMENT
OF
ENVIRONMENTAL QUALITY



Henry R. Darwin
Director

ARIZONA HAZARDOUS WASTE MANAGEMENT ACT PERMIT

EPA ID NUMBER AZR 000 037 382 (LTF # 59389)

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:** Munitions Treatment Range
Barry M. Goldwater Range – West
- FACILITY LOCATION:** R22W, T10S, Sec. 33, Yuma County
[Latitude 32° 31' 09" N, Longitude 114 ° 31' 14" West]
12 miles southeast of MCAS Yuma main base and 2 miles south
of Auxiliary Airfield II
- EPA ID NUMBER:** AZR 000 037 382
- PROPERTY OWNER:** United States Marine Corps
- FACILITY OPERATOR:** United States Marine Corps

The Munitions Treatment Range (MTR), located within the western segment of the Barry M. Goldwater Range and operated by the Marine Corps Air Station (MCAS), is used for destruction of unserviceable, out-dated, or obsolete munitions generated at MCAS Yuma, other military bases and bombing ranges, local government-owned manufacturing facilities, and local manufacturers under contract to the U.S. Government. The explosive ordnance treated at the MTR is categorized as reactive and ignitable hazardous waste. MCAS Yuma is a large quantity generator of hazardous waste under RCRA regulations and the Arizona Administrative Code. The method of treatment is Open Detonation (OD) conducted within the MTR in the fragmentation area and white phosphorus area detonation pits.

The Permittee must comply with all terms and conditions of this Permit. This Permit consists of the conditions contained herein (including those in any attachments) and the applicable regulations contained in Article 2 as specified in the Permit. This Permit does not, in any way, release the Permittee from complying with the applicable requirements of any of the provisions of Article 2, AHWMA, or any other applicable state requirement promulgated by rule or statute. 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 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 _____, 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 _____ day of _____, 2015

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

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PART I – GENERAL PERMIT CONDITIONS

A. EFFECT OF PERMIT

The Permittee is allowed to manage 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 is prohibited. Subject to Arizona Administrative Code (A.A.C.) R18-8-270.A and 40 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. and C.F.R. means the Arizona Administrative Code (A.A.C.) Title 18, Chapter 8, Article 2 (A.A.C. R18-8-260 et seq.), updated June 30, 2010, which adopts and modifies portions of Title 40 Code of Federal Regulations Part 260 (40 CFR 260 et seq.), July 1, 2006 edition.
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:
 - (a) Hazardous product storage unit or area.
 - (b) Any area where a one-time hazardous material (product or waste) spill event occurred.
 - (c) Any hazardous material unit or area where management may have occurred, where 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. Director means the Director of ADEQ or the Director's designee or authorized representative.
6. 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.
7. Facility or Activity means any HWM facility or any other facility or activity including land or appurtenances thereto) that is subject to regulation under the RCRA program.
8. 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).
9. Hazard Classification means the Department of Transportation (DOT) hazard classification given to a designated material for the purpose of classifying the material for transport.
10. Hazardous waste means a hazardous waste as defined in R18-8-261.A (40 CFR 261.3).
11. "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, containment building, corrective action management unit, or eligible for research, development, and demonstration Permit.
12. Qualified means that the individual or group shall have the same reliability, expertise, integrity, competence, training, education, and other necessary skills, as required by this Permit, as the person(s) or group who normally performs that function has.
13. 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.
14. 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).

14. Shall, Must, Will, and factual statements denote a mandatory requirement.
15. Should or May denotes a recommendation or permission, respectively, which is not mandatory.
16. 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 any area at a facility at which solid wastes have been routinely and systematically released.
17. Permittee denotes Marine Corps Air Station (MCAS) Yuma.

C. PERMIT ACTIONS

1. Permit Modification, Revocation and Reissuance, and Termination

This Permit may be modified, revoked and reissued, or terminated for cause, as specified in A.A.C. R18-8-270.A, 40 CFR 270.41, 270.42, and 270.43. The Permit may be modified by the Director at any time, following procedures outlined in A.A.C. R18-8-271.D in order to ensure compliance with applicable state and federal requirements. The filing of a request for a Permit modification, revocation and reissuance, or termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee, does not stay the applicability or enforceability of any Permit condition.

