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ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

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FACT SHEET

MARINE CORPS AIR STATION, YUMA BARRY M. GOLDWATER RANGE – WEST MUNITIONS TREATMENT RANGE EPA I.D. No. AZR 000 037 382

CLASS 3 HAZARDOUS WASTE PERMIT MODIFICATION

This fact sheet was prepared in accordance with the Arizona Administrative Code (A.A.C.) R18-8-271.E(e) and R18-8-271.G. A fact sheet must accompany every Arizona Hazardous Waste Management Act (AHWMA) draft permit that the Arizona Department of Environmental Quality (ADEQ) has prepared that either raises major issues or involves a new facility. All references to the A.A.C. hereafter refer to the A.A.C. R18-8-260 et seq., made effective on March 31, 2008, which incorporates and/or modifies parts of Title 40 Code of Federal Regulations (CFR) Parts 260 et seq. (July 1, 2006, Edition).

A. DESCRIPTION OF FACILITY

The Barry M. Goldwater Range (BGR) (see Figure 1) is a facility for training pilots in air-to-air and air-to-ground combat. The eastern section of the BGR (BGR-East) is managed by the U.S. Air Force while the western portion (BGR-West) is administered by the U.S. Marine Corps Air Station, in Yuma, Arizona (MCAS Yuma).

Within the western portion of BGR-West, about twelve miles southeast of Yuma, is a 1 square kilometer area known as the Munitions Treatment Range (MTR). The MTR plays a support role in fighter pilot training and operational training of the Marines stationed on MCAS Yuma. It is used for destruction of unserviceable, out-dated, or obsolete munitions generated at MCAS Yuma, other military bases and bombing ranges, local government owned manufacturing facilities, and from local manufacturers under contract to the U.S. Government located in Arizona and California.

In 2004, MCAS Yuma (the Permittee) was issued a hazardous waste permit to operate the MTR in accordance with hazardous waste regulations. The explosive ordnance treated at the MTR is categorized as reactive and ignitable hazardous waste. It includes Class A and B explosives (e.g., bomb and rocket fuzes, projectiles, missiles, bombs), and white phosphorus. The ordnance is treated in the Class A and B Detonation Area and the White Phosphorus Detonation Area (see Figure 3).

B. RCRA FACILITY INVESTIGATION

In accordance with Part IV.C of their hazardous waste permit, the Permittee was required to perform a RCRA Facility Investigation (RFI) of the following four areas (locations are shown in Figure 2):

1. SWMU-2, the Munitions Wash Area
2. SWMU-5, Auxiliary Air Field 2 Debris Piles
3. SWMU-9, Former Accumulation Area for Burn Residue.
4. SWMU-11, Former EOD Range

Soil concentrations from these investigations were compared to the pre-determined remediation standards found in the Arizona Administrative Code, Title 18, Chapter 7, Article 2, and are referred to as the “remediation goals”. Details on the investigations at the SWMUs can be found in the following report: *Revised Final RCRA Facility Investigation Report for SWMU 2, SWMU 5, SWMU 9, and SWMU 11, Marine Corps Air Station Yuma, Yuma, Arizona*. CDM Federal Programs Corporation. December 2007.

1. SWMU-2, Munitions Wash Area (MWA)

A munitions wash area was formerly located south of the closed open burn trenches in the northwest quadrant of the MTR. This self-contained unit, 200 square feet in area, was used infrequently from approximately 1988 until 1993 for the treatment of residue (pink/red water) from 2,4,6-trinitrotoluene (TNT) washing operations.

During the 2004 RFI surface and subsurface soil samples were collected from SWMU-2. The samples were characterized for volatile organic compounds (VOCs) including toluene and benzene. The concentrations of these contaminants of concern (COCs) were below the remediation goals.

2. SWMU-5, Auxiliary Air Field 2 Debris Piles

SWMU-5 is approximately 1.5 acres in size and is located west of Auxiliary Air Field 2. This site is currently used to stockpile scrap metal from spent ordnance and jet-assisted take off canisters. The site was also used as a temporary storage location for refuse items in the 1940s and 1950s. The debris pile reportedly contained lumber, tires, old vehicle parts, paint cans, and construction materials.

During the 2004 RFI, and a subsequent investigation in 2007, surface and subsurface soil samples were collected from SWMU-5. The samples were characterized for explosives, metals, perchlorate, and semi-volatile organic compounds (SVOCs). The concentrations of all COCs were below the remediation goals.

