



March 23, 2009

Mr. Richard Byrd  
City of Tucson, Environmental Services  
100 North Stone Ave. 2<sup>nd</sup> Floor  
Tucson, Arizona 85701

**Re: Summary of Near Surface Survey for Unexploded and Exploded Ordinance near Houghton and Irvington Roads in Tucson, AZ**

Dear Mr. Byrd:

Engineering and Environmental Consultants, Inc. (EEC) is pleased to submit this summary of work performed to complete a near surface survey for unexploded and exploded military ordinance (UXO) near the intersection of Houghton and Irvington Roads in Tucson, Arizona.

**Scope of Work**

EEC, working in conjunction with New World Technologies, Inc., a licensed UXO clearance firm, performed the survey from February 16 through 20, 2009. The parcel surveyed is approximately 200' wide by 3600' long. Appendix 1 is an aerial photograph showing the boundaries with latitude and longitude coordinates of the survey area.

The work was performed under the direction of a certified UXO specialist (Appendix 2). Hand held metal detection equipment was used to sweep the parcel. The parcel was systematically divided into sections and gridded into lanes using survey ribbon. Each lane was then swept with the detection devices. Metallic objects within 1-foot of the land surface were exposed and identified.

No military ordinance, debris, shrapnel, etc. was discovered during the survey. Civilian shell casings were noted in several areas of the parcel. Some of these areas appeared to be locations used for target practice by civilians. One area in the south central portion of the property appeared to be the site of fairly extensive dumping and shooting (noted as the "trash area" in Appendix 1). In this area, shell casings, clay pigeon debris, and other makeshift targets were common.

In addition to the target and shell casing debris, other items located and identified within the survey area included survey pins marking the old power line road, barbed wire, rebar, cans, metal pipe, small automotive parts, and a variety of miscellaneous metallic trash. Representative photographs of the property and metallic debris encountered are in Appendix 3.

### **Conclusions and Recommendations**

The entire survey area was swept for metallic objects to a depth of 1-foot below the land surface. No military ordinance or debris was discovered in the survey area. Based on the results of the survey, it appears that materials from the former military firing range located west of the property have not impacted the survey area. EEC believes no additional investigation of possible military ordinance on the property is warranted.

EEC appreciates the opportunity to assist COT-ES with this project. Should you have any questions or require additional information, please contact me at 321-4625 (office) or 488-926 (cell).