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

2. Permit Renewal

This Permit may be renewed as specified in A.A.C. R18-8-270.A, 40 CFR 270.30(b) and 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 HSWA Sec. 212]

D. SEVERABILITY

The provisions of this Permit are severable, and if any provision of this Permit, or the application of any provision of this Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby.

[A.A.C. R18-8-270.A]

E. DUTIES AND REQUIREMENTS

1. Duty to Comply

The Permittee shall comply with all conditions of this Permit, except to the extent and for the duration such noncompliance is authorized by an Emergency Permit. Any Permit noncompliance, other than noncompliance authorized by an Emergency Permit, constitutes a violation of AHWMA and/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) 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/quality control procedures. This provision requires the operation of back-up or auxiliary facilities or equivalent or better systems only when necessary to achieve compliance with the conditions of this Permit.

[A.A.C. R18-8-270.A 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 may be 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, EPA Publication SW-846 (current edition), or an equivalent or better method, as specified in the Waste Analysis Plan (see Permit Attachment B) 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 at least 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 the 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 performs directly for the Permittee to comply with the requirements of the permit must be licensed by the Arizona Department of Health Services (ADHS) [Arizona Revised Statutes (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 inform the laboratory in writing that it must operate under the applicable conditions set forth in 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(1)(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(1)(2))]

(c) Transfers

This Permit is not transferable to any person or any other corporation, except after notice to the Director. The Director may require modification or revocation and reissuance of the Permit to change the name of the Permittee and incorporate 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(1)(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(1)(4))]

(e) Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than fourteen (14) calendar days following each schedule date.

[A.A.C. R18-8-270.A (40 CFR 270.30(1)(5))]

(f) Manifest Discrepancy Report

If a significant discrepancy in a manifest is discovered, the Permittee must attempt to reconcile the discrepancy. If not resolved within fifteen (15) days, the Permittee must submit a letter report, including a copy of the manifest, to the Director.

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

(g) Unmanifested Waste Report

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

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

(h) Annual Report

The Permittee must submit an Annual Report pursuant to, and as described in A.A.C. R18-8-264.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(1)(4), (1)(5) and (1)(6), at the time monitoring (including annual) reports are submitted. Reports shall contain the information listed in A.A.C. R18-8-270.A and 40 CFR 270.30(1)(6).

[A.A.C. R18-8-270.K and 270.L (40 CFR 270.30(1)(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) day written notice requirement in favor of a written report within fifteen (15) days.

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

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(1)(11))]
- (b) Noncompliance with terms and conditions of the Permit that result in letters of warning, compliance orders from the Director, a civil consent judgment, or criminal enforcement of environmental laws by the State of Arizona shall be used to document the reliability, expertise, integrity and competence of the Permittee, pursuant to A.A.C. R18-8-270.J, and would be considered by the Director in making future changes to the Permit, pursuant to A.A.C. R18-8-270.A (40 CFR 270 Subpart D); and, when issuing a new Permit as set forth in A.A.C. R18-8-270.A (40 CFR 270.51).

F. CONFIDENTIAL INFORMATION

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 (P.E.), the current/updated version of the following 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. Closure Plan, as required by A.A.C. R18-8-264.A, 40 CFR 264.112(a) and this Permit;

The Permittee shall maintain at the facility, the past three years of the following documents:

8. Operating record, as required by A.A.C. R18-8-264.A, 40 CFR 264.73 and this Permit;
9. All other documents required by Permit Condition I.E.10 (Monitoring and Records).

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) For areas outside of the Munitions Treatment Range (36 CFR §800), which requires that, prior to any excavation or earth working activity, all potentially impacted underground utilities will be located (state law) and the Federal and State Historic Departments will be contacted.

2. Facility Mailing List

The Permittee shall obtain (from the 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) Training Director – See Permit Attachment G (Personnel Training);
- (b) Signatories – See Permit Condition I.E.11 (Signatory and Certification Requirements);
- (c) Emergency Coordinators – See Permit Attachment F (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 F (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.

[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 (except where the Permittee is also the generator), he/she must inform the generator in writing that he/she has the appropriate Permits, and will accept the waste the generator is 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)]

C. GENERAL WASTE ANALYSIS

The Permittee shall follow the waste analysis procedures, as described in the Waste Analysis Plan (Permit Attachment B).

