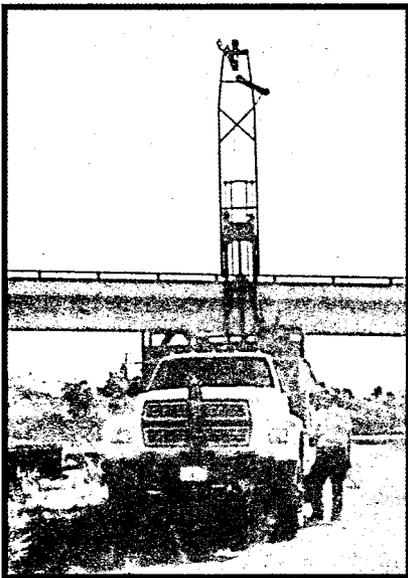


**HISTORICAL RECORDS REVIEW  
SURPRISE SPORTSMAN'S CLUB SHOOTING RANGE  
NEAR MCMICKEN DAM  
SURPRISE, ARIZONA  
CONTRACT FCD 2004C029  
WORK ASSIGNMENT NO. 3**

Property of  
Control District of MC Library  
Please Return to  
2801 W. Durango



**Geotechnical  
and  
Environmental  
Sciences  
Consultants**

***Ninyo & Moore***

**HISTORICAL RECORDS REVIEW  
SURPRISE SPORTSMAN'S CLUB SHOOTING RANGE  
NEAR MCMICKEN DAM  
SURPRISE, ARIZONA  
CONTRACT FCD 2004C029  
WORK ASSIGNMENT NO. 3**

Property of  
Flood Control District of MC Library  
Please Return to  
2801 W. Durango  
Phoenix, AZ 85009

**PREPARED FOR:**  
Flood Control District of Maricopa County  
2801 West Durango Street  
Phoenix, Arizona 85009

**PREPARED BY:**  
Ninyo & Moore  
Geotechnical & Environmental Sciences Consultants  
3001 South 35th Street, Suite 6  
Phoenix, Arizona 85034

January 30, 2006  
Project No. 600996003

January 30, 2006  
Project No. 600996003

Mr. Michael Greenslade, P.E.  
Flood Control District of Maricopa County  
2801 West Durango Street  
Phoenix, Arizona 85009

Subject: Historical Records Review  
Surprise Sportsman's Club Shooting Range  
Near McMicken Dam  
Contract FCD 2004C029  
Work Assignment No. 3

Dear Mr. Greenslade:

In accordance with your authorization, Ninyo & Moore is pleased to provide this historical records review regarding the Surprise Sportsman's Club Shooting Range located near the McMicken Dam in Surprise, Arizona. The activities were performed under Flood Control District of Maricopa County Contract No. 2004C029, Work Assignment No. 3 and in general accordance with Ninyo & Moore's revised proposal dated June 30, 2005.

Ninyo & Moore appreciates this opportunity to be of service to Flood Control District of Maricopa County. If you have any questions or comments regarding this report, please call the undersigned at your convenience.

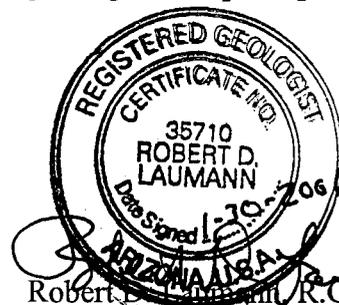
Respectfully submitted,  
**NINYO & MOORE**



Dwight H. Clark, C.H.M.M., C.E.T.  
Senior Environmental Engineer

DHC/HAL/RDL/hmm

Distribution: (1) Addressee



Robert D. Laumann, R.G.  
Principal Geologist/Division Manager

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**Figures**

Figure 1 – Site Location Map

Figure 2 – Site Layout Map

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**Appendix**

Appendix A – Copy of Surprise Sportsman’s Club, 20798 N. Cotton Lane, Surprise, Arizona  
85387, 5-Year Environmental Plan, dated August 24, 2005

## **EXECUTIVE SUMMARY**

Ninyo & Moore was retained by the Flood Control District of Maricopa County to perform a historical records review for the Surprise Sportsman's Club (formerly Peoria Rod and Gun Club) Shooting Range, located near McMicken Dam in Surprise, Arizona. The historical records review considered the past and present operations of the facilities. The historical records review presents a concise history of the site operations and provides a basis for future decision making for the facility.

The historical research identified that the flood control structures were developed between 1949 and 1956. The site has been used as a shooting range from approximately 1968 to present. Recently the site has been reviewed by the Maricopa County Risk Management Office as a part of an environmental audit of all County Owned and operated properties.

## 1. INTRODUCTION

Ninyo & Moore was retained by the Flood Control District of Maricopa County (FCDMC) to perform a historical records for the Surprise Sportsman's Club Shooting Range, located near McMicken Dam, Surprise, Arizona.

The shooting range occupies an approximately 21-acre triangle-shaped portion of the southwest quarter of Section 13 of Township 4 North, Range 2 West, Gila and Salt River Meridian and is identified as Maricopa County Assessor's Parcel Number 503-73-032. The range is situated just east of McMicken Dam, north of the Maricopa County Sheriff's Shooting Range and south of the emergency spillway (Figure 1). The current shooting range configuration consists one Trap Range, one Practical Range, a 25-yard Sighting Range, a combined 10- and 50-yard Pistol Range, and a Rifle Range with berms set at 50, 100, 200, and 300 yards. Located at the far eastern portion of the range is an Archery Range; however, no firearms are use at this range (Figure 2).

## 2. PURPOSE

The purpose of this Historical Records Review was to collect, evaluate, and summarize available information on the Surprise Sportsman's Club Shooting Range in support of future decisions and actions for that site. As applicable and available, operational records, personnel experience, aerial photographs, results of previous investigations, current site conditions, and other such information should be considered in assessing appropriate actions to be taken at the site. The Historical Records Review is intended to provide that information and/or list what information is available and what key information is missing.

A primary objective of the overall Surprise Sportsman's Club Shooting Range project is to reach a level of knowledge such that an assessment can be made as to whether or not constituents of concern (COCs) are present at the site in concentrations that would pose a threat to human health or the environment and to select appropriate remediation methods. It is anticipated that several locations in the shooting range will require differing remediation process parameters or technologies. The design of such remedial actions is a good example of how the Historical Records

Review will be used. In order for the remediation effort to be efficient and cost effective, its design should incorporate what is already known about the site. Therefore, it is important to know where operations having the potential to cause environmental impact were performed. Soil assessment and remediation will correspondingly be focused on areas with relatively higher potential for environmental impact.

