

ARIZONA HAZARDOUS WASTE MANAGEMENT ACT PERMIT

EPA ID NUMBER AZ5 213 820 991 (PLACE ID 1100) (LTF # 64135)

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 & Address: Munitions Treatment Facility
United States Army Garrison Yuma Proving Ground

Facility EPA I.D. No: AZ5 213 820 991

Location: Sections 30 and 31 of Township 5 South, Range 19 West, Gila and Salt River
Base Line and Meridian
Latitude 32° 57' 12-22" North and Longitude 114° 15' 40-51" West

Land Owner: U.S. Army Garrison Yuma Proving Ground

Facility Owner: U.S. Army Garrison Yuma Proving Ground

Facility Operator: U.S. Army Garrison Yuma Proving Ground
301 C Street
Yuma, Arizona 85365

The Munitions Treatment Facility is located on the Kofa Firing Range on the U.S. Army Garrison Yuma Proving Ground property. The facility is operated by the U.S. Army Garrison Yuma Proving Ground, and is used for destruction of unserviceable, out-dated, or obsolete munitions generated at U.S. Army Garrison Yuma Proving Ground. The explosive ordnance treated at the Munitions Treatment Facility is categorized as reactive and ignitable hazardous waste. U.S. Army Garrison Yuma Proving Ground is a large quantity generator of hazardous waste under RCRA regulations and the Arizona Administrative Code. The methods of treatment are Open Burning (OB) and Open Detonation (OD), conducted within the Munitions Treatment Facility in the OB pads and OD 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. 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, and O. 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 Attachments are accurate, and that the facility will be 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 June 29, 2017 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 DayTBD day of MonthTBD, 2017

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

ARIZONA HWMA PERMIT

U.S. ARMY GARRISON YUMA PROVING GROUND

EPA I.D. NO. AZ5213820991

HAZARDOUS WASTE TREATMENT FACILITY

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PERMIT ATTACHMENTS

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ACRONYMS AND ABBREVIATIONS

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
ADHS	Arizona Department of Health Services
ADOT	Arizona Department of Transportation
ADWR	Arizona Department of Water Resources
AGFD	Arizona Game and Fish Department
AEHA	United States Army Environmental Hygiene Agency
AHWMA	Arizona Hazardous Waste Management Act
AK	Accepted Knowledge
AMC	Army Materiel Command
AOC	areas of concern
ARs	Army Regulations
ATEC	Army Test and Evaluation Command
A.R.S.	Arizona Revised Statutes
bgs	below ground surface
BLM	Bureau of Land Management
CFR	Code of Federal Regulations
CO ₂	carbon dioxide
COPC	Constituent of Potential Concern
CP	Contingency Plan
CPR	cardiopulmonary resuscitation
DDESB	Department of Defense Explosives Safety Board
DMM	Discarded Military Munitions
DoD	Department of Defense
DOT	Department of Transportation
DPW	Directorate of Public Works
DRMO	Defense Reutilization and Marketing Office
DTC	Developmental Test Command
EC	Emergency Coordinator
EPA	Environmental Protection Agency
FIRM	Federal Insurance Rate Map
ft	foot
gpd/ft	gallons/day/foot
GPL	Groundwater Protection Levels
HAZMART	Hazardous Materials Pharmacy
GY	U. S. Army Garrison Yuma Proving Ground
HAZMAT	hazardous material
HAZWOPER	Hazardous Waste Operations and Emergency Response
HW	Hazardous Waste
IAW	in accordance with
ICUZ	Installation Compatible Use Zone
IOSC	Installation On-Scene Coordinator
IRT	Installation Response Team
KFR	Kofa Firing Range
kn	Knots

KNWR	Kofa National Wildlife Refuge
kph	Kilometers per hour
MC	Munitions Constituents
MEC	Munitions and explosives of concern
MHE	Material Handling Equipment
MIDAS	Munitions Items Disposition Action System
mph	miles per hour
MTF	Munitions Treatment Facility
NAAQS	National Ambient Air Quality Standards
NEW	net explosive weight
OB	Open Burning
OB/OD	Open Burning / Open Detonation
OD	Open Detonation
OE	Ordnance and Explosives
ORT	Ordnance Recovery Technician
OSHA	Occupational Safety and Health Administration
PEP	propellants, explosives, and pyrotechnics
PM ₁₀	particulate matter less than 10 microns
PPE	personal protective equipment
QA	Quality Assurance
RAP	Remedial Action Plan
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RRT	Regional Response Team
SOP	Standard Operating Procedure
SRL	Soil Remediation Level
SVOC(s)	Semi-Volatile Organic Compound(s)
SWMU	Solid Waste Management Unit
TSDF	Treatment, Storage, and Disposal Facility
U.S.	United States
UHCs	Underlying Hazardous Constituents
USCS	Unified Soil Classification System
USGS	United States Geological Survey
UXO	unexploded ordnance
UZ	unsaturated zone
VOCs	Volatile organic compounds
WAP	Waste Analysis Plan
YPG	Yuma Proving Ground
YTC	Yuma Test Center

GLOSSARY OF TERMS

Chemical munitions	Chemical munitions and chemicals loaded in such munitions include those used in chemical warfare, riot control, or other chemicals with similar function not used in conventional weapons; and their residues. Such chemicals include but are not limited to, Group B (HC, CN, and CS Agents), Group C, and Group D (HEA and incendiary). (SOP YP-YTRO-P-1000, Sec. 10-11).
Discarded Military Munitions (DMM)	Discarded Military Munitions means military munitions that have been abandoned without proper disposal or removed from storage in a military magazine or other storage area for the purpose of disposal. The term does not include unexploded ordnance, military munitions that are being held for future use or planned disposal, or military munitions that have been properly disposed of, consistent with applicable environmental laws and regulations. 10 USC §2710 [e] [2]
Explosive ordnance	All munitions containing explosives, nuclear fission or fusion materials, and biological and chemical agents. This includes bombs and warheads; guided and ballistic missiles; artillery, mortar, rocket, and small arms ammunition; all mines, torpedoes, and depth charges; demolition charges; pyrotechnics; clusters and dispensers; cartridge and propellant actuated devices; electro-explosive devices; clandestine and improvised explosive devices; and all similar or related items or components explosive in nature.
Explosive ordnance disposal procedures	Those particular courses or modes of action taken by explosive ordnance disposal personnel for access to, diagnosis, rendering safe, recovery, and final disposal of explosive ordnance or any hazardous material associated with an explosive ordnance disposal incident. <u>access procedures</u> — Those actions taken to locate exactly and gain access to unexploded explosive ordnance. <u>diagnostic procedures</u> — Those actions taken to identify and evaluate unexploded explosive ordnance. <u>render safe procedures</u> — The portion of the explosive ordnance disposal procedures involving the application of special explosive ordnance disposal methods and tools to provide for the interruption of functions or separation of essential components of unexploded explosive ordnance to prevent an unacceptable detonation. <u>recovery procedures</u> — Those actions taken to recover unexploded explosive ordnance. <u>final disposal procedures</u> — The final disposal of explosive ordnance which may include demolition or burning in place, removal to a disposal area, or other appropriate means.

Hazardous Constituent A constituent listed in 40 CFR 261 Appendix VIII “Hazardous Constituents”. Hazardous constituents are a subset of hazardous waste constituents (see 40 CFR 261.11(a)(3) and the definition below).

Hazardous Contamination Hazardous waste, hazardous constituents, hazardous waste decomposition products [see 40 CFR 260.10 and 40 CFR 265.111(b)], all constituents listed in the soil remediation rule [A.A.C. R18-7-201 et seq.] or any constituent which otherwise could exceed the remediation standards in A.A.C. R18-7-203.B, constituents whose concentrations could exhibit HW characteristics (reactivity, ignitability, etc.), and constituents listed in 40 CFR 261 Appendix VIII “Hazardous Constituents”, and 40 CFR 264 Appendix IX “Ground-Water Monitoring List”.

Hazardous Waste Constituent A constituent that caused the U.S. EPA to list the hazardous waste in 40 CFR 261 Subpart D or a Toxicity Characteristic constituent listed in 40 CFR 261.24, Table 1.

Material Potentially Presenting an Explosion Hazard (MPPEH) Materials potentially containing explosives, munitions, or materials potentially contaminated with a high enough concentration of explosives such that the material presents an explosives hazard.

Military Munitions The term “military munitions” means all ammunition products and components produced for or used by the armed forces for national defense and security, including ammunition products or components under the control of the Department of Defense, the Coast Guard, the Department of Energy, and the National Guard. The term includes confined gaseous, liquid, and solid propellants, explosives, pyrotechnics, chemical and riot control agents, smokes, and incendiaries, including bulk explosives and chemical warfare agents, chemical munitions, rockets, guided and ballistic missiles, bombs, warheads, mortar rounds, artillery ammunition, small arms ammunition, grenades, mines, torpedoes, depth charges, cluster munitions and dispensers, demolition charges, and devices and components thereof.

The term does not include wholly inert items, improvised explosive devices, and nuclear weapons, nuclear devices, and nuclear components, except that the term does include nonnuclear components of nuclear devices that are managed under the nuclear weapons program of the Department of Energy after all required sanitization operations under the *Atomic Energy Act of 1954* (42 U.S.C. 2011 et seq.) have been completed.

10 USC §2710 [e] [3]

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Munitions constituents (MC)	Any materials originating from unexploded ordnance, discarded military munitions, or other military munitions, including explosive and non-explosive materials, and emission, degradation, or breakdown elements of such ordnance or munitions. 10 USC §2710 [e] [4]
Munitions Debris/Scrap	A military munition or components thereof that do not contain explosives or pyrotechnics. Includes: practice munitions without spotting charges, inert training munitions, expended ejection munitions, and fragments of exploded/destroyed military munitions that do not contain explosives or pyrotechnics.
Munitions and Explosives of Concern (MEC)	Classification for those military munitions that pose an explosive safety risk. MEC consists of two types of military munitions that pose explosive safety risks: UXO (fired military munitions) and DMM (unfired military munitions)
Munitions response	Response actions, including investigation, removal, and remedial actions to address the explosives safety, human health, or environmental risks presented by unexploded ordnance, discarded military munitions, or munitions constituents.
Munitions Response Area (MRA)	Any area on a defense site that is known or suspected to contain unexploded ordnance, discarded military munitions, or munitions constituents. An MRA comprises one or more munitions response sites.
Munitions Response Site (MRS)	A discrete location within a Munitions Response Area that is known to require a munitions response.
Operational range	A military range currently used for range activities or a military range that is: (a) not currently being used but still considered by the DoD component to be a range area; (b) under the jurisdiction, custody, or control of DoD; and (c) not put to a new use incompatible with range activities. 10 USC §2710 [e] [5]
Radiation	Radiation means any or all of the following: alpha rays, beta rays, gamma rays, X-rays, neutrons, high-speed protons, and other atomic particles; but not sound or radio waves, or visible infrared, or ultraviolet light. (10 CFR 20.3 (1989))

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Radioactive
materials

Radioactive material includes any such material that emits radiation. For purposes of prohibiting radioactive materials or military munitions containing radioactive materials, radioactive materials shall mean:

- (a.) For radionuclides that are alpha-particle emitters, greater than or equal to 15 picocuries per 61 cubic inches of emitter (EPA MCL);
- (b.) For radionuclides that are beta-particle emitters and/or photon emitters, greater than or equal to 4 millirems per year (EPA MCL);
- (c.) Any material containing radium-226 and/or radium-228.
- (d.) Any material containing uranium.
- (e.) Any level in excess of 0.5 rem in one calendar year (0.057 mrems/hr), 100 mrems in seven consecutive days (0.595 mrems/hr), or two millirems in any one hour (2 mrems/hr). (10 CFR 20.105 (1989))

Nuclear weapons, nuclear devices, and nuclear components thereof are already prohibited pursuant to the definition of military munition in A.A.C. R18-8-260.A (40 CFR 260.10).

Unexploded
Ordnance (UXO)

Military munitions that:

1. Have been primed, fuzed, armed or otherwise prepared for action
2. Have been fired, placed, dropped, launched or projected
3. Remain unexploded by design or malfunction.

10 USC §2710 [e] [9]

REFERENCES

- A.A.C. 2004a Arizona Administrative Code, Title 18, Chapter 7, Article 2. *Department of Environmental Quality, Remedial Action, Soil Remediation Standards*. Phoenix: Office of the Secretary of State.
- A.A.C. 2004b Arizona Administrative Code, Title 18, Chapter 8, Article 2. *Department of Environmental Quality, Waste Management, Hazardous Waste*. Phoenix: Office of the Secretary of State.
- A.A.C. 2004c Arizona Administrative Code, Title 18, Chapter 11, Article 1. *Department of Environmental Quality, Water Quality Standards, Water Quality Standards for Surface Waters*. Phoenix: Office of the Secretary of State.
- ADEQ 1997 Arizona Department of Environmental Quality, *Investigation Derived-Wastes (IDW) Policy*, May 1997.
- ADEQ 2003a ADEQ Memorandum from Michael Naber to U.S. Army YPG Hazardous Waste Permits Unit File, *February 18-19, 2003 Site Visit and Public Meetings*, dated February 29, 2003 [Ref: HWP-IN1012].
- ADEQ 2003 Arizona Department of Environmental Quality, Letter and Attachment from Michael Naber to Dwight Clark, Doc. #AR01631, dated August 4, 2003.
- ADEQ 2003 Fort Hauchuca MIDAS Report, as provided by ADEQ November 2003
- ADEQ 2004b Letter from Robin Thomas to Charles Botdorf dated August 6, 2004 titled "OD Pits and Background Sampling Plan, & Infiltration Study Plan" (Ref: HWP-EX1845) (Letter grants YPG permission to proceed at risk, with conditions.)
- ADEQ 2004a ADEQ Memorandum from Michael Naber to U.S. Army YPG Hazardous Waste Permits Unit File, *Site Visits dated August 2004 of Soil Sampling and Infiltration Study Activities at the HW Munitions Open Detonation Units*, dated August 16, 2004 [Ref: HWP-IN1048].
- ADEQ 2004 ADEQ (Arizona Department of Environmental Quality) 2004, "Open Burning Permit #3010," Phoenix, Arizona.
- ADHS Title 36, Arizona Revised Statutes, Chapter 495. *Arizona of Health Services Office of Laboratory Licensure*. Phoenix: Office of Secretary of State.
- ADOT 1992 *Development of Seismic Acceleration Contour Maps for Arizona*. Kenneth M. Euge, Bruce A. Schell, and Ignatious Po Lam, Arizona Department of Transportation, September 1992.
- AEC 2001 AEC (U.S. Army Environmental Center) 2001, *Closure/Post-Closure Guidance for RCRA Open Burning and Open Detonation Units*, SFIM-AEC-EQ-CR-200124, Aberdeen Proving Ground, Maryland.
- AEHA 1987 U.S. Army Environmental Hygiene Agency (AEHA) Draft *RCRA Part B Permit Writers Guidance Manual for Open Burn/Open Detonation Facilities*, April 6, 1987.
- AEHA 1989 AEHA (U.S. Army Environmental Hygiene Agency) 1989, Interim Final Report, *Ground Water Contamination Survey No. 38-26-0882-89, Evaluation of Solid Waste Management Units, Yuma Proving Ground, Yuma, Arizona, 21-31 August 1988*, Aberdeen Proving Ground, Maryland.
- AMEC AMEC Earth & Environmental, "Comprehensive List of Chemicals Likely to be Found at Military Ranges - A Case Study of Camp Edwards, Massachusetts,"

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- ANL 2001 ANL (Argonne National Laboratory) 2001, *Release Assessment for Solid Waste Management Units at Yuma Proving Ground, Arizona*, University of Chicago, Illinois, prepared for Environmental Sciences Division, Directorate of Command Technology, Yuma Proving Ground.
- Barth 1984 Barth, D.S. and B.J. Mason. 1984. *Soil Sampling Quality Assurance User's Guide*. EPA-600/4-84-043.
- Botdorf 1998a Letter from Botdorf to Egleston dated July 10, 1998 which encloses as Exhibit 3 the "TSSI Sampling and Analysis Plan for RLS 98-13, OB/OD North Pad Soil Survey" dated June 23, 1998 by Stephen M. Maurer.
- Botdorf 1998b Letter from Botdorf to Egleston dated October 23, 1998 which encloses as Exhibit SAP-1, -2, and -3 the "TSSI Sampling and Analysis Plan Report for the North OB/OD Pad".
- CDH n.d. Colorado Department of Health, *Interim Final Policy and Guidance on Management of Investigation Derived Wastes (IDW) at RCRA Facilities*, Undated.
- Chamberlin et. al. 1974 Chamberlin, E.G. and M.L. Richardson, "Report and Interpretations for the General Soil Map of Yuma County, Arizona", U.S. Dept. of Agriculture Soil Conservation Service and Yuma County Natural Resource Conservation Districts, July 1974.
- Cochran 1991 Cochran, Chris, 1991, *Soil Survey of the U.S. Army Yuma Proving Ground, Arizona – Parts of LaPaz and Yuma Counties in 1991*, Soil Conservation Service, U.S. Army Yuma Proving Ground, Yuma, Arizona.
- CFR Title 40, Code of Federal Regulations (40 CFR), Part 260 "Hazardous Waste Management System: General"; Part 261 "Identification of Hazardous Waste"; Part 262 "Standards Applicable to Generators of Hazardous Waste"; Part 264 "Standards for owners and operators of hazardous waste treatment, storage, and disposal facilities"; Part 265 "Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities"; Part 268 "Land Disposal Restrictions"; and Part 270 "EPA Administered permit programs: The Hazardous Waste Permit Program". Washington D.C.: Office of the Federal Register National Archives and Records Administration (July 1, 2005 edition).
- Davies, et. al. 2004 Davies, B., Botdorf, C., Butler, J., Cantwell, B., Hlohowskyj, I., Kimmell, T.A., et. al. 2004, *Remedial Investigation Report for Selected Site at Yuma Proving Ground, Arizona*, Argonne National Laboratory, Environmental Assessment Division, Argonne IL, prepared for U.S. Army Yuma Proving Ground
- DOT U.S. Department of Transportation, *Title 49 Code of Federal Regulations, sections 101 to 200*, Current Revision.
- EEC 2001 Engineering and Environmental Consultants, Inc., *Quality Assurance Project Plan, Part 1: Open Burning/Open Detonation Units Work Plan*, U.S. Army Garrison, Fort Huachuca, February 2001.
- Entech 1987 Entech Engineers, Inc. 1987, *Yuma Proving Ground Hydrologic and Pollution Investigation Study, Cibola and Kofa Ranges*, Santa Ana, California, prepared for Los Angeles: U.S. Army Corps of Engineers, Los Angeles District.
- EPA 1983 U.S. Environmental Protection Agency (EPA) SW-968, *Permit Applicants' Guidance Manual for the General Facility Standards of 40 CFR 264, 10/15/1983*.

EPA I.D. NO. AZ5213820991

U.S. Army Garrison Yuma Proving GroundDraft Permit

- EPA 1983 EPA (U.S. Environmental Protection Agency), 1983, *Guide for Decontaminating Buildings, Structures, and Equipment at Superfund Sites*, Office of Research and Development, Washington, D.C.
- EPA 1984 U.S. Environmental Protection Agency. 1984 Characterization of Hazardous Waste Sites - A Methods Manual: Volume II. Available Sampling Methods, Second Edition. EPA-600/4-84-076.
- EPA 1986 Environmental Protection Agency. November 1986. *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (SW-846) Third Edition, as amended by Updates I (July 1992), II (September 1994, IIA (August 1993), IIB (January 1995), and III (December 1996), Office of Solid Waste.
- EPA 1987 U.S. Environmental Protection Agency (EPA) EPA/530-SW-87-010, *RCRA Guidance Manual for Subpart G Closure and Post-Closure Care Standards and Subpart H Cost Estimating Requirements*. (NTIS PB87-158978), January 1987.
- EPA 1991 U.S. Environmental Protection Agency, *Guide to Management of Investigation-Derived Wastes*, OSWER Directive 9345.3-02/FS (Fact Sheet), May 1991.
- EPA 1994 U.S. EPA Environmental Response Team, *Sampling Equipment Decontamination SOP 2006*, August 1994.
- EPA 1996 U.S. EPA, *Guidance for the Data Quality Assessment Process*, EPA QA/G9, February 1996.
- EPA 1999 Environmental Protection Agency. November 1999. *EPA Requirements for Quality Assurance Project Plans (QA/R-5) Interim Final*, EPA/600/R-99/033. Washington, DC: U.S. Environmental Protection Agency, Office of Environmental Information.
- EPA 1999 EPA 1999, *RCRA Facility Assessment, U.S. Army Yuma Proving Ground, Yuma Arizona, AZ5213820991*, Region 9, April, San Francisco, California.
- EPA 2000 Environmental Protection Agency. August 2000. *Guidance for the Data Quality Objectives Process (QA/G-4)*, EPA/600/R-96/055. Washington, DC: U.S. Environmental Protection Agency, Office of Research and Development.
- EPA 2000 Environmental Protection Agency. July 2000. *Guidance for Data Quality Assessment: Practical Methods for Data Analysis (QA/G-9)*, EPA/600/R-96/084. Washington, DC: U.S. Environmental Protection Agency, Office of Research and Development.
- EPA 2000 Environmental Protection Agency. May 2000. *Policy and Program Requirements for the Mandatory Agency-wide Quality System*. Washington, DC: U.S. Environmental Protection Agency.
- EPA 2000 U.S. EPA Environmental Response Team, *Soils Sampling SOP 2012*, February 2000.
- EPA 2000 Environmental Protection Agency. January 2000a. *The Data Quality Objectives Process for Hazardous Waste Sites (QA/G-4HW)*, EPA/600/R-00/007. Washington, DC: U.S. Environmental Protection Agency, Office of Environmental Information.
- EPA 2000 Environmental Protection Agency. January 2000b. *Guidance on Technical Audits and Related Assessments for Environmental Data Operations*, EPA QA/G-7, EPA/600/R-99/080. Washington, DC: U.S. Environmental Protection Agency, Office of Environmental Information
- EPA 2002 EPA (U.S. Environmental Protection Agency), 2002, "Integrated Risk Information System," <http://www.epa.gov/iriswebp/iris/index.htm>, Greenbelt, Maryland.