1. Waste Stream Evaluation

The Permittee shall perform waste stream evaluation in accordance with Permit Part B, Waste Analysis Plan, Section 4.5. Laboratory testing shall be conducted in accordance with the methods described in Attachment B, Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, EPA Publication SW-846 (current edition adopted by the laboratory performing the testing), 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 directly for the Permittee at off-site laboratories, in-state or out-of-state, must be conducted by laboratories licensed (certified) by the Arizona

Department of Health Services for the applicable analytical methods in use at the offsite laboratory.

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

D. SECURITY

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

E. GENERAL INSPECTION REQUIREMENTS

1. The Permittee shall follow the inspection schedule set out in the Procedures to Prevent Hazards (Permit Attachment E) and ensures that no waste container received at the Coolidge facility resides at the facility for more than 1 year. The Permittee can store waste beyond 1 year if such storage was solely for the purpose of accumulation of such quantities of hazardous waste as are necessary to facilitate proper recovery, treatment or disposal. The Permittee must prepare a written justification to the ADEQ Director each time a container is stored at the facility for more than 1 year.
2. 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).
[40 CFR 268.50 (b) & (c)]

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 Personnel Training Program (Permit Attachment G). 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. PSPECIAL PROVISIONS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE

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 (See Permit Attachment E).

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 (Permit Attachment E) and the Contingency Plan (Permit Attachment F).

[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. 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 F), 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 waste where hazardous waste is released from the facility beyond the facility boundary and has impacted surface soil, the Permittee shall sample and analyze to determine the extent and depth of any soil contamination present at concentrations which could threaten human health or the environment. Alternatively, the Permittee may conduct soil sampling after removal of soil contaminated with hazardous waste or hazardous constituents to verify that concentration of hazardous waste or constituents do not threaten human health and the environment. 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, EPA Publication SW-846 (current edition). Each parameter test that the in-state or out-of-state laboratory can perform for hazardous waste analysis must be licensed by ADHS.

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.

[A.R.S. 49-108]

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 request a modification to the Contingency Plan based on criteria listed in 40 CFR 264.54.

[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. Any change to the names, addresses, and phone numbers of all persons qualified to act as emergency coordinators, as listed in Permit Attachment F (Contingency Plan), shall be supplied to the Director as a Permit modification pursuant to Permit Condition II.I.3 above.

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

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, 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)]

- (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) 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))]
- (h) 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))]

2. Annual Report

The Permittee shall comply with the Annual Report requirements of A.A.C. R18-8-264.I (40 CFR 264.75).

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.

[R18-8-264.A and 270.A (40 CFR 264.17, 264.31, 270.11(b), 270.32(b)(1), 270.32(b)(2))]

K. GENERAL CLOSURE REQUIREMENTS

1. Update of Final Closure Plan Prior to Implementation of Final Closure

No later than six months prior to final Closure of the MTR, the Permittee shall submit a revised closure plan for ADEQ approval in accordance with the permit modification procedures of R18-8-270.A (40 CFR 270.41, 40 CFR §270.42 et seq.). The Permittee shall not commence with any of the steps (e.g., notification of closure) of final closure of the facility without having the final closure plan approved by the Director.

2. Performance Standard

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

3. Amendment to Closure Plan

The Permittee shall amend the Closure Plan (Permit Attachment H), 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.

4. Notification of Closure

The Permittee shall notify the Director in writing at least forty-five (45) 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))]

5. Time Allowed for Closure

Within ninety (90) 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 H).

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

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

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]

7. Closure Report

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

- (a) A summary of results, significant observations, deviations from the approved plan, and conclusions.
- (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;
 - (xii) Drawings and photographs where appropriate.
- (c) Data generated from sampling and analysis activities performed pursuant to the plan, including field notes, manifests, bills of lading, LDR forms, laboratory submittal forms, chain-of-custody forms, laboratory reports, and drilling logs.
- (d) Risk assessment discussion (if applicable), including methodology, data, references, and assumptions.
- (e) Certifications from the engineer and owner/operator.
- (f) Other information requested by the Director in writing.