3. SWMU-9, Former Accumulation Area for Burn Residue

The area designated as SWMU-9 is located 1 mile north of the MTR on the Aux II access road. From 1988 until 1993, open burning of munitions was conducted at the MTR (the open

burn trenches were clean-closed in 1998). During open burning operations, large pieces of scrap metal were removed from the trenches after open burn events and accumulated on the ground for disposal or recycling.

During the 2004 RFI surface and subsurface soil samples were collected from SWMU-9. The samples were characterized for explosives, metals, perchlorate, VOCs (including benzene), SVOCs, and white phosphorus. The concentrations of all COCs were below the remediation goals.

Table 1 summarizes the maximum contaminant concentrations and the remediation goals for selected contaminants at SWMUs -2, -5 and -9. The remediation goals shown are the lower of the residential soil remediation levels (SRL) or the groundwater protection levels (GPL) for that COC.

Table 1 – Summary of Contaminant Concentrations at SWMUs 2, 5, and 9

SWMU Name	Contaminant	Maximum Concentration (mg/kg)	Remediation Goal (mg/kg)
SWMU-2	Toluene	0.0027	400 ^a
	Benzene	ND	0.65 ^b
	Methylene chloride	0.013	93 ^b
SWMU-5	Perchlorate	3.2	55 ^b
	Lead	13.4	290 ^a
	RDX	ND	50 ^b
SWMU-9	Benzene	0.002	0.65 ^b
	Lead	4.1	290 ^a
	RDX	ND	50 ^b
	Perchlorate	ND	55 ^b

ND = Not detected

a = Remediation goal derived from groundwater protection levels (GPLs)

b = Remediation goal based on residential soil remediation levels (SRLs)

Corrective actions at SWMUs -2, -5, and -9 have been completed since concentrations of all COCs were below the remediation goals.

4. SWMU-11, Former EOD Range

SWMU-11, the former EOD Range is approximately 6.5 miles south east of Yuma (see Figure 2). It includes a trench and a dighole. The site was used in the past for open burning, detonation and disposal of spent ordnance. Features at SWMU-11 consist of a trench (approximately 2 feet deep, 14 feet wide, and 50 feet long) and a dighole (approximately 2 feet deep, and 21 feet in diameter).

The RFI at SWMU-11 involved excavation to determine if open burning and burying of munitions occurred at the trench or dighole. The RFI provided evidence that open burning and burying of munitions had occurred at the dighole. The dighole contents included black ash and burned munitions. Based on these findings, ADEQ required the Permittee to perform further corrective measures at SWMU-11.

C. RESULTS OF THE CORRECTIVES MEASURES IMPLEMENTATION AT SWMU-11 DIGHOLE

In 2006, the Corrective Measures Study (CMS) and Corrective Measures Implementation (CMI) Plan were finalized for SWMU-11, the former EOD Range. The selected remedy was excavation of the buried munitions and ash followed by confirmatory sampling of the bottom and sides of the dighole. The analytes addressed in confirmatory sampling included VOCs, SVOCs, explosives, perchlorate and metals. The selected remedy was implemented in 2007. The CMI Report was submitted in 2007 (*Draft Corrective Measures Implementation Report for SWMU 11 Dighole, Marine Corps Air Station Yuma, Yuma, Arizona*. CDM Federal Programs Corporation. July 2007).

The Report showed that concentrations of COCs were below the pre-determined soil remediation levels. However, the report did not adequately address the potential impact to groundwater.

D. NFA DETERMINATIONS AT SWMUs -2, -5, AND -9 AND SCHEDULE OF COMPLIANCE FOR CORRECTIVE ACTION AT SWMU-11

In accordance with the Corrective Action Module, Part IV.A.3(b) of the hazardous waste Permit, The Permittee must modify the Permit to incorporate the results of the corrective actions at SWMUs -2, -5, -9, and -11.

- ADEQ proposes to update Part IV.C of the Permit to present a brief summary of the RFI completed in 2007 at SWMUs -2, -5, -9 and -11.
- ADEQ proposes to update Part IV.C of the Permit to note that no further action (NFA) is needed at SWMUs -2, -5 and -9 based on the sampling results from the RFI.
- ADEQ proposes to update Part IV.C of the Permit to reference the Corrective Measures Study (CMS) and Corrective Measures implementation (CMI) at SWMU-11; list the selected remedy of excavation followed by confirmatory sampling; and report that MCAS Yuma has

not addressed groundwater protection in the CMI Report, and that there is need to include a schedule of compliance in the permit.

