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# COMMUNITY RELATIONS PLAN FOR THE INSTALLATION RESTORATION PROGRAM

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*Submitted To:*

**US ARMY GARRISON YUMA PROVING GROUND**



*Prepared By:*



**September 2010**

**COMMUNITY RELATIONS PLAN for the  
Installation Restoration Program  
U.S. Army Garrison Yuma Proving Ground  
Yuma, Arizona**

Prepared for:



U.S. Army Garrison Yuma Proving Ground  
Yuma, Arizona

Prepared by:



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September 2010

A handwritten signature in black ink that reads "Richard T. Martin". The signature is written in a cursive style and is positioned above a horizontal line.

**Richard T. Martin**  
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## TABLE OF CONTENTS

<b>SECTION 1.0</b>	<b>OVERVIEW .....</b>	<b>1-1</b>
1.1	INTRODUCTION .....	1-1
1.2	REGULATORY BACKGROUND .....	1-1
1.2.1	COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (CERCLA).....	1-1
1.2.2	RESOURCE CONSERVATION AND RECOVERY ACT (RCRA).....	1-2
1.3	PURPOSE OF COMMUNITY RELATIONS PLAN.....	1-3
<b>SECTION 2.0</b>	<b>SITE PROFILE .....</b>	<b>2-1</b>
2.1	INSTALLATION DESCRIPTION.....	2-1
2.2	HISTORY OF U.S. ARMY GARRISON YUMA PROVING GROUND (USAGYPG).....	2-1
2.3	SITE DESCRIPTIONS.....	2-2
2.3.1	Former Mortar Impact Area (YPG-002-R-01).....	2-2
2.3.2	Old Chemical Laboratory, BLDG S-2500 (YPG-01).....	2-4
2.3.3	Fuel Bladder Test Site (YPG-10) .....	2-4
2.3.4	Former Pesticide Mix/Storage, BLDG T-430 (YPG-11) .....	2-5
2.3.5	West Environmental Test Area (YPG-31), and Former Waste Disposal Area (YPG-32) .....	2-5
2.3.6	Building 506 (YPG-45).....	2-5
2.3.7	Fuel Station #1 UST 207& 209 (CCYPG-165) and YPG 138 UST Site Remediation AAFES Gas Station (CCYPG-204) .....	2-6
2.3.8	No Further Action Sites.....	2-7
2.3.8.1	Wash Pad 1 (South) – Castle Dome (YPG-13b); Wash Pad 2 (North) – Castle Dome (YPG-13c); Waste Basin – Castle Dome (YPG-13d); Septic Tank Leach Field – Kofa (YPG-13e); Wash Rack Lagoon – Kofa (YPG-23); Septic Tank Leach Field (North) - Castle Dome (YPG- 25); and Septic Tank Leach Field (South) - Castle Dome (YPG-26).....	2-7

## TABLE OF CONTENTS (CONTINUED)

2.3.8.2	Chemical Waste Holding Tank Near Building 2060 (YPG-02) .....	2-7
2.3.8.3	Building 2060 (YPG-03) and Building 3021 (YPG-13f) .....	2-7
2.3.9	Inactive Landfills .....	2-7
<b>SECTION 3.0</b>	<b>COMMUNITY INVOLVEMENT .....</b>	<b>3-1</b>
3.1	RESTORATION ADVISORY BOARD .....	3-1
3.2	PREVIOUS COMMUNITY OUTREACH EFFORTS BY USAGYPG ..	3-1
3.3	TECHNICAL ASSISTANCE FOR PUBLIC PARTICIPATION .....	3-2
<b>SECTION 4.0</b>	<b>COMMUNITY RELATIONS PROGRAM .....</b>	<b>4-1</b>
4.1	OBJECTIVES OF THE COMMUNITY RELATIONS PROGRAM .....	4-1
4.2	REQUIRED ACTIONS .....	4-1
4.3	ORGANIZATION OF THE RESTORATION ADVISORY BOARD .....	4-2
4.4	RESTORTION ADVISORY BOARD MEETINGS .....	4-2
4.5	INFORMATION REPOSITORY .....	4-3
4.6	PUBLIC NOTICES .....	4-3
4.7	SMALL-GROUP PRESENTATIONS .....	4-3
4.8	U.S. ARMY GARRISON YUMA PROVING GROUND (USAGYPG) MAILING LIST .....	4-4

## APPENDICES

<b>APPENDIX A</b>	<b>MAILING LIST</b>
<b>APPENDIX B</b>	<b>GLOSSARY OF ENVIRONMENTAL TERMS</b>

## **ACRONYMS AND ABBREVIATIONS**

AAFES	Army Air Force Exchange Services
ADEQ	Arizona Department of Environmental Quality
AOC	Area of Concern
bgs	Below Ground Surface
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CWA	Chemical Warfare Agent
DERP	Defense Environmental Response Program
DD	Decision Document
DoD	Department of Defense
FBTS	Fuel Bladder Test Site
FS	Feasibility Study
ft	Feet
FWDA	Former Waste Disposal Area
IRP	Installation Restoration Program
MC	Munitions Constituents
MCL	Maximum Contaminant Level
MD	Munitions Debris
MEC	Munitions and Explosives of Concern
MRS	Munitions Response Site
NPL	National Priority List
NFA	No Further Action
OU	Operable Unit
PA	Preliminary Assessment
RA	Remedial Action
RAB	Restoration Advisory Board
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RFA	RCRA Facility Assessment
ROD	Record of Decision

## **ACRONYMS AND ABBREVIATIONS (Continued)**

RI	Remedial Investigation
SARA	Superfund Amendments and Reauthorization Act
SCR	Site Characterization Report
SI	Site Investigation
SWMU	Solid Waste Management Unit
TAPP	Technical Assistance for Public Participation
USACHPPM	U.S. Center for Health Promotion and Preventative Medicine
USAGYPG	United States Army Garrison Yuma Proving Ground
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
WETA	West Environmental Test Area

## **SECTION 1.0 OVERVIEW**

### **1.1 INTRODUCTION**

This document presents a Community Relations Plan to provide guidelines for future public involvement in the Installation Restoration Program (IRP) at U.S. Army Garrison Yuma Proving Ground (USAGYPG). Community involvement at USAGYPG is a planned effort to involve citizens in the decision-making process and to prevent or resolve conflict through two-way communication. The goal of community involvement at USAGYPG is to provide a forum whereby community members are supplied with accurate and timely information on USAGYPG environmental restoration activities and given an opportunity to comment on any issues that may arise.

### **1.2 REGULATORY BACKGROUND**

#### **1.2.1 Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)**

In 1980, Congress passed the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) to address the cleanup of hazardous waste disposal sites across the country. The CERCLA gave the President authority to require responsible parties to remediate the sites or undertake response actions through the use of a fund, known as Superfund. Through executive order, the President delegated responsibility to the U.S. Environmental Protection Agency (USEPA) to investigate and remediate private party hazardous waste disposal sites that created a threat to human health and the environment. The President delegated responsibility to investigate and clean up federal facility disposal sites to the various federal agency heads. In 1981, the Secretary of Defense established the Defense Installation Restoration Program (IRP) to investigate and remediate Department of Defense (DoD) sites. In turn, each military service established its own IRP to locate and investigate hazardous waste sites on its installations.

Congress amended CERCLA in 1986 through the Superfund Amendments and Reauthorization Act (SARA). The SARA waived sovereign immunity for federal facilities. It gave authority to the USEPA to oversee the cleanup of federal facilities and to have the final authority to select the remedial action at federal facilities placed on the National Priorities List (NPL) if the USEPA and relevant federal agency could not concur in the selection. Congress also codified the Defense Environmental Response Program (DERP) (SARA Section 211), setting up a fund for the DoD to remediate its sites since the Superfund was not available for the cleanup of federal facilities. The DERP specifies the type of cleanup responses that the fund can be used to address.

In response to SARA, the DoD realigned its IRP to follow the investigation and cleanup stages of the USEPA. The phases of action and treatment at CERCLA sites are:

**Preliminary Assessment/Site Investigation (PA/SI)** — determines if contamination is present.

**Remedial Investigation/Feasibility Study (RI/FS)** — characterization study of the site and determination of alternatives for cleanup.

