



July 20, 2005

4400-04-1025

Mr. Scott Smale  
Brownfields/State Response  
Bureau of Corrective Actions  
Nevada Division of Environmental Protection  
333 W. Nye Lane, Room 138  
Carson City, Nevada 89706



**Remediation and Additional Characterization  
Former Police Department Firing Range  
City of Henderson  
Brownfields Project  
390 Athens Avenue  
Henderson, Nevada**

Dear Mr. Smale:

This report presents the results of firing range berm remediation and range floor characterization activities completed by MACTEC Engineering and Consulting (MACTEC) at the former City of Henderson Police Department firing range, Henderson, Nevada. The work described herein was performed under the Nevada Division of Environmental Protection (NDEP) Brownfields Nevada's Land Recycling Program.

## **1.0 INTRODUCTION**

The Subject Site is located at 390 Athens Avenue, Henderson, Nevada. It is approximately a 3.2-acre parcel of land located within a 99.5 acre parcel owned by the City of Henderson. The site is located in South one-half (S 1/2) of the Southwest Quarter (SW 1/4) of Section 36, Township 21 South, Range 62 East at Latitude 36°00'27"N, Longitude 114°57'56"W. The Clark County Assessor's Parcel Number (APN) is 161-36-801-001. The site is shown on Plate 1.

Characterization of the nature and extent of lead contamination within the backstop (northern) berm and lateral (eastern and western) berms at the site was performed previously by MACTEC and is summarized in a report to the NDEP dated February 25, 2005 (MACTEC, 2005). The report provides descriptions of the site history, physical characteristics, a summary of previous investigations, results of work performed by MACTEC, and a work plan to complete remediation of the northern berm and characterization of the range floor.

The purpose of this report is to describe the subsequent remediation and characterization activities recently performed by MACTEC for NDEP, analytical results of soil confirmation and characterization samples, and a summary of the remaining site conditions.

## **2.0 FIELD ACTIVITIES**

Field activities for berm remediation and range floor characterization were completed from May 2 through 6, and May 18 through 25, 2005, and consisted of excavation of lead-contaminated soil and confirmation sampling on the north berm, composite soil sampling within the range floor, and transportation and offsite disposal of contaminated soil.

### **2.1 Berm Remediation**

Excavation of a portion of the northern berm was performed in accordance with the work plan (MACTEC, 2005) to remove soil containing lead at concentrations at or above the EPA Region 9 preliminary remediation goal (PRG) of 800 milligrams per kilogram (mg/kg) for industrial soils (EPA, 2004). Limits of the excavation area on the northern berm were established in the field based on specifications in the work plan (MACTEC, 2005).

On May 4, 2005, approximately 600 cubic yards (yds<sup>3</sup>) of contaminated soil were excavated from the northern berm by Nevada Crime Cleaners (NCC) of Las Vegas, Nevada (Plate 2). A total of fifty-two (52) confirmation soil samples and six (6) quality control (QC) duplicate samples were collected from the exposed surface of the excavation at a depth interval from surface to 0.5 foot below ground surface (bgs) at locations shown on Plate 2.

On May 25, 2005, approximately 20 yds<sup>3</sup> of additional contaminated soil were excavated by NCC based on the analytical results from the above-mentioned confirmation soil samples, which indicated that soil containing total lead at concentrations above 800 mg/kg remained beyond the limits of the excavation completed on May 4, 2005 (Plate 3). Upon completion of the additional excavation, a total of nineteen (19) confirmation soil samples and two (2) QC duplicate samples were collected from the bottom of the excavation at a depth interval from surface to 0.5 foot bgs at locations shown on Plate 3.

All excavated material was placed on plastic sheeting until offsite transportation and disposal was completed. From May 6 through May 25, 2005, a total of approximately 620 yds<sup>3</sup> (approximately 700 tons) of lead-contaminated soil from the two excavation events were manifested and transported by NCC to the U.S. Ecology landfill in Beatty, NV.

### **2.2 Range Floor Characterization**

On May 2, 2005 MACTEC performed characterization sampling throughout the range floor according to procedures outlined in the work plan (MACTEC, 2005). The range floor was divided into twenty-six (26) grids comprised of sixteen (16) 25- by 25-foot grids between the covered structure and the northern berm, and ten (10) 50- by 50-foot grids over the remainder of the site (Plate 2). Five (5) subsamples were collected in each grid at a depth interval of surface to 0.5 feet bgs and from 0.5 to 1.0 foot bgs. Subsamples from each interval in each grid were homogenized, passed through a number 10 sieve, packaged, and shipped to the laboratory in accordance with approved procedures outlined in the Sampling and Analysis Plan (SAP) Addendum (MACTEC, 2005 [Appendix D]). A total of 52 composite soil grab samples and six (6) QC duplicate samples were collected from the range floor for analysis for total lead.

On May 24 and 25, 2005, additional composite soil sampling of the range floor was performed based on the analytical results from the above-mentioned range floor characterization, which indicated that lead concentrations in soil in nine grids exceeded the 800 mg/kg PRG for industrial soils. A total of eighteen (18) composite samples and two (2) QC duplicate samples were collected from six (6) 25- by 25-foot grids ( RF3NW, RF3NE, RF3SW, RF3SE, RF4NE, and RF4SE) and three (3) 50- by 50-foot grids (RF2, RF7, and RF5) at depth intervals of 1.0 to 1.5 feet and 1.5 to 2.0 feet (Plate 3). Samples were collected and processed as described above.

### **2.3 Field Variances**

The SAP Addendum (MACTEC, 2005 Appendix D), specified confirmation sample collection locations in the north berm along thirteen profiles spaced approximately 25 feet apart oriented perpendicular to the axis of the berm. Based on the actual extent of the excavation of the northern berm, a total of twelve profiles were sampled (Plate 2).

### **3.0 CHEMICAL ANALYSIS**

All soil samples were analyzed by Del Mar Analytical of Las Vegas, Nevada for total lead analyses using EPA Test Method 6010B. Details of the samples collected and analyses performed are presented in Table 1. A complete laboratory report is provided as Appendix A (Attached to this letter report on a compact disk).

#### **3.1 Results - Chemical Analysis**

The results of soil chemical analysis of the berm confirmation and range floor characterization samples are presented in Table 2. Table 3 provides details regarding field duplicate sample results. The results of these analyses are summarized below.

##### **3.1.1 Results – Berm Confirmation Samples**

Three of the fifty-two confirmation soil samples analyzed from the original excavated surface of the berm had concentrations of total lead in soil exceeding the EPA Region 9 PRG of 800 mg/kg for industrial soil; CP-8-0 (13,000 mg/kg), CP-6-5 (2,100 mg/kg), and CP-6-10 (5,600 mg/kg) (Plate 2 and Table 2). Sample CP-12-5, a duplicate for sample CP-6-5, contained total lead at a concentration of 2,600 mg/kg.

As described above, additional excavation was performed in the vicinity of the elevated concentrations, and additional confirmation samples were collected. Three of the nineteen confirmation soil samples analyzed from the surface of the additional excavation had concentrations of total lead in soil exceeding the EPA Region 9 PRG of 800 mg/kg for industrial soil; CP-5A/6A-5 (2,200 mg/kg), CP-6A-5 (8,600 mg/kg), and CP-7A-5 (14,000 mg/kg) (Plate 3 and Table 2). Sample CP-5A-5, a duplicate for sample CP-5A/6A-5, contained total lead at a concentration of 1,500 mg/kg.

Lead-containing spent ammunition (e.g., bullets or shot) were observed in only two confirmation samples (CP-7-10 and CP-8-15), but lead concentrations in those samples were well below the EPA PRG (22 and 41 mg/kg, respectively).