### 3. SCOPE OF WORK

This Historical Records Review is limited to information on the Surprise Sportsman's Club Shooting Range. The key information sought for this effort includes the following:

- Reports from previous investigations of the site;
- Historical site use information including:
  - historical operational records,
  - personal knowledge obtained through interviews, and
  - aerial photographs; and
- Review of current site operations.

As described in the document, not all information sources sought were located.

The scope of this document includes the presentation of the information found and an evaluation of its content (i.e., what does it mean and the conclusions that can be reached) as well as the associated uncertainty.

### 4. PREVIOUS INVESTIGATIONS

Two previous investigations were reviewed by Ninyo & Moore. The investigations are noted with the following titles:

- *Final Phase I / II - Environmental Site Assessments of the Peoria Rod and Gun Club, Surprise Arizona, EEC Project No. 203169.01, dated June 29, 2004.*

- *Final Phase II Environmental Site Assessment Surprise Shooting Range Burn Units & Off-site Drainage Surprise Arizona, EEC Project No. 203169.02, dated January 31, 2005.*

The first document obtained and reviewed by Ninyo & Moore consisted of a document titled Final Phase I / II - Environmental Site Assessments of the Peoria Rod and Gun Club, Surprise Arizona, EEC Project No. 203169.01, dated June 29, 2004. This Environmental Site Assessment (ESA) documented the following conclusions:

- The Phase I ESA indicated metal and polynuclear aromatic hydrocarbons (PAHs) associated with small arms munitions used on the shooting ranges were present in soils at the site. The results of sampling discussed in the Phase II ESA indicated that lead, antimony, and the PAH benzo(a)pyrene were present in levels above the Arizona Soil Remediation Levels (SRLs).
- The Phase I ESA noted a water well on site. The well was identified in the Phase I ESA as meeting the requirements of a Transient Non-Community Water System (TNCWS). However, the well was not permitted, operated, or tested as required for a TNCWS.

The second document obtained and reviewed by Ninyo & Moore consisted of a document titled Final II Environmental Site Assessment Surprise Shooting Range Burn Units & Offsite Drainage Surprise Arizona, EEC Project No. 203169.02, dated January 31, 2005. This ESA documented the drainage pipes noted during previous studies at the Surprise Sportsman's Club Shooting Range were internal relief drains for the McMicken Dam structure and not off-site drainage paths.

## **5. HISTORICAL SITE USE**

The interview process and review of the Phase I ESA noted that the Surprise Sportsman's Club (formerly the Peoria Rod and Gun Club) has operated at the subject property since 1968 and prior to that, shooting was known to occur on the subject property since 1952. Based on interviews, the historical site operations differ little from the current operations.

The historical uses of the property by the property title indicated ranching and citrus farming in addition to flood control structures. The flood control structures were developed between 1949 and 1956.

### **5.1. Real Estate Ownership**

A title report for the subject property was obtained from All Lands of Goodyear, Arizona during the Phase I ESA. The report listed the FCDMC as the current owner of the site. Previous owners of the site included Maricopa County, ranching and farming concerns, private individuals and the Maricopa County Drainage District #1.

According to the title report, no leases, VEMURs or DEURs, environmental liens, or activity and use limitations were found currently recorded against the subject property at the county recorders office.

Interviews with Mr. Michael Greenslade of the FCDMC indicated that the lease records were available at the FCDMC offices for the subject property.

### **5.2. Firing Records**

During the interview process the Surprise Sportsman's Club officers reported that they do not keep detailed records of the firing. The Phase I ESA (EEC, 2004) documented that the club has operated on the subject property since 1968 and has approximately 800 to 1,600 registered members. An estimated 50 to 60 people use the range daily. The club has developed a Master Plan for Lead Management and has recovered almost 40 tons of lead shot from the trap shooting range in March 2004.

Data Gap: Firing records, which could be used to assess relative levels of lead deposition, were not available.

### **5.3. Summary of Interviews**

On August 30, 2005, Ninyo & Moore interviewed Ms. Rita Neill of the Maricopa County Risk Management Department. Ms. Neill indicated that the Surprise Sportsman's Club Shooting Range was assessed as part of an environmental audit of all County owned and operated properties. Ms. Neil also stated that she was not aware of any environmental documentation for the site other than the Phase I / II ESA.

Ninyo & Moore interviewed Surprise Sportsman's Club Officers James Greaves, Charles Painter, and Larry Timmerman on August 26, 2005. Mr. Greaves, Mr. Painter, and Mr. Timmerman have been involved with the range 7, 10, and 3 years, respectively. They stated that the range has been in use since the early 1950s and that shooting in the area likely occurred prior to that time also. Surprise Sportsman's Club has leased the land since 1953 and changed its name from the Peoria Rod and Gun Club in 2005. According to the club's officers, the trap range users primarily fire 12-gauge shot guns; however, some members will occasionally use 20-gauge. No skeet shooting is conducted on range. The remaining ranges are used by members primarily firing .45, .38, .41, and .22 caliber pistols and rifles. No automatic weapons are allowed on range. The historical firing pattern has not changed other than the addition of new ranges. All firing is from east to west, except for on the trap range in which shooters fire toward the north-northwest. A copy of the current range configuration is provided in Figure 2. The club officers also stated the berms have been moved over time and rebuilt to the configuration now in existence. The range is open 365 days a year, except approximately one day a month when they close for range maintenance or when closed by the FCDMC. The club officers also informed us that lead reclamation was performed in March, 2004 for the trap range. A total of almost 40 tons of lead shot was recovered during the reclamation. No reclamation has been performed for any of the other ranges in the complex. The club officers also provided Ninyo & Moore with a copy of the document titled *5-Year Environmental Plan, Surprise Sportsman's Club, August 24, 2005*. This plan was created to address known and possible future environmental issues regarding the shooting range. A copy of the plan is included as Appendix A to this report.

Data Gaps: Ninyo & Moore was unable to locate any of the original club officers for an interview.

#### **5.4. Aerial Photo Interpretation and Map Analysis**

The records search effort included reviewing historical photographs of the Surprise Sportsman's Club Shooting Range that might give an indication on the nature and timing of the activities that occurred there. The search involved the review of aerial photographs from

Rupp Aerial Photography from 1940 to 2004. Although according to the Phase I ESA the flood control structures were in place by 1956, the Surprise Sportsman's Club did not official operate a shooting range until 1968. Shooting in the area; however, occurred as early as 1952. Therefore, the historical aerial photography review was conducted using aerial photographs dated from 1940 to present. A brief discussion of the historical photographs used for the evaluation is presented below and summarized in Figure 3. The aerial photographs reviewed were at a scale of 1:25,200 (1 inch = 2,100 feet) and evaluations were conducted with the naked eye and a handheld magnifying glass.