EPA I.D. NO. AZ5213820991

U.S. Army Garrison Yuma Proving GroundDraft Permit

- EPA 2002 EPA (U.S. Environmental Protection Agency), 2002, "Preliminary Remediation Goals (PRGs)," http://www.epa.gov/Region_9/waste/sfund/prg/index.htm, Region 9, San Francisco, California.
- EPA 2003 U.S. Environmental Protection Agency, April 2003, *Guidance for Field Samplers*, EPA 540-R-00-03, Washington, D.C.
- GPI 1996 Gutierrez-Palmenberg, Inc., "RCRA Part B Permit Application," Volume V, Appendix I, OB/OD Hazardous Substances Treated, November 1996
- GPI 1998 Work Plan for Soil Remediation of Lead, U.S. Army Proving Ground, North OB/OD Pad, dated December 1998, by Gutierrez-Palmenberg, Inc.
- HAAP 1998 Hawthorne Army Ammunition Plant Permit Application, Revision 4, August 1998. Extracted from Marine Corps Air Station Yuma Permit Application at ADEQ
- HSDB 2003 HSDB (Hazardous Substances Data Bank). 2003a. Calcium Cyanide. Database available through the National Library of Medicine's Toxicology Data Network (TOXNET). Accessed on-line at <http://toxnet.nlm.nih.gov/>.
- HSDB 2003 HSDB (Hazardous Substances Data Bank). 2003b. 2,4-Dinitrotoluene (2,4-DNT). Database available through the National Library of Medicine's Toxicology Data Network (TOXNET). Accessed on-line at <http://toxnet.nlm.nih.gov/>.
- HSDB 2003 HSDB (Hazardous Substances Data Bank). 2003c. Hydrogen Cyanide. Database available through the National Library of Medicine's Toxicology Data Network (TOXNET). Accessed on-line at <http://toxnet.nlm.nih.gov/>.
- HSDB 2003 HSDB (Hazardous Substances Data Bank). 2003d. Lead Compounds. Database available through the National Library of Medicine's Toxicology Data Network (TOXNET). Accessed on-line at <http://toxnet.nlm.nih.gov/>.
- IATA International Air Transport Association, Dangerous Goods Regulations, Current
- Jason 2003 Jason Associates Corporation, "Open Burn/Open Detonation Facility, RCRA Operating Permit Application," Volume VI, Submittal 12, Doc. #AR01549, February 2003.
- Mason 1983 Mason, B.J. 1983. *Preparation of Soil Sampling Protocol: Technique and Strategies*. EPA-600/4-83-020.
- NFESC 2000 NFESC (U.S. Naval Facilities Engineering Service Center), 2000, *Guide for Incorporating Bioavailability Adjustments into Human Health and Ecological Risk Assessments at U.S. Navy and Marine Corps Facilities*, Port Hueneme, California.
- Nichols 1996 Nichols Research Corporation, "Open Burning/Open Detonation UXO Baseline," Table 2.4 Target Analytes for Open Detonation Sites, Volume I Final Report, January 31, 1996
- NOAA 1973 NOAA (National Oceanic and Atmospheric Administration, U.S. Department of Commerce) 1973, *NOAA Atlas 2, Volume VIII*. NOAA, National Weather Service, Office of Hydrology. Prepared by the U.S. Department of Agriculture, Soil Conservation Service, Engineering Division.
- OSHA Title 29, Code of Federal Regulations, Part 1910.120. Hazardous Waste Operations and Emergency Response. Washington D.C.: Office of the Federal Register National Archives and Records Administration.
- RIDEM 1995 Rhode Island Department of Environmental Management, Office of Waste Management, *Guidelines for the Management of Investigation Derived Wastes*, January 1995.

EPA I.D. NO. AZ5213820991

U.S. Army Garrison Yuma Proving GroundDraft Permit

- SGWC 2004a Southwest Ground-Water Consultants, Inc., July 10, 2004, *QA Project Plan, Infiltration Study, OB/OD Treatment Facility, Kofa Firing Range*, U.S. Army Yuma Proving Ground, Yuma County, Arizona, EPA ID No. AZ5213820991.
- SGWC 2004b Southwest Ground-Water Consultants, Inc., October 28, 2004, *Infiltration Study, OB/OD Treatment Facility, Kofa Firing Range*, U.S. Army Yuma Proving Ground, Yuma County, Arizona, EPA ID No. AZ5213820991.
- USACHPPM 1998 USACHPPM (U.S. Army Center for Health Promotion and Preventative Medicine) 1998, *Firing Range Study No. 32-EE-6340-98 Field Investigation Protocol Munitions Test Range Environmental Management Project, Yuma Proving Ground, Arizona*, Aberdeen Proving Ground, Maryland.
- USACHPPM 1999 USACHPPM 1999, *Firing Range Study No. 32-EE-5813-99 Field Investigation Report Munition Test Range Environmental Management Project, Yuma Proving Ground, Arizona*, Aberdeen Proving Ground, Maryland.
- USCOE 1992 U.S. Army Corps of Engineers, *Management of Investigation-Derived Waste from Site Inspections*, Environmental Regulatory, Fact Sheet 92-02.
- USCOE 2001 U.S. Army Corps of Engineers, *Requirements for the Preparation of Sampling and Analysis Plans*, EM 200-1-3, February 2001.
- YPG 1992 YPG (U.S. Army Yuma Proving Ground), 1992, *Master Plan Report Yuma Proving Ground*, U.S. Army Corps of Engineers, Sacramento, California.
- YPG 2001 YPG 2001, *Final Range-Wide Environmental Impact Statement*, Command Technology Directorate, CSTE-DTC-YP-CD-ES, Yuma, Arizona.
- YPG 2004a U.S. Army Yuma Proving Ground (YPG), *Pits and Background Sampling Plan, Open Burn/Open Detonation Area*, Revision 1, July 2004, Directorate of Environmental Services, CSTE-DTE-YP-CD-ES, Yuma, Arizona.
- YPG 2004b U.S. Army Yuma Proving Ground (YPG), *Baseline Soils Investigation at the Open Burn/Open Detonation Treatment Facility, Report, November 2004*, Environmental Services Directorate, CSTE-DTC-YP-CD-ES, Yuma, Arizona.
- YPG 2004c RCRA Operating Permit Application, Open Burn/Open Detonation Facility, U.S. Army Yuma Proving Grounds, prepared by Jason Associates Corporation, September 2004 Update.
 YPG 2004c, Appendix C: “*RCRA Part A Application*”
 YPG 2004c, Appendix K: “*Solid Waste Management Unit Descriptions*”
 YPG 2004c, Submittal 1: “*Pre-Application Public Meeting Summary*”
 YPG 2004c, Submittal 2: “*U.S. Army Yuma Proving Ground, Historical Records Review, OB/OD Site*”, August 2004
 YPG 2004c, Submittal 3: “*Yuma Proving Ground: A Climatology 1954-1992*”, by Andrew Woodcock, Meteorologist, U.S. Army Test and Evaluation Command, Yuma Proving Ground, Arizona, dated July 1, 1992.
 YPG 2004c, Submittal 4: “*Geohydrologic Study of the Yuma Proving Ground with Particular Reference to the Open Burning/Open Detonation Facility at Yuma County, Arizona*”, prepared by ENTECH Engineers, Inc, May 1988, accompanied by a “*Memorandum to the Record*” by Jason Associates Corp.
 YPG 2004c, Submittal 5, Item 5-3c: “*OB/OD Pad Size Evaluation*” prepared by Jason Associates Corporation.
 YPG 2004c, Submittal 5, Item 5-3d: “*Analysis of Transient Heat Transfer in Open Burning Pans*” prepared by URS Corporation, sealed by Robert Farmer, Arizona – registered Chemical P.E., dated September 14, 2004.

- YPG 2004c, Submittal 6, Item 6-1: “*Final Drainage Report*”, by Premier Corporation.
- YPG 2004c, Submittal 6, Item 6-2: “*100-Year Flood Plain/Flood Protection Analysis, Open Burn/Open Detonation Site, Yuma Proving Grounds*”, prepared by James Davey and Associates, dated August 2004.
- YPG 2004c, Submittal 6, Item 6-3: “*Soil Survey of the U.S. Army Yuma Proving Ground, Arizona, parts of La Paz and Yuma Counties*”, by Christopher C. Cochran, Soil Conservation Service, 1991.
- YPG 2004c, Submittal 6, Item 6-4: “*Report and Interpretations for the General Soil Map of Yuma County, Arizona*”, prepared by E.C. Chamberlin and M.L. Richardson, U.S. Dept of Agriculture Soil Conservation Service and Natural Resource Conservations Districts in Yuma County, July 1974.
- YPG 2004c, Submittal 9: “*Munitions Items Disposition Action Systems (MIDAS) Reports*” (5 volumes).
- YPG 2004c, Submittal 10: “*U.S. Department of the Army Technical Manual (TM) 9-1300-214, Military Explosives*”, September 1984.
- YPG 2004c, Submittal 11, Item 1: “*Response to Comments Relating to Air Quality, RCRA Part B Application, Yuma Proving Grounds, Open Burn/Open Detonation@*”, prepared by URS, dated July 29, 2004, sealed by Robert Farmer, Arizona registered Chemical Professional Engineer.
- YPG 2004c, Submittal 11, Item 2: “*Air Quality Evaluations of OB/OD Operations, U.S. Army Yuma Proving Ground, Yuma, Arizona@*”, prepared by Jason Associates Corporation, dated December 2002, sealed by Michael Strong, Utah Registered Environmental Professional Engineer.
- YPG 2004c, Submittal 12: See SGWC, 2004a and SGWC, 2004b.
- YPG 2004c, Submittal 14: “*Open Burn/Open Detonation Physical Process Evaluation, U.S. Army Yuma Proving Ground*”, prepared by Jason Associates Corp., August 2004.
- YPG 2004c, Submittal 15: See YPG, 2004a and YPG, 2004b.
- YPG 2004c, Submittal 17, Item 1: U.S. Dept. of the Army, Army Regulation (AR) 385-64 “*U.S. Army Explosives Safety Program*”, Feb. 1, 2000.
- YPG 2004c, Submittal 17, Item 2: U.S. Dept. of the Army Pamphlet (DA PAM) 385-64, “*Ammunition and Explosives Safety Standards*”, December 15, 1999.
- YPG 2004c, Submittal 20: “*OB Ash Laboratory Analysis Reports*”

PART I – GENERAL PERMIT CONDITIONS

A. EFFECT OF PERMIT

The Permittee is allowed to treat on-site hazardous waste in accordance with the conditions of this Permit. Any storage, treatment, and/or disposal of hazardous waste not authorized in this Permit are prohibited. Subject to A.A.C. R18-8-270.A (40 CFR § 270.4), compliance with this Permit generally constitutes compliance, for purposes of enforcement with the AHWMA. Issuance of this Permit does not convey any property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of state or local law or regulations. Compliance with the terms of this Permit does not constitute a defense to any order issued or any action brought under Sections 3008(a), 3008(h), 3013, or 7003 of RCRA; Sections 106(a), 104 or 107 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601 et seq., commonly known as CERCLA), or any other law providing for protection of public health or the environment. [A.A.C. R18-8-270.A (40 CFR 270.4, 270.30(g))]

B. DEFINITIONS

For purposes of this Permit, terms used herein shall have the same meaning as those in A.A.C. R18-8-260 et seq. (40 CFR §§124, 260, 264, 266, 268, 270), unless this Permit specifically provides otherwise. Where terms are not defined in the regulations or the Permit, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

- “A.A.C.” and “CFR” means the Arizona Administrative Code, Title 18, Chapter 8, Article 2 (A.A.C. R18-8-260 et seq.), updated September 30, 2016, which adopts and modifies portions of Title 40 Code of Federal Regulations Part 260 (40 CFR 260 et seq.), July 1, 2013 and January 31, 2014 editions.
- “AHWMA” means Arizona Hazardous Waste Management Act
- “Area of Concern (AOC)” means those units or areas which do not meet the definition of SWMU below, but may have released or have the potential to release hazardous constituents to the environment on a non-routine basis. This includes, but is not limited to, the following:
 - any hazardous product storage unit or area;
 - any area where a one-time (or more) hazardous material (hazardous product or hazardous waste) spill event occurred; and
 - any hazardous material unit or area where management may have occurred, where the potential for release may have existed, but insufficient evidence was found during the RCRA Facility Assessment (RFA) to verify the existence of a definable SWMU.

- “Director” means the Director of ADEQ or the Director’s designee or authorized representative.
- “Example” means that the form is a blank form that is mandatory to be used or followed. This form does not convey to the Permittee that the statements are optional to be performed at the user’s discretion. “Example”, presents, unless otherwise specified, minimum acceptable.
- “Facility” means all contiguous land and structures, other appurtenances and improvements on the land used for treating, storing or disposing of hazardous waste. A facility may consist of several treatment, storage or disposal units. For the purpose of implementing corrective action under Part IV of this Permit, facility means all contiguous property under the control of the owner or operator and subject to this Permit and the AHWMA.
- “Hazardous waste” means a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, and increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed. The term hazardous waste includes hazardous constituent as defined above.
- “Hazardous Constituents” means any constituent identified in Appendix VIII of 40 CFR 261, or any constituent identified in Appendix IX of 40 CFR 264.
- “Qualified” means that the individual or group shall have the same training, education, experience, and other necessary skills, as required by this Permit, as the person(s) or group who normally performs that function has.
- “Regulated Facility” or “Regulated Unit” means a hazardous waste surface impoundment, waste pile, land treatment area, or a landfill defined by A.A.C. R18-8-264.A (40 CFR 264.90(a)(2)), although those units are not permitted herein. It also includes any miscellaneous unit which is similar to these units as stated in 40 CFR 264.90(d). In this context, the OB pan units are not regulated units but the OD pit units are regulated units.
- “Release” includes the definitions of 'discharge' and 'disposal' in 40 CFR 260.10 and means any spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping, or disposing of hazardous wastes (including hazardous constituents) into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing hazardous wastes or hazardous constituents) or into secondary containment.
- “Shall,” “Must,” “Will,” and factual statements denote a mandatory requirement.

- “Should” or “May” denotes a recommendation or permission, respectively, which is not mandatory.
- “Solid Waste Management Unit (SWMU)” means any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. SWMUs include those units defined as “regulated units” under RCRA (see above definition), as well as other units which have generally been exempted from standards applicable to hazardous waste management units, such as recycling units and wastewater treatment units, and areas contaminated by “routine, systematic, and deliberate discharges” from process areas.

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 and Q, and 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.D.2. Review of any application for a Permit renewal shall consider improvements in the state of control and measurement technology, as well as changes in applicable regulations. [A.A.C. R18-8-270.A, 40 CFR §270.30(b) and HSWA Sec. 212]

D. SEVERABILITY

The provisions of this Permit are severable, and if any provision of this Permit, or application of any provision of this Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby. [A.A.C.R18-8-270.A (40 CFR 124.16(a))]

E. DUTIES AND REQUIREMENTS

1. Duty to Comply

The Permittee shall comply with all conditions of this Permit, except to the extent and for the duration such noncompliance is authorized by an emergency Permit. Any Permit noncompliance, other than noncompliance authorized by an emergency

Permit, constitutes a violation of AHWMA and/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 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

Pursuant to A.A.C. R18-8-270.A and 40 CFR §270.50, this Permit shall be effective for a fixed term not to exceed ten (10) years. This Permit and all conditions herein will remain in effect beyond the Permit's expiration date, if the Permittee has submitted a timely, complete application pursuant to A.A.C. R18-8-270.A, E, F, G, H, J, and K and 40 CFR §§270.10, 270.13 through 270.29, and through no fault of the Permittee, the Director has not issued a new Permit, as set forth in A.A.C. R18-8-270.A and R, and 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 management units 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, as specified in 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

Pursuant to A.A.C. R18-8-270.A and 40 CFR §270.30(i), the 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, any substances or parameters at any location. For the case of inspection after an open burn or open detonation event, "reasonable time" shall mean after an appropriate wait time as designated in standard operating procedure or the Lead ORT.

10. Monitoring and Records

- (a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activities (e.g., retention basin sampling). 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 SW-846, Standard Methods of

Wastewater Analysis, or an equivalent or better method, as specified in the Waste Analysis Plan (see Permit Attachment 3). [A.A.C. R18-8-270.A and 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. R18-8-264.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 3 years from the date of the sample, measurement, report, record, certification, or application. These periods may be extended by request of the Director at any time, and are automatically extended during the course of any unresolved enforcement action regarding this facility. [A.A.C. R18-8-264.A and 270.A, and 40 CFR §264.74(b) and 270.30(j)(2)]
- (c) Pursuant to A.A.C. R18-8-270.A and 40 CFR 270.30(j)(3), records of monitoring information shall specify:
 - (i) The dates, exact place, and times of sampling or measurements;
 - (ii) The individual(s) who performed the sampling or measurements;
 - (iii) The dates analyses were performed;
 - (iv) The individuals who performed the analyses;
 - (v) The analytical techniques or methods used; and
 - (vi) The results of such analyses.
- (d) Each parameter test that an in-state or out-of-state laboratory can perform for hazardous waste analysis must be licensed (certified) by the Arizona Department of Health Services (ADHS) [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 conditions set forth in this Permit. For notification and certification verification purposes, a copy of that letter will be included with the final analytical report.

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 and 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 (40 CFR 270.30(1)(1)) and -270.L]
- (b) Anticipated Noncompliance. The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with Permit requirements. [A.A.C. R18-8-270.A (40 CFR 270.30(1)(2))]
- (c) Transfers. This Permit is not transferable to any person or any other corporation, except after notice to the Director. The Director may require modification or revocation and reissuance of the Permit to change the name of the Permittee and incorporate such other requirements as may be necessary pursuant to A.A.C. R18-8-270.A and 40 CFR 270.40. [A.A.C. R18-8-270.A (40 CFR 270.30(1)(3)), -270.L, and A.A.C R18-8-264.A (40 CFR 264.12(c))].
- (d) Monitoring Reports. Monitoring results shall be reported at the intervals specified elsewhere in this Permit. [A.A.C. R18-8-270.A (40 CFR 270.30(1)(4)), and -270.L].
- (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 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 with the waste generator or transporter. If not resolved within 15 calendar days after receiving the hazardous waste, the Permittee must immediately submit a letter report, including a copy of the manifest, to the Director (See A.A.C. R18-8-264.A (40 CFR 264.72)). [A.A.C. R18-8-270.A (40 CFR 270.30(1)(7))].
- (g) Unmanifested Waste Report. This report must be submitted to the Director within 15 days of receipt of unmanifested waste (See A.A.C. R18-8-264.A (40 CFR 264.76)). [A.A.C. R18-8-270.A (40 CFR 270.30(1)(8)), and -270.L].
- (h) Annual Report. The Permittee must submit an annual report pursuant to, and as described in A.A.C. R18-8-264.H (40 CFR 264.75), 270.A (40 CFR 270.30(1)(9)), and 270.L.
- (i) Other Noncompliance. The Permittee shall report all instances of noncompliance not reported under A.A.C. R18-8-270.A (40 CFR 270.30(1)(4), (5) and (6)), at the time monitoring (including annual) reports are submitted. Reports shall contain the information listed in A.A.C. R18-8-

270.A (40 CFR 270.30(l)(6)). [A.A.C. R18-8-270.K (40 CFR 270.30(l)(10)),
and -270.L]

13. Additional Requirements for Monitoring

The Permittee shall ensure that this Permit includes and specifies the following information: [A.A.C. R18-8-270.A (40 CFR 270.31)]

- (a) Requirements concerning the proper use, maintenance, and installation, when appropriate, of monitoring equipment or methods;
- (b) Required monitoring including type, intervals, and frequency sufficient to yield data which are representative of the monitored activity including, when appropriate, continuous monitoring; and
- (c) Applicable reporting requirements based upon the impact of the regulated activity and as specified in A.A.C. R18-8-264.A and 40 CFR Part 264.

14. Certification of Construction or Modification

The Permittee may not commence treatment of hazardous waste in a new OB unit until the Permittee has submitted to the Director, by certified mail or hand delivery, a letter signed by the Permittee and a registered professional engineer stating that the facility has been constructed in compliance with the Permit; and

- (a) ADEQ has inspected the modified or newly constructed unit and finds it is in compliance with the conditions of the Permit; or
- (b) ADEQ has either waived the inspection or has not within 15 days notified the Permittee of its intent to inspect. [A.A.C. R18-8-270.A and 40 CFR 270.30(l)(2)]
- (c) When constructing the proposed OB pads and the 100-year flood plain protection berms, the Permittee shall follow the procedures in Permit Condition I.E.14 (*Certification of Construction or Modification*). In addition the Permittee shall follow:
 - (i) At least fourteen (14) calendar days prior to start of construction of each open burn pad, the Permittee shall notify ADEQ hazardous waste permits unit and provide a schedule of major construction events (e.g., grading, liner installation, sump and double-piping installation, hydrostatic test, etc.). This will allow ADEQ to conduct oversight of the construction activities.
 - (ii) If the construction requires deviations from this Permit, a Permit modification will be submitted if required by Permit Condition I.C (*Permit Modifications*).