### **3.1.2 Results – Range Floor Characterization**

Fifteen of the fifty-two composite soil samples initially collected from the range floor had concentrations of total lead in soil exceeding the EPA Region 9 PRG of 800 mg/kg for industrial soil. Elevated lead was detected in nine (9) samples from the surface to 0.5-foot interval, and six (6) samples from the 0.5- to 1.0-foot interval at concentrations ranging from 1,000 to 19,000 mg/kg (Plate 2 and Table 2).

As described above, composite soils samples were subsequently collected in each of the nine grids with total lead concentrations in soil above the EPA Region 9 PRG of 800 mg/kg for industrial soil. Total lead was detected in grid RF3NE at a concentrations of 6,400 mg/kg (#RF-3A-NE-1.5; 1.0- to 1.5-feet bgs) and 870 mg/kg (#RF-3A-NE-2.0; 1.5- to 2.0-feet bgs), and in grid RF5 at 1,200 mg/kg (#RF-5A-1.5; 1.0- to 1.5-feet bgs) and 1,100 mg/kg (#RF-5A-2.0; 1.5- to 2.0-feet bgs) (Plate 3 and Table 2). Sample RF-8A-1.5 a duplicate for sample RF-5A-2.0 contained total lead at a concentration of 6,600 mg/kg.

No lead-containing spent ammunition (e.g., bullets or shot) were observed in any of the composite soil samples from the range floor (before sieving).

### **3.2 Data Validation**

Data review and validation for project samples was performed per EPA Region 9 Tier 1A data review on all sample results reported from the laboratory. In addition to the level Tier 1A review, EPA Region 9 Tier 2 level review was performed on approximately 10 percent of the sample results from each matrix. Data review and validation was conducted in accordance with the EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (*EPA, July 2002*). All data was reviewed for compliance with analytical holding times, initial and continuing calibration requirements, and acceptable spike recovery and absence of contamination in laboratory quality control samples with the exceptions of Samples RF-7A-1.5 and CP-7A/8A-5, which were used as QC samples and failed acceptance criteria due to matrix interference. A review of all field duplicate sample results was also conducted. EPA Tier 2 validation included a review of the raw data to assess accurate compound identification and quantitation. The findings of the data validation performed on the project samples indicate that the data is valid and useable as reported by the laboratory. A copy of the data validation report is provided as Appendix B.

### **4.0 SUMMARY**

During two excavation events from May 2 through 25, 2005, a total of approximately 620 yds (approximately 700 tons) of soil containing total lead at concentrations above the EPA Region 9 PRG of 800 mg/kg for industrial soil were removed from the northern impact berm at the former Henderson Police Department firing range. The excavated material was transported under manifest and disposed at

the U.S. Ecology landfill in Beatty, Nevada. Confirmation soil samples collected from selected locations on the remaining surface of the northern berm (Plate 3) indicate that some soil in the berm containing lead at concentrations above the EPA PRG of 800 mg/kg remains in a limited area extending from the range floor to approximately five feet up the berm face. Concentrations detected above the PRG range from 1,500 to 8,600 mg/kg.

Results of range floor soil characterization sampling indicates that lead contamination in soil at concentrations above the EPA PRG of 800 mg/kg exists in many of the grids located within the first 50 feet south of the toe of the northern berm (Plates 2 and 3). Concentrations detected above the PRG range from 870 to 19,000 mg/kg. Two grids, RF3NE and RF5, contain soil lead levels above the PRG at 2.0 feet bgs, the maximum depth interval sampled.

## 5.0 REFERENCES

MACTEC Engineering and Consulting (MACTEC), 2005. Former Police Department Firing Range, City of Henderson, Brownsfield Project, 390 Athens Avenue, Henderson, Nevada. March.


U.S. Environmental Protection Agency (EPA), 2004. Region 9 PRGs 2004 Table. October.


(Available at: <http://www.epa.gov/region09/waste/sfund/prg/files/04prgtable.pdf>)

MACTEC appreciates the opportunity to provide environmental consulting services for NDEP, Bureau of Corrective Actions. If you should have any questions, please call either of the undersigned at (775) 888-9992 or (707) 793-3887, respectively.

Sincerely,

**MACTEC Engineering and Consulting, Inc**

  
Bruce L. Wilcer  
Principal Professional

  
Ron Leiken, CEM  
Principal Environmental Scientist  
Certified Environmental Manager, Number 1798  
Expiration Date: 3/8/06

In accordance with Nevada Administrative Code 459.97285,

*I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable federal, state, and local statutes, regulations, and ordinances.*

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Mr. Scott Smale  
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cc: Addressee by mail

Addressee by email (pdf format) to [ssmale@ndep.nv.gov](mailto:ssmale@ndep.nv.gov)

Ms. Brenda L. Pohlmann, CEM, Environmental Programs Division Manager,  
City Attorney's Office, City of Henderson, PO Box 95050, Henderson, NV  
89009-5050

MACTEC Project File

Attachments: Table 1: Sample Summary  
Table 2: Results for Total Lead  
Table 3: Summary of Field Duplicates

Plate 1: Site Location Map

Plate 2: Range Floor and Confirmation Sampling, May 2-5, 2005

Plate 3: Range Floor and Confirmation Sampling, May 24 and 25, 2005

Appendix A: Laboratory Analytical Data (CD)