- ADEQ proposes to insert a Schedule of Compliance Permit Condition at Permit Part IV.C.4 of the hazardous waste Permit to include a schedule for further corrective action at SWMU-11. The Schedule of Compliance requires the following:
 - The Permittee performed a site remedy and must therefore demonstrate that resulting concentrations of COCs in soil do not exceed GPLs.
 - The Permittee must submit the revised CMI Report by December 31, 2011.
 - Based on the results of the above demonstration, the Permittee must complete any remaining corrective measures at SWMU-11 and submit the final CMI report within 90 days of ADEQ acceptance of the revised CMI report.

E. APPLICANT REQUESTED VARIANCES

Hazardous waste rules require that the ADEQ note in this fact sheet if the Permittee has requested any variances from the regulatory requirements. None have been requested by the Permittee for the Class 3 Permit Modification.

F. PUBLIC PARTICIPATION - PROCEDURES FOR REACHING A FINAL DECISION ON THE CLASS 3 PERMIT MODIFICATION

The Permittee submitted the Class 3 Permit Modification request to ADEQ on May 14, 2008. The hazardous waste rules required the applicant to hold a public meeting and to solicit public comment concerning the modification request. On May 27, 2009, the Permittee published a public notice in the Yuma Sun, announcing the public comment period, which ran from May 28, 2009 to July 26, 2009. On June 17, 2009, the Permittee held a public meeting in the Algodones Room at the Yuma Civic Center, 1440 S. Desert Hills Drive, Yuma, Arizona 85364. No objections to the proposed Class 3 permit modification were received by MCAS Yuma. A copy of the presentation made by the Permittee in support of their Class 3 permit modification request is available at: <http://www.azdeq.gov/enviro/waste/hazwaste/permits.html>.

A copy of the draft permit modification and relevant documents may be viewed at the Yuma Main Library (Information Services Desk), 2951 S. 21st Drive, Yuma, Arizona 85364 on Monday to Thursday 9 a.m. – 9 p.m.; and Friday, Saturday 9 a.m. – 5 p.m. The library is closed on Sundays. A copy of the above referenced records is also available at the ADEQ Phoenix office from 8:30 am – 4:00 pm, Monday – Friday (excluding state holidays). To arrange an appointment to review this record at ADEQ, contact the ADEQ Records Center at (602) 771-4380. A copy of the proposed Class 3 permit modification is also available on the ADEQ website at: <http://www.azdeq.gov/enviro/waste/hazwaste/permits.html>.

As required by A.A.C. R18-8-271.L and 40 CFR §124.13, all persons, including applicants, who believe any condition of the draft permit modification or the tentative decision to prepare this draft permit modification is inappropriate, must raise all reasonably ascertainable issues and submit all reasonably available arguments and supporting materials by the close of the public comment period. All comments submitted during the public comment period shall discuss the appropriateness of the draft permit modification.

The public comment period will open on **September 12, 2011** and will close on **October 27, 2011**. During the public comment period, any interested person may submit written comments on the draft permit modification. These comments and supporting materials must be delivered or postmarked by the last day of the public comment period to:

Arizona Department of Environmental Quality
Hazardous Waste Permits Unit, Mail Code 4415C-1
1110 West Washington Street
Phoenix, Arizona 85007

All written comments delivered or postmarked by the last day of the public comment period, will be considered in the formulation of the final determination regarding the draft Class 3 permit modification. After all comments have been considered, a final permit decision will be made by the Director. The applicant, each person who has submitted written or oral comments, and each person who has requested will receive a notice of this final permit modification decision. This notice shall include reference to procedures for appealing a decision on a permit modification. The final permit decision shall become effective on the date specified in the final permit notice.