8. Certification of Closure

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

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

L. LAND DISPOSAL RESTRICTIONS

The Permittee shall comply with all the applicable Land Disposal Restriction (LDR) requirements of 40 CFR Part 268, not limited to: 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.

M. TOXICITY CHARACTERISTICS

The Permittee must use the Toxicity Characteristic Leaching Procedure (TCLP) (Appendix II of 40 CFR Part 261), or use knowledge of the waste (A.A.C. R18-8-264.A and 40 CFR §264.13(a), and A.A.C. R18-8-262.A and 40 CFR §262.11) to determine whether a waste exhibits the characteristic of toxicity, as defined in 40 CFR §261.24.

N. 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.
[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).

O. SCHEDULE OF COMPLIANCE

1. Site Specific Groundwater Protection Levels (GPLs)

The Permittee must establish site specific GPLs for constituents of concern:

- (a) Within 180 days of the effective date of the permit the Permittee must perform sampling of soils so as to calculate site-specific GPLs for perchlorate, RDX and HMX;
- (b) Within 240 days after the effective date of the permit the Permittee must submit a written report that calculates site-specific GPLs for perchlorate, RDX and HMX.

2. Groundwater Monitoring

The Permittee must perform groundwater monitoring at the facility:

- (a) Before July 1, 2015, the Permittee must commence quarterly groundwater monitoring in accordance with the approved Groundwater Monitoring Plan (Attachment D, Exhibit D-2).
- (b) Within 120 days of completion of each groundwater monitoring event the Permittee must submit a written groundwater monitoring report to ADEQ.
[A.A.C. R18-8-270.A, M, N, and O (40 CFR 270.32 and 270.33)]

PART III – TREATMENT OF ENERGETIC WASTES

A. MANAGEMENT OF MISCELLANEOUS UNITS - SUMMARY

The MTR is a miscellaneous unit subject to A.A.C. R18-8-264.A and 40 CFR §264 regulations [40 CFR §264.600 - Subpart X]. OD operations are conducted throughout the MTR. There are two OD areas within the MTR: the fragmentation area and the white phosphorus detonation area. The fragmentation area is used for detonating Class 1.1, 1.2, and 1.3 explosives. The fragmentation area may also be used for detonating some Class 1.4 items, some of which may carry the D008 (lead), D009 (mercury) and/or D030 (2,4-dinitrotoluene [DNT]) waste codes. Specific prohibitions are listed in Part III.B.2.

Each OD area includes several shotholes or pits. The shotholes are created by the detonation of unexploded ordnance. The detonation of a bomb creates a pit and subsequent detonation of bombs increases the pit radius and depth. The detonation pits are inspected weekly, after each detonation, and after storm events or high winds. The pits are inspected for integrity, depth, and metal fragments (kickouts). If an inspection indicates a detonation pit is unusable, for example, when the pit becomes too deep (i.e., it is unsafe to roll a bomb into, 10 feet or deeper), the pit is backfilled and a new detonation pit/shothole is developed. Prior to backfilling, the depth and location of each pit are recorded.

The open burning of hazardous wastes is prohibited in the MTR, unless performed as an emergency action. This treatment prohibition does not apply to hazardous wastes that are burned for training purposes.

B. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

1. Permitted Hazardous Wastes

The Permittee may detonate the following wastes subject to the terms of this Permit and as described below:

Unserviceable, out-dated, or obsolete munitions from MCAS Yuma. (Permit Attachment B provides a description of the types of wastes that have been treated at the MTR).

Table III-A - Treatment Quantities

Unit	Description of Hazardous Wastes	EPA Hazardous Waste Codes	Maximum Permitted Quantity
MTR	Ordnance	D001, D003, D008, D009, D030	3,000 lbs NEW/event 72,000 lbs NEW/year

2. Prohibited Hazardous Wastes

The Permittee shall not treat wastes that are not identified in Permit Condition III.B.1. Examples of these wastes include:

- (a) Infectious wastes, lethal or incapacitating chemical and biological munitions and their residues,
- (b) Nuclear radioactive materials,
- (c) Wastes that cannot be detonated,
- (d) Munitions that have a NEW of more than 3,000 lbs,
- (e) Free liquids, and
- (f) Shipping containers and ordnance packing materials.