**Record of Decision (ROD) or Decision Document (DD)** — for the selection of the best remedial action cleanup alternative.

**Remedial Design/Remedial Action (RD/RA)** — engineering design plan and implementation of cleanup plan.

### **1.2.2 Resource Conservation and Recovery Act (RCRA)**

The USAGYPG is currently operating under a Resource Conservation and Recovery Act (RCRA) Part B permit issued in June of 2007. Under Subtitle C of RCRA, the State of Arizona has the authority to implement the RCRA program and many of the HSWA requirements. Currently, Arizona Department of Environmental Quality (ADEQ) monitors RCRA compliance and enforces its provisions at USAYPG. The ADEQ also administers the requirements of various other state and federal environmental regulations relevant to wastewater treatment systems, wastewater and storm-water discharges, air emissions, solid waste landfills, and underground storage tanks.

A letter from ADEQ dated December 4, 1996, identified the management strategy it adopted for several of USAGYPG's sites, including 13 of the 19 sites addressed in the RI report (all but YPG-13a through -13f). The 13 sites were designated to be managed under the direction of ADEQ's Voluntary Sites Unit. In January 1997, the U.S. Center for Health Promotion and Preventive Medicine (USACHPPM) conducted a relative risk site evaluation at 16 of the 19 sites (all but YPG- 10, -43, and -45) and found that only 3 of the 16 (YPG-11, -13a, and -3 1) scored in the medium range of relative risk; all others scored within the low range.

In May 1997, a RCRA Facility Assessment (RFA) site inspection was conducted on behalf of the USEPA Region 9. The main objectives of the RFA were to (1) identify sites and areas of concern (AOCs) at USAGYPG; (2) obtain information on USAGYPG's operational history; (3) obtain information on releases from any units within USAGYPG; (4) provide a specific description of the environmental setting; and (5) provide information on release pathways and the potential for releases to each medium.

The RFA recommended response actions for 51 sites and 6 AOCs, including 14 of the 19 SWMUs addressed in the RI. No sites were found to require emergency response actions. These sites were organized into four operable units (OUs) at ADEQ's request.

In a letter dated October 29, 1997, the ADEQ stated that additional investigation and subsequent restoration of designated USAGYPG sites would follow a CERCLA format, beginning with an RI.

### **1.3 PURPOSE OF COMMUNITY RELATIONS PLAN**

The CERCLA and RCRA share similar objectives in keeping the community informed about, and involved in, hazardous waste issues. Community relations activities are tailored to each individual site, taking into consideration the level of community concern, progress of cleanup and corrective actions, and RCRA permitting statuses.

Public information and participation programs are an integral component of CERCLA restoration and RCRA hazardous waste corrective action plans, study and implementation processes. The CERCLA and RCRA community relations programs ensure that people who live and/or work in the communities surrounding facilities where

corrective actions are being conducted, as well as those who work in or for these facilities, have opportunities for public participation in the environmental restoration process. The blueprint for public information and participation is the Community Relations Plan. This document helps identify the public's concerns and suggests ways that those responsible for implementing the environmental restoration will respond to those concerns. It also documents how community relations activities, required by CERCLA and RCRA are carried out.

The purpose of this Community Relations Plan is to:

- Provide background information about the areas involved in the IRP;
- Foster open communication between the army, community representatives, and residents living within USAGYPG;
- Outline the specific measures the USAGYPG is taking to involve the public in the environmental restoration activities.

The USAGYPG believes that public involvement is an important part in the environmental restoration process, and is working to keep the public informed and involved in this process. This plan and all other documents related to this project are available for public review at the USAGYPG Environmental Office.

## **SECTION 2.0 SITE PROFILE**

### **2.1 INSTALLATION DESCRIPTION**

The USAGYPG is located in the southwestern portion of the State of Arizona, bordered on the west by the Colorado River. The installation is located in remote portion of Yuma County with the nearest major population center, the city of Yuma, approximately 25 miles to the south-southwest. The city of Yuma has a population of 196,972 inhabitants (as of 2009 estimate). The USAGYPG is one of DoD's largest installations, approximately 830,000 acres in size or roughly 1300 square miles. Comparatively, it is slightly larger than the State of Rhode Island.

The USAGYPG is a general purpose facility with over 50 years of experience testing weapon systems of all types and sizes. Equipment and munitions tested at USAGYPG consist of medium and long-range artillery; aircraft target acquisition equipment and armament, armored and wheeled vehicles, a variety of munitions, and personnel and supply parachute systems. Testing programs are conducted for all United States military services, friendly foreign nations, and private industry. The USAGYPG is the Army's center for desert natural environment testing; the management center of cold weather testing at the Cold Regions Test Center (Alaska); and tropic testing at the Tropic Test Center (various locations). The USAGYPG is one of 22 major test ranges that comprise the DoD Major Range Test Facility Base.

### **2.2 HISTORY OF U.S. ARMY GARRISON YUMA PROVING GROUND**

Military use of USAGYPG began in 1942 for training desert troops. The mission changed in January 1943 when the site began to be used as a testing ground for bridges, river crossing equipment, boats, vehicles, and well drilling equipment under the designation Yuma Test Branch, Corps of Engineers. On October 1, 1947, it was designated the Engineering Research and Development Laboratories, Yuma Test Branch, Sixth Army. This installation was deactivated in January 1950 because of a military

austerity program. However, on April 1, 1951, it was reactivated as the Yuma Test Station for desert environmental testing of equipment ranging from tanks to water purification units. On August 1, 1962, the station was assigned to the U.S. Army Materiel Command, and on July 1, 1963, it was renamed Yuma Proving Ground.

Today, USAGYPG has a working population of approximately 3000 people, including test and support soldiers, civil service employees, and supporting civilian contractors. It hosts about 23,000 visitors per year, including test customers, training units, U.S. government and foreign dignitaries, local organizations, and school groups.