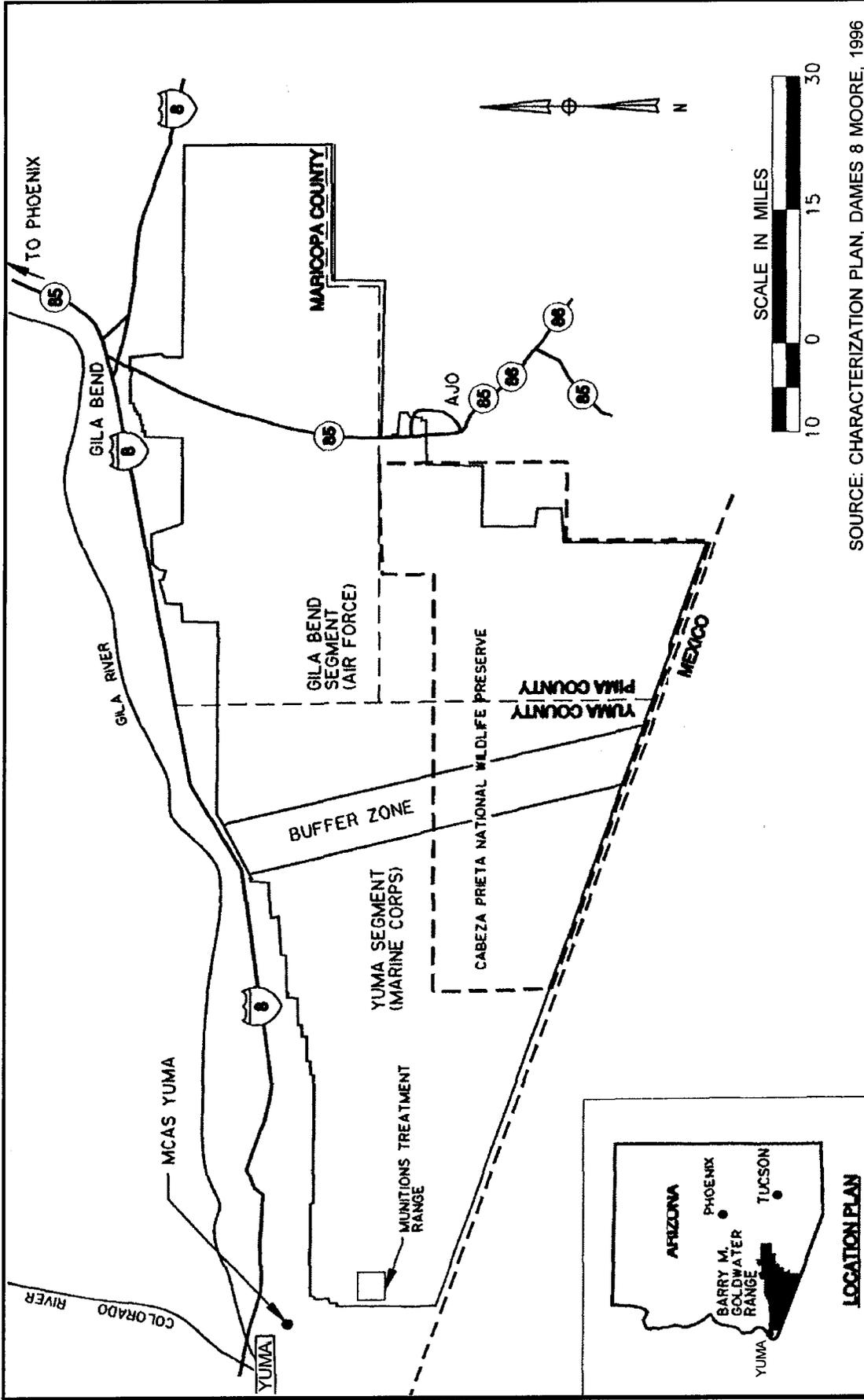
At the time that the final decision is made, the Director shall also issue a response to comments. Copies of the response to comments shall be sent to all persons submitting comments. A copy will also be placed on the ADEQ website at:
www.azdeq.gov/environ/waste/hazwaste/permits.html

Any person who wants to be placed on the mailing list for all future permitting activities for this facility or for other hazardous waste management facilities may request so in writing at any time.