*1940* – The shooting range does not exist at this time. There are no surface disturbances noted in the area.

*1958* – Although unofficially shooting was reportedly occurring on the site by this time, no range structures are visible.

*1964* – Berms are noted in the southern portion of the site on the rifle range. The 50-, 100-, 200-, and 300-yard berms for the rifle range are visible at this time.

*1977* – The 50-yard Pistol Range berms, adjacent to the north of the rifle range, are in place as well as the Trap Range in the northern portion of the site. Discoloration from clay pigeons was noted in the Trap Range area.

*1995 Second Quarter* – The 25-yard Pistol Range is added between the 50-yard Pistol Range to the south and the Trap Range to the north.

*1996 First Quarter* – The angled berm between the rifle range to the south and the support buildings to the north now exists.

*1999 First Quarter* – The auxiliary berm to the angled berm between the rifle range and the other ranges and support buildings to the north now exists.

## 6. CURRENT SITE USE SUMMARY

The site contains several features of concern as noted in the site reconnaissance, the Phase I ESA, and during the interviews. The current shooting range configuration consists of 5 ranges: a trap range, a practical range, a 25-yard sighting range, a 10- and 50-yard pistol range, and a rifle range with berms set at 50, 100, 200, and 300 yards. The layout of the areas of concern is pre-

sented in Figure 2. The detailed review of the use for each particular area of concern is included below.

### **6.1. Trap Range**

The trap range is a roughly triangular-shaped range located in the northern-most portion of the shooting range. Fire positions are centrally located and the shooters fire toward the far northwest corner of the range. The target area is the northwest corner of the range. An abandoned rifle berm is located along the western portion of the range; however, no other berm structures developed by the Surprise Sportsman's Club surround this range. The firing positions are set up in two main locations with approximately five variations in each main location.

### **6.2. Practical Range**

The practical range is used as a handgun range. It is located to the west of the 25-yard sighting range. This range has one berm located along the western edge of the shooting range. Shooters fire at targets from various shooting positions located behind drums, doorways, and other structure toward the west. This range is for close-quarters firing (less than 25 yards), simulating an urban environment.

### **6.3. 25-Yard Sighting Range**

The 25-yard sighting range is located north of the pistol range and south of the trap range. Shooters fire westward at targets with berms located on three sides of the range. A berm on the north side separates the range from the trap range, a berm on the south side separates the range from the 10 and 50-yard pistol range, and a berm on the west side (the direction of fire) separates the range from the practical range. The firing positions are in a fixed location under a shade structure.

#### **6.4. 10- and 50-Yard Pistol Range**

The 10- and 50-yard pistol range is centrally located and shares its north-side berm with the sighting range and its south-side berm with the rifle range. Shooters fire from fixed firing positions under a shade structure toward either the 10- or 50-yard targets. The 10-yard berm is at the northern portion of the range, while the 50-yard berm is at the southern portion of the range. This range is used for handgun firing and is surrounding on three sides by berms.

#### **6.5. Rifle Range**

The rifle range is located along the southern side of the range complex. Shooters fire westward from fixed firing positions under a shade structure at their choice of four distances. There are berms located at 50, 100, 200, and 300 yards. Based on site reconnaissance, the 50- and 100-yard berms are more frequently used than the others. A long berm runs along the south side of the rifle range marking the southern boundary of the range complex. The southern portion of the 300-yard berm was once used by the Sheriff's posse; however, is currently not used. A long berm on the north side of the rifle range separates it from the other ranges and building structures on the north side of the range complex.

## 7. REFERENCES

EEC, Final Phase I / II - Environmental Site Assessments of Peoria Rod & Gun Club, Surprise Arizona, EEC Project No. 203169.01, dated June 29, 2004.

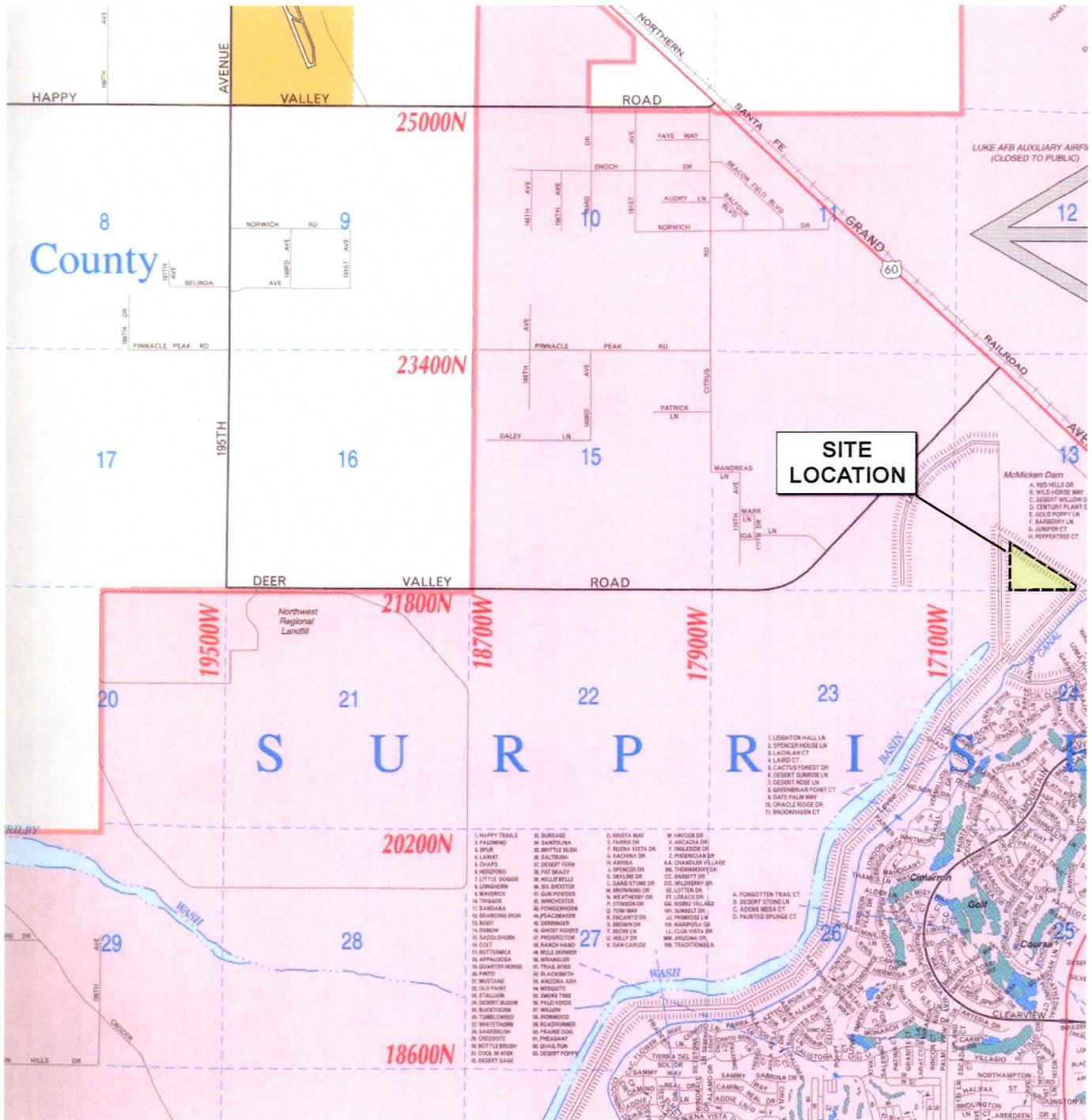
Rupp Aerial Photography, 2005, Aerial Photo Review.