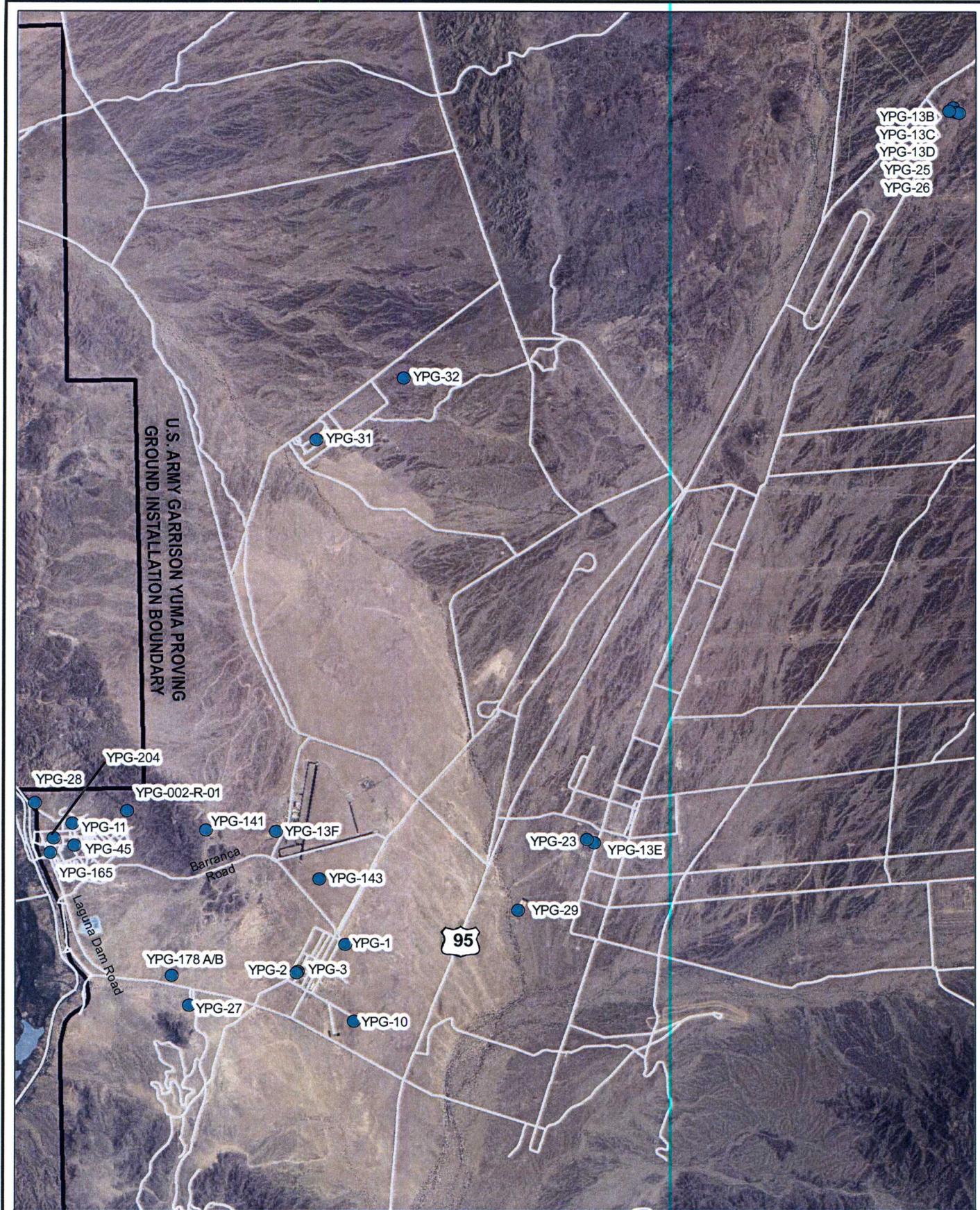
## **2.3 SITE DESCRIPTIONS**

The following sections provide descriptions of the IRP sites at the USAGYPG installation. Figure 1 shows the locations of these sites.

### **2.3.1 Former Mortar Impact Area (YPG-002-R-01)**

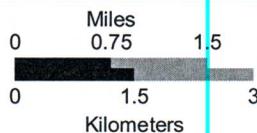
The Former Mortar Impact Area (YPG-002-R-01) is a single Munitions Response Site (MRS), and consists of approximately 625 acres in the southwestern portion of USAGYPG. The MRS encompasses a portion of the main cantonment area, including a military residential housing area, and undeveloped land located north and east of the main cantonment. Aboveground water tanks, a jogging trail and an observatory are also present within the boundaries of the Former Mortar Impact Area. A hill located in the southeastern portion of the site is also used for Easter sunrise services. It is believed that the site was used to train troops in desert warfare during the early part of World War II.

In 2009, USAGYPG completed a remedial investigation (RI) to characterize potential munitions and explosives of concern (MEC) and munitions constituent (MC) at the Former Mortar Impact Area. As a result of the RI, one MEC item (75-mm projectile, fuzed) and 27 munition debris (MD) items were identified. The boundary of the MRS was redefined to cover the area impacted by past activities.



**LEGEND**

- Installation Restoration Site



**FIGURE 1**

**INSTALLATION RESTORATION SITES AT USAGYPG**

**U.S. Army Garrison Yuma Proving Ground**

### **2.3.2 Old Chemical Laboratory, BLDG S-2500 (YPG-01)**

The Old Chemical Laboratory (YPG-01) is located in Building 2500 in the Mobility Test Area, also known as Yuma Test Area complex. The laboratory contained fume hoods, sinks, and laboratory tables. The wastewater from agent testing activities collected in the sinks and floor drains, and was reportedly decontaminated before its discharge into a nearby leaching well. Building 2500 is currently used to prepare soils to be analyzed for depleted uranium and beryllium.

Investigational activities at YPG-01 have included passive soil gas sampling and groundwater monitoring. Groundwater monitoring revealed that detected chemical concentrations at the site are not affecting surficial groundwater. However, because of the historical use of Chemical Warfare Agent (CWA) at the site, groundwater monitoring will continue to be performed in the future as part of this remedial action.

### **2.3.3 Fuel Bladder test Site (YPG-10)**

The Fuel Bladder Test Site (FBTS), or (YPG-10), is a fenced area of approximately 30 acres located south of the Mobility Test Area. Records indicate that there were 12 pits at the site, at least 7 of which were bermed and used for testing. Five others were borrow pits. The collapsible bladder tanks that were used in the pits have been removed; however, the bermed pits and two depressions (known as the Northern Depression and Southern Depression) are still visible at the site.

The YPG-10 site was used from the 1960s to 1970s to test the integrity of collapsible bladder tanks for combat field applications. Several releases of fuel, estimated to be from 150,000 to more than 500,000 gallons, occurred during testing as a result of minor leaks, complete bladder failure, and minor spills from the source tanks.

Previous investigations at the site have included soil vapor screenings, geophysical surveys, surface soil sampling, subsurface soil sampling, and groundwater sampling. Soil vapor extraction remediation and groundwater monitoring are currently being conducted at the site, since the SVE remediation activities start - the equivalent of 150,000 gallons of fuel have been removed from the subsurface.

#### **2.3.4 Former Pesticide Mix/Storage, BLDG T-430 (YPG-11)**

The Former Pesticide Mix/Storage Facility at Building T-430 (YPG-11) is a shed constructed of wood and wire and located within the USAGYPG Public Works compound at the Main Administrative Area. The building is constructed on a concrete slab and areas to the west and south of the building are paved with asphalt. It is adjacent to an employee break area and washroom. Building T-430 was in use during the 1970s to store a variety of bulk insecticides, herbicides, and associated chemical application equipment. The building is currently used for general storage.

Soil samples collected during investigations at the site detected pesticide and herbicide concentrations in shallow borings at the site. The depth interval of contamination was defined to be in the 0 to 2 ft interval. Asphalt paving will be completed in the area where the soil is exposed.

#### **2.3.5 West Environmental Test Area (YPG-31), and Former Waste Disposal Area (YPG-32)**

The West Environmental Test Area (WETA), or (YPG-31), and the Former Waste Disposal Area (FWDA), or (YPG-32), are located in the Cibola Testing and Training Range, which is in active operation, and used for firing test rockets and testing military equipment ordnance. The sites were used for storing, testing and disposing of Chemical Warfare Agent (CWA) during the 1950s and 1960s.

No intrusive soil sampling has been conducted at either site to protect the health and safety of investigators from the probable presence of CWA. However, soil gas and groundwater monitoring results show only low amounts of contamination. Soil cover to prevent infiltration is proposed along with groundwater monitoring.

#### **2.3.6 Building 506 (YPG-45)**

Located in the Main Administrative Area, Building 506 (YPG-45) is the site of two former steel 4,000-gallon underground storage tanks (USTs). The two steel USTs were used to store heating fuel oil (No. 2) from 1953 until their removal in March 1989, after they failed a tank tightness test. The tanks and contaminated soil were replaced with a single 6,000-gallon fiberglass tank which currently stores heating oil. An estimated

2,100 gallons of heating fuel leaked from the tanks. Approximately 150 cubic yards of contaminated soil was removed at the time of the UST removal.

Previous investigations included soil, groundwater, and soil gas sampling to characterize the site and determine the extent of contamination. Investigation results indicated that a limited volume of soil contamination exists at the site, primarily west and south of the former USTs at depths between 15 and 30 feet (ft) below ground surface (bgs). Groundwater has not been impacted. Asphalt paving and groundwater monitoring is proposed at the site.

### **2.3.7 Fuel Station #1 UST 207& 209 (CCYPG-165) and YPG 138 UST Site Remediation AAFES Gas Station (CCYPG-204)**

Service Station 207/209 (YPG-165) and the Army Air Force Exchange Service (AAFES) Service Station (YPG-204) are located in the Main Administrative Area of USAGYPG. Service Station 207/209 originally contained two 10,000-gallon USTs, and the AAFES Service Station contained three 10,000-gallon USTs. Both stations were used to store and supply leaded and unleaded gasoline and diesel fuel. Leaks at the UST sites were discovered when the tanks were removed and replaced in the early 1990s. At that time contaminated soils were excavated to depths of 12ft bgs at Service Station 207/209 and 13 ft bgs at the AAFES Service Station.