G. PERSONS TO CONTACT FOR ADDITIONAL INFORMATION

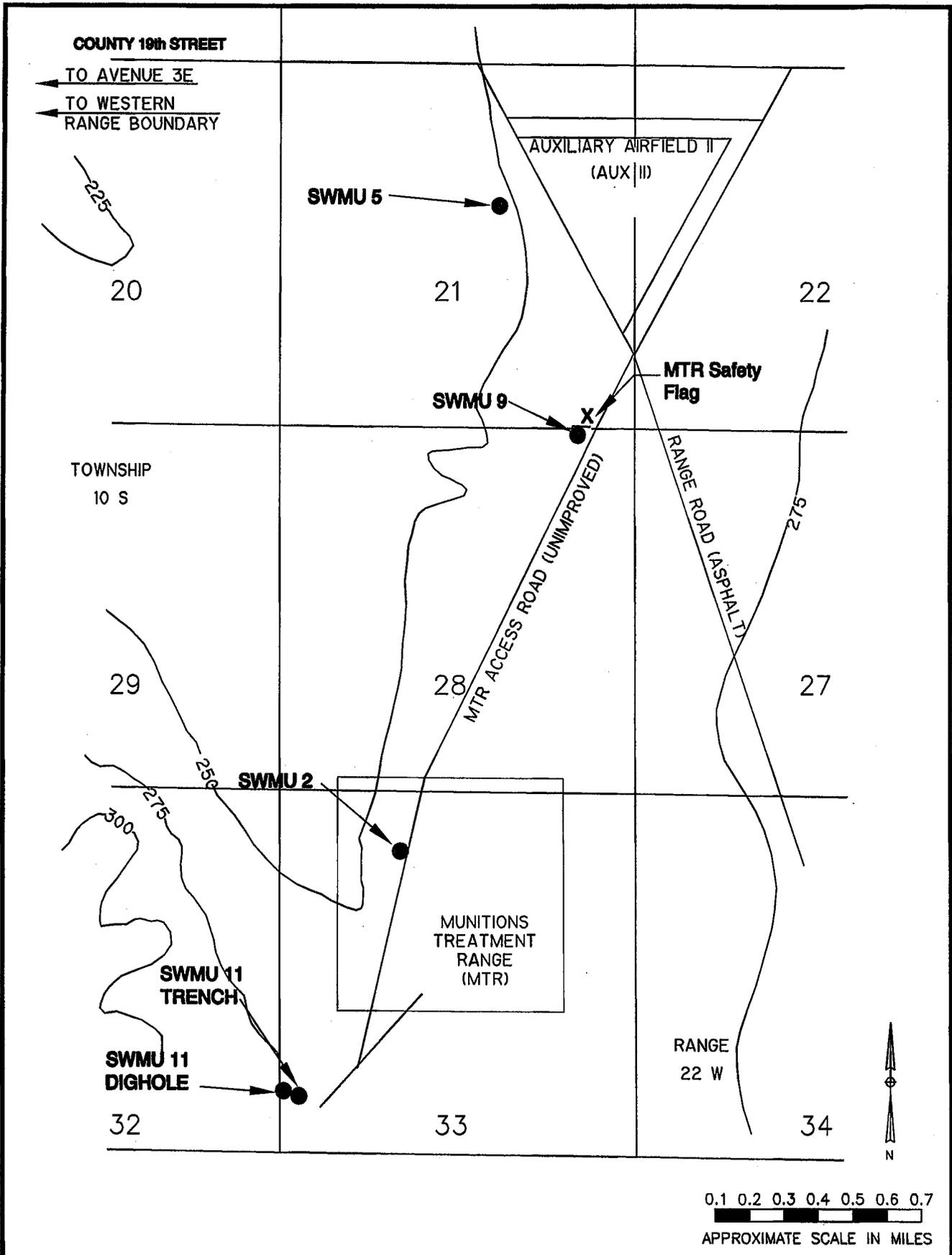
For additional information concerning the Class 3 permit modification, please contact Anthony Leverock of the Hazardous Waste Permits Unit of the Arizona Department of Environmental Quality at 1-800-234-5677, ext. 771-4160, or in writing at the ADEQ address above. Questions concerning the Barry Goldwater Range – West or the Munitions Treatment Range can be addressed by contacting Mr. Frederick Daniel of the Marine Corps Air Station, Yuma office at 928-269-3201.

Please bring this notice to the attention of any person who might be interested in this action.



SOURCE: CHARACTERIZATION PLAN, DAMES & MOORE, 1996

RCRA PART B PERMIT APPLICATION UPDATE YUMA, ARIZONA		AREA LOCATION MAP MUNITIONS TREATMENT RANGE BARRY M. GOLDWATER RANGE MCAS YUMA, YUMA, ARIZONA	FIGURE 1
CDM	DATE: 09/2003 FN: 0192-1		
PREPARED BY: J. Brown PROJECT NJ, 6218-019			