Surprise Sportsman's Club, Surprise Sportsman's Club, 20798 N. Cotton Lane, Surprise, Arizona 85387, 5-Year Environmental Plan: dated August 24, 2005.

United States Department of Agriculture, Soil Survey of Maricopa County, Arizona, Central Part: dated 1977.

United States Geological Survey (USGS), 7.5-Minute Topographic Quadrangle Map Series, McMicken Dam AZ, 1957, photorevised 1981 Scale 1:24,000.

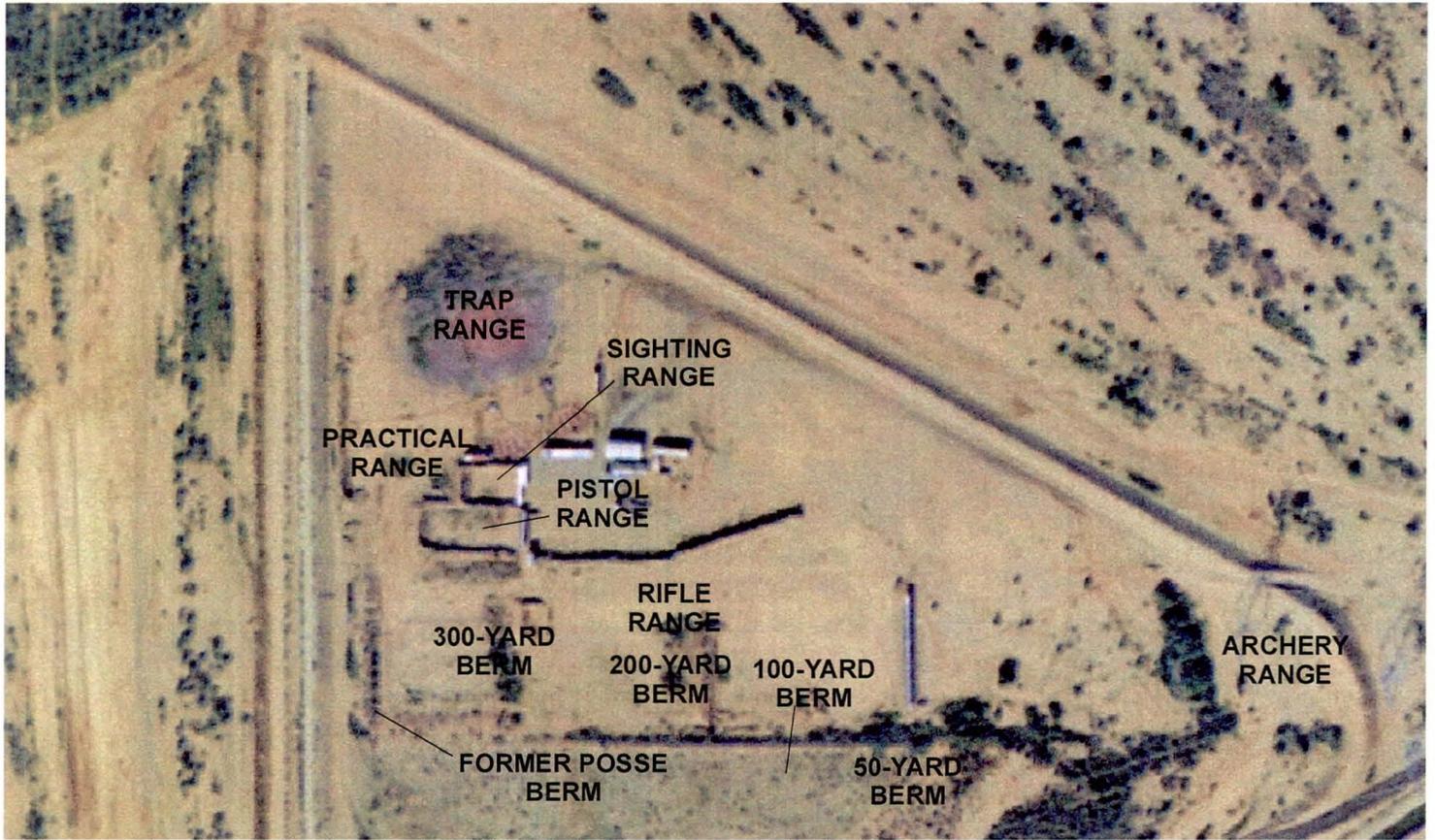
**FIGURES**



0 3300  
 Approximate Scale:  
 1 inch = 3300 feet

Source: Phoenix Mapping Service, Phoenix Metro 2005

<b>Ninyo &amp; Moore</b>		SITE LOCATION MAP	
SURPRISE SPORTSMAN'S CLUB SHOOTING RANGE HISTORICAL RECORDS REVIEW			FIGURE <b>1</b>
PROJECT No: 600996003	FILE No: 0996slm1105	DATE: 01/06	



0 150 300  
Approximate Scale:  
1 inch = 300 feet

Source: Maricopa County Assessor's GIS Dept, 2005,  
Boundaries and Locations are Approximate