- (iii) After each new OB pad is constructed and prior to its initial operation, the letter to the Director required by Permit Condition I.E.14 (*Certification of Construction or Modification*) will also include supporting reports and documents (e.g., P.E.-sealed hydrostatic pressure pipe test results, etc.).
 - (iv) Upon completion of construction, submit an updated topographic map showing the elevated soil surrounding the OB pads and retention basins and the elevated soil surrounding the OD pits and updated calculations (Submittal 21) showing no storm water run-on will occur into these OB and OD areas. The updated calculations will also include OD Pit 1 which was not included in the original calculations.
- (d) Fourteen (14) days after the final date of compliance in which all schedule-of-compliance activities above are completed [40 CFR 270.33(a)(3)], the Permittee shall also submit:
- (i) A written notice that states the facility is in compliance with the Schedule of Compliance requirements above; and
 - (ii) A Permit modification pursuant to Permit Condition I.C "Permit Modifications" that incorporates these activities.

15. 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 24 hours from the time the Permittee becomes aware of the circumstances. The report shall include the following: [A.A.C. R18-8-270.A and M, and 40 CFR 270.30(1)(6)]

- (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 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 reoccurrence of the noncompliance.

The Director may waive the five-day written notice requirement in favor of a written report within 15 days.

16. 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 M, and 40 CFR 270.30(I)(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 and Q (40 CFR 270.51).

F. CONFIDENTIAL INFORMATION

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

G. DOCUMENTS TO BE MAINTAINED AT THE FACILITY

The Permittee shall maintain at the facility, until closure is completed and certified by an independent, Arizona registered professional engineer, the following documents and all amendments, revisions and modifications to these documents:

1. Waste Analysis Plan (Permit Attachment 3), as required by A.A.C. R18-8-264.A, 40 CFR §264.13 and this Permit;
2. Inspection schedules (Permit Attachment 11A), as required by A.A.C. R18-8-264.A, 40 CFR §264.15(b) and this Permit;
3. Contingency Plan (Permit Attachment 10), as required by A.A.C. R18-8-264.A, 40 CFR §264.53(a) and this Permit;
4. Personnel training documents and records (Permit Attachment 12), as required by A.A.C. R18-8-264.A, 40 CFR §264.16(d) and this Permit;
5. Operating record, as required by A.A.C. R18-8-264.A, 40 CFR §264.73 and this Permit;
6. Closure Plan (Permit Attachment 14), as required by A.A.C. R18-8-264.A, 40 CFR §264.112(a) and this Permit;
7. All other documents required by Permit Condition I.E.10 “Monitoring and Records.”

The Permittee shall maintain the above records and documents at the locations and under the conditions specified in Permit Attachment 15 (*Recordkeeping and Reporting*).

H. PERMIT MODIFICATIONS

1. General Conditions

For Permit modifications (including re-applications), the Permittee shall follow, as applicable:

- (a) Permit Condition I.C.1 “Permit Modification, Reissuance, and Termination”;
- (b) Permit Condition I.E.12.a “Reporting Requirements - Planned Changes”;
- (c) Permit Condition I.E.12.b “Reporting Requirements – Anticipated Noncompliance”;
- (d) Permit Condition I.E.14 “Certification of Construction or Modification”;
- (e) Permit Condition II.A “Design and Operation of Facility”;

- (f) Signatory and document liability certification requirements as described in Permit Condition I.E.11 “Signatory Requirements”; and
- (g) Confidentiality rules, if desired, pursuant to Permit Condition I.F “Confidential Information”.
- (h) Fees required to be submitted with the application for Permit modification as required by A.A.C. R18-8-270.G.
- (i) Procedures for updating the facility mailing list, changing the emergency contingency plan or hazardous waste codes, and changing key employees.

2. Facility Mailing List

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

3. Changes to Key Employee(s)

For the following key personnel changes, the Permittee shall also submit an ADEQ character/background reference form [A.R.S. 49-922.C; A.A.C. R18-8-270.K (270.14(b)(23))]:

- (a) Signatories. See Permit Condition I.E.11 (Signatory Requirements);
- (b) Training Director. See Permit Attachment 12 (*Training Plan*);
- (c) Emergency Coordinators. See Permit Attachment 10 (*Contingency Plan*); specifically the ECs are those listed in Permit Attachment 10A;
- (d) Persons filling the following key positions. Refer to Permit Attachment 12.G Training Plan Figures and Tables:
 - Chief, Ammunition Management
 - OB/OD Facility Manager
 - QA Manager

4. Changes to Contingency Plan

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

I. SCHEDULE OF COMPLIANCE

The following activities shall be performed, and certification of completed activity shall be submitted to ADEQ within the timeframes specified below in accordance with the Permit.

To the extent that activities required by this Permit cannot be completed in accordance with the schedules contained below, and the Permittee can demonstrate to the Director's satisfaction that the Permittee used best efforts to accomplish the activity within the required schedule, the Permittee shall request an extension to the schedule prior to expiration of the schedule date, in accordance with Permit Condition I.H "Permit Modifications". The Director will evaluate the request for extension and justification, and either approve or disapprove the Class 1 Permit modification request.

1. Corrective Measures Implementation Report for Inactive Landfills CCYPG-027, -029, and -141losure Report for Inactive South Burn Pad

(a) By October 1, 2017, the Permittee shall submit a Corrective Measures Implementation (CMI) Report for Inactive Landfills CCYPG-027, -029, and -141. The CMI Report shall describe all activities performed during construction, provide actual specifications and as-built drawings of the constructed or implemented remedy, and provide a preliminary assessment of CMI performance. The CMI Report shall include, but not be limited to, the following elements:

- A synopsis of the corrective measure and certification of the design and construction;
- Explanation of any modifications to the approved construction and/or design plans and why these were necessary for the project;
- Listing of the criteria, established in the approved CMI Workplan, for judging whether the corrective measure is functioning properly, and also explaining any modification to these criteria;
- Certification by Arizona registrant(s) that the construction is complete, consistent with contract documents and the approved CMI design, and that the equipment performs to meet the intent of the specifications;
- Results of facility monitoring, assessing the likelihood (and approximate time frame) that the corrective measures will meet the media clean-up standards, and any amendment thereto; and
- Certification by the authorized signatory for the Permittee, in accordance with R18-8-270.A (40 CFR 270.11(d)).

The CMI Report shall include an executive summary of the corrective measures implementation, any daily inspection reports, inspection data sheets, problem identification and corrective measure reports, photographic reporting data sheets, sampling and analysis data, design engineers' acceptance reports, deviations from design and material specifications (with justifying documentation), and as-built drawings, unless otherwise agreed to by ADEQ.

(b) The Director shall determine whether the CMI Report has complied with the approved CMI Workplan, and may either approve or disapprove the CMI Report. If the Director disapproves the CMI Report, the Permittee shall be notified of the deficiencies, and a due date for submittal of a revised CMI Report shall be specified.

[R18-8-270.A (40 CFR 270.32(b), 270.33)]

2. Closure Report for Inactive South Burn Pad

- (a) By January 1, 2018, the Permittee shall submit a closure report for the Inactive South Burn Pad. The closure report shall provide the information required by Permit Conditions II.K(7) and II.K(8).

The Director shall determine whether the closure report has provided the information required by Permit Condition II.K(7) and has complied with the closure plan approved for the unit, and may either approve or disapprove the closure report. If the Director disapproves the closure report, the Permittee shall be notified of the deficiencies, and a due date for submittal of a revised closure report shall be specified.

- (b) Within 90 days of approval of the closure report for the Inactive South Burn Pad, the Permittee shall submit a Class 1 Permit Modification Request (C1 PMR), requiring Director approval in order to update Part VI of the Permit with the closure status for the unit.

[R18-8-264A (40 CFR 264, Subpart G), R18-8-270.A (270.32(b), 270.33)]

3. Update to Air Quality Impact Analysis for Munitions Treatment Facility

By July 1, 2018, the Permittee shall submit for the Director's approval an updated Air Quality Impact Analysis (AQIA) of OB/OD Operations (see Reference YPG 2004c, Submittal 11). The updated AQIA shall include, as appropriate, an updated Industrial Source Complex Modeling (or an approved alternate) for each hazardous waste treatment unit, updated emissions factors, and updated exposure analysis for any onsite and offsite human receptors that may be impacted by emissions from the treatment of hazardous wastes at the MTF.

The AQIA shall be submitted as a C1 PMR, requiring Director approval. The Director shall determine whether the AQIA has complied with the requirements of R18-8-264.A (40 CFR 264.601(c), and may either approve or disapprove the AQIA. If the Director disapproves the AQIA, the Permittee shall be notified of the deficiencies, and a due date for submittal of a revised AQIA shall be specified.

[R18-8-264.A (40 CFR 264.601(c)), R18-8-270.A (270.32(b), 270.33)]

4. Corrective Measures Implementation Report for Inactive Landfill CCYPG-178

- (a) By July 1, 2018 the Permittee shall submit a Corrective Measures Implementation (CMI) Report for Inactive Landfill CCYPG-178. The CMI Report shall describe all activities performed during construction, provide actual specifications and as-built drawings of the constructed or implemented remedy, and provide a preliminary assessment of CMI performance. The CMI Report shall include, but not be limited to, the following elements:

- A synopsis of the corrective measure and certification of the design and construction;
- Explanation of any deviations from the approved Corrective Measures Implementation Work Plan;
- Explanation of any modifications to the approved construction and/or design plans, and why these were necessary for the project;

- Listing of the criteria, established in the approved CMI Workplan, for judging whether the corrective measure is functioning properly, and also explaining any modification to these criteria;
- Certification by Arizona registrant(s) that the construction is complete, consistent with contract documents and the approved CMI design, and that the equipment performs to meet the intent of the specifications;
- Results of facility monitoring, assessing the likelihood (and approximate time frame) that the corrective measures will meet the media clean-up standards, and any amendment thereto; and
- Certification by the authorized signatory for the Permittee, in accordance with R18-8-270.A (40 CFR 270.11(d)).

The CMI Report shall include an executive summary of the corrective measures implementation, any daily inspection reports, inspection data sheets, problem identification and corrective measure reports, photographic reporting data sheets, sampling and analysis data, design engineers' acceptance reports, deviations from design and material specifications (with justifying documentation), and as-built drawings, unless otherwise agreed to by ADEQ.

The Director shall determine whether the CMI Report has complied with the approved CMI Workplan, and may either approve or disapprove the CMI Report. If the Director disapproves the CMI Report, the Permittee shall be notified of the deficiencies, and a due date for submittal of a revised CMI Report shall be specified.

- (b) Within 60 days of approval of the CMI Report for Inactive Landfill CCYPG-178, the Permittee shall submit a C1 PMR requiring Director approval in order to update Part VI of the Permit with a description of the final remedy, and the status for the unit.

R18-8-270.A (40 CFR 270.32(b), 270.33)

5. Update to Facility Investigation Report for former-Muggins Mountain OB/OD Site
By January 1, 2019, the Permittee shall submit an updated RCRA Facility Investigation (RFI) Report for the former- Muggins Mountain OB/OD (Site ID YPG-035 A, B, and C). The RFI Report shall provide updated descriptions of 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 Report shall present all updated information to support corrective action decisions at the facility, and may include other reports as indicated below.

The RFI Report shall be submitted as a C1 PMR, requiring Director approval. The Director shall determine whether the RFI Report fully details the objectives stated under Permit Condition VI.D "RFI Workplan", and then may either approve or disapprove the RFI Report. If the Director disapproves the RFI Report, the Permittee shall be notified of the deficiencies, and a due date for submittal of a revised RFI Report shall be specified.

R18-8-270.A (40 CFR 270.32(b), 270.33)

6. Update to Corrective Measures Study Work Plan for former-Muggins Mountain OB/OD Site

Within 45 calendar days of approval of the updated RFI Report, the Permittee shall submit an updated Corrective Measures Study (CMS) Workplan for the Muggins Mountain Former OB/OD (Site ID YPG-035 A, B, and C).

The updated CMS Workplan shall provide the following information:

- A description of the general approach to investigating and evaluating potential remedies;
- A description of the overall objectives of the study;
- The specific plans for evaluating remedies to ensure compliance with remedy standards;
- The schedules for conducting the study; and
- The proposed format for the presentation of information.

The updated CMS Workplan shall be submitted as a C1 PMR, requiring Director approval. The Director shall determine whether the CMS Workplan fully details the objectives stated under Permit Condition VI.F "Corrective Measures Study Plan", and may either approve or disapprove the CMS Workplan. If the Director disapproves the CMS Workplan, the Permittee shall be notified of the deficiencies, and a due date for submittal of a revised CMS Workplan shall be specified.

R18-8-270.A (40 CFR 270.32(b), 270.33)

7. Updated Corrective Measures Study Report for former-Muggins Mountain OB/OD Site

Within 60 calendar days of approval of the CMS Workplan, the Permittee shall submit an updated CMS Study Report (CMS Report) for the former-Muggins Mountain OB/OD (Site ID YPG-035 A, B, and C). The CMS Report shall summarize the results of the investigations for each remedy studied and of any bench-scale or pilot tests conducted. It must include an evaluation of each remedial alternative, and shall present all information gathered under the approved CMS Workplan. The CMS Report must contain adequate information to support the Director in the remedy selection decision-making process, described under Permit Condition VI.H. of this Permit.

The CMS Report shall be submitted as a C1 PMR, requiring Director approval. The Director shall determine whether the CMS Report has complied with the approved CMI Workplan, and may either approve or disapprove the CMS Report. If the Director disapproves the CMS Report, the Permittee shall be notified of the deficiencies, and a due date for submittal of a revised CMS Report shall be specified.

[R18-8-270.A (40 CFR 270.32(b), 270.33)]

8. Post-Closure Plan for former-Muggins Mountain OB/OD Site

By January 1, 2019, the Permittee shall submit a post-closure plan (PCP) for the former-Muggins Mountain OB/OD site (ID: YPG-035 A, B, and C), in accordance with the requirements of R18-8-264.A (40 CFR 264.118).

The PCP shall be submitted as a C1 PMR, requiring Director approval. The Director shall determine whether the PCP has complied with the requirements of R18-8-264.A (40 CFR 264.118), and may either approve or disapprove the PCP. If the Director disapproves the PCP, the Permittee shall be notified of the deficiencies, and a due date for submittal of a revised PCP shall be specified.

R18-8-270.A (40 CFR 270.32(b), 270.33)

PART II – GENERAL FACILITY CONDITIONS

A. DESIGN AND OPERATION OF FACILITY

The Permittee shall design, construct, maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or nonsudden release of hazardous waste or 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 is not allowed to receive hazardous waste from a foreign source. If the Permittee desires to import hazardous waste from a foreign source, the Permittee shall submit a Permit modification, notification as required by A.A.C. R18-8-264.A and 40 CFR 264.12(a), and follow Volume 61 Federal Register Page 16290 (dated April 12, 1996) “Imports and Exports of Hazardous Waste - Implementation of OECD C(92)39” as applicable.

2. Hazardous Waste from Off-Site Sources

The Permittee is not allowed to accept hazardous waste from off-site sources for purposes of open burning and open detonation. This includes wastes from foreign, civilian, and U.S. military sources. If the Permittee desires to accept such waste, however, the Permittee shall submit a Permit modification request. Once the request is approved by the Director, when the Permittee is to receive hazardous waste from an off-site source, he/she must inform the generator in writing that he/she has the appropriate Permits, and will accept the waste the generator is having transported. The Permittee must keep a copy of this written notice as part of the operating record. [A.A.C. R18-8-264.A and 40 CFR 264.12(b)]

C. GENERAL WASTE ANALYSIS

The Permittee shall follow the waste analysis procedures, as described in Permit Attachment 3 (*Waste Analysis Plan*). [A.A.C. R18-8-264.A and 40 CFR 264.13]

The waste analysis must be repeated as necessary to ensure that it is accurate and up to date. At a minimum, the analysis must be repeated when the Permittee is notified or has reason to believe that the process or operation generating the hazardous wastes has changed. [A.A.C. R18-8-264.A (40 CFR 264.13(a)(3)(i) and 264.13(b)(4))]

Any waste stream analysis or re-analysis shall be conducted using the sampling, analytical, and quality assurance and control methods described in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, EPA Publication SW-846, or using equivalent or better methods approved by the Director. This shall include, but not be limited to, maintaining

proper functional instruments, using approved sampling and analytical methods, verifying the validity of sampling and analytical procedures, and performing 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.

Each parameter test that the in-state or out-of-state laboratory can perform for compliance testing must be licensed (certified) by the Arizona Department of Health Services (ADHS) (see the Waste Analysis Plan). Compliance testing means laboratory analysis of any contaminant subject to regulation pursuant to Arizona Revised Statutes (A.R.S.) Title 49 or the rules adopted by the Director for determining compliance to A.R.S. Title 49, or as otherwise defined by A.R.S. 36-495.1. If a method parameter exists that is not certified by ADHS, the Permittee may use an EPA-approved laboratory until a laboratory becomes ADHS-certified for that parameter. However, the Permittee shall request the laboratory apply for ADHS certification for that parameter in a timely manner, if the cost for certification for that parameter (and the resulting increase in analytical cost) is not unreasonable compared to other ADHS-certified parameter methods. [A.R.S. Title 36, Chapter 4.3, Article 1, Section 36-495.01].

D. SECURITY

The Permittee shall comply with the security requirements of A.A.C. R18-8-264.A, 40 CFR 264.14(b)(2) and (c) and those in Permit Attachment 8 (*Security*).

E. GENERAL INSPECTION REQUIREMENTS

The Permittee shall follow the inspection schedules and procedures set out in Permit Attachment 11, (*Inspection Plan*), and A.A.C. R18-8-264.A and 40 CFR 264.15(a,b). The Permittee shall remedy any deterioration or malfunction discovered by an inspection, as required by A.A.C. R18-8-264.A and 40 CFR 264.15(c). Records of inspection shall be kept, as required by A.A.C. R18-8-264.A and 40 CFR 264.15(d).

F. PERSONNEL TRAINING

The Permittee shall conduct personnel training, as required by A.A.C. R18-8-264.A and 40 CFR 264.16. This training program shall follow the attached outline contained in Permit Attachment 12 (*Training Plan*). The Permittee shall maintain training documents and records, as required by A.A.C. R18-8-264.A and 40 CFR 264.16(d) and (e).

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

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 waste set forth in the permit, not limited to those provisions specified in Permit Attachment 2 (*Miscellaneous Units Description*) and Permit Attachment 6 (*OB/OD*

Operations), Section 6.4 - Operations - Prevention of Reaction of Ignitable, Reactive, and Incompatible Wastes.

H. PREPAREDNESS AND PREVENTION

1. Required Equipment

At a minimum, the Permittee shall maintain at the facility the equipment set forth in Permit Attachment 9 Equipment Provisions and in Permit Attachment 10, (*Contingency Plan*), as required by A.A.C. R18-8-264.A and 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, as required by A.A.C. R18-8-264.A and 40 CFR 264.33.

3. Access to Communications or Alarm System

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

4. Required Aisle Space

At a minimum, the Permittee shall maintain aisle space, as required by A.A.C. R18-8-264.A, 40 CFR 264.35, and the plans and specifications contained in:

- (a) Permit Attachment 1 (*Facility Description*), Section 1.4.4 Roads and Traffic Patterns@;
- (b) Permit Attachment 6 (*OB/OD Operations*), Section 6.2 Loading and Unloading@;
- (c) Permit Attachment 9 (*Equipment Provisions*), Section 9.4 Required Aisle Space for Equipment@.

5. Arrangements with Local Authorities

The Permittee shall maintain arrangements with state and local authorities, as required by A.A.C. R18-8-264.A and 40 CFR 264.37. If state or local officials refuse to enter into preparedness and prevention arrangements with the Permittee, the Permittee must document this refusal in the operating record. All correspondence related to these arrangements must be kept with the Contingency Plan as required by A.A.C. R18-8-264.A and 40 CFR 264.52(c). (see Permit Attachment 10C, Coordination Agreements).

I. CONTINGENCY PLAN

1. Implementation of Plan

- (a) The Permittee shall immediately carry out the provisions of Permit Attachment 10 (*Contingency Plan*), and follow the emergency procedures described by A.A.C. R18-8-264.A (40 CFR 264.56), and A.A.C. R18-8-264.E (40 CFR 264.56(d)(2)) whenever there is a fire, explosion, or release of hazardous waste or constituents which could threaten human health or the environment. Permitted open burns (fires) and open detonations (explosions) of military munition hazardous waste are not subject to this requirement so long as personal injury as a result of the OB/OD operations does not occur.
- (b) As part of remedial action taken in response to a fire, release or explosion of hazardous materials, the Permittee shall sample and analyze, to detect the extent and depth of any soil contamination. The sampling and analytical methods used must be consistent with those published in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, EPA publication SW-846 (most current edition), A.A.C. R18-8-261.A and 40 CFR 261 Appendix I Representative Sampling Methods, and the Permit. 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; and

In addition, each parameter test that the in-state or out-of-state laboratory can perform for compliance testing must be licensed (certified) by ADHS as stated in Permit Attachment 10 (*Contingency Plan*). Compliance testing means laboratory analysis of any contaminant subject to regulation pursuant to A.R.S. Title 49 or the rules adopted by the Director for determining compliance to A.R.S. Title 49, or as otherwise defined by A.R.S. 36-495.1. [A.R.S. Title 36, Chapter 4.3, Article 1, Section 36-495.01]

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

- (vi) Description of the statistical methods used
- (vii) Soil type and permeability information;

(viii) Groundwater depth and quality information; and

(ix) Procedures for establishing background contaminant concentrations.