Appendix B: Data Validation Reports

**Table 1**  
**Sample Summary**  
**City of Henderson Former Police Department**  
**Small Arms Firing Range Site**

Sample Area	Site Sample ID	Lab Sample ID	Date Sampled	Analyse/Method	Sample Type
Range Floor Sampling Round 1	RF11-SW-0.5	POE0029-01	2-May-05	Total Lead (6010B)	Soil
	RF11-SW-1	POE0029-02	2-May-05	Total Lead (6010B)	Soil
	RF11-NW-0.5	POE0029-03	2-May-05	Total Lead (6010B)	Soil
	RF11-NW-1	POE0029-04	2-May-05	Total Lead (6010B)	Soil
	RF4-SW-0.5	POE0029-05	2-May-05	Total Lead (6010B)	Soil
	RF4-SW-1	POE0029-06	2-May-05	Total Lead (6010B)	Soil
	RF15-SW-0.5	POE0029-07	2-May-05	Total Lead (6010B)	FD
	R4NW-0.5	POE0029-08	2-May-05	Total Lead (6010B)	Soil
	RF4NW-1	POE0029-09	2-May-05	Total Lead (6010B)	Soil
	RF4-NE-0.5	POE0029-10	2-May-05	Total Lead (6010B)	Soil
	RF4-NE-1	POE0029-11	2-May-05	Total Lead (6010B)	Soil
	RF4-SE-0.5	POE0029-12	2-May-05	Total Lead (6010B)	Soil
	RF4-SE-1	POE0029-13	2-May-05	Total Lead (6010B)	Soil
	RF4-SE-MS/MSD	POE0029-14	2-May-05	Total Lead (6010B)	Soil
	RF11-NE-0.5	POE0029-15	2-May-05	Total Lead (6010B)	Soil
	RF11-NE-1	POE0029-16	2-May-05	Total Lead (6010B)	Soil
	RF11-SE-0.5	POE0029-17	2-May-05	Total Lead (6010B)	Soil
	RF11-SE-1	POE0029-18	2-May-05	Total Lead (6010B)	Soil
	RF15-NW-0.5	POE0029-19	2-May-05	Total Lead (6010B)	FD
	RF10-SW-0.5	POE0029-20	2-May-05	Total Lead (6010B)	Soil
	RF10-SW-1	POE0029-21	2-May-05	Total Lead (6010B)	Soil
	RF10-NW-0.5	POE0029-22	2-May-05	Total Lead (6010B)	Soil
	RF10-NW-1	POE0029-23	2-May-05	Total Lead (6010B)	Soil
	RF15-SW-1	POE0029-24	2-May-05	Total Lead (6010B)	FD
	RF15-NW-1	POE0029-25	2-May-05	Total Lead (6010B)	FD
	RF3-SW-0.5	POE0029-26	2-May-05	Total Lead (6010B)	Soil
	RF3-SW-1	POE0029-27	2-May-05	Total Lead (6010B)	Soil
	RF3-NW-0.5	POE0029-28	2-May-05	Total Lead (6010B)	Soil
	RF3-NW-1	POE0029-29	2-May-05	Total Lead (6010B)	Soil
	RF3-NW-MS/MSD	POE0029-30	2-May-05	Total Lead (6010B)	Soil
	RF3-NE-0.5	POE0029-31	2-May-05	Total Lead (6010B)	Soil
	RF3-NE-1	POE0029-32	2-May-05	Total Lead (6010B)	Soil
	RF3-SE-0.5	POE0029-33	2-May-05	Total Lead (6010B)	Soil
	RF3-SE-1	POE0029-34	2-May-05	Total Lead (6010B)	Soil
	RF10-NE-0.5	POE0029-35	2-May-05	Total Lead (6010B)	Soil
	RF10-NE-1	POE0029-36	2-May-05	Total Lead (6010B)	Soil
	RF10-SE-0.5	POE0029-37	2-May-05	Total Lead (6010B)	Soil
	RF10-SE-1	POE0029-38	2-May-05	Total Lead (6010B)	Soil
	RF12-0.5	POE0029-39	2-May-05	Total Lead (6010B)	Soil
	5/2/05 rinsate	POE0029-40	2-May-05	Total Lead (6010B)	R
	RF12-1	POE0029-41	2-May-05	Total Lead (6010B)	Soil
	RF5-0.5	POE0029-42	2-May-05	Total Lead (6010B)	Soil
	RF5-1	POE0029-43	2-May-05	Total Lead (6010B)	Soil
	RF14-0.5	POE0029-44	2-May-05	Total Lead (6010B)	Soil
	RF14-1	POE0029-45	2-May-05	Total Lead (6010B)	Soil
	RF7-0.5	POE0029-46	2-May-05	Total Lead (6010B)	Soil
	RF7-1	POE0029-47	2-May-05	Total Lead (6010B)	Soil
	RF6-0.5	POE0029-48	2-May-05	Total Lead (6010B)	Soil
	RF6-1	POE0029-49	2-May-05	Total Lead (6010B)	Soil
	RF13-0.5	POE0029-50	2-May-05	Total Lead (6010B)	Soil
	RF13-1	POE0029-51	2-May-05	Total Lead (6010B)	Soil
	RF13-MS/MSD	POE0029-52	2-May-05	Total Lead (6010B)	Soil
	RF9-0.5	POE0029-53	2-May-05	Total Lead (6010B)	Soil
	RF9-1	POE0029-54	2-May-05	Total Lead (6010B)	Soil
	RF2-0.5	POE0029-55	2-May-05	Total Lead (6010B)	Soil
	RF2-1	POE0029-56	2-May-05	Total Lead (6010B)	Soil
	RF1-0.5	POE0029-57	2-May-05	Total Lead (6010B)	Soil
	RF1-1	POE0029-58	2-May-05	Total Lead (6010B)	Soil

**Table 1**  
**Sample Summary**  
**City of Henderson Former Police Department**  
**Small Arms Firing Range Site**

Sample Area	Site Sample ID	Lab Sample ID	Date Sampled	Analyse/Method	Sample Type
Berm Sampling Round 1	CP-5-15	POE0167-32	5-May-05	Total Lead (6010B)	Soil
	CP-6-0	POE0167-33	5-May-05	Total Lead (6010B)	Soil
	CP-6-5	POE0167-34	5-May-05	Total Lead (6010B)	Soil
	CP-12-5	POE0167-35	5-May-05	Total Lead (6010B)	FD
	CP-6-10	POE0167-36	5-May-05	Total Lead (6010B)	Soil
	CP-6-15	POE0167-37	5-May-05	Total Lead (6010B)	Soil
	CP-6-20	POE0167-38	5-May-05	Total Lead (6010B)	Soil
	CP-9-0	POE0167-39	5-May-05	Total Lead (6010B)	Soil
	CP-12-10	POE0167-40	5-May-05	Total Lead (6010B)	FD
	CP-9-5	POE0167-41	5-May-05	Total Lead (6010B)	Soil
	CP-9-10	POE0167-42	5-May-05	Total Lead (6010B)	Soil
	CP-9-15	POE0167-43	5-May-05	Total Lead (6010B)	Soil
	CP-9-20	POE0167-44	5-May-05	Total Lead (6010B)	Soil
	CP-10-0	POE0167-45	5-May-05	Total Lead (6010B)	Soil
	CP-10-5	POE0167-46	5-May-05	Total Lead (6010B)	Soil
	CP-12-15	POE0167-47	5-May-05	Total Lead (6010B)	FD
	CP-10-10	POE0167-48	5-May-05	Total Lead (6010B)	Soil
	CP-10-15	POE0167-49	5-May-05	Total Lead (6010B)	Soil
	CP-10-20	POE0167-50	5-May-05	Total Lead (6010B)	Soil
	CP-11-0	POE0167-51	5-May-05	Total Lead (6010B)	Soil
	CP-11-5	POE0167-52	5-May-05	Total Lead (6010B)	Soil
	CP-13-0	POE0167-53	5-May-05	Total Lead (6010B)	FD
	CP-11-10	POE0167-54	5-May-05	Total Lead (6010B)	Soil
	CP-11-15	POE0167-55	5-May-05	Total Lead (6010B)	Soil
	CP-20-0	POE0167-56	5-May-05	Total Lead (6010B)	Soil
	CP-20-5	POE0167-57	5-May-05	Total Lead (6010B)	Soil
	CP-20-10	POE0167-58	5-May-05	Total Lead (6010B)	Soil
	CP-13-5	POE0167-59	5-May-05	Total Lead (6010B)	FD
	5-05-05 Rinsate	POE0167-60	5-May-05	Total Lead (6010B)	R
Berm Sampling Round 2	CP-5A/6A-5	POE0725-01	25-May-05	Total Lead (6010B)	Soil
	CP-5A/5	POE0725-02	25-May-05	Total Lead (6010B)	Soil
	CP-5A/6A-10	POE0725-03	25-May-05	Total Lead (6010B)	Soil
	CP-6A-5	POE0725-04	25-May-05	Total Lead (6010B)	Soil
	CP-6A-10	POE0725-05	25-May-05	Total Lead (6010B)	Soil
	CP-6A-15	POE0725-06	25-May-05	Total Lead (6010B)	Soil
	CP-6A/7A-5	POE0725-07	25-May-05	Total Lead (6010B)	Soil
	CP-6A/7A-10	POE0725-08	25-May-05	Total Lead (6010B)	Soil
	CP-7A-5	POE0725-09	25-May-05	Total Lead (6010B)	Soil
	CP-7A/8A-5	POE0725-10	25-May-05	Total Lead (6010B)	Soil
	CP-8A-5	POE0725-11	25-May-05	Total Lead (6010B)	Soil
	CP-7A/8A-10B	POE0725-12	25-May-05	Total Lead (6010B)	Soil
	CP-9A-10	POE0725-13	25-May-05	Total Lead (6010B)	Soil
	CP-7A/8A-10A	POE0725-14	25-May-05	Total Lead (6010B)	Soil
	CP-7A/8A-5B	POE0725-15	25-May-05	Total Lead (6010B)	Soil
	CP-7A-10B	POE0725-16	25-May-05	Total Lead (6010B)	Soil
	CP-7A-10A	POE0725-17	25-May-05	Total Lead (6010B)	Soil
	CP-7A-5B	POE0725-18	25-May-05	Total Lead (6010B)	Soil
	CP-6A/7A-10B	POE0725-19	25-May-05	Total Lead (6010B)	Soil
	CP-6A/7A-5B	POE0725-20	25-May-05	Total Lead (6010B)	Soil
	P-8A/9A-5/CP-8A/9A5MS/MS	POE0725-21	25-May-05	Total Lead (6010B)	Soil
	EQ RINSE 5-25-05B	POE0725-22	25-May-05	Total Lead (6010B)	EQ