**Ninyo & Moore**

SITE LAYOUT MAP

SURPRISE SPORTSMAN'S CLUB SHOOTING RANGE  
HISTORICAL RECORDS REVIEW

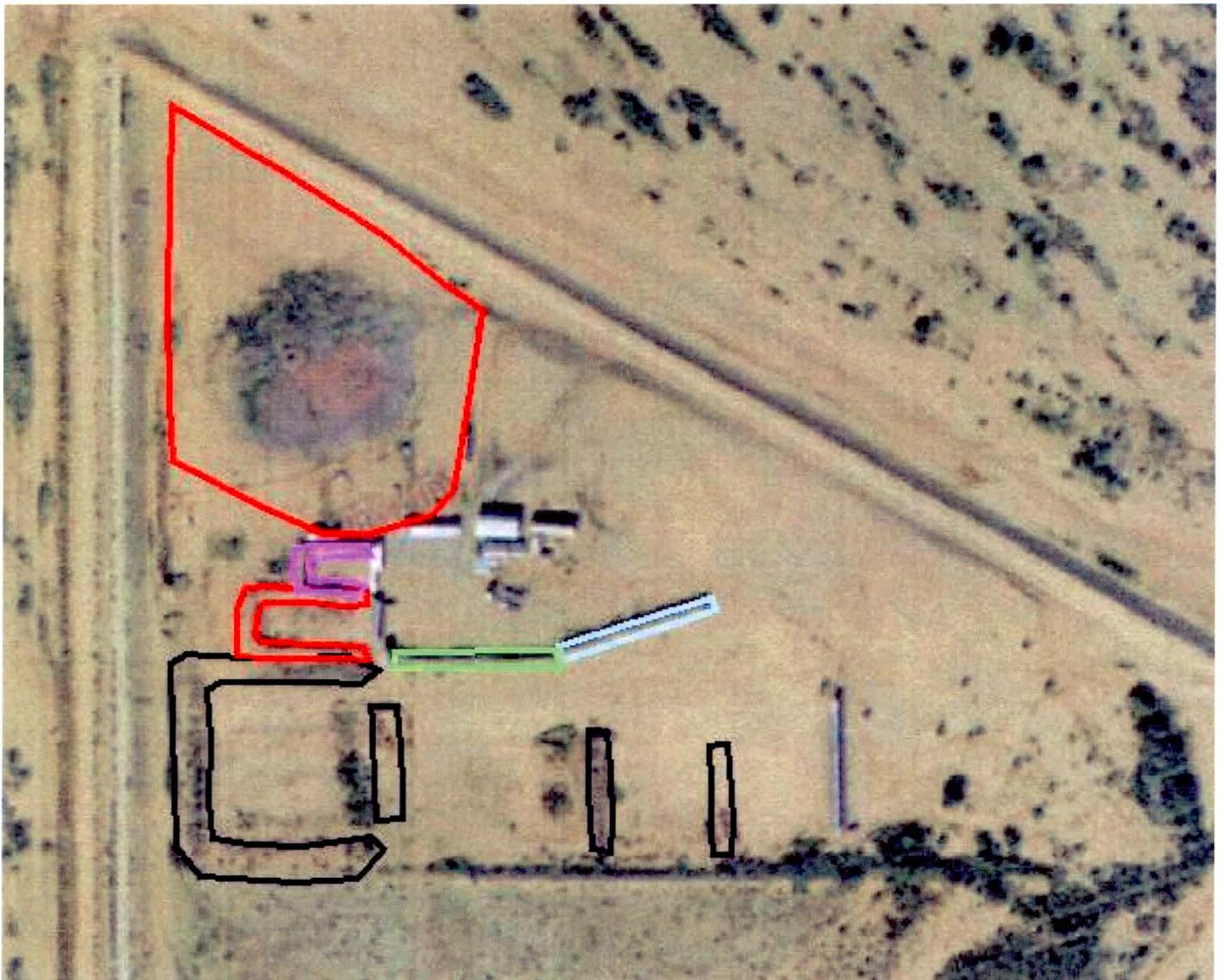
FIGURE

PROJECT No:  
600996003

FILE No:  
0996layout1105

DATE:  
01/06

2



**LEGEND**

-  1964
-  1977
-  1995
-  1996
-  1999

0 100 200  
Approximate Scale:  
1 inch = 200 feet

Source: Maricopa County Assessor's GIS Dept, 2005,  
Boundaries and Locations are Approximate

***Ninyo & Moore***

SITE PLAN AND  
VICINITY MAP

SURPRISE SPORTSMAN'S CLUB SHOOTING RANGE  
HISTORICAL RECORDS REVIEW

FIGURE

PROJECT No:  
600996003

FILE No:  
0996spl1105

DATE:  
01/06

3

**APPENDIX A**

**COPY OF SURPRISE SPORTSMAN'S CLUB, 20798 N. COTTON LANE, SURPRISE,  
ARIZONA 85387, 5-YEAR ENVIRONMENTAL PLAN, DATED AUGUST 24, 2005**

Environmental Five (5) Year Plan  
Surprise Sportsman's Club

**Surprise Sportsman's Club  
20798 N. Cotton Lane  
Surprise, Arizona 85387**

**Five (5) Year  
Environmental Plan**

## **5 Year Environmental Plan Contains 3 Parts**

1. **Narrative** Describing the Club and Purpose of the Plan
2. **Action Items Charts** with “to be Completed” Dates
3. **Appendices** Containing Results of Action Items and Backup Documents

## TABLE OF CONTENTS

### 1.0 Introduction

#### 1.1 Organization

#### 1.2 Mission Statement

#### 1.3 Purpose

#### 1.4 Goals

### 2.0 Descriptions of Ranges and Support Facilities

#### 2.1 Existing Environmental Conditions

##### 2.1.1 Traps Ranges

##### 2.1.2 Pistol Ranges

##### 2.1.3 Rifle Ranges

##### 2.1.4 Tactical Pistol Range

##### 2.1.5 Archery Range

### 3.0 Measuring/Statistics/Monitoring/Dimensions

#### 3.1 Lead

#### 3.2 PH

#### 3.3 Grounds

#### 3.4 See Attachment for Dimensions

### 4.0 Maricopa County Environmental Site Assessment Regulations

### 5.0 Environmental Action Plans

#### 5.1 See 5 Year Action/Date Chart Plan Attachment

### 6.0 Appendices (See Action Plan Chart – Appendix A 1.1.1) Action results are contained in the Appendices)

## 1.0 Introduction

### 1.1 Club Location

1.1.1 The Peoria Rod & Gun Club 20798 N. Cotton Lane  
Surprise, AZ 85374

### 1.2 Mission Statement

1.2.1 The Peoria Rod & gun Club is a private club established to provide its members with pistol, rifle, archery and shotgun trap facilities. The Club is dedicated to observing and following all environmental rules and regulations established by Maricopa County, Arizona State and local authorities.

### 1.3 Purpose Of Plan

1.3.1 The major causes or issues for gun club closures include Safety (rounds leaving the range & range safety practices) and the Environmental risk (Lead Migration/Mobility & Sound). These are the major issues that this Plan is addressing.

1.3.2 Review of the County's environmental inspection document.

1.3.3 Establish a 5 year implementation schedule to address all known and possible future environmental issues. The County actions as listed in the Environmental Report dated 6/29/2004 are to receive the highest priority.