(c) If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment, outside the facility, he/she must immediately notify appropriate local authorities and the National Response Center in accordance with A.A.C. R18-8-264.A, 40 CFR 264.56(d), and A.A.C. R18-8-264.E (264.56(d)(2)), and the Director. Permitted open burns (fires) and open detonations (explosions) of military munition hazardous waste are not subject to this requirement so long as personal injury as a result of the OB/OD operations does not occur.

2. Copies of Plan

The Permittee shall comply with the requirements of A.A.C. R18-8-264.A and 40 CFR 264.53.

3. Amendments to Plan

The Permittee shall review and immediately amend, if necessary Permit Attachment 10 (*Contingency Plan*), as required by A.A.C. R18-8-264.A and 40 CFR 264.54 and in accordance with Permit Condition I.G.4 "Contingency Plan or Waste Code Modifications".

4. Emergency Coordinator

A trained emergency coordinator shall be available at all times in case of an emergency, as required by A.A.C. R18-8-264.A and 40 CFR 264.55. Any change to the names, addresses, and phone numbers of all persons qualified to act as emergency coordinators, as listed in Permit Attachment 10 (*Contingency Plan*), shall be supplied to the Director as a Permit modification pursuant to Permit Condition I.H and Permit Condition II.I.3 above [A.A.C. R18-8-264.A and 40 CFR 264.52(d)].

5. Emergency Equipment

The Permittee shall ensure that the *Contingency Plan* (Permit Attachment 10) includes an updated list of all emergency equipment required at the facility. In addition, for each item on the list the plan must include its location, physical description, and a brief outline of its capabilities. [A.A.C. R18-8-264.A (40 CFR 264.52(e))]

J. RECORD KEEPING AND REPORTING

In addition to the recordkeeping 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 operating record at the facility, in accordance with A.A.C. R18-8-264.A and 40 CFR 264.73, 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 as required by A.A.C. R18-8-264.A and 40 CFR 264.73(b)(1) (including 40 CFR 264 Appendix I);
- (b) The location of each hazardous waste within the facility, the quantity at each location, and cross references to specific manifest document numbers, in accordance with A.A.C. R18-8-264.A and 40 CFR 264.73(b)(2);
- (c) Records and results of waste analyses performed pursuant to A.A.C. R18-8-264.A and 40 CFR 264.73(b)(3);
- (d) Summary reports and details of all incidents pursuant to A.A.C. R18-8-264.A and 40 CFR 264.73(b)(4);
- (e) Records and results of inspections pursuant to A.A.C. R18-8-264.A and 40 CFR 264.73(b)(5);
- (f) Monitoring, testing or analytical data, and corrective action pursuant to A.A.C. R18-8-264.A and 40 CFR 264.73(b)(6);
- (g) Notices to generators pursuant to A.A.C. R18-8-264.A and 40 CFR 264.73(b)(7);
- (h) Copies of waste minimization documents required in Permit Conditions II.S (*Source Reduction Plans and Reports*).
- (i) The information contained in the land disposal restriction notice, and the certification and demonstration if applicable, as required by A.A.C. R18-8-264.A and 40 CFR 264.73(b)(15,16).

2. Annual Report

The Permittee shall comply with the annual report requirements of A.A.C. R18-8-264.G.

3. Inspections 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". The training requirements for the authorized representative of the Director which are contained in Permit Attachment 12 (*Training Plan*), shall in no way hinder the inspection and may be waived by the Director if lawful.

4. Manifests

The Permittee shall comply with the manifest requirements of A.A.C. R18-8-264.A, 40 CFR 264.71, 264.72, and 264.76, and A.A.C. R18-8-264.F (264.71(a)(4)), and shall be submitted to the Director as required by A.A.C. R18-8-264.H (40 CFR 264 Subpart E).

K. GENERAL CLOSURE REQUIREMENTS

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

At such a time that the Permittee intends to close the TTU, the Permittee must 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.). Upon approval by the Director, this modified closure plan shall become the Final Closure Plan for the facility. The Permittee shall not commence with any of the steps (e.g., notification of closure) of final closure of the facility without having its final closure plan approved by the Director.

2. Performance Standard

The Permittee shall close the facility, as required by A.A.C. R18-8-264.A, 40 CFR 264.111, and in accordance with Permit Attachment 14 (*Closure Plan*).

3. Amendment to Closure Plan – Partial Closure

The Permittee shall amend Permit Attachment 14 (*Closure Plan*), in accordance with A.A.C. R18-8-264.A and 40 CFR 264.112(c), whenever necessary, including any time that a hazardous waste management unit will be closed. The Permittee must submit the revised closure plan at least 90 calendar days prior to the date on which he expects to begin closure of the hazardous waste management unit. The revised closure plan shall be submitted in accordance with the permit modification procedures of R18-8-270.A (40 CFR 270.41, 40 CFR 270.42, et. seq.). The revision will incorporate details such as the number and locations of samples, analytical or screening methods, decontamination processes, and any new closure technology.

4. Notification of Final Closure

The Permittee shall notify the Director in writing at least 90 calendar days prior to the date on which he/she expects to begin final closure of the facility. ADEQ review the RCRA Facility Assessment (RFA) final report, and other applicable documents, for additional sampling locations, analytical methods, and other details to be incorporated for SWMUs and AOCs, as required by Permit Part VI.

5. Time Allowed for Closure

After receiving the final volume of hazardous waste, the Permittee shall treat, and/or 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 Permit Attachment 14 (*Closure Plan*).

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

The Permittee shall decontaminate or dispose of all contaminated equipment, structures, and soils, as required by A.A.C. R18-8-264.A, 40 CFR 264.114 and Permit Attachment 14 (*Closure Plan*).

In addition, each parameter test that the in-state or out-of-state laboratory can perform for H.W. analysis during closure must be licensed (certified) by the Arizona Department of Health Services (ADHS) as stated in Permit Attachment 14 (*Closure Plan*). [A.R.S. Title 36, Chapter 4.3, Article 1, Section 36-495.01].

7. Closure Report

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

- (a) A summary of results, significant observations, and conclusions.
- (b) A detailed discussion of the closure procedures followed for each unit. Include a description of:
 - i. The procedures followed for decontamination of the hazardous waste management unit (including disposition of residues);
 - ii. The equipment used for decontamination of the hazardous waste management unit;
 - iii. The sampling procedures used;
 - iv. The equipment used for sampling;
 - v. The remedial procedures (if applicable) used;
 - vi. The equipment used for remediation (if applicable);
 - vii. The analytical procedures and methods used;
 - viii. The analytical equipment used;
 - ix. The quality assurance program used;

- x. The procedures used to prevent hazards and protect field personnel during closure;
- xi. The equipment used to prevent hazards and protect field personnel during closure.

Also include drawings and photographs where appropriate and identify any deviations from the approved plan.

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

8. Certification of Closure

The Permittee shall certify that the facility has been closed in accordance with the specifications in Permit Attachment 14 (*Closure Plan*), as required by A.A.C. R18-8-264.A and 40 CFR 264.115.

L. COST ESTIMATE FOR FACILITY CLOSURE

The Facility permitted is owned and operated by the federal government. According to A.A.C. R18-8-264.A and 40 CFR 264.140(c), the federal government is exempt from requirements concerning cost estimates for facility closure.

M. FINANCIAL ASSURANCE FOR FACILITY CLOSURE

The Facility permitted is owned and operated by the federal government. According to A.A.C. R18-8-264.A and 40 CFR 264.140(c), the federal government is exempt from requirements concerning financial assurance for facility closure.

N. LIABILITY REQUIREMENTS

The Facility permitted is owned and operated by the federal government. According to A.A.C. R18-8-264.A and 40 CFR 264.140(c), the federal government is exempt from requirements concerning sudden or nonsudden accidental occurrences.

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

The Facility permitted is owned and operated by the federal government. According to A.A.C. R18-8-264.A and 40 CFR 264.140(c), the federal government is exempt from requirements concerning incapacity of owners or operators, guarantors, or financial institutions.

P. RCRA AIR EMISSIONS STANDARDS

The Permittee shall comply with the following air emission standards concerning the OB/OD treatment units:

1. Process Vents. The facility OB/OD units do not contain any process vents; therefore, the Permittee is exempt from the requirements of 40 CFR Part 264, Subpart AA (Air Emission Standards for Process Vents).
2. Equipment Leaks. The facility OB/OD units do not contain any devices that meet the regulation-specific definition of equipment; therefore, the Permittee is exempt from the requirements of 40 CFR Part 264, Subpart BB (Air Emission Standards for Equipment Leaks).
3. Tanks, Surface Impoundments, and Containers. The facility OB/OD units are miscellaneous units that could be considered similar to tanks, surface impoundments or containers. However, because the miscellaneous units do not continuously contact waste. The Permittee is not subject to any requirements of 40 CFR Part 264, Subpart CC (Tanks, Surface Impoundments, and Containers).

Q. LAND DISPOSAL RESTRICTIONS

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

R. 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.

S. WASTE MINIMIZATION CERTIFICATION

1. Annual Certification

The Permittee shall annually certify:

- (a) That the Permittee has a program in place to reduce the volume and toxicity of all hazardous wastes which are generated by the facility operations to the degree, determined by the Permittee, to be economically practicable; and
- (b) That the method of treatment, storage, or disposal is the only practicable method or combination of methods currently available to the facility which minimizes the present and future threat to human health and the environment.

[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).

PART III – HAZARDOUS WASTE OPEN BURN TREATMENT UNITS

A. MISCELLANEOUS OB UNITS - MANAGEMENT SUMMARY

The hazardous waste open burning (OB) units are regulated as miscellaneous units as described in the A.A.C. R18-8-264.A and the 40 CFR 264 Subpart X regulations [40 CFR 264.600 to 264.603]. These units are defined as the location where propellants, black powder, or other “energetic materials” (energetic materials are further described in Permit Attachment 4 (*Constituents of Potential Concern*) and Reference YPG 2004c, Submittal 9) are placed and burned (steel burn pans) and the adjacent area where debris, residue, or OE could be ejected (typically, the concrete pads the steel pans are on top of, and any surrounding soil that could become contaminated.). This is the active area of the site as defined in A.A.C. R18-8-260.A (40 CFR 260.10).

The entire active area of the OB/OD site where both open burning and open detonation are conducted is a fenced-in area of approximately 572 acres. In the center of the active area, there are a total of six steel OB pans (units) in operation at any one time. Each pan is approximately 18 feet long by 6 feet wide, and 1 foot high. The pans have steel legs which rest on concrete pads and support the pans. There are 3 steel OB pans (OB units) per containment pad. The pads vary in size depending on which are in operation. The following approximate geometry and dimensions apply to each OB pad:

OB CONTAINMENT	STATUS AT PERMIT ISSUANCE	LENGTH	WIDTH
<i>South OB Pad</i> (includes a containment sump linked to a concrete stormwater retention basin via underground double-walled piping)	Operational	Pad: 100 feet	80 feet
		Basin: 60 feet	60 feet
<i>North OB Pad</i> (includes a containment sump linked to a concrete stormwater retention basin via underground double-walled piping)	Operational	Pad: 100 feet	80 feet
		Basin: 60 feet	60 feet

The total maximum process design treatment capacity of the six operable OB units is restricted to 2.0 short tons (4,000 pounds) of propellant or net explosive weight (NEW) hazardous waste per day. No chemical agents, radionuclides, or medical wastes are allowed to be burned in these units.

A burn pan is used only once a day. Only the quantities of PEP to be treated in a given operational event are transported to the OB facility. The time of receipt of PEP to event initiation varies, but is typically in the 3-5 hour range (the time to place the propellant or energetic material and the time to add initiation charge and/or wiring). Typical OB duration

is up to a few seconds with maximum temperatures reaching between 3000 and 4940 degrees Fahrenheit.

Some deposition of the particulate compounds will occur onsite. Access to this area is limited. On the day following the OB action (after sufficient time has elapsed for cool down), burn pads/pans are cleaned (swept up with broom and dust pan or vacuumed, as appropriate). Operators who clean up residue and ash from OB pans are required to wear proper personal protective equipment, which may include respirators as determined by an approved health and safety plan for that activity. Rain protection lids are placed on top of the pans when the cleaning is completed. The burn residue is bagged, sealed with tape, and put in a hazardous waste container at the satellite accumulation point.

B. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

1. Permitted Hazardous Wastes

The Permittee may burn military munition hazardous wastes in the OB pans subject to the terms of this Permit. The hazardous waste that may be burned in the OB pans are restricted to propellants, black powder, and other energetic material that contain only the following EPA hazardous waste codes:

- (a) D001 (ignitability - all non-liquid compounds meeting 40 CFR 261.21(a)(2) except those which ignite upon absorption of moisture);
- (b) D001 (ignitability - all non-liquid oxidizers) (see 40 CFR 261.21(a)(4));
- (c) D003 (reactivity - all non-liquid compounds meeting 40 CFR 261.23 except those normally unstable (see 40 CFR 261.23(a)(1)), those which react with water (see 40 CFR 261.23(a)(2-4)), and reactive cyanide or sulfide bearing waste (see 40 CFR 261.23(a)(5))) (Ref: *USEPA H.W. Permits Compendium Document # 9443.1995(01)*);
- (d) D004 (arsenic), D005 (barium), D006 (cadmium), D007 (chromium), D008 (lead), D009 (mercury), D010 (selenium), D011 (silver), D030 (2,4-dinitrotoluene), D032 (hexachlorobenzene), and/or D036 (nitrobenzene) (see 40 CFR 261.24). (Ref: *USEPA H.W. Permits Compendium Document # 9442.1991(16)*);

The Permittee may burn in the OB units only munitions in U.S. inventory or foreign test munitions, when either has been generated by the U.S. Army Garrison Yuma Proving Ground as military munition hazardous waste, and they are characterized by only one of more of the EPA hazardous waste codes listed above.

The Permittee shall declare a military munition as a solid waste in accordance with A.A.C. R18-8-266.A (40 CFR 266.202) and as a hazardous waste in accordance with A.A.C. R18-8-261.A (40 CFR 261.3). The Permittee declares the military munition a solid waste, potentially subject to hazardous waste regulations, when:

- (e) An item exceeds its shelf life;
- (f) An item has excessive rust or no longer meets appropriate military standards;
- (g) An item is surplus and cannot be or has not been sold or recycled;
- (h) An item is unsafe for storage;
- (i) An item is unsafe to transport off the installation; and
- (j) An item is unburned as a result of research, testing, or training and can be safely moved to the OB site (A.A.C. R18-8-266.A (40 CFR 266.202(c)(1))).

In addition, the military munition hazardous waste to be burned must only contain the constituents given in the master list contained in Permit Attachment 4 (*Constituents of Potential Concern*). This master list was derived from historical information of energetic material burned at the facility and typical material burned at other similar OB sites. If a constituent is present in the waste and not listed in the attachment, a request for permit modification must be submitted to ADEQ to include the constituent(s) on the permit master list.

2. Permitted Materials

The Permittee may use hazardous products in accordance with the *U.S. Army Standard Operating Procedures (SOP)* (see Permit Attachment 6 (*OB/OD Operations*)) to initiate the OB activity. The Permittee may also burn military munition product in the OB units in a research, testing, or research capacity as described in A.A.C. R18-8-266.A (40 CFR 266.202), if the following standards are met:

- (a) The munition is compatible with hazardous waste most recently burned in the OB unit;
- (b) The munition is compatible with the construction materials of the OB unit;
- (c) The activity is conducted in accordance with *U.S. Army Standard Operating Procedures (SOP)* in a safe manner and will not damage the OB unit; and
- (d) The OB unit is inspected after the burn and appropriately cleaned up to the same standards as if it were a military munition hazardous waste that was burned.

3. Prohibited Materials

The Permittee shall not burn in the OB units any military munitions (products or waste) that are not identified in Permit Condition III.B.1 (*Permitted Hazardous*

Waste) or Permit Condition III.B.2 (*Permitted Materials*) above. This includes those hazardous wastes stated in paragraph (c) of Permit Condition III.B.1 as prohibited. In addition, the Permittee shall not treat any other product or waste in these OB units.

This prohibition includes the following materials, and includes military munitions products or waste that might contain the following materials even if those munitions are identified in Permit Condition III.B.1 or Permit Condition III.B.2 above:

- (a) Infectious wastes, lethal or incapacitating biological munitions and their residues,
- (b) Chemicals used in chemical warfare, riot control, or other chemicals with similar function not used in conventional weapons; and their residues,
- (c) Radioactive materials,
- (d) Wastes that cannot be burned,
- (e) Free liquids or flammable or combustible liquids (e.g., diesel fuel),
- (f) Lead-lined propellant bags and other containers,
- (g) Imported hazardous wastes from foreign sources,
- (h) Waste that detonate,
- (i) Flares, smokes, or other illumination materials (YPG 2004c, Submittal 11),
- (j) Shipping containers and ordnance packing materials, and
- (k) Waste munitions delivered to the U.S. Army Garrison Yuma Proving Ground from civilian sources.

None of the prohibitions above apply to hazardous waste to be burned at the OB/OD site during an emergency (A.A.C. R18-8-266.A (40 CFR 266.204)). However, once the immediate response is over, the OB treatment and cleanup activities are subject to this Permit.

4. Restrictions on Treatment Quantities

The Permittee may burn the hazardous wastes described in Permit Condition III.B.1 (*Permitted Hazardous Wastes*) above, subject to the following limitations:

TABLE III-1. MATERIAL BASED LIMITS ON OB OPERATIONS

HAZARDOUS WASTE ^A	QUANTITY LIMIT
Propellant, burn powder, or energetic material	2,000 pounds per pan, 4,000 pounds NEW per day ^{B, C} 730,000 pounds NEW per year
Ammonium Perchlorate (non-aluminum)	250 pounds NEW per day ^{B, D}
Manufacture Waste (Aluminized propellant with diesel)	1,000 pounds NEW per day ^{B, D}
M31A1E1 Propellant	2,000 pounds NEW per day ^B

Notes:

^{A.} Hazardous wastes are restricted to the EPA codes listed in Permit Condition III.B.1.

- B. Only one burn event is allowed per day. Therefore, the daily quantity restriction is also a daily maximum limit on the cumulative total for the six operable OB pan units.
- C. Practical limitation based on material handling constraints.
- D. Based on contaminant air emission modeling results using the Industrial Source Complex Short-Term ISCST3 dispersion model (YPG 2004, Submittal 11).
- E. The term net explosive weight (NEW) is used to distinguish reactive and ignitable portions of the hazardous waste from non-reactive and non-ignitable portions of the waste.

C. **OPEN BURN UNIT LOCATION**

The Permittee has been operating a OB/OD hazardous waste management (HWM) facility since about 1971. From 1971 to 1986, operations were conducted on the soil surface at the open burn on ground (OBOG) area. The Permittee has not conducted open burning on the ground operations at the OBOG area since 1986. After that date, the facility has conducted OB activities at the OB/OD area within steel pans located on concrete containment pads. Only the current OB activities being conducted in the steel pans are permitted herein. Due to the long-term use of the HWM facility, the post-1986 operable OB units are considered part of an *existing HWM facility* [A.A.C. R18-8-260.A (40 CFR 260.10)]. The Permittee identifies the HWM facility, including buffer zone and associated security fencing as the “Munitions Treatment Facility” (MTF).

The MTF is located outside of the 100-year flood plain. However, a protective berm (described in Permit Attachment 1 - *Facility Description*), was constructed to prevent potential flooding of the OB pads and adjacent nearby soils. Within the area the berm is protecting, the ground surface is subject to rainfall and localized flooding. The Permittee shall ensure the ground surface surrounding each OB pad or the OB pad itself (including any stormwater retention basin) is high enough to prevent localized flooding during a 100-year storm.

D. **OPEN BURN UNIT DESIGN AND CONSTRUCTION**

The Permittee has certified that the existing OB units are designed, operated and maintained to withstand the thermal and mechanical stresses arising from the OB operations and do not pose a threat to the human health and environment. The OB units are designed, operated, and maintained in a manner that will ensure protection of human health and the environment. At a minimum, this will include compliance with the conditions in this Permit including, but not limited to:

1. **Open Burn Pans**

The burn pans shall be operated as follows:

- (a) The pan frame shall be a rectangular shaped box, approximately 18 feet long by 6 feet wide and 1 foot deep. The pan frame shall be 14 gauge galvanized

steel (0.0781 inches thick) welded at the seams, and supported by two skid beams beneath the bottom of the pan.

- (b) Two fork lifting channels running lengthwise along the pan bottom shall be welded to the pan frame and shall provide a nominal 7-inch clearance for forklift. Total height of the pan structure shall be less than 2 feet.
- (c) The pan interior shall be lined with 4 inches of castable ceramic refractory exposed to the air, and 1.5 inches of ceramic fiberboard located between the 14 gauge steel pan and the refractory.
- (d) The refractory top layer shall have expansion joints on the pan side composed of 1-inch ceramic fiberboard, and on the base composed of 1-inch Kaowool M-board.
- (e) Six electrical grounding lugs shall be attached to the exterior of each pan. The grounding threads are welded to the pan, and lug bolts are threaded to each. Both the lug bolts and threads are stainless steel 316 material.
- (f) A removable aluminum lid shall be used to keep rainfall out of the pan. Four steel chains, each welded to the pan exterior and attachable to the lid exterior, shall be used to tie-down the lid onto the pan when the pan is not in use.