FD: Field duplicate Samples

R: Rinsate

EQ: Equipment Rinse

Reviewed

Approved

*[Signature]*  
*[Signature]*



Table 2  
Results for Total Lead  
Henderson Firing Range  
May 2005

Work Area	Site Sample ID	Analyses /Method	Lead Results (mg/Kg)	Dilution Factor	Lab Reporting Limit (mg/Kg)	Validation Qualifier
Range						
Floor	RF-11-SW-0.5	Total Pb (EPA 6010B)	53	1	5.0	A
Sampling #1	RF-11-SW-1	Total Pb (EPA 6010B)	17	1	5.0	A
	RF11-NW-0.5	Total Pb (EPA 6010B)	40	1	5.0	A
	RF11-NE-1	Total Pb (EPA 6010B)	30	1	5.0	A
	RF11-SW-0.5	Total Pb (EPA 6010B)	300	1	5.0	A
	RF4 SW-1	Total Pb (EPA 6010B)	140	1	5.0	A
	RF15-SW-0.5	Total Pb (EPA 6010B)	69	1	5.0	A
	R4-NW-0.5	Total Pb (EPA 6010B)	270	1	5.0	A
	RF4 NW-1	Total Pb (EPA 6010B)	64	1	5.0	A
	RF4-NE-0.5	Total Pb (EPA 6010B)	1200	1	5.0	A
	RF4-NW-1	Total Pb (EPA 6010B)	150	1	5.0	A
	RF4-SE-0.5	Total Pb (EPA 6010B)	10000	5	25.0	A
	RF4-SE-1	Total Pb (EPA 6010B)	28	1	5.0	A
	RF4-SE-MS/MSD	Total Pb (EPA 6010B)	20000	5	25.0	A
	RF11-NE-0.5	Total Pb (EPA 6010B)	50	1	5.0	A
	RF11-NE-1	Total Pb (EPA 6010B)	21	1	5.0	A
	RF11-SE-0.5	Total Pb (EPA 6010B)	27	1	5.0	A
	RF11-SE-1	Total Pb (EPA 6010B)	16	1	5.0	A
	RF15-NW-0.5	Total Pb (EPA 6010B)	41	1	5.0	A
	RF10-SW-0.5	Total Pb (EPA 6010B)	39	1	5.0	A
	RF10-SW-1	Total Pb (EPA 6010B)	37	1	5.0	A
	RF10-NW-0.5	Total Pb (EPA 6010B)	83	1	5.0	A
	RF10-NW-1	Total Pb (EPA 6010B)	220	1	5.0	A
	RF15-SW-1	Total Pb (EPA 6010B)	31	1	5.0	A
	RF15-NW-1	Total Pb (EPA 6010B)	78	1	5.0	A
	R3-SW-0.5	Total Pb (EPA 6010B)	1000	1	5.0	A
	RF3-SW-1	Total Pb (EPA 6010B)	7100	5	25.0	A
	RF3-NW-0.5	Total Pb (EPA 6010B)	19000	10	50.0	A
	RF3-NW-1	Total Pb (EPA 6010B)	3200	1	5.0	A
	RF3-NW MS/MSD	Total Pb (EPA 6010B)	35000	10	50.0	A
	RF3-NE-0.5	Total Pb (EPA 6010B)	2000	1	5.0	A
	RF3-NE-1	Total Pb (EPA 6010B)	2100	1	5.0	A
	RF3-SE-0.5	Total Pb (EPA 6010B)	2000	1	5.0	A
	RF3-SE-1	Total Pb (EPA 6010B)	1000	1	5.0	A
	RF10-NE-0.5	Total Pb (EPA 6010B)	89	1	5.0	A
	RF10-NE-1	Total Pb (EPA 6010B)	38	1	5.0	A
	RF10-SE-0.5	Total Pb (EPA 6010B)	22	1	5.0	A
	RF10-SE-1	Total Pb (EPA 6010B)	32	1	5.0	A
	RF12-0.5	Total Pb (EPA 6010B)	26	1	5.0	A
	5/2/05 Rinsate	Total Pb (EPA 6010B)	ND	1	0.050µ/L	A
	RF12-1	Total Pb (EPA 6010B)	18	1	5.0	A
	RF5-0.5	Total Pb (EPA 6010B)	6200	2	10.0	A
	RF5-1	Total Pb (EPA 6010B)	81	1	5.0	A
	RF14-0.5	Total Pb (EPA 6010B)	32	1	5.0	A
	RF14-1	Total Pb (EPA 6010B)	36	1	5.0	A
	RF7-0.5	Total Pb (EPA 6010B)	5000	2	10.0	A
	RF7-1	Total Pb (EPA 6010B)	5500	2	10.0	A
	RF6-0.5	Total Pb (EPA 6010B)	33	1	5.0	A
	RF6-1	Total Pb (EPA 6010B)	60	1	5.0	A
	RF13-0.5	Total Pb (EPA 6010B)	21	1	5.0	A
	RF13-1	Total Pb (EPA 6010B)	14	1	5.0	A
	RF13-MS/MSD	Total Pb (EPA 6010B)	19	1	5.0	A
	RF9-0.5	Total Pb (EPA 6010B)	35	1	5.0	A

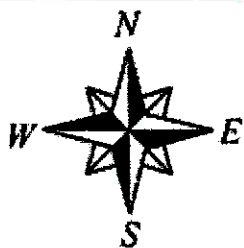
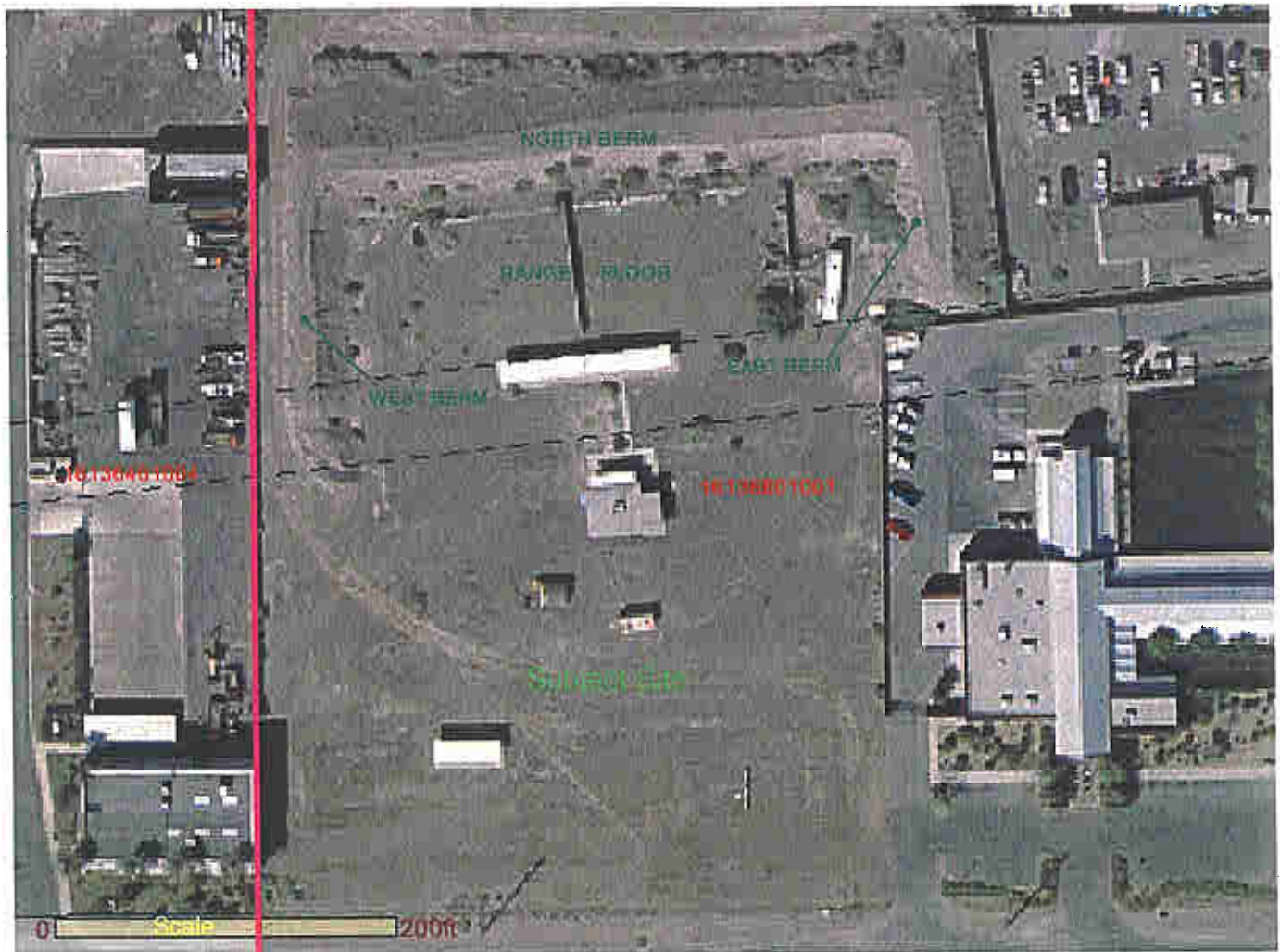
Table 2  
Results for Total Lead  
Henderson Firing Range  
May 2005