In 2006, USAGYPG submitted Site Characterization Reports (SCRs) for the two stations. The SCRs concluded that natural attenuation processes will complete remediation of the sites. The ADEQ accepted the reports and did not require the submittal of Corrective Action Plans.

Periodic groundwater monitoring at the sites will continue until the plumes have degraded to below Arizona Drinking Water Maximum Contaminant Levels (MCLs) or until groundwater monitoring results indicate that the plume is growing or migrating. If, in the future, it is determined that either plume is growing or migrating, a Corrective Action Plan will be developed and implemented.

## **2.3.8 No Further Action Sites**

No further action (NFA) has been recommended at ten sites at USAGYPG. The NFA sites have been placed into three groups based on characteristics and contamination at the site. An RI was completed between 1990 and 1994 on these sites and a Decision Document has been submitted to ADEQ for concurrence.

### **2.3.8.1 Wash Pad 1 (South) – Castle Dome (YPG-13b); Wash Pad 2 (North) – Castle Dome (YPG-13c); Waste Basin – Castle Dome (YPG-13d); Septic Tank Leach Field – Kofa (YPG-13e); Wash Rack Lagoon – Kofa (YPG-23); Septic Tank Leach Field (North) - Castle Dome (YPG-25); and Septic Tank Leach Field (South) - Castle Dome (YPG-26)**

The YPG-13b, -13c, -13d, -13e, -23 -25 and -26 sites share a common issue: soils at the sites contain slightly elevated levels of arsenic. The Army proposed NFA for these sites because background levels of arsenic in soil in this general area are slightly elevated as a result of historical mining activity.

### **2.3.8.2 Chemical Waste Holding Tank Near Building 2060 (YPG-02)**

The YPG-02 site was a fuel underground storage tank. The tank was removed in 2002, and soil sampling confirmed that no contaminants exceed ADEQ remediation goals.

### **2.3.8.3 Building 2060 (YPG-03) and Building 3021 (YPG-13f)**

The YPG-03 and -13f sites are septic tank/leach field sites. The septic tank at YPG-13f was removed in 1995, and the tank at YPG-03 was removed in May 2002. Only arsenic was detected slightly above the ADEQ remediation goal.

## **2.3.9 Inactive Landfills**

The six inactive landfill sites consist of YPG-027, -028, -029, -141, -143, -178a, and -178. The history of waste disposal at these sites is believed to be municipal and construction debris; however, it is possible that MEC and MD could exist at these sites. Only limited historical information regarding the size of the landfills, depth of waste burial, and quantities of waste disposal exists.

Previous investigations and activities at these sites include a geophysical survey performed in 2007, a surface waste removal and disposal in 2009, and additional geophysical surveys following the surface removal.

The USAGYPG is performing intrusive investigations to delineate the horizontal and vertical extent of buried waste and to characterize the types of waste present, and collecting surface and subsurface soil samples to determine if chemicals have been released to the soil from surface debris (formerly present) or buried waste.

## **SECTION 3.0 COMMUNITY INVOLVEMENT**

### **3.1 RESTORATION ADVISORY BOARD**

An integral part of USAGYPG community involvement is the Restoration Advisory Board (RAB). The RAB consists of community members, city and county officials and other stakeholders. The purpose of the RAB is to provide a forum through which information about environmental restoration at the installation can be provided to the RAB members, who, in turn, provide feedback and community concerns to USAGYPG. A RAB was established June 2010.

### **3.2 PREVIOUS COMMUNITY OUTREACH EFFORTS BY U.S. ARMY GARRISON YUMA PROVING GROUND**

In the past, USAGYPG has attempted to determine if sufficient community interest in the environmental restoration program was present to develop a RAB. In the summer of 1999, USAGYPG launched a campaign to determine community interest in the development of a RAB. Public meetings were held on August 2, 1999 in Yuma and August 3, 1999 at USAGYPG in an effort to gauge the public's interest. Notices of the meetings were posted in local newspapers and made available to local television and radio stations. Mailings and RAB interest questionnaires were also sent to community members who had shown prior interest in USAGYPG activities. Due to the very low response to these efforts, the USAGYPG commander determined that there was insufficient community interest to develop a RAB.

Community interest in forming a RAB was re-assessed in February 2001 and August 2003 through the distribution of interest surveys via mailing lists and public meetings, and announcements in local newspapers. Again, there was insufficient community interest to develop a RAB.

Even though past attempts to form a RAB for the environmental restoration program at USAGYPG have been unsuccessful, USAGYPG is committed to involve the community, and realizes that community interest in the program may have changed over

time. Because of this commitment, a RAB meeting was held on June 7, 2010. The meeting was attended by community members, city and county officials and other stakeholders. During the meeting, an overview of the IRP was presented, along with a description of the remediation activities currently being conducted at USAGYPG. A second RAB meeting was held September 1, 2010 at the Yuma County Main Library. A third RAB meeting is planned for mid January 2011. The USAGYPG will continue to assess the public interest in remediation activities.

### **3.3 TECHNICAL ASSISTANCE FOR PUBLIC PARTICIPATION**

In recognition of the important role citizens can play in the installation restoration process, Congress established and funded the Technical Assistance for Public Participation (TAPP) program. Under TAPP, the community members of the RAB can apply for up to \$25,000 annually (or one percent of the cost to complete restoration activities, whichever is less, and a lifetime maximum of \$100,000 per installation) to hire the services of objective, independent, private sector, small business consultants to help them understand the complex scientific, technical, and engineering issues related to installation restoration.

In order to qualify for TAPP funding, a minimum of three community members must serve on the RAB and a majority of the community members must agree on a project that will help enhance their participation in the RAB. After the project has been agreed upon, it is presented to the installation commander for approval or denial. Upon approval, the RAB co-chairs and the installation contracting office work cooperatively to implement the project. If the project is denied, the installation commander will explain the basis for the denial and provide an alternative to the proposed project. The RAB community members can appeal the commander's denial through the normal chain of command.

A RAB may be considered for TAPP funds under either of the following two circumstances. In one circumstance, the RAB must demonstrate that the federal, state, and local agencies responsible for overseeing the installation environmental restoration and DoD personnel do not have the technical expertise required to meet the objectives of

the project sought by the community members of the RAB. Under the other circumstance, TAPP funds can be requested if it is “likely to contribute to the efficiency, effectiveness, or timeliness of environmental restoration activities” and is “likely to contribute to community acceptance of environmental restoration activities at the installation.”

The following are examples of the types of projects that can be funded through TAPP:

- Interpreting technical documents such as site studies, risk assessments, and health assessments;
- Explaining how the technologies selected for or being considered for the site actually work, when they are usually used, and how they have worked in practice;
- Preparing for participating in Relative Risk Site Evaluations;
- Interpreting the potential health implications of site contaminants and exposure scenarios; and
- Training in areas such as chemical process, health effects, alternative technologies, and risk assessments.

Applications for TAPP funds can also be obtained upon request to:

Department of Defense  
Office of the Deputy Under Secretary of Defense for  
Environmental Security  
3400 Defense Pentagon  
Washington, D.C. 20301-3400.

## **SECTION 4.0**

### **COMMUNITY RELATIONS PROGRAM**

#### **4.1 OBJECTIVES OF THE COMMUNITY RELATIONS PROGRAM**

This community relations program is designed to meet the public communications needs of USAGYPG as it executes the environmental restoration activities at installation.

The actions outlined are intended to serve the following purposes:

- Disseminated information to the public regarding environmental restoration activities in a proactive, timely, convenient and easily understood manner.
- Provide opportunities for face-to-face interaction with the public to allow people to ask questions and express concerns.
- Foster a sense of partnership and trust between the communities and USAGYPG as environmental restoration activities progress.

The community relations program is overseen by the USAGYPG who is responsible for all environmental restoration activities at the installation, and executed by Parsons, the contractor responsible for performing the restoration activities.

#### **4.2 REQUIRED ACTIONS**

Both CERCLA and RCRA require public involvement in three major phases of environmental restoration:

- Site analysis and characterization,
- Analysis of remedial alternatives, and
- Remedy selection.