1.3.4 Lead removal is to receive special attention. Reference Appendix B article "What you need to know about lead & the environment by Richard Peddicord, Ph. D.

1.3.5 Regularly monitor the Plan progress.

1.3.6 Regularly evaluate and monitor the financial impact of Plan implementation. Financial planning is very important due to our limited resources.

Environmental Five (5) Year Plan  
Surprise Sportsman's Club

1.4 Goals

- 1.4.1 Conduct lead recovery in a timely and financially prudent manner
- 1.4.2 Dispose of all above and under ground trash
- 1.4.3 Maintain soil PH between 6.5-8.5 in shotfall zone and other range fields
- 1.4.4 Improve range maintenance
- 1.4.5 Correct well water problem as defined by Maricopa County
- 1.4.6 Evaluate water run-off situation if any
- 1.4.7 Ensure adherence to "Sound" standards & regulations
- 1.4.8 Satisfy all Maricopa County actions with priority

**2.0 Description of Club Ranges and Support Facilities**

- 2.1 The Peoria Rod & Gun Club is comprised of 22 acres located on property owned by Maricopa County. It is fenced with a locked gate and is surrounded by a 15-foot Maricopa County berm. See attachment for statistics.
- 2.2 The Club has the following ranges.
  - 2.2.1 3 Shotgun Trap ranges
  - 2.2.2 1 Tactical pistol range
  - 2.2.3 1 Black powder range
  - 2.2.4 1 10 yard pistol range
  - 2.2.5 1 25 yard pistol range
  - 2.2.6 1 25 yard plinking range
  - 2.2.7 1 50 yard rifle range
  - 2.2.8 1 100 yard rifle range
  - 2.2.9 1 200 yard rifle range
  - 2.2.10 1 300 yard rifle range
  - 2.2.11 1 Archery range
- 2.3 Other facilities include:
  - 2.3.1 Clubhouse (24' x 64')
  - 2.3.2 2 Toilet facilities (1 Men/1 Women)

Environmental Five (5) Year Plan  
Surprise Sportsman's Club

2.3.3 2 Warehouses

2.3.4 1 Workshop

2.3.5 2 Trailer storage sheds

2.3.6 1 Trap house building

2.4 Existing Environmental Conditions

2.4.1 Lead has been removed from trap range

2.4.2 Pistol, Rifle ranges require lead removal

2.4.3 Well water control

2.4.4 Sound adherence standards

2.4.5 Water runoff/Drain Pipes

2.5 Maricopa County Environmental Action Report

2.5.1 Following are specific actions in the County report

2.5.1.1 Well water (drinking water) problem with no date specified

2.5.1.2 Lead removal plan with no dates specified.

2.5.1.3 Well Water problem

2.5.1.4 Investigate Drain Pipes & Potential Water Runoff

**3.0 Measuring/Statistics/Monitoring/Dimensions**

3.1 Removal of lead. Reference Appendix H & K.

3.2 Measure PH. Reference Appendix G.

3.3 Measure all Berms

3.4 Adherence to Sound Regulations. Reference Appendix I

**4.0 County Environmental Site Assessment Regulations & Conclusions**

(See Appendix N)

**5.0 Environmental Action Plan**

5.1 Reference Appendix A – 5 Year Action/Date Chart Plan.

**6.0 Appendices**

See Appendix A 1.1.1 For list of Appendices

# 5 Year Environmental Plan

Surprise Sportsman's Club 20798 N. Cotton Lane Surprise, Arizona 85387

ACTIONS	2004				2005				2006				2007				2008					
	QUARTER	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4													
<b>1.0 Creation &amp; Management of Plan</b>																						
1.1 Develop 5 Yr. Environmental Plan																						
1.1.1 Attachments/Charts/Pictures																						
A. 5Yr. Plan by Date																						
B. Lead and the Environment Article																						
C. Club Aerial Photo																						
D. Club Site Layout																						
E. Lead Test Results by County (E1-E4)																						
F All Berm Dimensions																						
G. PH Measurements																						
H. Lead Removal from Trap Range Field																						
I. Adherence to Sound Standards																						
J. Drain Pipe Inspection																						
K. Lead Removal from Rifle & Pistol Berms (See Action Item 5.0 for schedule)																						
L. Well Water Testing																						
M. County Regulations & Conclusions																						

# 5 Year Environmental Plan

*Surprise Sportsman's Club 20798 N. Cotton Lane Surprise, Arizona 85387*

<b>ACTIONS</b>	<b>QUARTER</b>	<b>2004</b>				<b>2005</b>				<b>2006</b>				<b>2007</b>				<b>2008</b>			
		Q1	Q2	Q3	Q4																
1.2 Plan Approval by Board																					
1.3 Review of Maricopa County Environ. Report																					
1.4 Periodic Progress & Adherence to Plan																					
1.5 Determine Financial Impact of Each Action																					
<b>2.0 Maricopa County Environ Doc.</b>																					
2.1 Phase I County Survey																					
2.2 Phase II County Survey																					
2.3 County Letter Regarding Well Water																					
2.4 Sound Survey Results																					
2.5 Original Letter Regarding Environ. Survey																					
2.6 HAZ/MAT Spills Report from Fire Dept.																					
2.7 Survey Form that Club Sent to County																					

# 5 Year Environmental Plan

*Surprise Sportsman's Club 20798 N. Cotton Lane Surprise, Arizona 85387*

<b>ACTIONS</b>	<b>2004</b>				<b>2005</b>				<b>2006</b>				<b>2007</b>				<b>2008</b>					
	<i>QUARTER</i>	<i>Q1</i>	<i>Q2</i>	<i>Q3</i>	<i>Q4</i>	<i>Q1</i>	<i>Q2</i>	<i>Q3</i>	<i>Q4</i>													
<b>3.0 Well (fresh) Water</b>																						
3.1 Test Water																						
3.2 Post Non-Potable Signs																						
3.3 Remove or repair Water Fountain																						
3.4 Bottled Water in Vending Machine/ Refrig.																						
3.5 Move Vending Machine to Patio																						
<b>4.0 Club Site Trash/Pollution – Ext. &amp; Int.</b>																						
4.1 Remove old Trailer																						
4.2 Remove Visible Trash Dumps																						
4.3 Remove Shotgun Pattern Board/ Polluted Soil																						
4.4 Research existence of Pits/Surface Stains/Sumps/Dry Wells/Catch Basins/Storage Tanks/Surface Stains etc.																						
4.5 Building Exteriors & Interiors																						

## Well Water Testing

The City of Surprise will not test our water. They hire Aerotech to do their testing.

The following laboratory will test water, however they recommend hiring the consultant listed below.