Work Area	Site Sample ID	Analyses /Method	Lead Results (mg/Kg)	Dilution Factor	Lab Reporting Limit (mg/Kg)	Validation Qualifier
<b>Berm</b> Sampling #1	CP-3-0	Total Pb (EPA 6010B)	39	1	2	A
	CP-3-5	Total Pb (EPA 6010B)	17	1	2	A
	CP-3-10	Total Pb (EPA 6010B)	14	1	2	A
	CP-3-15	Total Pb (EPA 6010B)	10	1	2	A
	CP-4-0	Total Pb (EPA 6010B)	44	1	2	A
	CP-4-5	Total Pb (EPA 6010B)	420	1	2	A
	CP-4-10	Total Pb (EPA 6010B)	15	1	2	A
	CP-4-15	Total Pb (EPA 6010B)	27	1	2	A
	CP-5-0	Total Pb (EPA 6010B)	110	1	2	A
	CP-5-5	Total Pb (EPA 6010B)	180	1	2	A
	CP-5-10	Total Pb (EPA 6010B)	20	1	2	A
	CP-5-15	Total Pb (EPA 6010B)	150	1	2	A
	CP-6-0 MS/MSD	Total Pb (EPA 6010B)	48	1	2	A
	CP-6-5	Total Pb (EPA 6010B)	2100	5	10	A
	CP-12-5	Total Pb (EPA 6010B)	2600	5	10	A
	CP-6-10	Total Pb (EPA 6010B)	5600	10	20	A
	CP-6-15	Total Pb (EPA 6010B)	30	1	2	A
	CP-6-20	Total Pb (EPA 6010B)	9.2	1	2	A
	CP-9-0 MS/MSD	Total Pb (EPA 6010B)	200	1	2	A
	CP-12-10	Total Pb (EPA 6010B)	17	1	2	A
	CP-9-5	Total Pb (EPA 6010B)	20	1	2	A
	CP-9-10	Total Pb (EPA 6010B)	11	1	2	A
	CP-9-15	Total Pb (EPA 6010B)	9.9	1	2	A
	CP-9-20	Total Pb (EPA 6010B)	18	1	2	A
	CP-10-0	Total Pb (EPA 6010B)	15	1	2	A
	CP-10-5	Total Pb (EPA 6010B)	23	1	2	A
	CP-12-15	Total Pb (EPA 6010B)	22	1	2	A
	CP-10-10	Total Pb (EPA 6010B)	12	1	2	A
	CP-10-15	Total Pb (EPA 6010B)	15	1	2	A
	CP-10-20	Total Pb (EPA 6010B)	10	1	2	A
	CP-11-0	Total Pb (EPA 6010B)	13	1	2	A
	CP-11-5	Total Pb (EPA 6010B)	8.8	1	2	A
	CP-13-0	Total Pb (EPA 6010B)	8.8	1	2	A
	CP-11-10	Total Pb (EPA 6010B)	29	1	2	A
	CP-11-15	Total Pb (EPA 6010B)	29	1	2	A
	CP-20-0MS/MSD	Total Pb (EPA 6010B)	42	1	2	A
	CP-20-05	Total Pb (EPA 6010B)	27	1	2	A
	CP-20-10	Total Pb (EPA 6010B)	56	1	2	A
	CP-13-5	Total Pb (EPA 6010B)	65	1	2	A
	5/5/05 RINSATE	Total Pb (EPA 6010B)	ND	1	0.0050µ/L	A
<b>Berm</b> Sampling #2	CP-5A/6A-5	Total Pb (EPA 6010B)	2200	1	5	A
	CP-5A-5	Total Pb (EPA 6010B)	1500	1	5	A
	CP-5A/6A-10	Total Pb (EPA 6010B)	65	1	5	A
	CP-6A-5	Total Pb (EPA 6010B)	8600	2	10	A
	CP-6A-10	Total Pb (EPA 6010B)	36	1	5	A
	CP-6A-15	Total Pb (EPA 6010B)	13	1	5	A
	CP-6A/7A-5	Total Pb (EPA 6010B)	460	1	5	A
	CP-6A/7A/10	Total Pb (EPA 6010B)	15	1	5	A
	CP-7A-5	Total Pb (EPA 6010B)	14000	5	25	A
	CP-7A/8A-5	Total Pb (EPA 6010B)	13	1	5	J
	CP-8A-5	Total Pb (EPA 6010B)	16	1	5	A
	CP-7A/8A-10B	Total Pb (EPA 6010B)	13	1	5	A

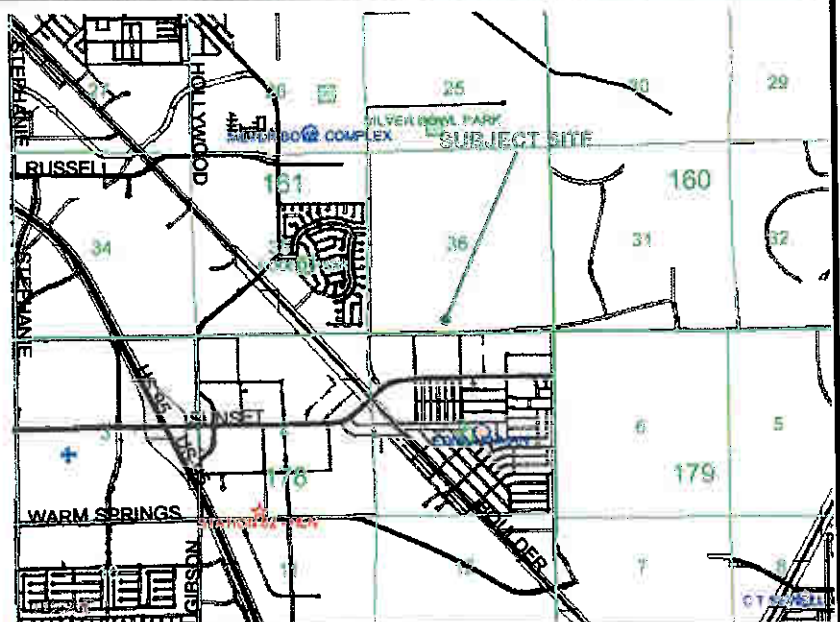
**Table 3**  
**Summary of Field Duplicates**  
**City of Henderson Former Police Department Small Arms Firing Range Site**