2. Open Burn Pads

The Permittee has certified that the OB pads are designed, operated and maintained to withstand the thermal and mechanical stresses arising from the OB operations and do not pose to the human health and environment.

- (a) The surface of each new 100-foot by 80-foot OB pad shall be sloped from the perimeter down to the portion of the pad where the sump is located.
- (b) Each new pad shall consist of 4-inches of Kaocrete 249C refractory material, underlain by 1/8-inches of Kaowool paper, underlain by 8 inches of concrete with rebar, underlain by 6 inches of clean compacted sand, and underlain by compacted native soil of variable width to accommodate the sloping above and beneath.
- (c) The slope beneath shall also be from the pad perimeter towards the pad sump area, and shall consist of 12 inches of compacted clean sand, underlain by minimum of 40 mil HDPE lining, underlain by 12 inches of compacted clean sand, underlain by 8 inches of scarified native soil.
- (d) The pad sump shall be constructed of concrete and shall have two pipes protruding into it. The first pipe shall be a double-walled 8-inch by 10-inch PVC pipe, the invert located about 6 inches above the sump base, and the second pipe shall be a leak detection monitoring pipe protruding into the base

to the sand layer above the HDPE liner. The visible end of the leak detection pipe shall be of galvanized steel and have a watertight removable plug. The end not visible shall extend into the permeable sand layer, at which point it shall be slotted with well screen to detect any liquid release into the sand layer. The slot size of the monitoring pipe debris screen shall be 0.02 inch.

- (e) The concrete pad sump and water stops and other joints within it, shall be water proof, and shall be chemical-resistant or coated with chemical-resistant sealant.
- (f) The removable 24-inch by 24-inch grate and the grate foundation surrounding the sump shall be capable of withstanding the weight of a forklift carrying a pan.

3. Retention Basins

YPG has certified that the retention basins are designed, operated and maintained to withstand the thermal and mechanical stresses arising from the OB operations and do not pose to the human health and environment.

- (a) The surface of each retention basin shall be sloped from the perimeter down to the portion of the basin where the sump is located. The approximately 2-foot-deep, 60-foot by 60-foot basin (adjoined to the pad sump via a underground double-walled PVC pipe) shall be able to contain the volume of precipitation rained onto the pad and basin, at a minimum equivalent to a 100-year, 24-hour storm event.
- (b) Each basin shall consist of 6-inches of concrete with rebar, underlain by 12" of clean compacted sand, underlain by a sloped 40 mil HDPE lining, underlain by 12 inches of compacted clean sand, and underlain by 8 inches of scarified native soil.
- (c) The HDPE liner shall have a 0.8% minimum slope from the perimeter down towards the sump. The sump shall be constructed of 6" concrete with rebar with two pipes protruding into it. The first pipe shall be the double-walled PVC pipe from the pad sump. The second pipe shall be the leak detection galvanized steel pipe protruding out of the sand layer located above the HDPE liner. The pipe will be designed the same as the detection pipe for the pad.
- (d) The concrete surface of the retention basin and basin sump, including the expansion joints, walls, and water stops, shall be water proof, and shall be chemical-resistant or coated with chemical-resistant sealant. This chemical resistance shall consider primary and secondary OB chemicals and the highly corrosive nature of the soils entering the basin due to wind or run-on from between the pad and basin.

E. OPEN BURN UNIT OPERATIONS

The Permittee shall comply with the environmental performance standards in 40 CFR 264.601, and the standards contained in this Permit, not limited to:

1. All OB events shall be conducted in accordance with the standard operating procedures (SOPs) contained in Permit Attachment 6 (*OB/OD and Related Operations*).
2. The Permittee shall contact a U.S. Army Garrison Yuma Proving Ground meteorological station to determine if conditions are conducive to open burning, and shall receive final approval from U.S. Army Garrison Yuma Proving Ground Range Control to conduct the burn (Permit Attachment 6 (*OB/OD Operations*)).
3. The Permittee shall determine that the hazardous waste to be burned meets the requirements in Permit Section III.B (*Permitted and Prohibited Waste Identification*), and the waste shall be documented as acceptable for treatment (Permit Attachment 6 (*OB/OD Operations*)).
4. The Permittee shall ensure all personnel handling military munition hazardous waste are properly trained, including licensing and certifications for material handling equipment as applicable (see Permit Attachment 10 (*Training Plan*)).
5. Loose propellant to be burned should be placed in a pan no greater than 3 inches deep (or if cast or composite propellant, no greater than one layer deep). Black powder is placed in separate pans in a thin layer no greater than 50 pounds. Time fuzes or electric squibs (initiators) are strategically placed throughout the PEP. The material is ignited.
6. Following the OB event and as soon as deemed safe by the lead ORT (but in no case later than 72 hours after the required safe wait time), ash residue shall be removed from the pans and any visible ash or flash reducer will be removed from the pads and if applicable, the adjacent soil. The bagged and containerized ash will be taken to the safety bunker hazardous waste generator accumulation area.
7. A burn pan will be used only once a day, or as otherwise allowed by the *SOPs* in Permit Attachment 6 (*OB/OD Operations*).
8. ORT technicians will determine when it is safe to re-enter the OB area in accordance with the *SOPs* in Permit Attachment 6 (*OB/OD Operations*). As soon as it is determined safe, an inspection of the area where the burn took place is made. If waste propellant including ejecta remains unburned, then OE waste must be flashed as soon as practicable after discovery. After a safe waiting period, the residue, if any, from the flashing will be containerized and removed from the site. Completion of these activities shall not exceed 15-days from the initial burn event.

9. After the cleaning activities have been complete and the pan cooled down to ambient temperature, the removable aluminum lid will be placed back over the pan. Additionally, for the new OB pans, the lid will be secured onto the pan using tie-down chains.
10. Permittee shall not conduct operations during electrical/thunderstorms.
11. Permittee shall conduct operations only during daylight hours.
12. Permittee shall ensure that no personnel are present on the MTF, except at the safety bunker, when the detonation takes place.

F. INSPECTION SCHEDULES AND PROCEDURES

The Permittee shall comply with the inspection, monitoring, and testing requirements for the O.B. units specified in A.A.C. R18-8-264.A (40 CFR 264.602) and this Permit, including those listed in Permit Attachment 11 (*Inspection Plan*), and Permit Attachment 15 (*Recordkeeping*), including:

1. Daily Inspections (Pre-Burn). The Permittee shall conduct prior-to-use pre-burn inspections such as proper connection of pan grounding, pan weld and refractory integrity, pad has no cracks, and no storm water present on pad (excludes sump). These prior-to-use inspections will be conducted the same day as the planned burn.
2. Daily Inspections (Post-Burn). The Permittee shall conduct post-burn inspections after cool down for signs of damage to the pans, any splatter on soil, and other signs of potential soil contamination (such as stains or discoloration). These inspections are conducted as soon as practicable after OB operations but in no case later than 48 hours after the event.
3. Weekly Inspections. The Permittee shall conduct routine inspections once per week regardless of whether there is an OB/OD activity or not, inspecting for such items as pad sump grate is in good condition, sump interstitial pipe cap is in place and tight, no splatter or debris in pans, pads, or on soil, and basin is in good condition.
4. Quarterly Inspections. The Permittee shall conduct routine inspections once per quarter (during March, June, September, and December) regardless of whether there is an OB/OD activity or not, inspecting the integrity of the fences and the presence of no smoking or danger signs on the fence.
5. 6-Month Inspection. Regardless of whether there is OB activity or not, the Permittee shall inspect the OB pan grounding resistance using an electrical test, in March and October annually.
6. Five-Year Inspection. At least every five years after the start of operation of a new OB pad and retention basin, the Permittee shall perform a leak test of the underground double-walled PVC piping between the pad and basin. If a leak in the

inner pipe or the outer pipe is detected, corrective action shall be initiated to restore the double-containment design integrity feature of the underground pipe.

7. Significant Event Inspections. The Permittee shall conduct inspections at the first opportunity, not to exceed 7 days after a significant event has occurred. A significant event is defined as precipitation rainfall which exceeds a 2-year 24-hour rainfall, an earthquake greater than or equal to 5 on the Richter scale, or a wind speed in excess of 39 mph (8 or more on the Beaufort wind strength scale). The wind and rain events used in this determination will be obtained from measurements at the nearest available weather station to the OB/OD facility.

After each inspection, the completed inspection forms are filed in the operating record unless corrective action is required at which the item will be tracked to completion in accordance with Permit Attachment 15 (*Recordkeeping*). All corrective action is prioritized based on severity, safety concerns, regulatory requirements, budget, and time constraints. Routine corrective action is handled accordingly. Emergency response or other corrective action is handled in accordance with Permit Section III.I (*Response and Corrective Action*)

G. SPECIAL PROVISIONS FOR IGNITABLE OR REACTIVE WASTES

The Permittee shall comply with the requirements of A.A.C. R18-8-264.A (40 CFR 264.601) and this Permit in order to prevent the unintended ignition or reaction of hazardous wastes. Some such provisions are found in Permit Attachment 3 (*Waste Analysis Plan*) and in Permit Attachment 6, Section 6.4 (*Operations - Ignitable, Reactive, and Incompatible Waste Provisions*).

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 MTF.
2. Only non-sparking tools will be used.

H. SPECIAL PROVISIONS FOR INCOMPATIBLE WASTES

1. The Permittee shall ensure that waste items (projectiles, fuzes, etc.) containing incompatible chemicals are not treated at the same OB pad.
2. The Permittee shall comply with the additional provisions for preventing potential mixture of incompatible wastes (e.g., residue remaining after detonation) contained in Permit Attachment 3 (*Waste Analysis Plan*) and in Permit Attachment 6 (*OB/OD Operations*), Section 6.4 (*Operations - Ignitable, Reactive, and Incompatible Waste Provisions*).

I. RESPONSE AND CORRECTIVE ACTION

The Permittee shall comply with the response and corrective action requirements specified in A.A.C. R18-8-264.A (40 CFR 264.602) and in the Permit, not limited to:

1. Timely correction of deficiencies or problems found during inspections specified in Permit Attachment 11 (*Inspection Plan*).
2. Response and correction of potential or actual unsafe conditions or releases pursuant to Permit Attachment 10 (*Contingency Plan*).
3. Implementation of corrective action procedures for un-permitted releases from the O.B unit to the environment in accordance with Permit Part VI (*Corrective Action for Releases from SWMUs*).
4. The Permittee shall conduct sampling of soils surrounding the OB pads every five (5) years, consistent with ADEQ approved Long-Term Surface Soil Monitoring Plan 2000c) and in accordance with Permit Part VI (*Corrective Action for SWMUs*). The investigation shall include analyses for munition contaminants treated in the OB units.

Acceptable soil contamination levels are levels below the non-residential soil remediation standards found in A.A.C. Title 18, Chapter 7, Article 2, and the Arizona SRLs and GPLs. If these levels are exceeded, the Permittee will submit to ADEQ additional plans or information in accordance with Permit Part VI (*Corrective Action for SWMUs*).

J. RECORDKEEPING AND REPORTING

1. The Permittee shall place the results of all waste analyses and other documentation that shows compliance with Permit Condition III.G (*Special Provisions for Ignitable and Reactive Wastes*) and Permit Condition III.H (*Special Provisions for Incompatible Wastes*) into the operating record.
2. The Permittee shall comply with the recordkeeping and reporting requirements found in A.A.C. R18-8-264.A (40 CFR 264.602), and the standards contained in this Permit, not limited to, those found in Permit Attachment 15 (*Recordkeeping*).

K. OB UNIT CLOSURE

The OB units shall be closed in a manner that will ensure protection of human health and the environment. The Permittee shall comply with the environmental performance standards for closure found in A.A.C. R18-8-264.A (40 CFR 264.601), and the closure standards contained in Permit Attachment 14 (*Closure Plan*).

L. EXCEPTION TO THE 72-HOUR INSPECTION RULE DUE TO STORM EVENT

In case of access restrictions due to a storm event USAGYPG will inspect the OB unit as soon as access is reestablished.

PART IV – HAZARDOUS WASTE OPEN DETONATION TREATMENT UNITS

A. MISCELLANEOUS O.D. UNITS - MANAGEMENT SUMMARY

The Open Detonation (OD) units are regulated as miscellaneous units as described in A.A.C. R18-8-264.A and the 40 CFR 264 Subpart X regulations [40 CFR 264.600 to 264.603]. These units are defined as the location where munitions are placed and detonated (pits or trenches) and the adjacent area where debris, residue, or OE could be ejected. This is the active area of the site as defined in 40 CFR 260.10.

The active area of the OB/OD site is a fenced-in area of approximately 572 acres. There are a total of five OD units in the center of the active area. The total area of these OD pits is approximately 1.85 acres. These pits have been created either by excavation or detonation, and are of the following approximate geometry and dimensions:

TABLE IV-1

UNIT	GEOMETRY	LENGTH	WIDTH	MAXIMUM DEPTH
Detonation On-Ground Area	Plan-View: Ellipse Side-View: 2 depressions	300 feet	100 feet	NA
Detonation Pit #2 West	Plan-View: Rectangular Side-View: Wedge	233 feet	50 feet	15 feet (at base)
Detonation Pit #2 East	Plan-View: Rectangular Side-View: Wedge	183 feet	50 feet	15 feet (at base)
Detonation Pit #3 South	Plan-View: Rectangular Side-View: Wedge	165 feet	60 feet	15 feet (at base)
Detonation Pit #3 North	Plan-View: Rectangular Side-View: Wedge	400 feet	50 feet	15 feet (at base)

The OD pit dimensions above include a working area (where the munition is placed) and the dirt ramp decline down to the working area. The typical working area is less than 50 feet long at the base of the pit.

The Detonation On-Ground Area is at ground surface elevation and is used for surface detonations of items containing sub-munitions. Submunitions are not covered with soil because if they were detonated below surface, there is a chance of losing a submunition which could cause a potential explosive safety concern. Detonation Pits # 2E, 2W, 3N, and 3S are deeper pits, and are used on ordnance without submunitions. These ordnance are covered with soil to reduce or eliminate scattering of fragments.

The hazardous waste (projectiles, fuzes, etc.) to be destroyed are placed at the base of the pits on their sides or in a position to expose the largest surface area to the initiating explosives. Donor charges are prepared and placed on the items to be destroyed. The charges are set off with a detonating cord and blasting caps using electric or non-electric initiation.

The next day or after the approved wait time as specified in the approved *Standard Operating Procedures (SOPs)* found in Permit Attachment 6 (*OB/OD Operations*), but in no case later than 72 hours after the required safe wait time, the OD unit is searched and cleared of OE or scrap material (primarily metals) remaining from the detonation. Any unexploded ordnance or explosives found are moved back into the pit if safely able to be moved and detonated during the next OD event. The craters formed by the detonation are backfilled with ejected soil or fill from a pile of native soil located adjacent to the pit. Accumulated OE is destroyed in a pit the same day as the inspection or as soon as practicable (not to exceed 15 days from the initial O.D. event), or it is removed from the site and managed as hazardous waste.

The total maximum process design treatment capacity of the five OD pits is 0.5 short tons (1,000 pounds) net explosive weight (NEW) per day up to 36,500 pounds NEW per year, with additional restrictions on cadmium-containing T45E7 adapter booster charges and 20-millimeter cartridges with copper jacket containing a high explosive incendiary round. (See Permit Condition IV.B.4 (*Restrictions on Treatment Quantities*)).

The pits are inspected daily when in use, at least weekly when not in use, and after significant rain, wind, or earthquake events pursuant to Permit Section IV.F (*Inspection Schedules and Procedures*). The daily inspections are conducted both prior to the detonation and as soon as practicable after OD operations after the required wait time (but in no case later than 72 hours after the required wait time). These inspections include inspecting the pits for integrity, ejecta or residue, or other evidence of contamination (discoloration or stressed vegetation) as described in that section.

B. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

1. Permitted Hazardous Wastes

The Permittee may detonate the following military munition hazardous wastes in the OD pits subject to the terms of this Permit and as follows.

TABLE IV-2

Unit	Description of Hazardous Wastes	EPA Hazardous Waste Codes	Allowed Constituents
Detonation On-Ground Area	Ordnance and explosives containing submunitions	D001 (all non-liquid compounds meeting 40 CFR 261.21(a)(2) except those which ignite upon absorption of moisture) D001 (all non-liquid oxidizers -- see 40 CFR 261.21(a)(4)) D003 (all non-liquid compounds meeting 40 CFR 261.23 ^A except those normally unstable (see 40 CFR 261.23(a)(1)), those	See Permit Attachment 4 (<i>Constituents of Potential Concern</i>)

Unit	Description of Hazardous Wastes	EPA Hazardous Waste Codes	Allowed Constituents
		which react with water (see 40 CFR 261.23(a)(2-4)), and reactive cyanide or sulfide bearing waste (see 40 CFR 261.23(a)(5)) D004, D005, D006, D007, D008, D009, D010, D011, D030, D032, and D036. ^B	
Detonation Pit #2 East, Detonation Pit #2 West, Detonation Pit #3 South, Detonation Pit #3 North.	Ordnance and explosives (including ejecta) <u>not</u> containing submunitions	Same as above for D001, D003, D004-D011, D030, D032, and D036.	See Permit Attachment 4 (<i>Constituents of Potential Concern</i>)

Notes:

- A. See USEPA H.W. Permits Compendium Document # 9443.1995(01).
- B. EPA hazardous waste codes are D001 (ignitability), D003 (reactivity), D004 (arsenic), D005 (barium), D006 (cadmium), D007 (chromium), D008 (lead), D009 (mercury), D010 (selenium), D011 (silver), D030 (2,4-dinitrotoluene), D032 (hexachlorobenzene), and D036 (nitrobenzene).(Ref: USEPA H.W. Permits Compendium Document # 9442.1991(16));

The Permittee may detonate in the OD units only munitions in U.S. inventory or foreign test munitions, when either has been generated by the U.S. Army Garrison Yuma Proving Ground as military munition hazardous waste, and they are characterized by only one of more of the EPA hazardous waste codes listed above.

The Permittee shall declare a military munition as a solid waste in accordance with A.A.C. R18-8-266.A (40 CFR 266.202) and as a hazardous waste in accordance with A.A.C. R18-8-261.A (40 CFR 261.3). The Permittee declares the military munition a solid waste, potentially subject to hazardous waste regulations, when:

- (a) An item exceeds its shelf life;
- (b) An item has excessive rust or no longer meets appropriate military standards;
- (c) An item is surplus and cannot be or has not been sold or recycled;
- (d) An item is unsafe for storage;
- (e) An item is unsafe to transport off the installation;
- (f) An item is unexploded from testing, research, or training and can be safely moved to the OD site [A.A.C. R18-8-266.A (40 CFR 266.202(c)(1))].

In addition, the military munition hazardous waste to be detonated must only contain the constituents given in the master list contained in Permit Attachment 4 (*Constituents of Potential Concern*). This master list was derived from historical information of energetic material detonated at the facility and typical material detonated at other similar OD sites. If a constituent is present in the waste material and not listed in the attachment, a request for permit modification must be submitted to ADEQ to include the constituent(s) on the permit master list.

2. Permitted Hazardous Materials

The Permittee may use hazardous products in accordance with the *U.S. Army Standard Operating Procedures (SOP)* found in Permit Attachment 6 (*OB/OD Operations*) to initiate the OD activity. The Permittee may also detonate military munition product in the OD units in a research, testing, or research capacity as described in A.A.C. R18-8-266.A (40 CFR 266.202), if the following standards are met:

- (a) The munition is compatible with hazardous waste detonated most recently in the OD unit;
- (b) The munition is compatible with the construction materials of the OD unit;
- (c) The activity is conducted in accordance with *U.S. Army Standard Operating Procedures (SOP)* in a safe manner and will not damage the OD unit; and
- (d) The OD unit is inspected after the detonation and appropriately cleaned up to the same standards as if it were a military munition hazardous waste that was treated.

3. Prohibited Material

The Permittee shall not treat any military munitions (products or waste) that are not identified in Permit Condition IV.B.1 (*Permitted Hazardous Waste*) or Permit Condition IV.B.2 (*Permitted Materials*) above. This includes those hazardous wastes stated in Table IV-2 as prohibited. In addition, the Permittee shall not treat any other product or waste in the OD units.

This prohibition includes the following materials, and includes military munitions products or waste that might contain the following materials even if those munitions are identified in Permit Condition IV.B.1 or Permit Condition IV.B.2 above:

- (a) Infectious wastes;
- (b) Chemical used in chemical warfare, riot control, or other chemicals with similar function not used in conventional weapons; and their residues;

- (c) Biological munitions and their residues;
- (d) Radioactive materials;
- (e) Wastes that cannot be detonated (e.g., are not reactive);
- (f) Non-HE ammunition (e.g., less than 50 caliber non-HE bullets);
- (g) Free liquids or flammable or combustible liquids (e.g., diesel fuel);
- (h) Shipping containers and ordnance packing materials; and
- (i) Waste munitions delivered to the U.S. Army Garrison Yuma Proving Ground from civilian sources.

None of the prohibitions above apply to hazardous waste to be treated at the facility during an emergency (A.A.C. R18-8-266.A (40 CFR 266.204)). However, once the immediate response is over, the OD treatment and cleanup activities are subject to this Permit.