Although the restoration activities are following CERCLA, some of the features resemble RCRA. In order to ensure the maximum opportunity for public participation, the requirements of both CERCLA and RCRA were reviewed.

To formalize community involvement in environment restoration projects, the Army has developed a RAB at USAGYPG. The organization and RAB requirements are described below.

### **4.3 ORGANIZATION OF THE RESTORATION ADVISORY BOARD**

The RAB will have two co-chairs, an Installation Co-chair and a Community Co-chair, which have been determined. Once formed, the RAB will meet to organize itself, and will then proceed in drafting its mission statement and operating procedures. These procedures will allow the RAB to govern itself for the duration of the IRP. The current RAB have a manual and co-chairs.

### **4.4 RESTORATION ADVISORY BOARD MEETINGS**

The RAB meetings will be open to the general public. The frequency of meetings will be based on public interest. Meetings will be designed to meet the following objectives:

- 1) The first objective is for USAGYPG to provide information to the RAB/community on the status of the restoration program and the issues facing the program.
- 2) The second is for the RAB/community to raise its questions, concerns, and ideas about the IRP.
- 3) The third, and most significant objective, is the opportunity for USAGYPG and the RAB/community to come to an understanding – if not resolution – of any problematic issues.

In order to meet these objectives, RAB meetings will feature interest areas rather than large-scale formal presentations that can often stifle discussion. The interest areas will feature informative displays on present and projected installation restoration activities. The interest areas will be staffed by people who are knowledgeable of the activity being presented and can respond to questions and comments.

Comments made by the RAB/community will be recorded and passed on to USAGYPG. Comments and written responses will become part of the Information Repository and will be available at the following RAB meeting.

## **4.5 INFORMATION REPOSITORY**

An information repository of documents pertinent to the IRP has been established at the Environmental Services Division. The following documents may be included in the repository:

- Sampling and Analysis Plans;
- Community Relations Plans;
- Remedial Investigation/Feasibility Study Work Plans;
- Remedial Investigation Reports;
- Feasibility Study Reports; and
- Decision Documents.

## **4.6 PUBLIC NOTICES**

Public notices of meetings on the environmental restoration program will be placed in local newspapers of general circulation.

## **4.7 SMALL-GROUP PRESENTATIONS**

Appropriately qualified USAGYPG personnel may provide presentations to interested civic organizations, local officials, or interest groups upon invitation. These presentations will be given with the intent of sharing information and facilitating communication on the USAGYPG IRP. Requests for these presentations should be channeled through the USAGYPG Public Affairs Office by calling (928) 328-6143 or writing to:

Public Affairs Office  
U.S. Army Yuma Proving Ground  
Attn: TEDT-YP-CS-PA  
301 C Street, Bldg 2100  
Yuma, AZ 85365

#### **4.8 U.S. ARMY GARRISON YUMA PROVING GROUND MAILING LIST**

The USAGYPG will maintain a mailing list of interested citizens, public officials, and other stakeholders, and will take every opportunity to add people to the list. The mailing list found in Appendix A will be updated on a regular basis.

**APPENDIX A**

**MAILING LIST**

## Mailing List for USAGYPG Installation Restoration Program Meetings

<p><b>Arizona Department of Environmental Quality</b></p>	<p><b>Delfina Olivarez</b> Project Manager Remedial Projects Section 1110 West Washington Street Phoenix, AZ 85007</p> <p><b>Donald E Atkinson</b> Project Hydrologist, Remedial Projects Section Waste Programs Division 1110 West Washington Street Phoenix, AZ 85007</p> <p><b>Mr. Harry Hendler</b> Unit Manager Waste Programs Division 1110 West Washington Street Phoenix, AZ 85007</p> <p><b>Mr Anthony Loverock</b> Supervisor, Hazardous Waste Permits Unit Waste Programs Division 1110 West Washington Street Phoenix, AZ 85007</p> <p><b>Rajendra (Raj) Paode, P.E.</b> Environmental Engineer Hazardous Waste Permits Unit Waste Programs Division 1110 West Washington Street Phoenix, AZ 85007</p> <p><b>Edward Ranger</b> Administrative Counsel 1110 West Washington Street Phoenix, AZ 85007</p>	<p>Phone : 602-771-4710 or 800-234-5677 Fax: 602-771-4272 <a href="mailto:dco@azdeq.gov">dco@azdeq.gov</a></p> <p>Phone: 602-771-4182 Fax: 602-771-4272 <a href="mailto:Atkinson.Don@azdeq.gov">Atkinson.Don@azdeq.gov</a></p> <p>Phone: 800-234-5677 Fax : 602-771-4272 <a href="mailto:hh3@azdeq.gov">hh3@azdeq.gov</a></p> <p>Phone: 800-234-5677 Fax: 602-771-4272 <a href="mailto:acl@azdeq.gov">acl@azdeq.gov</a></p> <p>Phone: 602-771-4165 or 800-234-5677 Fax: 602-771-4138 <a href="mailto:Paode.Rajendra@azdeq.gov">Paode.Rajendra@azdeq.gov</a></p>
<p><b>USAGYPG</b></p>	<p><b>Charles Ruerup</b> Chief, Environmental Sciences Division U.S. Army Garrison Yuma PG, IMWE-YMA-PWE 301 C Street, Bldg. 307 Yuma, AZ 85365</p>	<p>DSN: 899-2977 Fax: 928-328-6696</p>

	<p><b>Donnett Brown</b> DERP Program Manager U.S. Army Garrison Yuma PG, IMWE-YMA-PWE 301 C Street, Bldg. 307 Yuma, AZ 85365</p> <p><b>Richard Martin</b> Garrison Manager U.S. Army Garrison Yuma PG, IMWE-YMA-ZA 301 C Street, Bldg. 2604 Yuma, AZ 85365</p> <p><b>Meg McDonald</b> Cultural Resources Manager, USAYPG, IMWE-YMA-PWE Yuma, AZ 85365</p> <p><b>Chuck Wullenjohn</b> Chief, Public Affairs Office TEDT-YP-CS-PA Yuma, Arizona 85365</p>	<p>DSN 899-2754 Fax: 928-328-6696</p> <p>Phone: 928-328-3474 Fax: 928-328-3400</p> <p>Phone: 928-328-2310 Fax: 928-328-6696</p> <p>Phone: 928-328-6533/6189 Fax: 928-328-6039</p>
<b>Parsons</b>	<p><b>Edward Staes</b> Project Manager 10235 South Jordan Gateway South Jordan, UT 84095</p> <p><b>Ross N. Miller</b> Technical Director 10235 South Jordan Gateway South Jordan, UT 84095</p>	<p>Phone: 801-572-5999 Fax: 801-572-9069 <a href="mailto:ed.staes@parsons.com">Email: ed.staes@parsons.com</a></p> <p>Phone: 801-572-5999 Fax: 801-572-9069 <a href="mailto:ross.miller@parsons.com">Email: ross.miller@parsons.com</a></p>
<b>United States Federal Government</b>		
<b>U.S. Senate</b>	<p><b>Senator John McCain</b> 5353 North 16th Street, Ste. 105 Phoenix, AZ 85016</p> <p><b>Senator Jon Kyl</b> 2200 East Camelback, Suite 120 Phoenix, AZ 85016-3455</p>	<p>Phone: 602-952-2410 Fax: 602-952-8702</p> <p>Phone: 602-840-1891 Fax: 602-957-6838</p>
<b>U.S. House of Representatives</b>	<p><b>Raul M. Grijalva</b> 1455 S. 4th Avenue Suite 4 Yuma, AZ 85364</p>	<p>Phone: 928-343-7933 Fax: 928-343-7949</p>