Sample Origin	Original Sample #	Lab ID	Matrix	Element	Orig. Results	Duplicate Sample #	Lab ID	Dup. Results	RPD
Range Floor	RF4-SW-0.5	POE0029-05	Soil	Total Lead	300	RF4-SW-1	POE0029-06	140	73%
	RF15-NW-0.5	POE0029-19	Soil	Total Lead	41	RF10-SW-0.5	POE0029-20	39	5%
	RF10-SW-1	POE0029-21	Soil	Total Lead	37	RF15-SW-1	POE0029-24	31	18%
	RF10-NW-1	POE0029-23	Soil	Total Lead	220	RF15-NW-1	POE0029-25	78	95%
	RF-13-05	POE0029-50	Soil	Total Lead	21	RF15-SE-0.5	POE0029-61	17	21%
	RF-3A-SE-1.5	POE0650-09	Soil	Total Lead	38	RD-1A-SW-1.5	POE0650-11	37	0.0267
	RF-5A-2.0	POE0722-03	Soil	Total Lead	1100	RF-8A-2.0	POE0722-04	6600	-1.429
Berm	CP-12-0	POE0167-16	Soil	Total Lead	9.8	CP-1-15	POE0167-15	9.3	5%
	CP-12-5	POE0167-35	Soil	Total Lead	2600	CP-6-5	POE0167-34	2100	21%
	CP-9-5	POE0167-41	Soil	Total Lead	20	CP-12-10	POE0167-40	17	16%
	CP-10-5	POE0167-46	Soil	Total Lead	23	CP-12-15	POE0167-47	22	4%
	CP-11-5	POE0167-52	Soil	Total Lead	8.8	CP-13-0	POE0167-53	8.8	0%
	CP-13-5	POE0167-59	Soil	Total Lead	65	CP-20-10	POE0167-58	56	15%
	CP5A/6A/5	POE0725-01	Soil	Total Lead	2200	CP-5A-5	POE0725-02	1500	38%
	CP-7A/8A-10B	POE0725-12	Soil	Total Lead	13	CP-9A-10	POE0725-13	13	0%

Checked RL  
Approved RL



Source:  
Southern Nevada GIS  
OpenWeb Info Mapper  
Aerial Photography  
Fall 2003



# MACTEC

## SITE LOCATION MAP

FORMER POLICE DEPARTMENT FIRING RANGE  
CITY OF HENDERSON  
HENDERSON, NEVADA

Project:  
4400-04-1025.09

*RL/BW*

Plate 1



PLATE

2

REVISED DATE

DATE

6/2005

# Range Floor and Confirmation Sampling

May 2-5, 2005

City of Henderson Former Police Firing Range  
Henderson, Nevada

APPROVED  
*re/pw*

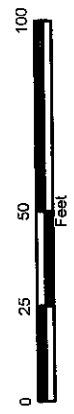
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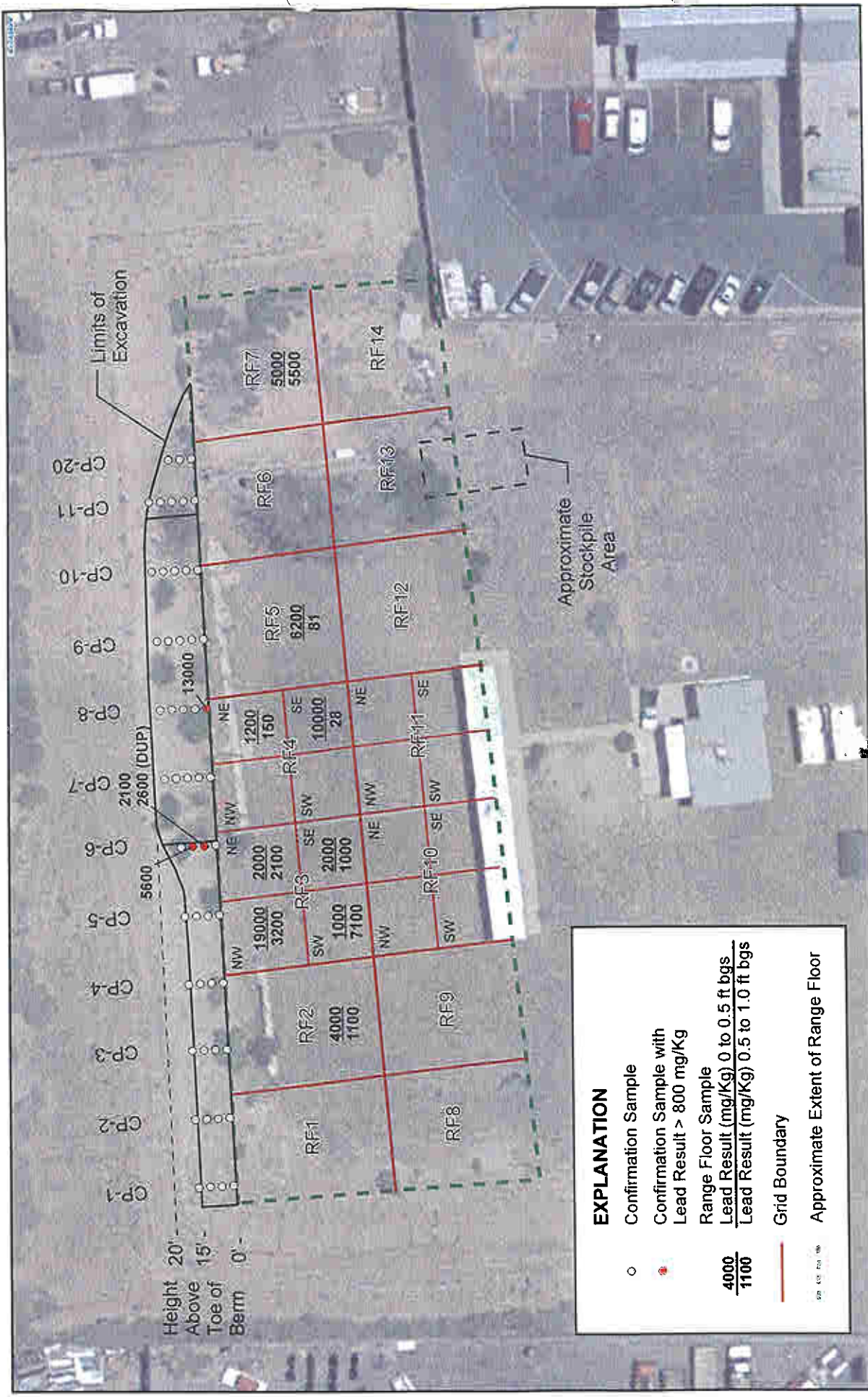
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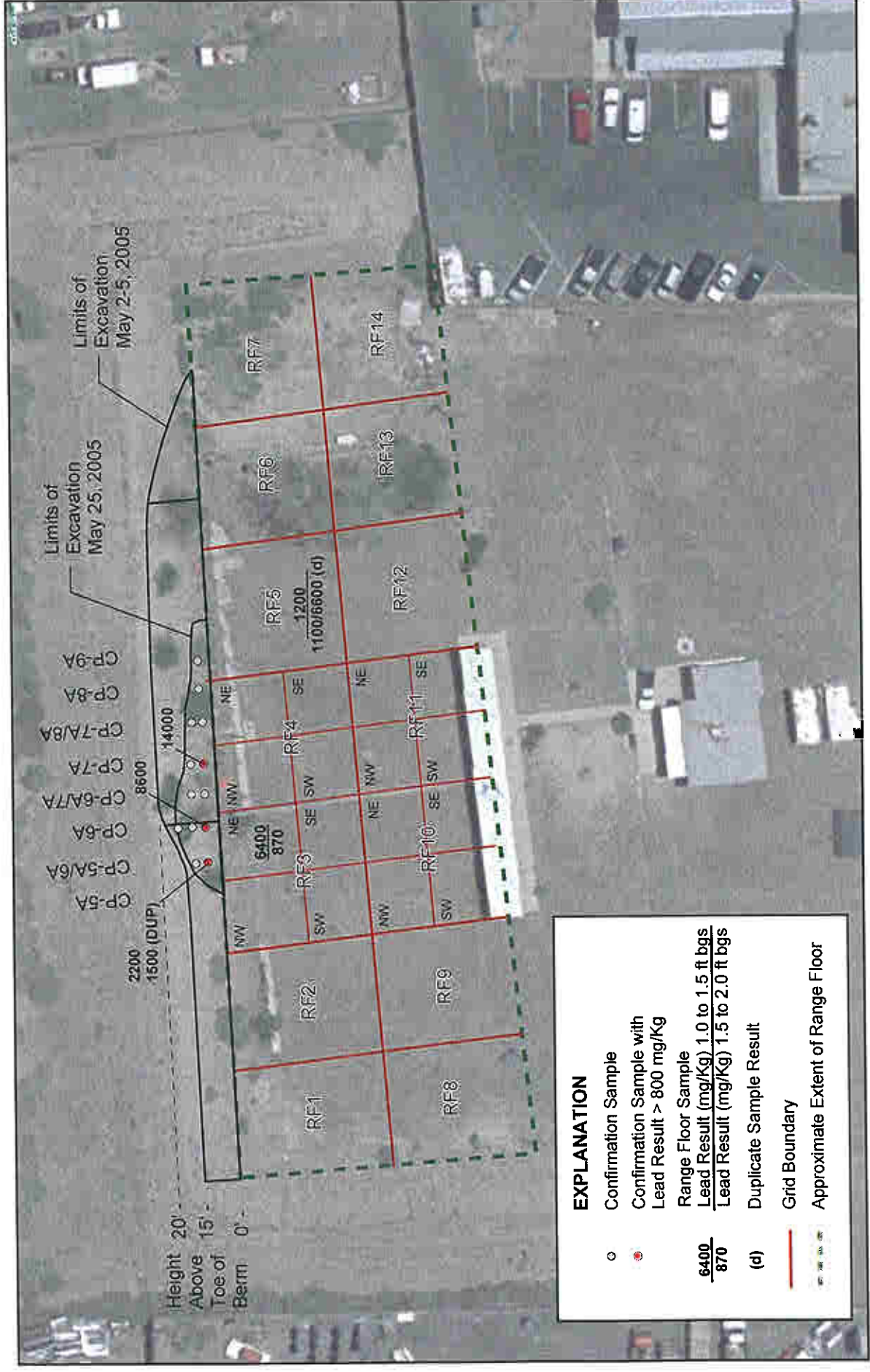
TJH