4. Restrictions on Treatment Quantities

The Permittee may detonate the hazardous wastes described in Permit Condition IV.B.1 (*Permitted Hazardous Wastes*) above, subject to the following limitations:

TABLE IV-3

WASTE	QUANTITY LIMIT	LIMITING CONSTITUENT
Military Munitions	1,000 pounds per day, 36,500 pounds per year	See Permit Condition IV.B.1 (<i>Permitted Hazardous Wastes</i>)
20 MM HEI ^A	150 pounds NEW ^A per blast ^B	Copper ^B
T45E7 adapter booster charge	150 units per blast ^B	Cadmium ^B

Notes:

- A. Abbreviated of a 20 millimeter (mm) high explosive incendiary (HEI) is for a 20 mm cartridge with copper jacket, containing an incendiary round with RDX/aluminum explosive, the explosive quantity referred to in terms of net explosive weight (NEW).
- B. Based on contaminant air emission modeling results using the Industrial Source Complex Short-Term ISCST3 dispersion model (YPG 2004c, Submittal 11).

C. OPEN DETONATION UNIT LOCATION

The Permittee has been operating a OB/OD hazardous waste management (HWM) facility since about 1971. Therefore, the OD units are considered to be part of an *existing HWM facility* [A.A.C. R18-8-260.A (40 CFR 260.10)]. The Permittee identifies the HWM facility,

including buffer zone and associated security fencing as the “Munitions Treatment Facility” (MTF or OB/OD MTF).

The MTF is located within an area protected from storm run-on by a protective berm. The protective berm is described in Permit Attachment 1 (*Facility Description*) to minimize the effects of run-on following precipitation events, including accumulation of precipitation within the OD units and adjacent potentially-contaminated nearby soil. In plan-view, the berm appears as a horseshoe surrounding the OD pits, with the heel on the up-slope side of the area.

Within the area the berm is protecting, the ground surface is subject to rainfall and accumulated water from storm run-on. To ensure that any residue contamination present in the OD pits will not migrate deeper into the soil due to this accumulated water, where it could accumulate at concentrations exceeding the non-residential SRLs and could not be practically be excavated, the Permittee shall maintain the ground surface surrounding each OD unit high enough to prevent significant run-on into the OD unit during a 100-year storm. In addition, the soil on immediate periphery of the OD Unit will remain graded to ensure the storm water will flow away from the pits.

D. OPEN DETONATION UNIT DESIGN AND CONSTRUCTION

The Permittee shall design and construct the OD units in a manner that will ensure protection of human health and the environment. At a minimum, this will include compliance with the conditions in this Permit including, but not limited to, ensuring the OD pits are located and constructed according to the design OD pit design standards contained in Permit Attachment 2 (*Miscellaneous Units*).

E. OPEN DETONATION UNIT OPERATIONS

The Permittee shall also comply with the environmental performance standards in A.A.C. R18-8-264.A (40 CFR 264.601), and in this Permit, not limited to:

1. All OB events shall be conducted in accordance with the standard operating procedures (SOPs) contained in Permit Attachment 6 (*OB/OD Operations*).
2. The Permittee shall contact a U.S. Army Garrison Yuma Proving Ground meteorological station to determine if conditions are conducive to open detonation, and shall receive final approval from the U.S. Army Garrison Yuma Proving Ground Range Control to conduct the detonation.
3. The Permittee shall determine that the hazardous waste to be detonated meets the requirements in Permit Section IV.B (*Permitted and Prohibited Waste Identification*)), and the waste shall be documented as acceptable for treatment (Permit Attachment 6 (*OB/OD Operations*)). If possible, any rocket motors containing solid propellants shall be disassembled, and the propellants burned in accordance with Permit Part III (*Open Burning Units*).

4. The Permittee shall ensure all personnel handling military munition hazardous waste are properly trained, including licensing and certifications for material handling equipment as applicable (see Permit Attachment 10 (*Training Plan*)).
5. Operations at the OB/OD Treatment Facility shall not be conducted from one-half hour before sunset to one-half hour after sunrise. Operations related to OB/OD operations (paperwork, munition accounting, preparation, etc.) may be conducted at locations not at the OB/OD treatment site during times outside the above hours if allowed by operations SOP or other base approved documents.
6. Upon arrival at the entrance of the OB/OD treatment facility, the Permittee shall barricade the access road and hoist the red flag. A flashing warning light may also be turned on.
7. Military ordnance containing submunitions shall be detonated in the Detonation On-Ground Area (formerly identified as “Pit #1”), and all other military munitions to be detonated shall be destroyed in the other deeper pits (Detonation Pits #2E, 2W, 3N, and 3S).
8. After the detonation and the necessary cool-down time has elapsed, a minimum of 200 feet surrounding the pit will be inspected to identify:
 - (a) Any remaining OE items -- Any discovered OE items will be moved to a new pit for destruction or if unable to be moved, will be blown in place under the provisions of the Contingency Plan (Permit Attachment 10), with the location recorded and soil appropriately sampled to verify cleanliness. YPG has certified the ORT is trained to remove all OE items after detonation. Consequently, there is no risk of unrecovered OE elements triggering a detonation in a subsequent batch of explosives.
 - (b) Any non-OE debris -- All used or discovered non-OE items such as scrap metal, plastics, wood crates, and trash, will be collected and placed on a plastic liner or plywood. Prior to its disposal or recycling, all non-OE items shall be inspected by a qualified ORT and declared free of explosive residue. The item shall also be declared free of hazardous waste if disposed, or free of hazardous waste that cannot be recycled at a solid waste recycling facility. YPG has certified the ORT is trained to assess OE debris and determine if it is hazardous or not.
9. The Permittee shall ensure that only native soil from nearby borrow areas (created from the initial excavation of the pits), or soils ejected from the pit detonations, are used as backfill for craters or erosion within the OD pits. If soil from other areas is desired to be used, an appropriate number of soil samples will first be taken to demonstrate the new soil background concentrations.
10. Soil shall only be removed from the OD Pits pursuant to a corrective action work plan or other Director-approved mechanism. If soil is removed from the OD Pits

(other than soil ejected from the pits during a detonation), the Permittee shall perform a determination of hazardous waste characteristics prior to disposing the soil or placing the soil on the ground surface outside the pits. The Permittee may place the excavated soil in containers or on plastic while awaiting results of this analyses.

11. The Permittee shall periodically pull a large magnet over the grounds to gather scrap metal not immediately visible. This will be done at a minimum of once every two years and shall be documented with the inspection records.
12. The Permittee shall periodically flash burn an 82-foot radius area around the pits to destroy OE residues not immediately visible. This will be done at a minimum of once per year (see Permit Section 6.6 (*Range Maintenance Activities*)) and shall be documented with the inspection records.
13. The Permittee shall place explosives in the pit only after ensuring that the pit is dry (i.e., there is no visible accumulated precipitation within the surfaces of the unit, and the soils are deemed to be free of moisture by the ORT).
14. OD operations can only be conducted when, in the judgment of the ORT, there is no significant likelihood of rain (see Permit Attachment 6 (*OB/OD Operations*)).

F. INSPECTION SCHEDULES AND PROCEDURES

The Permittee shall comply with the inspection, monitoring, maintenance, and testing requirements for the O.D. units as required in A.A.C. R18-8-264.A (40 CFR 264.602) and this Permit, including Permit Attachment 11 (*Inspection Plan*), not limited to:

1. Pre- and Post-Detonation Daily Inspections -- The Permittee will conduct these inspections on such items as the presence of storm water in the pits, impaired integrity of the pits, proper bulldozer function, and the presence of residue, scrap metal ejecta, and other types of soil contamination resulting from detonations. The daily inspections are conducted both the same day prior to the detonation and as soon as practicable after OD operations after the required wait time at the direction of the Lead ORT (but in no case later than 72 hours after the required wait time).
2. Routine Once per Week, Month, or Quarter Inspections -- Regardless of whether there is OD activity or not, the Permittee will conduct these inspections on such items as erosion of the pits, and the presence of OE/UXO or other scrap metal with explosive residues. In addition, the quarterly inspections shall be conducted during March, June, September and December.
3. Minimum Yearly Inspections -- At a minimum of once per year, the Permittee shall flash burn a 82 foot radius area around the pits to destroy OE residues. Additionally, the Permittee shall pull a large magnet over the grounds at least once every two years to gather scrap ferrous metal not immediately visible.

4. Significant Event Inspections. The Permittee shall conduct inspections at the first opportunity, not to exceed 7 days after a significant event has occurred. A significant event is defined as precipitation which exceeds a 2-year 24-hour rainfall, an earthquake greater than or equal to 5 on the Richter scale, or a wind speed in excess of 39 mph (8 or more on the Beaufort wind strength scale). The wind and rain events used in this determination will be obtained from measurements at the nearest available weather station to the OB/OD facility.

Documentation of each inspection will be recorded on the appropriate inspection forms given in Permit Attachment 11 (*Inspection Plan*). Note that these forms are Examples so that the formatting of the forms can be changed without a permit modification (see Permit Condition I.A. (*Definitions*)). After each inspection, the completed inspection forms are filed in the operating record unless corrective action is required at which the item will be tracked to completion in accordance with Permit Attachment 15 (*Recordkeeping*).

All corrective action is prioritized based on severity, safety concerns, regulatory requirements, budget, and time constraints. Routine corrective action is handled accordingly. Emergency response or other corrective action is handled in accordance with Permit Section IV.I (*Response and Corrective Action*).

G. SPECIAL PROVISIONS FOR IGNITABLE OR REACTIVE WASTES

The Permittee shall comply with the requirements of A.A.C. R18-8-264.A (40 CFR 264.601) and this Permit in order to prevent the unintended ignition or reaction of hazardous wastes. Some such provisions are found in Permit Attachment 3 (*Waste Analysis Plan*) and in Permit Attachment 6 (*OB/OD Operations*), Section 6.4 (*Operations - Ignitable, Reactive, and Incompatible Waste Provisions*).

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 MTF.
2. Only non-sparking tools will be used.

H. SPECIAL PROVISIONS FOR INCOMPATIBLE WASTES

1. The Permittee shall ensure that waste items (projectiles, fuzes, etc.) containing incompatible chemicals are not treated at the same O.D. pit location.
2. The Permittee shall comply with the additional provisions for preventing potential mixture of incompatible wastes (e.g., residue remaining after detonation) contained in Permit Attachment 3 (*Waste Analysis Plan*) and in Permit Attachment 6 (*OB/OD Operations*), Section 6.4 (*Operations - Ignitable, Reactive, and Incompatible Waste Provisions*).

I. RESPONSE AND CORRECTIVE ACTION

The Permittee shall comply with the response and corrective action requirements specified in A.A.C. R18-8-264.A (40 CFR 264.602) and in the Permit, not limited to:

1. Timely correction of deficiencies or problems found during inspections specified in Permit Condition IV.E (Inspection Schedule and Procedures).
2. Response and correction of potential or actual unsafe conditions or releases pursuant to Permit Attachment 10 (Contingency Plan).
3. Implementation of corrective action procedures for un-permitted releases from the OD unit to the environment in accordance with Permit Part VI (Corrective Action).
4. The Permittee will conduct sampling of the OD units every five (5) years, consistent with an ADEQ approved Long-Term Surface Soil Monitoring Plan and in accordance with Permit Part VI (Corrective Action). The investigation shall include analyses for munition contaminants treated at the OD units.

Acceptable soil contamination levels are levels below the non-residential soil remediation standards found in A.A.C. Title 18, Chapter 7, Article 2, and the Arizona SRLs and GPLs. If these levels are exceeded, the Permittee will submit to ADEQ additional plans or information in accordance with Permit Part VI (Corrective Action).

J. RECORD KEEPING AND REPORTING

1. The Permittee shall place the results of all waste analyses and other documentation that shows compliance with Permit Condition IV.G (*Special Provisions for Ignitable and Reactive Wastes*) and Permit Condition IV.H (*Special Provisions for Incompatible Wastes*) into the operating record.
2. The Permittee shall comply with the recordkeeping and reporting requirements found in A.A.C. R18-8-264.A (40 CFR 264.602), and the standards contained in this Permit, not limited to, those found in Permit Attachment 15 (*Recordkeeping*).

K. OD UNIT CLOSURE

The OD units shall be closed in a manner that will ensure protection of human health and the environment. The Permittee shall comply with the environmental performance standards for closure found in A.A.C. R18-8-264.A (40 CFR 264.601), and the closure standards contained in this Permit, not limited to, the procedures found in Permit Attachment 14 (*Closure Plan*).

L. EXCEPTION TO THE 72-HOUR INSPECTION RULE DUE TO STORM EVENT

In case of access restrictions due to a storm event Permittee will inspect the OD unit as soon as access is reestablished.

PART V – GROUNDWATER MONITORING

A. GROUNDWATER MONITORING PLAN

The Permittee shall conduct groundwater monitoring, well field measurements, sampling, analysis, additional actions, and reporting according to parameters and frequencies specified in Permit Attachment 7 (*Groundwater Monitoring Plan* [GMP]) and in Permit Attachment 13 (*Quality Assurance Project Plan* [QAPP]).

1. If the Permittee believes the groundwater detection 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(h))]
2. Any changes to the GMP and QAPP must be made as a Permit Modification request, requiring the Director's approval, and submitted in accordance with Permit Condition I.H.
3. The frequency for groundwater monitoring shall be biennially. This frequency may be increased (e.g. to annually, semiannually, or quarterly) following a determination by the Director that such an increase in frequency is necessary to protect human health and the environment. Any such determination by the Director shall be provided to the Permittee in writing, including the basis for the determination).

B. WELL LOCATIONS, INSTALLATION, CONSTRUCTION, AND MAINTENANCE

The Permittee shall design, install, and 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 groundwater monitoring wells at the locations specified on Table B.1 in Permit Attachment 7 (*Groundwater Monitoring Plan*). Well locations will be added as directed by ADEQ, or at the discretion of the Permittee.
2. All wells removed from the groundwater monitoring system shall be abandoned in accordance with procedures approved by the Arizona Department of Water Resources (ADWR). Well abandonment methods and certification shall be submitted to ADEQ within 90 days from the date the well is removed from the network.
3. The Permittee shall maintain the integrity of each monitoring well so as to enable proper collection of groundwater samples. The annular space (i.e., the space between the bore hole and the well casing) above the sampling depth must always remain sealed to prevent contamination of samples and the groundwater.
4. Each well shall be secured by a cover with locked latch on the well opening, or by placement within a locked vault;
5. Each well shall be protected from damage by installation of three or four bollards

surrounding the well. Any damage to the bollards or the well shall be repaired as soon as practicable.

6. Each well be identified by the YPG well identification number and/or the ADWR well registration number on the exterior of the well so that the number is plainly visible.

C. GROUNDWATER 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.

1. Groundwater samples shall be collected from the wells identified in Table B.1 of the GMP (Permit Application 7). Groundwater samples shall be collected, preserved, and shipped in accordance with the procedures specified in the GMP and QAPP (Permit Attachments 7 and 13).
2. The Permittee shall ensure that the groundwater samples are collected biennially in accordance with the GMP and QAPP (Permit Attachments 7 and 13).
3. Groundwater samples shall be tracked and controlled using the chain-of-custody procedure specified in the GMP and QAPP (Permit Attachments 7 and 13).
4. Samples shall be analyzed according to the GMP and QAPP (Permit Attachments 7 and 13) 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 at each sampling event at all wells identified in Table B.1 of Permit Attachment 7 (*Groundwater Monitoring Plan*). Water level measurements will be performed in accordance with the specifications of Permit Attachment 7 (*Groundwater Monitoring Plan*).
6. Changes in groundwater quality will be assessed and further actions taken pursuant to Permit Attachment 7 (*Groundwater Monitoring Plan*).

D. REPORTING AND RECORDKEEPING

1. The Permittee shall enter all monitoring, testing, and analytical data obtained pursuant to this Permit in the operating record. The data must include all computations and data validation.
[A.A.C. R18-8-264.A (40 CFR 264.73(b)(6))]
2. The Permittee shall submit to ADEQ a report providing water level and groundwater quality data collected in the previous two years. The report shall be submitted to ADEQ no later than 90 days after each sampling event. The report shall be prepared pursuant to the specific requirements of Permit Attachment 7 (*Groundwater Monitoring Plan*).

E. MANAGEMENT OF IDW

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

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

PART VI – CORRECTIVE ACTION

A. STANDARD CONDITIONS

1. Authority

Section 3004(u) of RCRA, as amended by HSWA, and A.A.C. R18-8-264.A (40 CFR 264 Subpart F) and A.A.C. R18-8-270.A (40 CFR 270.14(d)) require that permits issued after November 8, 1984, address corrective action as necessary to protect public health and the environment for releases of hazardous waste, including hazardous constituents, from any solid waste management unit (SWMU) at the facility, regardless of when the waste was placed in the unit.

2. Failure to Submit Information

Failure to submit any information required by this Permit or falsification of any submitted information, is grounds for termination of this Permit (A.A.C. R18-8-270.A (40 CFR 270.43)). The Permittee shall ensure that all plans, reports, notifications, and other submissions required are signed and certified in accordance with A.A.C. R18-8-270.A (40 CFR 270.11(d)). Three copies of all plans, reports, notifications, and other submissions required shall be submitted to the Director.

3. Further Actions

If the Director determines that further actions beyond those provided in this Permit are warranted, the Director shall modify the Permit either according to the procedures in Permit Condition VI.I (*Permit Modification for Remedy*), or according to the permit modification processes in A.A.C. R18-8-270.A (40 CFR 270.41) and G.

4. Record Keeping

All raw data, such as laboratory reports, drilling logs, bench-scale or pilot-scale data, or other supporting information gathered or generated during activities undertaken pursuant to corrective action, shall be maintained at the facility during the term of this Permit, including any reissued Permits.

5. 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 findings, including summaries of laboratory data;

- (iii) Summaries of all problems or potential problems encountered during the reporting period and actions taken to correct the problems; and
 - (iv) Projected work for the next reporting period with a detailed schedule for this work.
- (b) Copies of other reports (e.g., inspection reports), drilling logs and laboratory data shall be made available to the Director upon request.
- (c) The Director may require the Permittee to conduct new or more extensive assessments, investigations, or studies, as needed, based on information provided in these progress reports or other supporting information. These assessments, investigations or studies may be required following review of the Permittee's RCRA Facility Investigation Reports, Corrective Measures Study Work Plan (see VI.G.3), or Corrective Measures Study Report (see VI.G.6), or Corrective Measures Implementation Program Plan (See VI.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.
6. 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.

7. 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
- (iv) 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.

8. 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.

B. RCRA FACILITY ASSESSMENT (RFA)

1. The U.S. Army Garrison Yuma Proving Ground Base Installation

A brief history of the origination of the U.S. Army Garrison Yuma Proving Ground base is as follows:

- (a) In January 1943, the installation which was to become the U.S. Army Garrison Yuma Proving Ground, officially began operation designated as the USACE Yuma Test Branch and located at Imperial Dam. The installation tested engineering equipment and river crossing techniques. The installation closed on January 1, 1950.(YPG 2004c, Submittal 13)
- (b) In April 1951, the installation was reopened for purposes of desert environmental testing (a Class I installation), under the control of the Commanding General, Sixth U.S. Army and designated as the Yuma Test Station. (YPG 2004c, Submittal 13). One source regards the U.S. Army Garrison Yuma Proving Ground installation as starting its operation on May 26, 1952 (YPG 2004c, Appendix C).
- (c) In 1962, the installation became a Class II installation for use as a general purpose proving ground, under the control of the Commanding General, U.S. Army Test and Evaluation Command (TECOM). In August 1963 the installation was officially redesignated as the U.S. Army Garrison Yuma. (YPG 2004c, Submittal 13)
- (d) The name of the installation was changed to U.S. Army Garrison Yuma on October 1, 2003.

2. The U.S. Army Garrison Yuma Proving Ground Kofa Munitions Treatment Facility

A brief history of the origination of the Kofa Hazardous Waste OB/OD Treatment Facility at the U.S. Army Garrison Yuma Proving Ground is as follows. The site is sometimes referred to as the New Demolition area to distinguish it from the Muggins Mountain OB/OD Site also located in the Kofa Region of the U.S. Army Garrison Yuma Proving Ground. Any required investigation and cleanup of the Muggins Mountain OB/OD Site and other SWMUs will be addressed in this Permit Part:

- (a) In 1974, the open burning on ground (OBOG) area and the OD pits became operational; although conflicting sources have the OBOG operational in 1972 and the OD pits created in 1976 (YPG 2004c, Submittal 2).
- (b) November 19, 1980 is defined in 40 CFR 260.10 as the date distinguishing existing HWM facilities from new HWM facilities. The U.S. Army Garrison Yuma Proving Ground submitted their first RCRA Permit Part A application on this date to gain interim status for its drum storage area and battery acid

neutralizing area. Approval to temporary operate (referred to as interim status) was granted on January 19, 1981.