C. DESIGN, CONSTRUCTION, AND OPERATING REQUIREMENTS

1. The Permittee shall perform OD operations in accordance with the Standard Operating Procedures (SOP) in Attachment A (Exhibit A-5) and Process Description contained in Permit Attachment C.

The immediate area around the detonation shall be inspected after each event as soon as it is safe to do so. All detonation debris (metal casings and kick outs) will be collected from the ground and processed in accordance with Permit Attachment C.

2. The Permittee shall backfill the pit after it becomes too deep (i.e., it is unsafe to roll a bomb into, 10 feet or deeper), the pit is backfilled and a new detonation pit/shothole is developed. Pits will be sampled pursuant to the Soil Monitoring Plan (see Permit Attachment D, Exhibit D-3) at a frequency of no less than once per year.
3. Permittee shall not conduct operations during electrical/thunderstorms.
4. Munitions to be treated, including those received from offsite sources may be held at the MCAS Yuma ASP for a period not to exceed ten (10) days.
5. Permittee shall ensure that the material sent for recycling (e.g., scrap metal) will not have any hazardous waste associated with it.
6. Permittee shall conduct operations only during daylight hours.
7. Permittee shall ensure that no personnel are present on the MTR when the detonation takes place.

D. HANDLING REQUIREMENTS

The Permittee shall perform OD operations in accordance with Permit Attachment E (Procedures to Prevent Hazards) and applicable DOD, NAVSEA and MCAS rules.

E. INSPECTION SCHEDULES AND PROCEDURES

The Permittee will follow the inspection requirements specified in Attachment E. The MTR will be regularly inspected to:

1. Ensure that no unauthorized personnel have trespassed within MTR boundaries;
2. Check the condition of all warning signs, boundary fences, and gates;
3. Maintain the overall readiness of the MTR;
4. Ensure the MTR's preparedness in the event of emergency; and
5. Check the condition of access and periphery roads.

Documentation of each inspection will be recorded in the MTR Inspection Checklist (Exhibit E-1). Security devices, including fences, signs, and gates will be inspected weekly. Range areas, including main and perimeter roads, gate area, flag poles, and periphery are inspected monthly. Communications equipment (radios and cellphones) and safety and emergency equipment, such as fire extinguishers, first aid equipment and emergency crew shelters are inspected before and after each use. After each inspection, the completed MTR Inspection Checklists are filed in the Operations and Inspection Log stored at the EOD building.

Vehicles used to transport demolition materials, explosives, and personnel will be inspected prior to transporting explosives and inspections per the Navy's Shipping Inspector's Manual for Ammunition, Explosives, and Related Hazardous Materials (Attachment B, Exhibit B-7). The EOD crew assigned to each truck will clean and service it at the end of each day's operations. Additionally, they will draw and stow any required replacement hardware, such as chains or shovels, and inform the OIC of any expenditures. If a vehicle breakdown occurs during operations, the crew will report it to the OIC for call-in to mobile maintenance.

If inspections reveal that non-emergency maintenance is needed at the MTR, then EOD personnel will initiate immediate action(s) to preclude further damage and to reduce the need for emergency repairs. If a hazard is imminent, or has already occurred during the course of an inspection, or any time between inspections, then remedial action will immediately be taken in accordance with the Contingency Plan. Appropriate authorities will be notified according to the Contingency Plan (Attachment F). In the event of an emergency involving the release of hazardous constituents to the environment, efforts will be directed towards containing the hazard, removing it, and subsequently decontaminating the affected area as outlined in the Contingency Plan.

F. PREVENTION OF UNINTENDED IGNITION OR REACTION OF WASTES

All explosive wastes are kept from sources of ignition or reaction. EOD personnel are very familiar with OD procedures, further minimizing the chance for accidental ignition or reaction of wastes.

In transporting explosive ordnance for treatment at the MTR, certain precautions are taken to ensure that ignition or reaction of wastes is prevented. The reactive wastes will be packaged securely, segregated by separating incompatible items, secured on vehicles and transported according to United States Department of Transportation (DOT) regulations. Incompatible wastes are not mixed for transportation to or at the MTR. All transportation and shipment of explosive ordnance follows the Navy's Shipping Inspector's Manual for Ammunition, Explosives and Related Hazardous Materials (Attachment B, Exhibit B-7).