**EXPLANATION**

- Confirmation Sample
- Confirmation Sample with Lead Result > 800 mg/Kg
- Range Floor Sample
  - 4000 Lead Result (mg/Kg) 0 to 0.5 ft bgs
  - 1100 Lead Result (mg/Kg) 0.5 to 1.0 ft bgs
- Grid Boundary
- Approximate Extent of Range Floor





# Range Floor and Confirmation Sampling May 24-25, 2005

City of Henderson Former Police Firing Range  
Henderson, Nevada

Henderson-plate3.mxd - 6/28/2005



June 28, 2005

Project No. 4400041025.08

**DATA VALIDATION SUMMARY REPORT FOR THE CITY OF HENDERSON FORMER  
POLICE DEPARTMENT SMALL ARMS FIRING RANGE SITE, HENDERSON, NV**

**LABORATORY: Del Mar Analytical, Las Vegas, NV**

**SAMPLING DATES: May 4 and 5, 2004**

Data validation of sample delivery group (SDG) POE0167 was performed according to the guidelines provided in EPA Test Method 6010B, SW-846 update III and the U. S. Environmental Protection Agency (EPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, July 2002.

Following USEPA Region 9 Tier 1A criteria, the data were reviewed for holding times, blanks, initial and continuing calibration verification (ICV/CCV) standards, laboratory control samples (LCS), matrix spikes (MS), matrix spike duplicates (MSD), ICP interference check standards, ICP serial dilutions and field duplicate samples.

**The following paragraphs highlight the essential findings of the data validation effort:**

**I. Total Lead (6010B)**

Overall, the data are usable as reported. Qualification was not required.

**A. Reporting Limits**

The laboratory reporting limits for lead in soil matrix samples met the project required reporting limits.

**B. Holding Times**

Technical holding time criteria were met for all project samples.

**C. Blanks**

Target analytes were not observed in any laboratory method blanks associated with the project samples.

**USABILITY**

The quality control criteria were reviewed, and other than those discussed above, all criteria were met and the data are considered acceptable. Based upon the Tier 1 data validation, all results are considered valid and usable for all purposes. The absence of rejected or qualified data indicates high usability.



**Table 1**  
**Sample Summary SDG POE0029**  
**City of Henderson Former Police Department Small Arms Firing Range Site**