Aerotech Laboratories  
4645 East Cotton Center Boulevard  
Building #3, Suite 189  
Phoenix, AZ 85040  
602-437-3340  
866-772-5227  
Fax: 623-445-6192  
Web: [www.aerotechlabs.com](http://www.aerotechlabs.com)  
Email: [aelinfo@aerotechlabs.com](mailto:aelinfo@aerotechlabs.com)  
(Certified Environmental, food. water, air, soil)

### **Aerotech Labs recommended:**

Water Consultant  
Jack Morris  
Cell: 602-680-3041  
Office 602-942-7376  
Located in Metrocenter?

### **Approx. Costs for Morris**

Knows the Maricopa County laws	
Works for \$45 per hr.	Approx 150
Test for Bacteria	Approx. \$ 30
Test for Arsenic, Fluorides, and other chemicals	Approx. \$ 165
Test for Lead, Copper	<u>Approx. \$ 50</u>
<b>TOTAL</b>	<b>Approx. \$400- 500</b>

# 5 Year Environmental Plan

Surprise Sportsman's Club 20798 N. Cotton Lane Surprise, Arizona 85387

ACTIONS	2004				2005				2006				2007				2008					
	QUARTER	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4													
<b>5.0 Lead removal</b>																						
5.1 Trap Range Field (Appendix H)																						
5.2 Practical Range Berm (Appendix K)																						
5.3 Plinking Range Berm "																						
5.4 10 Yard Pistol Range Berm "																						
5.5 25 Yard Pistol Range Berm "																						
5.6 50 Yard Rifle Range Berm																						
5.7 100 Yard Rifle Range Berm																						
5.8 200 Yard Rifle Range Berm																						
5.9 300 Yard Rifle Range Berm																						
5.10 Old Posse Berm																						
5.11 Old Rifle Range Berm																						
5.12 Pigeon (Bird) Piles																						
5.13 Archery Range																						
5.14 Fragmentation on all Range Flats																						
5.15 Solicit Lead Removal Bids																						
5.16 Black Powder Range																						

## 5 Year Environmental Plan

*Surprise Sportsman's Club 20798 N. Cotton Lane Surprise, Arizona 85387*

<b>ACTIONS</b>	<b>2004</b>				<b>2005</b>				<b>2006</b>				<b>2007</b>				<b>2008</b>					
	<small>QUARTER</small>	<small>Q1</small>	<small>Q2</small>	<small>Q3</small>	<small>Q4</small>																	
<b>6.0 PH Levels (Acceptable = 6.5-8.5)</b>																						
6.1 Conduct PH Tests																						
6.2 Correct PH Levels if Necessary																						
<b>7.0 Range Statistics Paper Work (App. F)</b>																						
7.1 Berm Dimensions																						
7.2 Range Flats Dimensions																						
7.3 Approximate Lead Density in Berms																						
<b>8.0 Ground Water</b>																						
8.1 Trilby Wash																						
8.2 Flood Plane Consideration																						
8.3 Drainage Pipes Investigation (Append. J)																						

## PH Test Results

1. Triangle corner beyond Trap range-----	6.5, 6.5, 6.5	
2. Deep Birds Areas-- Both Traps-----	6.1, 7.1, 7.1	
3. County Berm outside the fence----- (50 yards to the right of triangle point)	7.0	
4. County Berm outside the barbed wire fence----- County Flats outside the barbed wire fence----- (To the left of triangle point $\frac{3}{4}$ distance to Practical Range)	6.0, 7.0, 6.1, 7.0, 6.9 6.9, 7.0, 7.1	
5. Old Rifle Berm (Near Practical Pistol Range)-----	6.0	
6. Practical Pistol Range Berm-----	5.5	**
7. 50 yd. Rifle Range Flats-----	7.1	
50 yd. Rifle Berm-----	5.5, 6.0, 6.0	**
8. 100 yd. Rifle Range Flats-----	6.5	
100 yd. Rifle Range Berm-----	5.1	**
9. 200 yd. Rifle Berm-----	6.5	
10. 300 yd. Rifle Berm-----	7.0	
11. Plinking Range Flat-----	5.5	***
12. Plinking Range Berm-----	4.0 to 6.0	***
13. Pistol 10 yd. Range Berm-----	5.5	***
14. Pistol 25 yd. Range Flats-----	5.5	***
15. Pistol 25 yd. Range Berm-----	5.8	***

### PH Scale

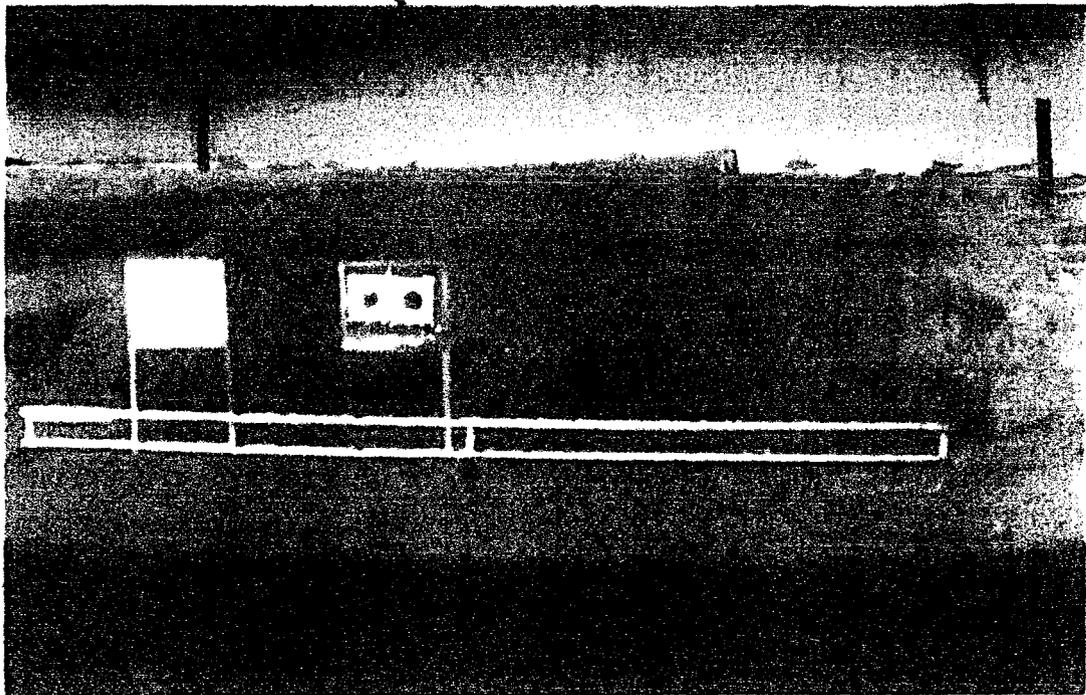
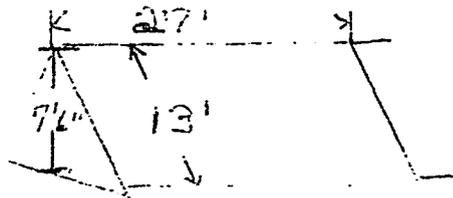
Approx. PH 7.2-8.0	Soil is Alkaline
Approx. PH 6.5-7.2	Soil is Neutral
Approx. PH 4.0-6.5	Soil is Acid