The Permittee shall employ the following safety measures to ensure that the explosive waste does not ignite or detonate except during controlled treatment operations:

1. Smoking shall not be allowed at the MTR.
2. Only non-sparking tools will be used.

G. CLOSURE

The Permittee shall follow the final closure plan for the MTR found in Permit Attachment H (as modified prior to final closure -- see Permit Condition II.K).

H. FLOOD PLAIN RESTRICTIONS

No operations will be performed on the west side of the access road on the MTR since it is on the 100-year flood plain.

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

A. AUTHORITY

RCRA Section 3004(u), as amended by the HSWA, and A.A.C. R18-8-264.A (40 CFR 264.101 and 40 CFR 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 Solid Waste Management Unit (SWMU) at the facility, regardless of when the waste was placed in the unit.

Past releases have been comprehensively investigated by the Permittee, and these releases do not pose a threat to human health or the environment. A determination of No Further Action has been made by the ADEQ for such past releases of hazardous waste and hazardous waste constituents. When the Permittee discovers a new SWMU or an area of concern (AOC) at the facility, or determines a release has occurred, the facility will be governed by the conditions of this Permit Part (hereinafter referred to as the "Corrective Action Schedule of Compliance" or "CASOC").

B. GENERAL CORRECTIVE ACTION REQUIREMENTS

1. Record Keeping

In accordance with 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 annual progress reports of all activities (i.e., SWMU Assessment, Interim Corrective Measures, RCRA Facility Investigation, Corrective Measures Study, Corrective Measures Implementation) conducted pursuant to the provisions of this CASOC, beginning no later than (90) calendar days after the Permittee is first required to begin implementation of any requirement herein. These reports shall contain:
- (i) A description of the work completed;
 - (ii) Summaries of all problems or potential problems encountered during the reporting period and actions taken to correct the problems; and
 - (iii) 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 RCRA Facility Investigation Reports, Corrective Measures Study Work Plan (see IV.G.3), or Corrective Measures Study Report (see IV.G.6), or Corrective Measures Implementation Program Plan (See IV.I), 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 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

A sampling plan submitted by the Permittee shall include all elements of EPA SW-846, and A.A.C.R18-8-260 et seq. (40 CFR Part 260 et seq.), not limited to:

- (i) Specifying the sampler and sampler procedure for use;
- (ii) Specifying sampling points based on a statistical basis, logic, and strategy;
- (iii) Trip blanks, duplicates, spikes, splits, and other field control samples; and

- (ii) 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:

- (i) Inform the Director's Project Coordinator which laboratories will be used by the Permittee.
- (ii) Ensure that all laboratories used by the Permittee for its analyses participate in a quality assurance/quality control program equivalent to that described in EPA SW-846. As part of such a program, and upon request by the Director, such laboratories shall perform analyses of a reasonable number of known samples provided by the Director to demonstrate the quality of the analytical data.
- (iii) Ensure that the laboratory used is licensed by the Arizona Department of Health Services (ADHS) to perform the specific analyses for the specific analyte(s) of concern.

(c) Evaluation of Sampling Data

The Permittee shall ensure that sampling plans contain provisions for review of all field and laboratory QA/QC notes and results, and shall use EPA SW-846 to evaluate all data developed in compliance with this Permit. 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

The Permittee will assign a Project Coordinator within 30 days of a written request by ADEQ. 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.

C. 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 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 that the Permittee prepare a written 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 C.2 above.

- (c) The approved SWMU Assessment Plan shall be incorporated into Permit Attachment J (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 IV.J (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 J (CASOC - Approved Work Plans and Reports).

- (b) The RFI Work Plan or SP described in Condition IV.C.7.(a) will be reviewed for approval pursuant to Condition IV.F (RCRA Facility Investigation Work Plan and Reports) or Condition IV.J (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.

D. 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 J (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 IV.E 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 J (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 IV.F (RCRA Facility Investigation Work Plan and Report) or Condition IV.J (Site Assessment and Remedy) of this Permit, as specified by the Director.

E. 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 Permit Part I.H (Permit Modifications). Interim Measures do not require a public comment period until the measures are incorporated into the Corrective Measures Study (CMS) Work Plan and Report described in Condition IV.G 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 IV.E.2(b)(ii). The final approved IM Work Plan shall then be incorporated into Permit Attachment J (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.