<b>U.S. Bureau of Reclamation</b>	<b>Chris Wallis</b> Resource Management Office Manager Yuma Area Office 7301 Calle Aqua Salada Yuma, Arizona 85364	Phone: 928-343-8215  <a href="mailto:cwallis@usbr.gov">cwallis@usbr.gov</a>
<b>U.S. Environmental Protection Agency</b>	<b>Wayne Natri</b> Regional Administrator (ORA-1) Region IX 75 Hawthorne Street San Francisco, CA 94105-3901	
<b>U.S. Bureau of Land Management</b>	<b>Dave Daniels</b> Planning and Environmental Yuma District Office 2555 East Gila Ridge Road Yuma, AZ 85365  <b>Roger Oyler</b> Wildhorse and Burro Specialist Yuma District Office 2555 East Gila Ridge Road Yuma, AZ 85365  <b>James T. Shoaff</b> Field Manager 2555 East Gila Ridge Road Yuma, AZ 85365	
<b>U.S. Fish and Wildlife Service</b>	<b>Steven L. Spangle</b> Arizona Ecological Services Field Office 2322 West Royal Palm Road, Ste. 103 Phoenix, AZ 85021	
<b>U.S. Bureau of Indian Affairs</b>	<b>Brian Bowker</b> Regional Director Western Regional Office 2600 N. Central Ave. 4th Floor Mail Room Phoenix, AZ 85004-3050  <b>Raymond Fry</b> Superintendent P.O. Box 11000 Yuma, AZ 85366-1000	Phone: 602-379-6600 Fax: 602-379-4413

	<b>Amy Heuslein</b> Environmental Protection Officer 400 N. 5th Str., 2 AZ Center Phoenix, AZ 85004	Phone: 602-379-6750 Fax: 602-379-3833 <a href="mailto:Amy.Heuslein@bia.gov">Amy.Heuslein@bia.gov</a>
<b>U.S. Border Patrol</b>	<b>Richard Hays</b> Supervising Border Patrol Agent 4035 South Avenue A Yuma, AZ 85364	
<b>Arizona State Government</b>		
<b>Governor</b>	<b>Jan Brewer</b> Governor of Arizona 1700 West Washington Phoenix, Arizona 85007	Phone: (602) 542-4331 Fax: (602) 542-1381 <a href="http://www.azgovernor.gov">http://www.azgovernor.gov</a>
<b>Arizona State Senate</b>	<b>Amanda Aguirre</b> Senate District 24 1700 W. Washington Room #314 Phoenix, AZ 85007	Phone: (602) 926-4139 Fax: (602) 417-3184 <a href="mailto:aaguirre@azleg.gov">aaguirre@azleg.gov</a>
<b>Arizona State House of Representatives</b>	<b>Lynne Pancrazi</b> Senate District 24 1700 W. Washington Room #324 Phoenix, AZ 85007	Phone: (602) 926-3004 Fax: (602) 417-3179 <a href="mailto:lpancrazi@azleg.gov">lpancrazi@azleg.gov</a>
<b>Arizona Department of Transportation</b>	<b>Frank Felix</b> District Supervisor Yuma District Office 2243 E. Gila Ridge Road Yuma, AZ 85365	Phone: (928) 317-2124 Fax: (928) 317-2121 <a href="mailto:FFelix@azdot.gov">FFelix@azdot.gov</a>
<b>Arizona Department of Agriculture, Native Plant Program</b>	<b>James McGinnis</b> Supervisor, Special Investigations 1688 West Adams Phoenix, AZ 85007	

## Local Governments

<p><b>La Paz County</b></p>	<p><b>Scott Bernhart</b>          Director, Community Development          1112 Joshua, Suite 202          Parker, AZ 85344</p> <p><b>Colleen McVey</b>          Department of Community Development          1112 Joshua, Suite 202          Parker, AZ 85344</p>	<p>Phone: (928) 669-6138</p>
<p><b>City of Yuma, Arizona</b></p>	<p><b>Alan L. Krieger</b>          Mayor          One City Plaza          P.O. Box 13014          Yuma, Arizona 85366-3014</p> <p><b>Laurie Lineberry</b>          Director of Comm. Development          One City Plaza          P.O. Box 13013          Yuma, AZ 85366-3013</p> <p><b>Noah Cullis</b>          Department of Community Development          One City Plaza          P.O. Box 13013          Yuma, AZ 85366-3013</p>	<p>Phone: (928) 373-5002</p> <p><a href="mailto:mayorandcouncil@yumaaz.gov">mayorandcouncil@yumaaz.gov</a></p> <p>Phone: (928) 373-5175          Fax: (928) 272-5176</p>
<p><b>Yuma County</b></p>	<p><b>Monty Stansbury</b>          Planning Director          Yuma County Development Services          2703 South Avenue B          Yuma, AZ 85364</p> <p><b>Maria Gonzalez</b>          Environmental Compliance Inspector          Yuma County Development Services          2351 West 26th Street          Yuma, AZ 85364</p> <p><b>Cindy Joslin</b>          Yuma County Planning and Zoning Division          198 S. Main Street,          Yuma, AZ 85364</p>	<p>Phone: (928) 817-5139</p> <p><a href="mailto:maria.gonzalez@yumacountyaz.gov">maria.gonzalez@yumacountyaz.gov</a></p> <p>Phone: (928) 373-1010          Fax: (928) 373-1120  <a href="mailto:cindy.joslin@yumacountyaz.gov">cindy.joslin@yumacountyaz.gov</a></p>

<b>Yuma County Farm Bureau</b>	<b>David Sharp</b> Treasurer 1129 S Arizona Avenue Yuma, AZ 85364	Phone: (928) 782-5338
<b>Yuma County Water Users Association</b>	<b>Tom Davis</b> Manager P.O. Box 5775 Yuma, AZ 85366	Phone: (928) 627-8824
<b>Yuma County Chamber of Commerce</b>	<b>Kelly Averitt</b> Executive Assistant 180 W. 1st Street, Ste. A Yuma, AZ 85364	Phone: (928) 782-2567
<b>Other Points of Contact</b>		
<b>Marine Corps Air Station</b>	<b>Dave Rodriquez</b> Environmental Department Director P.O. Box 99110 Yuma, AZ 85369	
<b>Air Combat Command PMS/CEV</b>	<b>Elvie R. Hoag</b> Chief, Environmental Branch 11817 Canon Blvd., Suite 306 Newport News, VA 23606	
<b>Sierra Club</b>	<b>Sandy Bahr</b> Conservation Outreach Director 202 East McDowell Road, Ste. 277 Phoenix, AZ 85004-4536	Phone: (602) 253-8633  <a href="mailto:sandy.bahr@sierraclub.org">sandy.bahr@sierraclub.org</a>
<b>Arizona Deer Association</b>	<b>Pete Cimellaro</b> President P.O. Box 21868 Mesa, AZ 85277	
<b>Arizona Game and Fish Department</b>	<b>Rebecca Davidson</b> Project Evaluation Program Supervisor Habitat Program 5000 W. Carefree Highway Phoenix, AZ 85068-5000	

	<b>Russ Engel</b> Habitat Program Manager 9140 East 28th Street Yuma, AZ 85365-3596	
<b>Audubon Society</b>	<b>Patricia Rather</b> President P.O. Box 6395 Yuma, AZ 85366	
<b>Arizona State Historic Preservation Office</b>	<b>James Garrison</b> 1300 W. Washington Phoenix, AZ 85007	
<b>Southwest Arizona National Wildlife Refuge Complex</b>	<b>Mitch Ellis</b> Complex Manager 9300 E. 28th Street Yuma, AZ 85365	
<b>Kofa National Wildlife Refuge Southwest Arizona NWR Complex</b>	<b>Susanna Henry</b> Refuge Manager 9300 E. 28th Street Yuma, AZ 95365	
<b>Arizona Desert Bighorn Sheep Society</b>	<b>Jim Unmacht</b> President P.O. Box 21705 Mesa, AZ 85277	Phone: 480-854-8950 Fax: 480-854-8966 <a href="mailto:assnmgmt1@cox.net">assnmgmt1@cox.net</a>
<b>Imperial National Wildlife Refuge</b>	<b>Tina Lynsky</b> Acting Refuge Manager 12812 N. Wildlife Way Yuma, AZ 85365	
<b>Public Employees for Environmental Responsibility (PEER)</b>	<b>Daniel Patterson</b> Ecologist and Southwest Director 738 N. 5th Ave. Ste. 210 Tucson, AZ 85705	Phone: 520-906-2159 <a href="mailto:swpeer@peer.org">swpeer@peer.org</a>