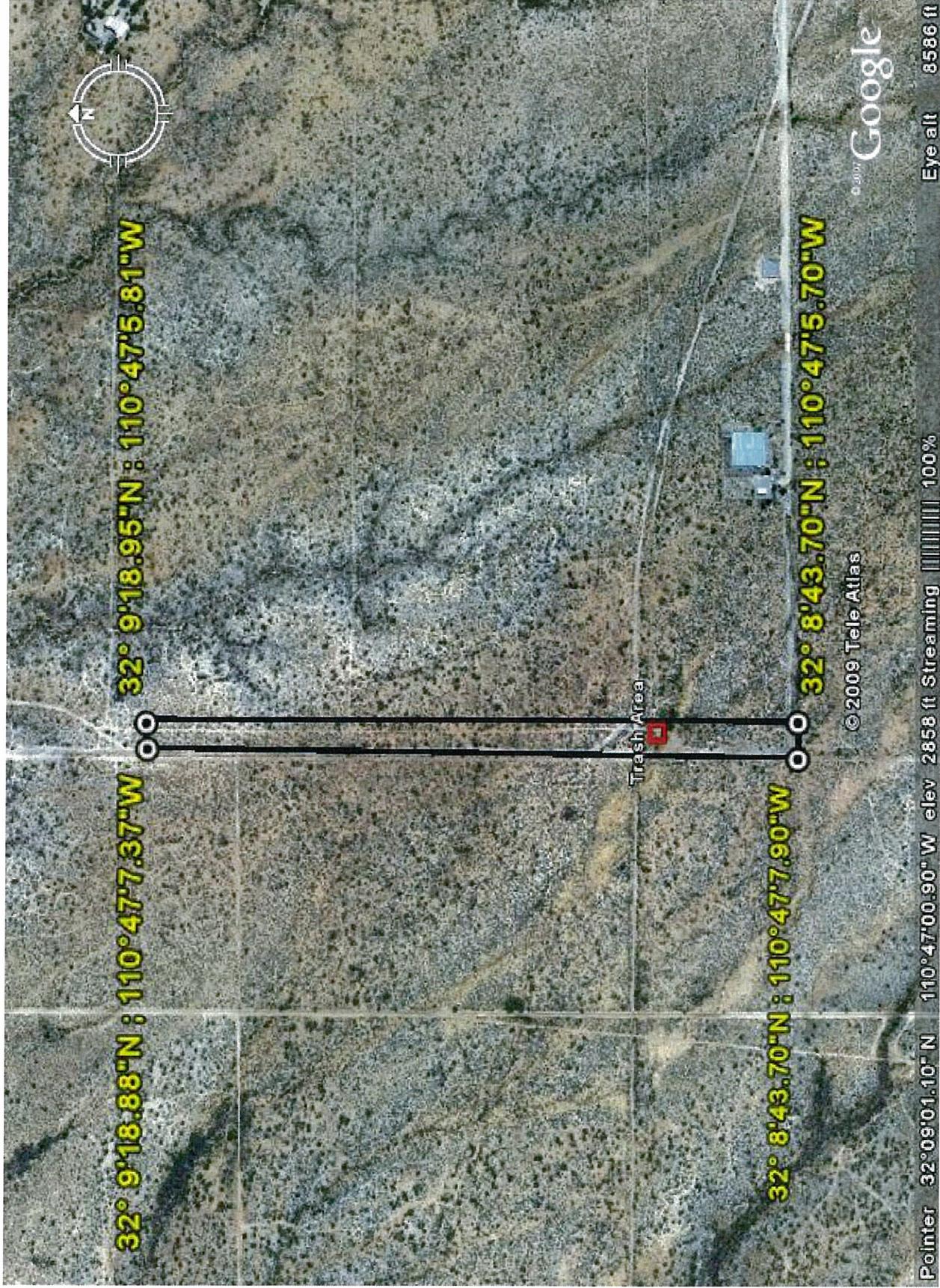
Respectfully submitted,  
ENGINEERING AND ENVIRONMENTAL CONSULTANTS, INC.



Kevin A. Pierce  
Project Manager, Geohydrologist

**APPENDIX 1**

**AERIAL PHOTOGRAPH**



# UXO SURVEY AREA



**APPENDIX 2**

**UXO TECHNICIAN CERTIFICATION**

# Naval School Explosive Ordnance Disposal



This certifies that

Sergeant  
David O. Williams, USMC

having successfully completed  
the prescribed course of study for

BASIC EXPLOSIVE ORDNANCE DISPOSAL

is awarded this

Certificate

this 10th day of January 1985

J. Sedlar, Sr., CDR, USN  
COMMANDING OFFICER

United States Marine Corps



This is to certify that

Capt Williams, D O

261 51 4851

successfully completed a 40 hour course of  
instruction in Hazardous Waste  
Management as Prescribed by Articles 29 and  
40 of the Code of Federal Regulations.

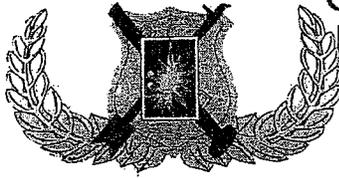
Given this 11th Day of December, 1998



*F. E. Daniel Jr.*

F. E. Daniel Jr., CET

Certificate of Completion



*Rapid Entry Systems Technology Corp.*

P. O. BOX 7093  
YUMA, ARIZONA 85366  
(928) 329-7555  
www.breacher.com

## ***CERTIFICATE OF COMPLETION***

This is to certify that;

***Dave Williams***

has successfully completed the eight hour Refresher  
Training Course in Hazardous Materials/Waste Site  
Operations and UXO Recognition, in accordance with  
29 CFR 1910.120 on this 15th day of October, 2008.

G. L. (Rus) Hart  
Instructor of Record



**APPENDIX 3**  
**SITE PHOTOGRAPHS**



**Typical Property Terrain – West Property Boundary**



**Typical Property Terrain – Central Area**



**Typical Small Miscellaneous Debris**



**Survey Pin for Power Line Road**



**“Trash Area”**



**Spent Shotgun Shells**