Marginally acid                      \*\*                      Acid                      \*\*\*                      Very Acid

②

PEORIA ROD & GUN CLUB  
P.O. BOX 11  
PEORIA, AZ 85380

10 YARD SELF DEFENSE RANGE BERM STRUCTURE  
351 SQUARE FT.



Attachment J

## Drainpipe Inspection

On November 16, 2004 – Kirk Creswick, R.G. (see card below) of Maricopa County EEC inspected the drainpipes contained in the County berm at the far end of our Trap Range. The drainpipe openings are facing our club but are not on Club property. His inspection was done in the company of Charlie Painter and Jim Greaves.

The purpose of the inspection was to satisfy the query as to the purpose of the drains as questioned in the Environment Report of June 29, 2004. Mr. Creswick was satisfied that the drains' purpose was to allow water to escape from the berm. To our knowledge, water flow never has happened.

Mr. Creswick indicated that he was satisfied and required no action on our part.

*Kirk F. Creswick, R.G.  
Project Manager/Hydrogeologist*



*Engineering and Environmental  
Consultants, Inc.*

*3003 N. Central Avenue, Suite 600  
Phoenix, Arizona 85012-2905  
tel: 602-248-7702 ext. 317  
fax: 602-248-7851  
kreswick@eecphx.com*

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## 5 Year Environmental Plan

*Surprise Sportsman's Club 20798 N. Cotton Lane Surprise, Arizona 85387*

<b>ACTIONS</b>	<b>2004</b>				<b>2005</b>				<b>2006</b>				<b>2007</b>				<b>2008</b>					
	<b>QUARTER</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>													
<b>9. Sound Testing (Appendix I)</b>																						
9.1 Measurement/Specs																						
9.2 Adherence to Sound Standards																						

# APPENDIX I

## 5.0 Noise Measurement Results

The measured noise level for the noisiest hour was 58 dBA (LAeq1h) at Receiver 1. However the noise level contributed by the Peoria Rod & Gun Club is estimated at less than 45 decibels (LAeq1h), since the shooting range noise was only audible when traffic noise levels dropped below 45 decibels. Traffic and aircraft noise levels at this receiver masks nearly all noise from the shooting range.

The measured ambient noise level at Receiver 2 was 56 decibels (LAeq1h). The estimated noise level contribution to the ambient from the Peoria Rod & Gun Club is 49 decibels (LAeq1h). During the noise measurement period at this Receiver noise levels stabilized at 49 dBA when other noise sources, such as airplanes and construction equipment, were absent from the area.

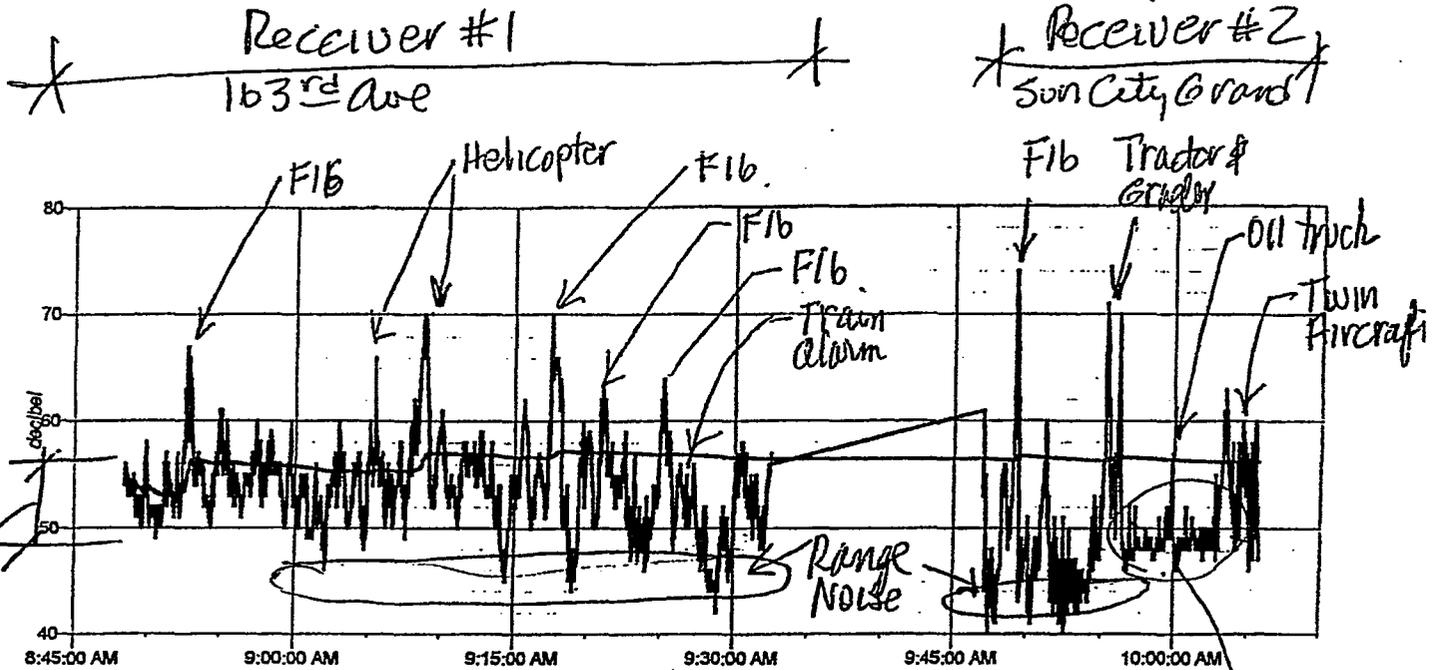
## 6.0 Conclusions and Recommendations

The noise emitted from the Peoria Rod & Gun Club does not exceed the maximum noise level defined by ARS 17-601, subsection D, of 64 dBA (LAeq1h). As such, the facility has complied with the statute and is afforded the affirmative defense provisions and other protections.

# Peoria Rod & Gun Club

## Noise Monitoring

February 18, 2003



Overall Leq: 56.2

Overall Max: 76.0

Overall Min: 38.5