<b>Greater Yuma Economic Development Corporation</b>	<b>Julie Engel</b> President/CEO 899 E. Plaza Circle, Ste. 2 Yuma, AZ 85365	Phone: (928) 782-7774 Fax: (928) 782-7775 <a href="mailto:jengel@greateryuma.org">jengel@greateryuma.org</a>
<b>Center for Biological Diversity</b>	<b>Jay Lininger</b> Ecologist P.O. Box 1178 Flagstaff, AZ 86002	Phone: 928-853-9929 <a href="mailto:jlininger@biologicaldiversity.org">jlininger@biologicaldiversity.org</a>
<b>Welton-Mohawk Natural Resources Conservation District</b>	<b>David Sharpe</b> Chairman c/o Natural Resources Conserv. Service 5578 South Avenue 37E Roll, AZ 85347  <b>Bobbi McDermott</b> c/o Natural Resources Conserv. Service 5578 South Avenue 37E Roll, AZ 85347	
<b>Arizona Wilderness Coalition</b>	<b>Jason Williams</b> Regional Director P.O. Box 2741 Prescott, AZ 86302	
<b>Yuma Valley Rod and Gun Club</b>	<b>David Garrison</b> President P.O. Box 6500 Yuma, AZ 85366	
<b>Natural Resources Conservation Service</b>	<b>Shelly Ward</b> District Conservationist 2197 S. 4th Avenue, Suite 104 Yuma, AZ 85364	Phone: (928) 276-5508 <a href="mailto:Shelly.Ward@az.usda.gov">Shelly.Ward@az.usda.gov</a>
<b>Western Arizona Council of Governments</b>	<b>Brian H. Babiars</b> Executive Director 224 S. 3rd Avenue Yuma, Arizona 85364	Phone: (928) 782-1886 Fax: (928) 329-4248 <a href="mailto:brianb@wacog.com">brianb@wacog.com</a>

## Tribal Contacts

<b>Ak-Chin Indian Community Council</b>	<p><b>Lewis J. Manuel, Jr.</b> Chairwoman 42507 W. Peters and Nall Road Maricopa, AZ 85239</p> <p><b>Gary Gilbert</b> Cultural Resources Specialist 47685 N. Eco-Museum Road Maricopa, AZ 85366</p>	
<b>Chemehuevi Indian Tribe</b>	<p><b>Charles Wood</b> Chairman P.O. Box 1976 Havas Lake, CA 92363</p> <p><b>Ronald Escobar</b> Secretary/Treasurer P.O. Box 1976 Havas Lake, CA 92363</p>	
<b>Cocopah Indian Tribe</b>	<p><b>Jill McCormick</b> Cultural Resources Manager County 15th and Avenue G Somerton, AZ 85350</p> <p><b>Sherry Cordova</b> Chairwoman County 15th and Avenue G Somerton, AZ 85350</p>	
<b>Colorado River Indian Tribes</b>	<p><b>Eldred Enas</b> Chairman 26600 Mohave Road Parker, AZ 85344</p>	
<b>Fort McDowell Yavapai Nation Community</b>	<p><b>Clinton M. Pattea</b> President P.O. Box 17779 Fountain Hills, AZ 85268</p>	

<b>Fort Mojave Tribe Council</b>	<b>Timothy Williams</b> Chairman 500 Merriman Avenue Needles, CA 92363	
<b>Gila River Indian Community</b>	<b>William R. Rhodes</b> Govenor P.O. Box 2140 Sacaton, AZ 85247	
<b>Salt River Pima-Maricopa Indian Community</b>	<b>Diane Enos</b> President 10005 East Osborn Road Scottsdale, AZ 85256	
<b>San Carlos Apache Tribe</b>	<b>Wendsler Nosie</b> Chairman P.O. Box O San carlos, AZ 85550  <b>Vernelda Grant</b> Director, Historic Preservation Office P.O. Box O San Carlos, AZ 85550	
<b>Fort Yuma Reservation, The Quechan Tribe</b>	<b>Chase Durand Choate</b> Environmental Director P.O. Box 1899 Yuma, AZ 85366  <b>Mike Jackson, Sr.</b> President P.O. Box 1899 Yuma, AZ 85366  <b>Wayne Nastri</b> Historic Preservation Officer P.O. Box 1899 Yuma, AZ 85366  <b>Bridget Nash-Chrabascz</b> Quechan Historic Preservation Officer P.O. Box 1899 Yuma, AZ 85366	

<b>Tohono O'Odham Nation</b>	<p><b>Ned Norris, Jr.</b> Chairman P.O. Box 837 Sells, AZ 86534</p> <p><b>Shirley Molina</b> Program Manager P.O. Box 837 Sells, AZ 86534</p>	
<b>Yavapai-Prescott Tribe</b>	<p><b>Ernest Jones, Sr.</b> President 530 East Merritt Street Prescott, AZ 86301</p> <p><b>Greg Glassco</b> Director, Cultural Resources Department 530 East Merritt Street Prescott, AZ 86301</p>	
<b>The Hopi Tribe</b>	<p><b>Leigh Duwanwisiwma</b> Director, Hopi Cultural Preservation Office P.O. Box 124 Kykotsmovi, AZ 86039</p>	

**APPENDIX B**

**GLOSSARY OF ENVIRONMENTAL TERMS**

## **GLOSSARY OF TERMS**

<b>Administrative Record</b>	The Administrative Record consists of all documents which have a legal bearing on the remedial action. It is required for every response action, is used for judicial review, and forms the basis for the selection of response actions at third-party sites.
<b>Applicable or Relevant and Appropriate Requirements (ARAR)</b>	These are federal and state laws which must be considered in choosing a remedial action.
<b>Aquifer</b>	An underground geological formation, or group of formations, containing usable amounts of groundwater that can supply wells and springs.
<b>Area of Concern</b>	Any discernable unit or area which may have received solid or hazardous waste or waste containing hazardous constituents at any time.
<b>BTEX</b>	Benzene, toluene, ethylbenzene and xylene. These organic compounds are common constituents of vehicle fuels.
<b>Community Relations Plan</b>	A plan required by the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) at all National Priorities List (NPL) sites. The plan is a guide to assist in the implementation of public involvement activities as well as a mechanism for informing the community about cleanup progress under the base's Installation Restoration Program (IRP), as well as responding to community concerns.
<b>Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)</b>	CERCLA is also known as Superfund. It has been modified and amended several times, most significantly in 1986 by the Superfund Amendments and Reauthorization Act, known as SARA. Originally signed by law by President Jimmy Carter on Dec. 11, 1980, the Act was amended and reauthorized in 1986. CERCLA provides the legal framework for cleanup of hazardous waste sites. Costs for the cleanup are charged to those parties responsible for the pollution. Where no responsible party can be found, cleanup is paid for by tax revenues collected from the petrochemical industry. The Installation Restoration Program is the Department of Defense's cleanup regulation, which is based mainly on CERCLA.

<b>Decision Document (DD)</b>	A means of recording significant decisions in the Installation Restoration Program. Actions which merit a DD include: selecting a remedial action, closing out a site, and reactivating a site.
<b>Defense Environmental Restoration Program (DERP)</b>	A Department of Defense program, mandated in the Superfund Amendments and Reauthorization Act (SARA) Section 211, which includes the Installation Restoration Program as a component.
<b>Discarded Military Munitions (DMM)</b>	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 (UXO), 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 U.S.C. 2710 (e)(2)).
<b>Emergency Response</b>	A control measure or combination of control measures implemented to prevent or mitigate an immediate and substantial threat to public welfare posed by a hazardous waste site.
<b>Feasibility Study (FS)</b>	A description and analysis of the potential cleanup alternatives for a site or alternatives for a site on the National Priorities List. This restoration phase identifies the means for development, evaluation, selection, and description of remedial action alternatives. It usually starts as soon as the Remedial Investigation is underway; together, they are commonly referred to as the RI/FS.
<b>Groundwater</b>	Water found beneath the Earth's surface that fills pore spaces in the soil. In aquifers, groundwater occurs in sufficient quantities that it can be used for drinking water, irrigation and other purposes.
<b>Hazardous Substance</b>	A solid waste, or combination of solid wastes, that can pose a substantial or potential hazard to human health or the environment when improperly managed. It possesses at least one of four characteristics (ignitability, corrosivity, reactivity, or toxicity), or appears on special EPA lists.
<b>Heavy Metals</b>	Metallic elements with high atomic weights such as mercury, chromium, cadmium, arsenic, and lead.
<b>Herbicide</b>	A chemical pesticide designed to control or destroy plants, weeds, or grasses.