- (c) On July 25, 1984, the U.S. Army Garrison Yuma Proving Ground submitted a revised RCRA Permit Part A application that included the New Demo area. The treatment capacity was 100 pounds per burn event and 40 pounds per detonation event. On October 31, 1985, a revised RCRA Permit Part A application increased this to 2000 pounds per burn event and 100 pounds per detonation event.
- (d) On September 30, 1986, open burning in the steel pans at the north and south concrete pads replaced the open burning on ground (OBOG) area. (USATHAMA, 1988). However, there is some speculation as to exact date of transition (YPG 2004c, Submittal 2; YPG 2004c, Submittal 4).
- (e) In 1987, the curb of the 1986 South OB pad became damaged, reportedly due burning of sodium perchlorate (YPG 2004c, Submittal 2).
- (f) On October 27, 1988, the U.S. Army Garrison Yuma Proving Ground submitted a revised RCRA Permit Part A application that included the Old Demo area as well as the New Demo area. The Old Demo area would operate only temporarily to accommodate cleanup action at Muggins Mountain. The treatment capacity for the New Demo area remained the same; 2000 pounds per burn event and 100 pounds per detonation event.
- (g) In 1994, a new curbless south concrete pad became operational near the damaged pad. The 1986 north OB pad also became inactive due to this new pad.
- (h) On May 15, 1997, the U.S. Army Garrison Yuma Proving Ground submitted a revised RCRA Permit Part A application. The treatment capacity was 2.5 short tons (5000 pounds) per day. The capacity change was necessary to agree with the ADEQ Air Quality Division Open Burning daily permit limits on test munitions of 4,000 pounds per day for open burning and 1,000 pounds per day for open detonation. However, it did not specifically state pounds NEW nor did it reflect the more stringent yearly AQD permit limits (see Permit Part III (*OB Units*) and Part IV (*OD Units*)).
- (i) In August 2008, the U.S. Army Garrison Yuma Proving Ground notified ADEQ that it would acquire funds to construct new engineered open burn pads to replace the existing units.
- (j) In October, 2010, the U.S. Army Garrison Yuma Proving Ground submitted a closure plan for the former burn-on-ground-area, the abandoned South Pad, the abandoned North pad, and the Trash Trench area.

- (k) In May, 2013, designs for the new North and South Burn pads were submitted to ADEQ for approval. The new designs were approved by ADEQ in May, 2013. Construction was completed in April, 2014, and as-build diagrams were submitted in April, 2014.
- (l) In February, 2014, the U.S. Army Garrison Yuma Proving Ground certified closure of the former North Burn Pad.
- (m) On March 31, 2014 ADEQ acknowledged closure for the former burn-on-ground-area, the abandoned South Pad, the abandoned North pad, and the Trash Trench area.
- (n) On April 22, 2014, Operations began on the new North Burn Pad.
- (o) In December, 2016, the U.S. Army Garrison Yuma Proving Ground notified ADEQ that it would proceed with closure of the inactive south Burn Pad.

3. Other SWMUs and AOCs at the U.S. Army Garrison Yuma Proving Ground

The terms solid waste management units (SWMUs) and areas of concern (AOCs) cover a broad range of waste and product-related activities that could contaminate the environment and endanger human health. The following are some site-specific documents that provide a comprehensive overview of the SWMUs (including the Kofa OB/OD Treatment Facility) and AOCs at the U.S. Army Garrison Yuma Proving Ground:

- (a) 1980 - *Installation Assessment of Yuma Proving Ground*, Report No. 139, dated 1980, prepared by the U.S. Army Toxic and Hazardous Materials Agency (USATHAMA), Aberdeen, MD.
- (b) 1988 - *Update of the Installation Assessment of Yuma Proving Ground*, Report No. 139(U), dated 1988, prepared by the U.S. Army Toxic and Hazardous Materials Agency (USATHAMA), Aberdeen, MD.
- (c) 1988 - *Interim Final Report, Ground-Water Contamination Survey No. 38-26-0882-89, Evaluation of Solid Waste Management Units, Yuma Proving Ground, Arizona*, dated 1988, prepared by the U.S. Army Environmental Hygiene Agency (AEHA), Aberdeen, MD.
- (d) 1999 - *RCRA Facility Assessment (RFA) Final Report, U.S. Army Yuma Proving Ground, Yuma, Arizona*, dated April 1999, prepared by Tetra Tech EM for U.S. EPA Region IX, San Francisco, CA.
- (e) 2001 - *Release Assessment for Solid Waste Management Units at Yuma Proving Ground*, dated 2001, prepared by Argonne National Laboratory (ANL), Chicago, IL.

- (f) 2004 - Descriptions of Solid Waste Management Units at U.S. Army Garrison Yuma Proving Ground, dated September 2004, prepared by the U.S. Army Garrison Yuma Proving Ground (YPG 2004c, Appendix K). This document provides a database page output for each of 142 areas describing the period of operation, the status, and the description of the SWMU. The earliest date of operation of any of these SWMUs was in the 1800's to early 1940 (mines) and 1943, 1948, and 1950 (landfills). A map showing the location of each is provided.
- (g) 2004 - Historical Records Review of OB/OD Site at YPG, dated August 2004, prepared by Jason Associates Corporation (YPG 2004c, Submittal 2). - This document provides a historical review primarily of only the OB and OD activities at the Kofa Hazardous Waste OB/OD Treatment Facility.
- (h) 2014 - Final RCRA Facility Investigation Report for Muggins Mountain OB/OD Facility, YPG-035a, b, and c, Revision 1, prepared by Parsons Corp., September, 2014.

4. Required Further Corrective Action

As a result of a review of above documents, including the recommendations for further action in the RCRA Facility Assessment final report, the Director finds that additional corrective action is needed. RCRA corrective Action activities include:

- (a) Updates to the RCRA Facility Assessment final report, when necessary (see Permit Section VI.C (*Notification and Assessment of Newly Identified SWMUs*)).
- (b) Conducting RCRA Facility Investigations (RFIs) when required by the Director (see Permit Condition I.I (*Schedule of Compliance*), VI.D (*RFI Workplan*), and VI.E (*RFI Report*)).
- (c) Conducting a Risk Assessment (RA) as determined by the Director to establish cleanup requirements for the area investigated. Unless otherwise agreed to by the Director, the Permittee will first develop a risk assessment workplan for Director approval prior to submitting the RA final report.
- (d) Perform a study on corrective measure alternatives when required by the Director in order to address, stabilize, or remediate the release (see Permit Section VI.F (*Corrective Measures Study Plan*) and Permit Section VI.G (*Corrective Measures Study Report*)).
- (e) Implementing the selected corrective measures as required by the Director in order to address, stabilize, or remediate the release (see Permit Section VI.H (*Remedy Selection*) and Permit Section VI.I (*Permit Modification for Remedy*)).

- (f) Implementing interim clean-up measures when required by the Director (see Permit Section VI.J (*Interim Measures*)).
- (g) Other actions when required by this Permit (see Permit Section VI.K (*Other Provisions*) for example).
- (h) Corrective action status for specific SWMUs (see Permit Section VI.M, Corrective Action at USAGYPG).

The Permittee shall continue to address necessary corrective action with the responsible ADEQ organization, and when requested by the Director. The timeframes for compliance will be specified in letter if not already addressed in the sections below.

C. NOTIFICATION AND ASSESSMENT OF NEWLY IDENTIFIED SWMU(s)

1. Notification of New SWMUs

The Permittee shall notify the Director, in writing, of any potential SWMU(s) (including new SWMUs) identified during the course of ground-water monitoring, field investigations, environmental audits, or other means, no later than fifteen (15) calendar days after discovery.

2. Preparation of SWMU Assessment Plan

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

Other than notifications of a newly-identified SWMU pursuant to subparagraph VI.C.1, above, the procedures required by this section will be used unless the Director agrees that the new SWMU can be deferred to CERCLA in accordance with part VI.M, *supra*.

3. 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 provide a timetable for acquisition of funds and completion of the SWMU Assessment Plan. The Plan will be used for determining past and present operations at the unit, as well as any sampling and analysis of ground water, surface water, land surface and subsurface strata, or air as necessary to determine whether a release of hazardous waste, including hazardous constituents, from such a unit(s) has 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 (or has yielded) representative samples, and must

identify potential pathways for 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 Plan in writing.

- (a) If the Director approves the Plan, the Permittee shall provide a timetable for acquisition of funds and implementation of the Plan within fifteen calendar days of receiving such written notification.
- (b) If the Director disapproves the Plan, he/she 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 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.
 - (iii) The approved SWMU Assessment Plan shall be incorporated into Permit Attachment 16 (*CASOC – Approved Work Plans and Reports*).

5. Implementation of 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 ninety (90) calendar days from completion of the work specified in the approved SWMU Assessment Plan. The Report will be submitted as a 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:

- (d) The location of the newly identified SWMU in relation to other SWMUs. The location if the identified SWMU must be plotted on a topographic map of appropriate scale;
- (e) The type and function of the unit;
- (f) The general dimensions, capacities, and structural description of the unit, including any available drawings;
- (g) The period during which the unit was operated;
- (h) The specifics on all wastes that have been or are being managed at the SWMU, to the extent available; and

- (i) 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(s);
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 RCRA Facility Investigation (RFI) Work Plan or a Site Assessment Plan (SP) [see Condition VI.L (Site Assessment and Remedy) of this Permit Part] for such investigations. If the Director determines that investigations are needed, the Director shall incorporate his determination into the SAR approval. The SAR and SAR Approval shall constitute approval of the Permittee's Class 1 Permit Modification request. The final approved SAR shall then be incorporated into Permit Attachment 16 (*CASOC – Approved Work Plans and Reports*).
 - (b) The RFI Work Plan or SP described in Condition VI.C.7(a) will be reviewed for approval pursuant to Condition VI.F (RCRA Facility Investigation Work Plan and Reports) or Condition VI.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. RCRA FACILITY INVESTIGATION (RFI) WORKPLAN

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

- (a) Within ninety (90) days after receiving a request from the Director for an RFI Work Plan, the Permittee shall submit a time table for acquisition of funds and for implementation of the RFI Workplan.
- (b) 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.
- (c) 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 unit(s) or group(s) of units, and their actual or potential receptors. The Workplan shall detail all proposed activities and procedures to be conducted

at the facility, the schedule for implementing and completing such investigations, the qualifications of personnel performing and directing the investigation(s), including contractor personnel, and the overall management of the RFI.

- (d) The Work Plan shall discuss sampling and data collection quality assurance and data management procedures listed in Condition A.7 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 elements applicable to the facility. The Director will either approve or disapprove the Workplan in writing.

- (a) If the Director approves the Workplan, the Permittee shall begin to implement the Workplan within thirty calendar days of receiving such written notification.
- (b) If the Director disapproves the Workplan, the Director shall either:
 - (i) Notify the Permittee, in writing, of the Workplan's deficiencies and specify a due date for submittal of a revised Workplan, or
 - (ii) Revise the Workplan and notify the Permittee of the revisions. This amended RFI Workplan then becomes the approved RFI Workplan. The Permittee shall implement the RFI Workplan within thirty calendar days of receiving written approval.
- (c) If approved the RFI Work Plan will be incorporated into Permit Attachment 16 (*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 16 (*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.

E. RCRA FACILITY INVESTIGATION (RFI) REPORT

1. Content and Submittal of RFI Interim or Final Report

Within ninety (90) calendar days after the completion of the RFI Work Plan or other schedule approved by the Director, the Permittee shall submit:

(a) 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 Action

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.

2. Review and Approval or Disapproval of RFI Interim or Final Report

After the Permittee submits the RFI Report, the Director shall determine whether the RFI Interim or Final Report (and NFA Determination, if applicable) fully details the objectives stated under Permit Condition VI.D "RFI Workplan", and then may either approve or disapprove the RFI Report (and NFA Determination, if applicable).

- (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 V.I.E.1(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 16 (*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 16 (*CASOC – Approved Work Plans and Reports*).

F. CORRECTIVE MEASURES STUDY (CMS) PLAN

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 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 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) A description of the general approach to investigating and evaluating potential remedies;
- (b) A definition of the overall objectives of the study;
- (c) The specific plans for evaluating remedies to ensure compliance with remedy standards;
- (d) The schedules for conducting the study; and
- (e) The proposed format for the presentation of information.

3. Review and Approval or Disapproval of CMS Plan

The Director shall review the CMS Plan to ensure it contains all necessary contents, and shall either approve or disapprove the CMS Plan in writing.

- (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 16 (*CASOC – Approved Work Plans and Reports*).
- (c) If the Director approves the Plan, the Permittee shall begin to implement the Plan within thirty calendar days of receiving such written notification.

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

G. CORRECTIVE MEASURES STUDY (CMS) REPORT

1. 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).

2. 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 VI.G.1). The CMS Report will be incorporated into Permit Attachment 16 (*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 16 (*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 VI.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 selecting the remedy which meets the standards for remedies established under Permit Condition VI.H.1 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) Short-term Reliability and 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.
- (c) 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).
- (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 16 (*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 16 (*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. INTERIM MEASURES

1. Determination that Interim Measures are Needed

If the Permittee discovers, at any time, a potential or actual threat to human health or the environment, the Permittee shall take, interim measures to prevent releases or additional contamination, and to reduce, abate or remove the exposure threat presented by releases. This may involve implementation of the contingency plan (Permit Condition II.I.1 and Permit Attachment 10) as the initial response. In addition, 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 described in Condition VI.F of this Permit.
 - (ii) The Director may notify the Permittee in writing that the Permittee is required to develop an IM Work Plan. In this event, the Permittee shall submit the IM Work Plan within thirty (30) calendar days after request. The IM Work Plan shall be submitted as a Class 1 Permit Modification request, requiring the Director's approval.
- 3. Review and Approval or Disapproval of IM Work Plan

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

 - (a) Notify the Permittee in writing of the IM Work Plan's deficiencies and specify a due date for submittal of a revised Plan, or
 - (b) Revise the IM Work Plan (this revised Work Plan becomes the approved IM Work Plan) and notify the Permittee of the revisions. The approved IM Work Plan constitutes approval of the Class 1 Permit Modification request specified in Condition VI.J.2(b)(ii). The final approved IM Work Plan shall then be incorporated into Permit Attachment 16 (*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.

K. OTHER PROVISIONS

- 1. Whenever the Permittee discovers, after submitting reports on SWMU(s) pursuant to Permit Condition VI.C (*Notification and Assessment of Newly Identified SWMUs*), that other relevant information about the SWMU(s) have not been incorporated in

those reports, the Permittee shall submit such information to the Director within thirty (30) calendar days of making the discovery.

If the Director determines at any time that the plans required under Permit Condition VI.D (RFI Workplan) and Permit Condition VI.F (CMS Plan), respectively, will not lead to abatement of potential or continued releases of hazardous waste or hazardous constituents from SWMU(s) pursuant to A.A.C. R18-8-264.A (40 CFR 264 Subpart F) or this Permit, the Permittee must submit amended plans to the Director no later than thirty calendar days after the amendment is requested by the Director. The Director shall:

- (a) Notify the Permittee in writing of the proposed amendment and the date by which comments on the proposed amendment must be received; and
 - (b) Publish a notice of the proposed amendment in a locally distributed newspaper, mail a notice to all persons on the facility mailing list maintained according to A.A.C. R18-8-271.I(c)(ix) (40 CFR 124.10(c)(1)), and place a notice in the facility's information repository (i.e., a central source of all pertinent documents concerning the remedial action, usually maintained at the facility or some other public place, such as a public library, that is accessible to the public) if one is required.
 - (i) If the Director receives no written comment on the proposed amendment, the amendment shall become effective five (5) calendar days after the close of the comment period.
 - (ii) If the Director receives written comment on the proposed amendment, the Director shall make a final determination concerning the amendment after the end of the comment period.
 - (c) Notify the Permittee in writing of the final decision.
 - (i) If no written comment was received, the Director shall notify individuals on the facility mailing list in writing that the modification has become effective and shall place a copy of the amended plan in the information repository, if a repository is required for the facility.
 - (ii) If written comment was received, the Director shall provide notice of the final amendment decision in a locally distributed newspaper and place a copy of the amended plan in the information repository, if a repository is required for the facility.
2. Amendments that are initiated and finalized by the Director according to this procedure shall not be subject to administrative appeal.
 3. Amendments to the plan do not constitute a reissuance of this Permit.

4. All reports must be signed and certified in accordance with A.A.C. R18-8-270.A (40 CFR 270.11).
5. Certain technical information submitted pursuant to Part VI of this Permit shall be sealed by a qualified independent Arizona-registered professional in accordance with the requirements of A.A.C. R18-8-264.A (40 CFR 264 Subpart F), A.A.C. R18-8-270.A (40 CFR 270.14(a)), and A.A.C. R4-30-304.
6. Each parameter test that the in-state or out-of-state laboratory can perform for compliance testing must be licensed (certified) by the Arizona Department of Health Services (ADHS). Compliance testing means laboratory analysis of any contaminant subject to regulation pursuant to Arizona Revised Statutes (A.R.S.) Title 49 or the rules adopted by the Director for determining compliance to A.R.S. Title 49, or as otherwise defined by A.R.S. 36-495.1. If a method parameter exists that is not certified by ADHS, the Permittee may use an EPA-approved laboratory until a laboratory becomes ADHS-certified for that parameter. However, the Permittee shall request the laboratory apply for ADHS certification for that parameter in a timely manner, if the cost for certification for that parameter (and the resulting increase in analytical cost) is not unreasonable compared to other ADHS-certified parameter methods. [A.R.S. Title 36, Chapter 4.3, Article 1, Section 36-495.01].
7. If a contractor or contractor laboratory is used to perform sampling or testing, the Permittee shall notify the party in writing that they must operate in accordance with this Permit. For verification purposes, a copy of that notification will be submitted to the Director with the appropriate data results package.

L. SITE ASSESSMENT AND REMEDY

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

1. A SP shall be submitted to the Director for approval. The SP shall contain the following:
 - (a) A description of the purpose for the SP
 - (b) A general description of the site including a site diagram or drawing. Identify as applicable:
 - (i) property boundaries

- (ii) buildings and fences
 - (iii) process and maintenance areas
 - (iv) active and inactive waste generation, handling treatment, storage, disposal, and spill areas
 - (v) water wells, dry wells, sumps, storm sewers, industrial and sanitary sewers, septic tanks, surface waters (including intermittent washes, discharges/irrigation ditches, canals, etc)
 - (vi) depth to ground water
 - (vii) soil coverings (asphalt, concrete, vegetation, etc)
 - (viii) topography and drainage patterns
- (c) Identity of each waste which has been stored, treated, or disposed at the site, and the identity of each hazardous constituent, including perchlorates, present in that waste.
- (d) The method(s) used to determine sample locations and depths (random, systematic, biased, or combination) and a rationale for the number of samples taken.
- (e) A diagram showing the number, type, and location of samples
- (f) Detailed sampling procedures describing:
- (i) Contents of the field notebook
 - (ii) Sampling equipment used
 - (iii) Sample sizes
 - (iv) Use of any sample compositing
 - (v) Sample containers, labels, and seals
 - (vi) Field/trip blanks
 - (vii) Sample preservatives
 - (viii) Quality assurance procedures (blind field duplicates, use of a check lab, and chain of custody)
 - (ix) Sample packaging and shipment
 - (x) Reserved samples (samples to be taken but not immediately analyzed)
 - (xi) Backfilling and grouting of sample borings
 - (xii) Equipment decontamination procedures, including disposal of spent solutions.
- (g) Analytical parameters and the rationale for choosing such parameters
- (h) Provision for expanding the SP if contamination is found to have migrated
- (i) Provision for the submittal of a Site Assessment Report within 60 days of performance of the SP, providing the following information:
- (i) A summary of results, significant observations, and conclusions.
 - (ii) A discussion of the sampling followed for each site, including a

description of:

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

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

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

M. CORRECTIVE ACTION AT USAGYPG

RCRA/CERCLA Integration

The Army’s CERCLA response obligations and the Army’s RCRA corrective action obligations which relate to the release(s) of hazardous substances, hazardous wastes,

pollutants or contaminants covered by this permit are considered to provide equivalent protection of human health and the environment. Remedial activities covered under this permit satisfy the corrective action requirements of sections 3004(u) and (v) of RCRA, 42 U.S.C. §6924(u) and (v), achieve compliance with CERCLA, 42 U.S.C. §6901 et seq., and meet or exceed all applicable or relevant and appropriate federal and state laws and regulations, to the extent required by section 121 of CERCLA, 42 U.S.C. §6921. Additionally, remedial activities conducted in accordance with CERCLA, 42 U.S.C. §6901 et seq. which are required to meet or exceed all applicable or relevant and appropriate federal and state laws and regulations, including RCRA or more stringent state regulations, meet or exceed the corrective action requirements of this permit.

Based upon the foregoing, any corrective action selected under the RCRA permit will be considered under CERCLA as deferral to RCRA for any CERCLA response needed to address any release(s) of hazardous substances, hazardous wastes, pollutants, or contaminants. Sites being addressed under CERCLA will be treated under this permit as deferred to CERCLA for any RCRA corrective action requirements under this permit for the release(s) of hazardous substances, hazardous wastes, pollutants, or contaminants.

With respect to release(s) of hazardous substances, hazardous wastes, pollutants, or contaminants deferred to CERCLA under this permit, RCRA shall be considered an applicable or relevant and appropriate requirement pursuant to section 121 of CERCLA, 42 U.S.C. §9621. Any requirement to obtain permits for response actions at sites deferred to CERCLA under this permit shall be as provided in CERCLA and the National Oil and Hazardous Substance Contingency Plan. The ADEQ may revisit a deferral decision if it appears that the response action is not being properly addressed under CERCLA.