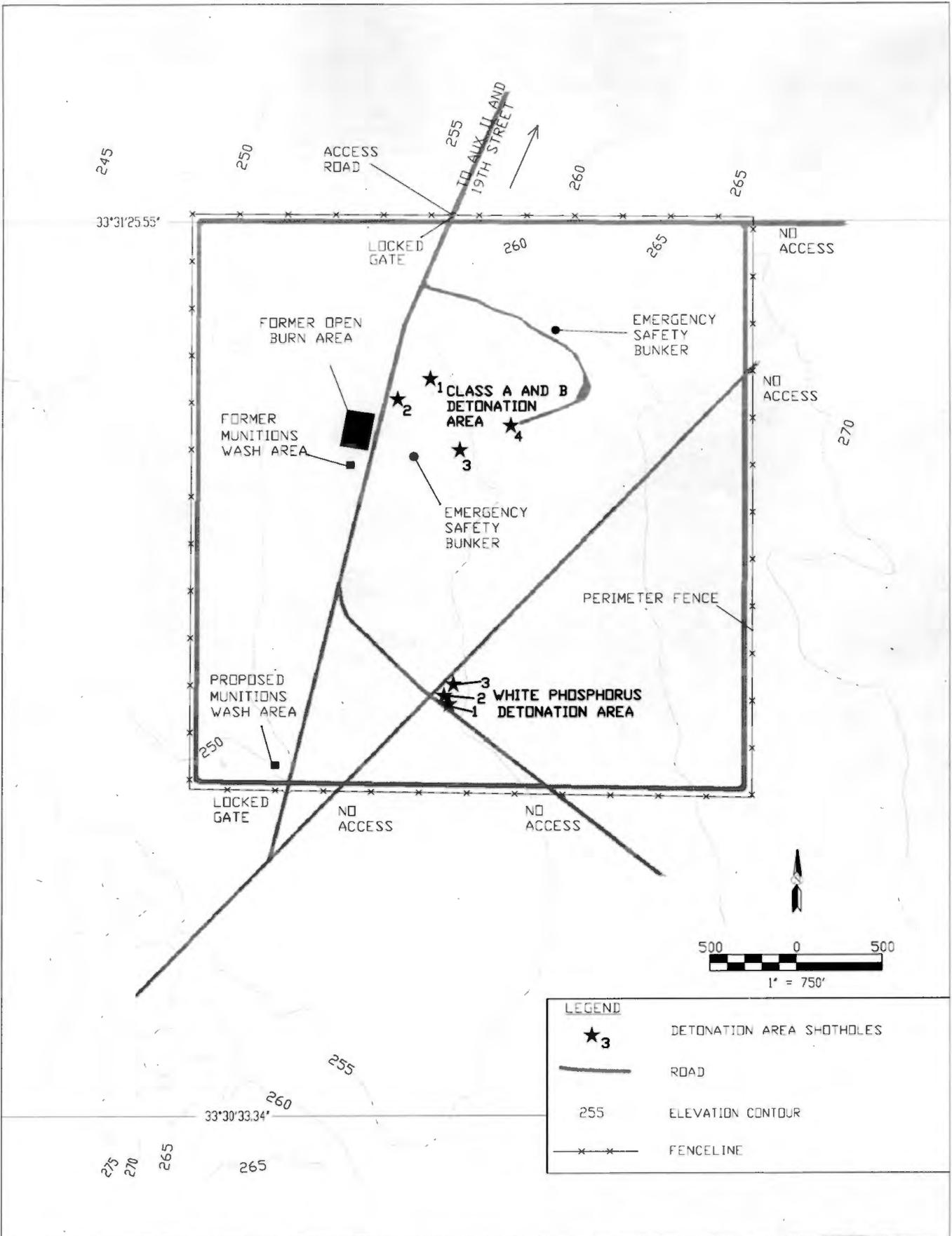


RCRA FACILITY INVESTIGATION YUMA, ARIZONA	
CDM 9444 FARNHAM STREET SAN DIEGO, CALIFORNIA 858-268-3383	DATE: 10/2007 FN: 001_RPT
MODIFIED BY: <i>J. Brown</i>	PROJECT NO. 6231-001

SITE LOCATION MAP

**BARRY M. GOLDWATER RANGE
MCAS YUMA, YUMA, ARIZONA**

FIGURE
2



RCRA PART B PERMIT APPLICATION UPDATE YUMA, ARIZONA		SITE MAP MUNITIONS TREATMENT RANGE BARRY M. GOLDWATER RANGE MCAS YUMA, YUMA, ARIZONA	FIGURE 3
CDM Federal Programs Corporation	DATE: 09/2003 FN: 019_2-3		
MODIFIED BY: <i>J. Brown</i>	PROJECT NO. 6218-019		