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

1. Submittal of RFI Work Plan

RFI Work Plans may be required at future times in order to determine potential or actual impacts on human health and the environment.

2. Content and Submittal of RFI Work Plan

Within sixty (60) 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.
- (b) The Plan shall discuss sampling and data collection quality assurance and data management procedures listed in Condition B.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.

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 IV.F.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 D of this Permit Part).

If approved, the RFI Work Plan will be incorporated into Permit Attachment J (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 J (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 RCRA Facility Investigation 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 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) 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 IV.F.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 J (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 J (CASOC – Approved Work Plans and Reports).

G. CORRECTIVE MEASURES STUDY (CMS) PLAN AND REPORT

1. Call-in of the Corrective Measures Study

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 Corrective Measures Study (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 IV.H (Remedy Selection);
- (d) The schedules for conducting the study; and
- (e) Proposed format for presentation of the information.

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 J (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;
- (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 recommended corrective measure(s).

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 IV.H (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 IV.G.5). The CMS Report will be incorporated into Permit Attachment J (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 J (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 Corrective Measures Implementation (CMI) Program Plan for the remedy selected pursuant to Condition IV.I (Corrective Measures Implementation).

H. 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:

- (i) Magnitude of residual risks in terms of amounts and concentrations of waste remaining following remedy implementation, considering the persistence, toxicity, mobility and propensity to bio-accumulate of such hazardous wastes including hazardous constituents;
- (ii) Type and degree of long-term management required, including monitoring, operation and maintenance;
- (iii) Exposure potential of humans and environmental receptors to remaining wastes, considering potential threats to human health/environment associated with excavation, transportation, re-disposal or containment;
- (iv) Long-term reliability of the engineering and institutional controls, including uncertainties associated with land disposal of untreated wastes and residuals;
- (v) Potential need for replacement of the remedy.

(b) Reduction of toxicity, mobility, and volume

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

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

(c) Short-term effectiveness.

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

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

(d) Implementability.

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

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

(e) Cost.

The types of costs assessed include:

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

I. 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 Corrective Measures Implementation (CMI) Program Plan. All

Corrective Action requirements of 40 CFR 264.99(h) and 264.100 shall be addressed, not limited to:

- (a) Details of specific remedies (i.e. remove-and-treat or treat-in-place) to be taken which achieve compliance with the standards, and a description of remedy'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 for removal, decontamination, closure, or post-closure of units, equipment, devices or structures used to implement remedy;
 - (iii) Requirements for achieving compliance with concentration limits and levels;
- (b) Basic standards including, but not limited to:
 - (i) 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.
- (c) 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;
- (d) Requirements for submission of semi-annual 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 J (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 J (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.

J. 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 IV.F through IV.I 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 impacted by the historic release.

1. Site Assessment Plan

Any SP submitted by the Permitted in accordance with IV.J 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 ground water;
 - (vii) soil coverings (asphalt, concrete, vegetation, etc);
 - (viii) topography and drainage patterns

- (c) Identity of each waste which has been stored, treated, or disposed at the site, and the identity of each hazardous constituent 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 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:
 - a. The sampling procedures used;
 - b. The equipment used for sampling;
 - c. The analytical procedures and methods used;
 - d. The analytical equipment used; and
 - e. The quality assurance procedures used.
 - (iii) The procedures used to prevent hazards and protect field personnel;
 - (iv) The equipment used to prevent hazards and protect field personnel;
 - (v) Drawings and photographs where appropriate;
 - (vi) Description of any deviations from the approved SP;
 - (vii) Data generated from sampling and analysis activities performed pursuant to the plan, including field notes, manifests, bills of lading,

LDR forms, laboratory submittal forms, chain-of-custody forms, laboratory reports, and drilling logs.

- (j) Provision for the submittal of a Remedial Plan, if any hazardous constituents 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 ground water.
- (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 ground water.
- (l) The final approved SP shall be incorporated into Permit Attachment J (CASOC – Approved Work Plans and Reports).