1. List of Solid Waste Management Units (SWMUs) Requiring No Further Action (NFA).

SWMUs Requiring No Further Action					
SWMU #	YPG #	Description	Results of Investigations EPA RFA ¹	ADEQ Determination /Recommendation ²	Regulatory Entity ⁴
SWMU 4	YPG-103	Battery Acid Neutralization Pit, MAA, Building 416	ADHS granted closure in 1985.	NFA based on ADEQ Evaluation Criteria 5	ADEQ HWU
SWMU 40	YPG-143	Inactive Landfill, LAAF	Landfill does not exist. Corrective Action Complete ADEQ-REF:HWP-EX2514, March 23, 2012	NFA based on ADEQ Evaluation Criteria 1	ADEQ HWU
SWMU 24	YPG-105	Inactive Battery Maintenance Shop, Building 2076	EPA RFA recommended NFA; battery maintenance discontinued, no release observed.	NFA based on ADEQ Evaluation Criteria 3	ADEQ HWU
SWMU 29	YPG-145	Hazardous Waste Storage Facility, Mobility Test Area	Clean closed ADEQ-HWPU-EX1768, 2004	NFA based on ADEQ Evaluation Criteria 6	ADEQ HWU
SWMU 86	YPG-137	DRMO Storage Area, Main Administrative Area	EPA RFA recommended removal from SWMU list; No storage of hazardous constituents	NFA based on ADEQ Evaluation Criteria 2	ADEQ HWU
SWMU 87	YPG-128	Drum Storage Area, Building 531, Main Administrative Area	EPA RFA recommended removal from SWMU list. Drum storage area cannot be located.	NFA based on ADEQ Evaluation Criteria 1	ADEQ HWU
SWMU 88	YPG-112	Used Oil AST. Building 2085	Tank cannot be located. EPA RFA recommended removal from SWMU list.	NFA based on ADEQ Evaluation Criteria 1	ADEQ HWU
SWMU 92	YPG-144	Incinerator at Building S-5	Incinerator no longer exists. EPA RFA recommended removal from SWMU list.	NFA based on ADEQ Evaluation Criteria 1	ADEQ HWU
None	YPG-107	HazMat Pick-Up Area, Building 5007	EPA RFA indicated that the unit was never used for managing hazardous waste.	NFA based on ADEQ Evaluation Criteria 2	ADEQ HWU
SWMU 43	YPG-38	Lead Arsenate Burial Site	EPA RFA confirmed residual concentrations below background and recommended removal from SWMU list.	NFA based on ADEQ Evaluation Criteria 4	ADEQ HWU
SWMU 85	YPG-150	Active Non-PCB Transformer Storage Area	EPA RFA recommended removal from SWMU list. Does not meet definition of a SWMU; used to store electrical components.	NFA based on ADEQ Evaluation Criteria 2	ADEQ HWU

1. EPA RCRA Facility Assessment (RFA) April 1999
2. Should a new investigation or remediation be required at the SWMU, the ADEQ Director may initiate a permit modification under 40 CFR 270.41 to require further action.
4. ADEQ HWU = Hazardous Waste Unit

SWMUs Requiring No Further Action (Continued)					
SWMU #	YPG #	Description	Results of Investigations EPA RFA¹	ADEQ Determination /Recommendation²	Regulatory Entity⁴
SWMU 91	YPG-146	Active Photographic Shop Disposal Area	EPA RFA recommended NFA; unit could not be found.	NFA based on ADEQ Evaluation Criteria 1	ADEQ HWU
SWMU 7	YPG-170	Active Antifreeze Recycling Unit, Vehicle Maintenance Shop, Building 206, MAA	EPA RFA recommended NFA; unit deactivated 14 years ago.	NFA based on ADEQ Evaluation Criteria 1 and 3	ADEQ HWU
SWMU 8	YPG-171	Active Refrigerant Recycling Unit, Vehicle Maintenance Shop, Building 206, MAA	EPA RFA recommended NFA; unit deactivated 14 years ago.	NFA based on ADEQ Evaluation Criteria 1 and 3	ADEQ HWU
SWMU 44	YPG-149	Active Antifreeze Recycling Unit, Building 3490, Test Vehicle Maintenance Section, KFF	EPA RFA recommended NFA	NFA based on ADEQ Evaluation Criteria 1 and 3	ADEQ HWU
SWMU 81	YPG-126	Active Sign Shop Catch Tank Paint Waste, Building 409	EPA RFA recommended NFA and removal from future SWMU list.	NFA based on ADEQ Evaluation Criteria 1 and 3	ADEQ HWU
SWMU 23	YPG-161	Active SAA, Tracked Vehicle Maintenance Building 2090, MTA	SAA no longer active at Building 2090. Operations moved to Building 3490 before 2001.	NFA based on ADEQ Evaluation Criteria 1 and 3	ADEQ HWU
SWMU 26	YPG-166	Active SAA, Vehicle Instrumentation Unit, Building 2096, MTA	SAA does not exist. It was demolished more than 12 years ago.	NFA based on ADEQ Evaluation Criteria 1 and 3	ADEQ HWU
SWMU 45	YPG-160	Active SAA, Test Vehicle Maintenance Section, Building 3490, KFF	SAA was deactivated 7 years ago.	NFA based on ADEQ Evaluation Criteria 1 and 3	ADEQ HWU
SWMU 82	YPG-109	Active Solvent Storage Area, Building 204, Truck Maintenance Building, MAA	SAA currently not active. Area now used for electric supply and component storage.	NFA based on ADEQ Evaluation Criteria 1 and 3	ADEQ HWU
SWMU 27	YPG-154	Active Silver Recovery Unit, Building 2102, MTA	EPA RFA recommended NFA. Unit was deactivated over 10 years ago.	NFA based on ADEQ Evaluation Criteria 1 and 3	ADEQ HWU
SWMU 83	YPG-108	Active Drum Storage Area, Building 204, MAA	EPA RFA recommended NFA and removal from future SWMU list. Unit does not exist.	NFA based on ADEQ Evaluation Criteria 1 and 3	ADEQ HWU
SWMU 6	YPG-169	Active Used Oil SAA, Vehicle Maintenance Shop, Building 206, MAA	Unit is not being used.	NFA based on ADEQ Evaluation Criteria 1 and 3	ADEQ SWU

1. EPA RCRA Facility Assessment (RFA) April 1999
2. Should a new investigation or remediation be required at the SWMU, the ADEQ Director may initiate a permit modification under 40 CFR 270.41 to require further action.
4. ADEQ HWU = Hazardous Waste Unit

SWMUs Requiring No Further Action (Continued)					
SWMU #	YPG #	Description	Results of Investigations EPA RFA¹	ADEQ Determination /Recommendation²	Regulatory Entity⁴
SWMU 31	YPG-167	Inactive Used Oil SAA, Vehicle Maintenance Facility, Building 6006 & 6021, CDH	EPA RFA recommended NFA; unit is not being used.	NFA based on ADEQ Evaluation Criteria 1 and 3	ADEQ SWU
SWMU 56	YPG-006a	Inactive Kofa Burn on Ground Area	Site was clean closed.	NFA based on ADEQ Evaluation Criteria 6	ADEQ HWU
None	YPG-006e	Inactive Kofa Abandoned South Pad Area	Site was clean closed.	NFA based on ADEQ Evaluation Criteria 6	ADEQ HWU
None	YPG-006f	Inactive Kofa Abandoned North Pad Area	Site was clean closed.	NFA based on ADEQ Evaluation Criteria 6	ADEQ HWU
None	YPG-006g	Inactive Kofa Trash Trench	Site was clean closed.	NFA based on ADEQ Evaluation Criteria 6	ADEQ HWU
SWMU 52	YPG-44	Inactive Kofa Ammunition Deflagration Site	Site was clean closed.	NFA based on ADEQ Evaluation Criteria 5	ADEQ APP

1. EPA RCRA Facility Assessment (RFA) April 1999
2. Should a new investigation or remediation be required at the SWMU, the ADEQ Director may initiate a permit modification under 40 CFR 270.41 to require further action.
4. ADEQ HWU = Hazardous Waste Unit

2. List of Solid Waste Management Units for which No Action Currently Needed.

Pursuant to the “RCRA CERCLA equivalency” language contained in VI.M. subparagraph, because the sites in Table 2 are being addressed under the CERCLA program, the corrective action for the units or areas identified in this table has been deferred to CERCLA (no action is required under RCRA because any hazard is already being addressed under the CERCLA Program, which affords equivalent protection) and no action is required under this permit. Where decision documents have been issued and concurred with by ADEQ, they are cited in Table 2 below.

SWMUs, No Action Currently Needed					
SWMU #	YPG #	Description	Results of Investigations	Determination ³	Regulatory Entity ⁴
SWMU 18	YPG-3	Petroleum Testing Lab, Building 2060, Leachate Field	Decision Document ADEQ Concurrence December 21, 2011 FPU 12-115	No action is currently needed for protection of human health and environment. Site is subject to facility wide five year review process.	ADEQ FPU
SWMU 11	YPG-13f	Building 3021 Leach Field and Septic Tank	Decision Document ADEQ Concurrence December 21, 2011 FPU 12-115	No action is currently needed for protection of human health and environment. Site is subject to facility wide five year review process.	ADEQ FPU
SWMU 48	YPG-23	Wash Rack and Lagoon, Kofa Building 3490	Decision Document ADEQ Concurrence March 24, 2014 FPU 14-173	No action is currently needed for protection of human health and environment. Site is subject to facility wide five year review process.	ADEQ FPU
SWMU 79	YPG-25	Building 6071 Septic Tank / Leach Field (North)	Decision Document ADEQ Concurrence March 24, 2014 FPU 14-173	No action is currently needed for protection of human health and environment. Site is subject to facility wide five year review process.	ADEQ FPU
None	YPG-13b	Castle Dome Heliport Washpad (South)	Decision Document ADEQ Concurrence March 24, 2014 FPU 14-173.	No action is currently needed for protection of human health and environment. Site is subject to facility wide five year review process.	ADEQ FPU

3. The Determination of No Action is Currently Needed is based on the current understanding of site conditions and supporting evidence as contained in the Administrative Record file and summarized in the Decision Document. If evidence is submitted in the future that either questions the accuracy of the documented nature and extent of site specific contamination, or questions the ability of the selected response action or remedy to protect human health and the environment, the site may be re-opened for additional investigation and, if necessary, response action by the lead agency in coordination with ADEQ. The DD may be modified or amended consistent with CERCLA, the NCP, and relevant DoD and ADEQ policy.

4. ADEQ FPU = Federal Projects Unit

SWMUs, No Action Currently Needed (Continued)					
SWMU #	YPG #	Description	Results of Investigations	Determination³	Regulatory Entity⁴
None	YPG-13c	Castle Dome Heliport Wash pad 2 (North)	Decision Document ADEQ Concurrence March 24, 2014 FPU 14-173	No action is currently needed for protection of human health and environment. Site is subject to facility wide five year review process.	ADEQ FPU
None	YPG-13e	Septic Tank and Leach Field (East) at Kofa Building 3490	Decision Document ADEQ Concurrence March 24, 2014 FPU 14-173.	No action is currently needed for protection of human health and environment. Site is subject to facility wide five year review process.	ADEQ FPU
None	YPG-45	Building 506 Underground Storage Tank	Decision Document ADEQ Concurrence January 29, 2014 FPU 14-131	No action is currently needed for protection of human health and environment. Site is subject to facility wide five year review process.	ADEQ FPU
SWMU 21 & 22	YPG-1	Old Chemical Building 2500	Decision Document ADEQ Concurrence August 22, 2013 FPU 14-027	No action is currently needed for protection of human health and environment. Site is subject to facility wide five year review process.	ADEQ FPU
SWMU 38	YPG-13d	Inactive Landfill, Castle Dome Heliport Wash Basin	Decision Document ADEQ Concurrence March 24, 2014 FPU 14-173.	No action is currently needed for protection of human health and environment. Site is subject to facility wide five year review process.	ADEQ FPU
SWMU 17	YPG-02	Petroleum Testing Lab, Building 2060 Holding Tank	Decision Document ADEQ Concurrence December 17,2014 FPU 15-122	No action is currently needed for protection of human health and environment. Site is subject to facility wide five year review process.	ADEQ FPU

3. The Determination of No Action is Currently Needed is based on the current understanding of site conditions and supporting evidence as contained in the Administrative Record file and summarized in the Decision Document. If evidence is submitted in the future that either questions the accuracy of the documented nature and extent of site specific contamination, or questions the ability of the selected response action or remedy to protect human health and the environment, the site may be re-opened for additional investigation and, if necessary, response action by the lead agency in coordination with ADEQ. The DD may be modified or amended consistent with CERCLA, the NCP, and relevant DoD and ADEQ policy.

4. ADEQ FPU = Federal Projects Unit

3. List of Solid Waste Management Units Not Requiring Corrective Action at this Time.

SWMUs, Not Requiring Corrective Action at this Time					
SWMU #	YPG #	Description	Results of Investigations	ADEQ Determination /Recommendation	Regulatory Entity ⁴
AOC 6	YPG-164	USTs No. 3111, 3112, and 3113	Case closure letter approved by ADEQ in 1999.	ADEQ will not require further corrective actions at this time. LUST case file may be re-opened and additional corrective action may be required IAW A.A.C. R 18-12-263.03(H).	ADEQ TRU

4 ADEQ TRU = Tanks Unit

4. Active Ranges Deleted from Solid Waste Management Unit (SWMU) List.

Active Ranges Deleted from SWMU List					
SWMU #	YPG #	Description	Comments	Revised Determination	Regulatory Entity ⁴
None	YPG-07	Active Mobility Range	Does not meet definition of a SWMU.	Delete from App K; Contact ADEQ HWU in the event of range closure.	ADEQ HWU
None	YPG-33	Active CS Test Site 8 km West of Rt. 95, 4.4 km Southwest of Cibola Road	Does not meet definition of a SWMU.	Delete from App K; Contact ADEQ HWU in the event of range closure.	ADEQ HWU
None	YPG-34	Active CS Test Site, NE of Chemical Agent Disposal Area	Does not meet definition of a SWMU.	Delete from App K; Contact ADEQ HWU in the event of range closure.	ADEQ HWU
None	YPG-39	Active Kofa Range Impact Area	Does not meet definition of a SWMU.	Delete from App K; Contact ADEQ HWU in the event of range closure.	ADEQ HWU
None	YPG-40	Active Pyrotechnic Range Impact Area	Does not meet definition of a SWMU.	Delete from App K; Contact ADEQ HWU in the event of range closure.	ADEQ HWU
None	YPG-41	Active Cibola Range Impact Area	Does not meet definition of a SWMU.	Delete from App K; Contact ADEQ HWU in the event of range closure.	ADEQ HWU
None	YPG-134	Active Cibola Coyote Drop Zone	Does not meet definition of a SWMU.	Delete from App K; Contact ADEQ HWU in the event of range closure.	ADEQ HWU
None	YPG-135	Active Cibola Roadrunner Drop Zone	Does not meet definition of a SWMU.	Delete from App K; Contact ADEQ HWU in the event of range closure.	ADEQ HWU

4 ADEQ HWU = Hazardous Waste Unit

5. Active Solid Waste Management Units Not Requiring Corrective Action.

These SWMUs are [no] longer subject to RCRA Corrective Action, but rather to RCRA closure standards, given that YPG has actively managed these units/facilities/Satellite Accumulation Areas and has consistently demonstrated through the annual ADEQ inspections and YPG weekly/monthly internal inspections, compliance with 40 CFR 261, 262, 264, 268, and ADEQ R18-8-261, 262, 264, and 268 regulations. These inspections have not revealed any new evidence of routine and systematic releases or abandoned spills that would subject YPG to RCRA Corrective Action. When YPG decides to close any of these units, closure will be in accordance with (IAW) permit provisions and applicable ADEQ and RCRA closure regulations. Should a spill occur at one of these sites, it will be handled immediately in accordance with our Installation Spill Contingency Plan (ISPC) or Spill Prevention Control and Countermeasures Plan (SPCCP), as appropriate, and will be remediated to applicable ADEQ and RCRA corrective action standards as appropriate.

Active SWMUs not Requiring Corrective Action					
SWMU #	YPG #	Description	Results of Investigations EPA RFA¹	ADEQ Determination /Recommendation²	Regulatory Entity⁴
SWMU 1	YPG-157	Active SAA, Building 710, MAA	EPA RFA recommended no action, spill prevention measures are adequate.	NFA based on ADEQ Evaluation Criteria 3	ADEQ HWU
SWMU 13	YPG-102	Active Aircraft Wash Rack, LAAF	EPA RFA recommended no action. There were no signs of release observed.	NFA based on ADEQ Evaluation Criteria 3	ADEQ HWU
SWMU 14	YPG-139	Active Bead Blaster, Helicopter Maintenance, Building 3015, LAAF	EPA RFA recommended no action; this unit is used indoors on a concrete surface. Resulting cadmium-containing waste is disposed of as hazardous waste.	NFA based on ADEQ Evaluation Criteria 3	ADEQ HWU
SWMU 15	YPG-114	Active SAA, Drum Storage Area, Building 3008, LAAF	EPA RFA recommended no action; Spill prevention measures were adequate and no visual signs of a release observed.	NFA based on ADEQ Evaluation Criteria 3	ADEQ HWU

1. EPA RCRA Facility Assessment (RFA) April 1999
2. Should a new investigation or remediation be required at the SWMU, the ADEQ Director may initiate a permit modification under 40 CFR 270.41 to require further action.
4. ADEQ HWU = Hazardous Waste Unit

Active SWMUs not Requiring Corrective Action (Continued)					
SWMU #	YPG #	Description	Results of Investigations EPA RFA¹	ADEQ Determination /Recommendation²	Regulatory Entity⁴
SWMU 19	YPG-05	Active SAA, Building 2060, Petroleum Testing Laboratory, MTA	EPA RFA recommended no action; spill prevention measures adequate.	NFA based on ADEQ Evaluation Criteria 3	ADEQ HWU
SWMU 20	YPG-158	Active SAA, Soil Testing Laboratory, Building 2500, MTA	EPA RFA recommended no action; small volumes (1 to 2 gallons) of waste acids are stored inside the building, and spill prevention measures are adequate.	NFA based on ADEQ Evaluation Criteria 3	ADEQ HWU
SWMU 25	YPG-172	Active Vehicle Wash Rack, MTA	EPA RFA recommended no action; wash water drains over a concrete pad to a catch basin and oil/water separator. No visual evidence of a release was noted.	NFA based on ADEQ Evaluation Criteria 3	ADEQ HWU
SWMU 32	YPG-168	Active Vehicle Wash Rack, Vehicle Maintenance Facility, Castle Dome Heliport	EPA RFA recommended no action; wash water drains over a concrete pad to a catch basin and oil/water separator. No visual evidence of a release was observed.	NFA based on ADEQ Evaluation Criteria 3	ADEQ HWU
SWMU 47	YPG-148	Active SAA, Measure & Material Analysis Unit, Bldg. 3490, KFF	EPA RFA recommended no action; this unit is self-contained and the 55-gallon drum is stored indoors, so potential release to any environmental media is low.	NFA based on ADEQ Evaluation Criteria 3	ADEQ HWU
SWMU 55	YPG-06d	Active SAA, New Demo Area Bunker	EPA RFA recommended no action; potential release to any environmental media is low.	NFA based on ADEQ Evaluation Criteria 3	ADEQ HWU
SWMU 84	YPG-12	Active Pesticide Storage Area, Building 416, MAA	Pesticide use, mixing and storage is limited due to adoption of xeriscaping and pesticide reduction measures.	NFA based on ADEQ Evaluation Criteria 3	ADEQ HWU

1. EPA RCRA Facility Assessment (RFA) April 1999

2. Should a new investigation or remediation be required at the SWMU, the ADEQ Director may initiate a permit modification under 40 CFR 270.41 to require further action

4. ADEQ HWU = Hazardous Waste Unit

Active SWMUs not Requiring Corrective Action (Continued)					
SWMU #	YPG #	Description	Results of Investigations EPA RFA¹	ADEQ Determination /Recommendation²	Regulatory Entity⁴
SWMU 12	YPG-140	Active Used Oil SAA, Building 3015, Helicopter Maint., LAAF	EPA RFA recommended no action; a 35-gallon drum is placed on a concrete floor indoors, and there are no drains or sumps in the area, so contents are unlikely to reach any environmental media.	NFA based on ADEQ Evaluation Criteria 3	ADEQ SWU
SWMU 35	YPG-138	Active Used Oil SAA, Dynamometer Testing Field Shop, Bldg. 3109	EPA RFA recommended no action; spill prevention measures are adequate.	NFA based on ADEQ Evaluation Criteria 3	ADEQ SWU
SWMU 46	YPG-101	Active Used Oil AST, Test Vehicle Maintenance Section, Building 3490, KFF	The tank and pad no longer exist. Replaced with bermed concrete pad and double wall above ground steel tank.	NFA based on ADEQ Evaluation Criteria 1	ADEQ SWU

1. EPA RCRA Facility Assessment (RFA) April 1999
2. Should a new investigation or remediation be required at the SWMU, the ADEQ Director may require further action.
4. ADEQ SWU = Solid Waste Unit

N. 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 VI.L (Site Assessment and Remedy) of this Permit part], no later than fifteen (15) calendar days after their discovery. Such newly discovered releases may be from newly identified units, from units for which, based on the findings of the RFA, the Director had previously determined that no further investigation was necessary, or from units investigated as part of RFI or the SP.

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

2. Interim Measures for Current or Potential Threats

Within forty-five (45) calendar days of notifying the Director, the Permittee shall submit to the Director for approval an Interim Measures (IM) Work Plan, pursuant to Condition VI.J 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 16 (*CASOC – Approved Work Plans and Reports*).

3. Further Investigations

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