<b>Hydrology</b>	Science dealing with the properties, movement, and effects of water on the Earth's surface, in the soil and rocks below, and in the atmosphere.
<b>Information Repository</b>	A file containing technical reports, information and reference documents regarding cleanup activities under the Installation Restoration Program and/or Superfund.
<b>Installation Restoration Program (IRP)</b>	A Department of Defense program to identify the location of former hazardous waste disposal sites, to determine if any contamination releases have occurred, and to minimize the associated hazards to public health.
<b>Long-Term Monitoring (LTM)</b>	A program of water, soil or sediment analysis intended to track the migration (or non-migration) of contaminants. Monitoring is implemented without concurrent implementation of a remedial action.
<b>Material Potentially Presenting an Explosive Hazard (MPPEH)</b>	Material potentially containing explosives or munitions (e.g., munitions containers and packaging material; munitions debris remaining after munitions use, demilitarization, or disposal; and range-related debris); or material potentially containing a high enough concentration of explosives such that the material presents an explosive hazard (e.g., equipment, drainage systems, holding tanks, piping, or ventilation ducts that were associated with munitions production, demilitarization or disposal operations). Excluded from MPPEH are munitions within DoD's established munitions management system and other hazardous items that may present explosion hazards (e.g., gasoline cans, compressed gas cylinders) that are not munitions and are not for use as munitions.
<b>Maximum Contaminant Level (MCL)</b>	The maximum permissible level of a contaminant in groundwater and soil. MCLs are enforceable standards.
<b>Minimum Separation Distance (MSD).</b>	The MSD is the distance at which personnel in the open must be from an intentional or unintentional detonation.
<b>Mitigation</b>	Measures taken to reduce adverse impacts on the environment.
<b>Monitoring</b>	Periodic or continuous surveillance or testing to determine the level of compliance with statutory requirements and/or pollutant levels in various media or in humans, animals, and other living things.

**Monitoring Wells**

Wells drilled at specific locations on or off a hazardous waste site where groundwater can be sampled at selected depths. Analyses to determine such things as the depth to groundwater and the types and amounts of contaminants present can then be performed.

**Munitions Constituents (MC)**

Any materials originating from unexploded ordnance (UXO), discarded military munitions (DMM), or other military munitions, including explosive and non-explosive materials, and emission, degradation, or breakdown elements of such ordnance or munitions. (10 U.S.C. 2710 (e)(3)).

**Munitions Debris (MD)**

Remnants of munitions (e.g. fragments, penetrators, projectiles, shell casings, links, fins) remaining after munitions use, demilitarization, or disposal.

**Munitions and Explosives of Concern (MEC)**

This term, which distinguishes specific categories of military munitions that may pose unique explosives safety risks means: (A) Unexploded ordnance (UXO), as defined in 10 U.S.C. 101 (e)(5); (B) Discarded military munitions (DMM), as defined in 10 U.S.C. 2710 (e)(2); or (C) Munitions constituents (MC) (e.g., TNT, RDX), as defined in 10 U.S.C. 2710 (e)(3), present in high enough concentrations to pose an explosive hazard.

**Munition with the Greatest Fragmentation Distance (MGFD)**

The munition with the greatest fragmentation distance that is reasonably expected (based on research of characterization) to be encountered in any particular area.

**National Oil and Hazardous Substances Contingency Plan (NCP) 40 CFR 300**

The federal regulation established under the Clean Water Act and expanded under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), which provides for the coordinated and effective response to discharges of oil and to releases of hazardous substances, pollutants and contaminants.

**National Priorities List (NPL)**

A compiled list of the most serious hazardous waste sites identified for possible long-term remedial response. The list is based primarily on the score a site receives on the Hazard Ranking System (HRS). The EPA is required to update the NPL at least once a year.

**No Further Action**

This term has been replaced by the term: "site close-out." Site close-out may occur during several different stages of the cleanup process, depending upon the particular site.

<b>Operable Unit (OU)</b>	A portion of a site requiring further specialized investigation. A site can be made up of several discreet operable units. Typical restoration activities at an operable unit would be removing drums and tanks from the surface of a site.
<b>Range Related Debris</b>	Debris, other than munitions debris, collected from operational ranges or from former ranges (e.g., target debris, military munition packaging and crating material).
<b>Remedial Action (RA)</b>	The actual construction or implementation phase that follows the remedial design of the selected cleanup alternative at a site.
<b>Remedial Design (RD)</b>	An engineering phase that follows the Record of Decision (ROD) when technical drawings and specifications are developed for remedial action at a site.
<b>Remedial Investigation (RI)</b>	The Installation Restoration Program (IRP) or Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) related process to determine the nature and extent of contamination at a site. This phase of the IRP emphasizes data collection and site characterization of hazardous waste sites in an interactive fashion with the Feasibility Study phase.
<b>Remedial Investigation/Feasibility Study (RI/FS)</b>	The term indicating the iterative/interactive combination of the two related Installation Restoration Program studies.
<b>Resource Conservation and Recovery Act (RCRA)</b>	The federal law that established a regulatory system to track hazardous substances from the time of generation to disposal. The law requires safe and secure procedures to be used in treating, transporting, storing, and disposing of hazardous substances. RCRA is designed to prevent new, uncontrolled hazardous waste sites.
<b>Risk Assessment</b>	An evaluation to assess conditions at a site and determine the risk posed to public health and/or the environment.
<b>Site Inspection (SI)</b>	A technical phase that follows a Preliminary Assessment designed to collect more information on a hazardous waste site. The information is used to score the site with the Hazard Ranking System to determine whether a response action is needed.
<b>Small Arms Ammunition</b>	Ammunition, without projectiles that contain explosives (other than tracers), that is 0.50 caliber or smaller, or for shotguns.

<b>Solvents</b>	Cleaning agents and degreasing compounds. Some chemical solvents are suspected of being carcinogenic.
<b>Standard</b>	Any limits established by regulatory agencies on quantities, rate and concentrations of chemical, physical, biological and other constituents.
<b>Superfund Amendments and Reauthorization Act (SARA); PL 99-499</b>	Modifications to the Comprehensive Environmental Response, Compensation and Liability Act enacted on October 17, 1986.
<b>Superfund</b>	The common name used to denote the trust fund for site restoration established in the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), or CERCLA itself.
<b>Underground Storage Tank (UST)</b>	A tank located all or partially underground that is designed to hold gasoline or other petroleum products or chemical solutions.
<b>Unexploded Ordnance (UXO)</b>	Military munitions that (A) have been primed, fuzed, or otherwise prepared for action; (B) have been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard to operations, installations, personnel, or material; and (C) remain unexploded whether by malfunction, design, or any other cause. (10 U.S.C. 101 (e)(5)(A) through (C)).
<b>UXO-Qualified Personnel</b>	Personnel who have performed successfully in military explosive ordnance disposal (EOD) positions, or are qualified to perform in the following Department of Labor, Service Contract Act, Directory of Occupations, contractor positions: UXO Technician II, UXO Technician III, UXO Safety Officer, UXO Quality Control Specialist, or Senior UXO Supervisor.
<b>UXO Technicians</b>	Personnel who are qualified for and filling Department of Labor, Service Contract Act, Directory of Occupations, contractor positions of UXO Technician I, UXO Technician II, and UXO Technician III.
<b>Volatile Organic Compound (VOC)</b>	An organic (carbon-containing) compound that evaporates (volatilizes) readily at room temperature.