2. Remedial Plan

Any Remedial Plan (RP) submitted by the Permittee in accordance with IV.J 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 ground water;
 - (q) Documentation that the site has been flagged prior to remediation;
 - (r) Provisions for the submittal of a Remedial Report within 90 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:
 - a. the sampling procedures used;

- b. the equipment used for sampling;
- c. the analytical procedures and methods used;
- d. the analytical equipment used;
- e. 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, through a Class 1 Permit Modification request, 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 ground water;
- (t) The final approved RP shall be incorporated into Permit Attachment J (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.

- (ii) Summaries of all findings, including summaries of laboratory data;

PART V- GROUNDWATER MONITORING

A. GROUNDWATER MONITORING PLAN

The Permittee shall conduct groundwater monitoring, well field measurements, sampling, analysis, and reporting according to parameters and frequencies specified in Attachment D, Exhibit D-1 (Groundwater Monitoring Plan [GWMP]). The Permittee shall use this GWMP, until revisions of these plans are approved by ADEQ as necessary to comply with the requirements of A.A.C. R18-8-264.A, 40 CFR 264.97 and 264.98. Revisions to these documents are considered modifications of this Permit pursuant to Permit Condition I.H.

1. Based on data collected from groundwater monitoring or other investigation results required by this Permit, the Director may require the Permittee to 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 264.98)]

2. If the Permittee believes the monitoring program no longer satisfies the requirements of the regulations, the Permittee shall, within 90 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)]

B. WELL LOCATIONS, INSTALLATION, AND CONSTRUCTION

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

1. The Permittee shall maintain the groundwater monitoring well at the location specified in Section 2.1 of the GWMP and shown in Attachment D, Exhibit D-2 (Groundwater Monitoring Well Construction Report). Well locations will be added based on 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 90 days from the date the well is removed from the network.
3. Any changes to the GWMP must be made as a Permit Modification request, requiring the Director's approval, and submitted in accordance with Permit Condition I.H.

C. SAMPLING AND ANALYSIS

The Permittee shall follow the following techniques and procedures when obtaining and analyzing groundwater samples to provide a reliable indication of groundwater quality.

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

1. Groundwater samples shall be collected from the monitoring wells identified in Section 2.1 of the GWMP. Groundwater samples shall be collected, preserved, and shipped in accordance with the procedures specified in the GWMP.
2. Monitoring Frequency: For the initial quarterly sampling, the frequency of sample collection and the wells to be sampled are in accordance with the GWMP. Upon completion of the quarterly sampling groundwater monitoring the frequency of sample collection shall be no not less frequent than one event per year.
3. Groundwater samples shall be tracked and controlled using the chain-of-custody procedure specified in the GWMP.
4. Samples shall be analyzed according to Sampling and Analysis Plan (Appendix B) of the GWMP or the most current final version of EPA Test Methods for Evaluating Solid Waste SW-846. For those constituents that have established Maximum Contaminant Levels (MCL), Preliminary Remediation Goals (PRG), or Arizona Health-Based Guidance Level (HBGL), the analytical method chosen must be capable of achieving a Practical Quantitation Limit (PQL) below the established MCL, PRG, or HBGL.
5. Depth to water level measurements will be collected once per two years at the monitoring and production wells identified in Section 2.1 of the GWMP. Water level measurements will be performed in accordance with the specifications in the GWMP.

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. On or before December 31 of the year of the sampling is performed the Permittee shall submit to ADEQ a groundwater monitoring report (Report) providing water level and groundwater quality data collected in every groundwater sampling event. The Report shall provide an executive summary of each groundwater monitoring event as well as detailed and comprehensive documentation of the groundwater monitoring activities. Detailed information to be contained in the Report shall include sections on project activities, analytical results summary, and recommendations. The project activities section will include project objectives, summary of groundwater sampling activities, summary of laboratory analyses, and

summary of data quality evaluation. The results section will include well gauging data, analytical results summary, and an evaluation of any potential human health risks. Comprehensive documentation, including the raw analytical data and the full data quality evaluation will be contained in appendices to the Report.

The Report will be prepared under the direction of a qualified professional (e.g. an Arizona registered professional engineer, geologist, or hydrogeologist) in accordance with Permit Condition I.E.11.

E. MANAGEMENT OF IDW

1. All 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, except that uncontaminated purge water will be released at the site in accordance with ADEQ IDW policies. 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.