Sample Area	Site Sample ID	Lab Sample ID	Date Sampled	Analyse/Method	Sample Type
Range Floor	RF11-SW-0.5	POE0029-01	2-May-05	Total Lead (6010B)	Soil
	RF11-SW-1	POE0029-02	2-May-05	Total Lead (6010B)	Soil
	RF11-NW-0.5	POE0029-03	2-May-05	Total Lead (6010B)	Soil
	RF11-NW-1	POE0029-04	2-May-05	Total Lead (6010B)	Soil
	RF4-SW-0.5	POE0029-05	2-May-05	Total Lead (6010B)	Soil
	RF4-SW-1	POE0029-06	2-May-05	Total Lead (6010B)	Soil
	RF15-SW-0.5	POE0029-07	2-May-05	Total Lead (6010B)	FD
	R4NW-0.5	POE0029-08	2-May-05	Total Lead (6010B)	Soil
	RF4NW-1	POE0029-09	2-May-05	Total Lead (6010B)	Soil
	RF4-NE-0.5	POE0029-10	2-May-05	Total Lead (6010B)	Soil
	RF4-NE-1	POE0029-11	2-May-05	Total Lead (6010B)	Soil
	RF4-SE-0.5	POE0029-12	2-May-05	Total Lead (6010B)	Soil
	RF4-SE-1	POE0029-13	2-May-05	Total Lead (6010B)	Soil
	RF4-SE-MS/MSD	POE0029-14	2-May-05	Total Lead (6010B)	Soil
	RF11-NE-0.5	POE0029-15	2-May-05	Total Lead (6010B)	Soil
	RF11-NE-1	POE0029-16	2-May-05	Total Lead (6010B)	Soil
	RF11-SE-0.5	POE0029-17	2-May-05	Total Lead (6010B)	Soil
	RF11-SE-1	POE0029-18	2-May-05	Total Lead (6010B)	Soil
	RF15-NW-0.5	POE0029-19	2-May-05	Total Lead (6010B)	FD
	RF10-SW-0.5	POE0029-20	2-May-05	Total Lead (6010B)	Soil
	RF10-SW-1	POE0029-21	2-May-05	Total Lead (6010B)	Soil
	RF10-NW-0.5	POE0029-22	2-May-05	Total Lead (6010B)	Soil
	RF10-NW-1	POE0029-23	2-May-05	Total Lead (6010B)	Soil
	RF15-SW-1	POE0029-24	2-May-05	Total Lead (6010B)	FD
	RF15-NW-1	POE0029-25	2-May-05	Total Lead (6010B)	FD
	RF3-SW-0.5	POE0029-26	2-May-05	Total Lead (6010B)	Soil
	RF3-SW-1	POE0029-27	2-May-05	Total Lead (6010B)	Soil
	RF3-NW-0.5	POE0029-28	2-May-05	Total Lead (6010B)	Soil
	RF3-NW-1	POE0029-29	2-May-05	Total Lead (6010B)	Soil
	RF3-NW-MS/MSD	POE0029-30	2-May-05	Total Lead (6010B)	Soil
	RF3-NE-0.5	POE0029-31	2-May-05	Total Lead (6010B)	Soil
	RF3-NE-1	POE0029-32	2-May-05	Total Lead (6010B)	Soil
	RF3-SE-0.5	POE0029-33	2-May-05	Total Lead (6010B)	Soil
	RF3-SE-1	POE0029-34	2-May-05	Total Lead (6010B)	Soil
	RF10-NE-0.5	POE0029-35	2-May-05	Total Lead (6010B)	Soil
	RF10-NE-1	POE0029-36	2-May-05	Total Lead (6010B)	Soil
	RF10-SE-0.5	POE0029-37	2-May-05	Total Lead (6010B)	Soil
	RF10-SE-1	POE0029-38	2-May-05	Total Lead (6010B)	Soil
	RF12-0.5	POE0029-39	2-May-05	Total Lead (6010B)	Soil
	5/2/05 rinsate	POE0029-40	2-May-05	Total Lead (6010B)	R
	RF12-1	POE0029-41	2-May-05	Total Lead (6010B)	Soil
	RF5-0.5	POE0029-42	2-May-05	Total Lead (6010B)	Soil
	RF5-1	POE0029-43	2-May-05	Total Lead (6010B)	Soil
	RF14-0.5	POE0029-44	2-May-05	Total Lead (6010B)	Soil
	RF14-1	POE0029-45	2-May-05	Total Lead (6010B)	Soil
	RF7-0.5	POE0029-46	2-May-05	Total Lead (6010B)	Soil
	RF7-1	POE0029-47	2-May-05	Total Lead (6010B)	Soil
	RF6-0.5	POE0029-48	2-May-05	Total Lead (6010B)	Soil
	RF6-1	POE0029-49	2-May-05	Total Lead (6010B)	Soil
	RF13-0.5	POE0029-50	2-May-05	Total Lead (6010B)	Soil
	RF13-1	POE0029-51	2-May-05	Total Lead (6010B)	Soil
	RF13-MS/MSD	POE0029-52	2-May-05	Total Lead (6010B)	Soil
	RF9-0.5	POE0029-53	2-May-05	Total Lead (6010B)	Soil
	RF9-1	POE0029-54	2-May-05	Total Lead (6010B)	Soil
	RF2-0.5	POE0029-55	2-May-05	Total Lead (6010B)	Soil
	RF2-1	POE0029-56	2-May-05	Total Lead (6010B)	Soil
	RF1-0.5	POE0029-57	2-May-05	Total Lead (6010B)	Soil
	RF1-1	POE0029-58	2-May-05	Total Lead (6010B)	Soil

Table 2  
Results for Total Lead - SDG POE0029  
Henderson Firing Range  
May 2005


Work Area	Site Sample ID	Lab Sample ID	Date Sampled	Analyses /Method	Sample Type	Date Analyzed	Lead Results (mg/Kg)	Lab Qualifier	Validation Qualifier	Dilution Factor	Lab Reporting Limit (mg/Kg)
Range Floor	RF-11-SW-0.5	POE0029-01	5/2/2005	Total Pb (EPA 6010B)	Soil	5/12/2005	53		A	1	5.0
	RF-11-SW-1	POE0029-02	5/2/2005	Total Pb (EPA 6010B)	Soil	5/12/2005	17		A	1	5.0
	RF11-NW-0.5	POE0029-03	5/2/2005	Total Pb (EPA 6010B)	Soil	5/12/2005	40		A	1	5.0
	RF11-NE-1	POE0029-04	5/2/2005	Total Pb (EPA 6010B)	Soil	5/12/2005	30		A	1	5.0
	RF11-SW-0.5	POE0029-05	5/2/2005	Total Pb (EPA 6010B)	Soil	5/12/2005	300		A	1	5.0
	RF4 SW-1	POE0029-06	5/2/2005	Total Pb (EPA 6010B)	Soil	5/12/2005	140		A	1	5.0
	RF15-SW-0.5	POE0029-07	5/2/2005	Total Pb (EPA 6010B)	Soil	5/12/2005	69		A	1	5.0
	R4-NW-0.5	POE0029-08	5/2/2005	Total Pb (EPA 6010B)	Soil	5/12/2005	270		A	1	5.0
	RF4 NW-1	POE0029-09	5/2/2005	Total Pb (EPA 6010B)	Soil	5/12/2005	64		A	1	5.0
	RF4-NE-0.5	POE0029-10	5/2/2005	Total Pb (EPA 6010B)	Soil	5/12/2005	1200		A	1	5.0
	RF4-NW-1	POE0029-11	5/2/2005	Total Pb (EPA 6010B)	Soil	5/12/2005	150		A	1	5.0
	RF4-SE-0.5	POE0029-12	5/2/2005	Total Pb (EPA 6010B)	Soil	5/19/2005	10000		A	5	25.0
	RF4-SE-1	POE0029-13	5/2/2005	Total Pb (EPA 6010B)	Soil	5/12/2005	28		A	1	5.0
	RF4-SE-MS/MSD	POE0029-14	5/2/2005	Total Pb (EPA 6010B)	MS/MSD	5/13/2005	20000	M1	A	5	25.0
	RF11-NE-0.5	POE0029-15	5/2/2005	Total Pb (EPA 6010B)	Soil	5/12/2005	50		A	1	5.0
	RF11-NE-1	POE0029-16	5/2/2005	Total Pb (EPA 6010B)	Soil	5/12/2005	21		A	1	5.0
	RF11-SE-0.5	POE0029-17	5/2/2005	Total Pb (EPA 6010B)	Soil	5/12/2005	27		A	1	5.0
	RF11-SE-1	POE0029-18	5/2/2005	Total Pb (EPA 6010B)	Soil	5/18/2005	16		A	1	5.0
	RF15-NW-0.5	POE0029-19	5/2/2005	Total Pb (EPA 6010B)	Soil	5/17/2005	41		A	1	5.0
	RF10-SW-0.5	POE0029-20	5/2/2005	Total Pb (EPA 6010B)	Soil	5/17/2005	39		A	1	5.0
	RF10-SW-1	POE0029-21	5/2/2005	Total Pb (EPA 6010B)	Soil	5/17/2005	37		A	1	5.0
	RF10-NW-0.5	POE0029-22	5/2/2005	Total Pb (EPA 6010B)	Soil	5/18/2005	83		A	1	5.0
	RF10-NW-1	POE0029-23	5/2/2005	Total Pb (EPA 6010B)	Soil	5/17/2005	220		A	1	5.0
	RF15-SW-1	POE0029-24	5/2/2005	Total Pb (EPA 6010B)	Soil	5/18/2005	31		A	1	5.0
	RF15-NW-1	POE0029-25	5/2/2005	Total Pb (EPA 6010B)	Soil	5/18/2005	78		A	1	5.0
	R3-SW-0.5	POE0029-26	5/2/2005	Total Pb (EPA 6010B)	Soil	5/17/2005	1000		A	1	5.0
	RF3-SW-1	POE0029-27	5/2/2005	Total Pb (EPA 6010B)	Soil	5/18/2005	7100		A	5	25.0
	RF3-NW-0.5	POE0029-28	5/2/2005	Total Pb (EPA 6010B)	Soil	5/18/2005	19000		A	10	50.0
	RF3-NW-1	POE0029-29	5/2/2005	Total Pb (EPA 6010B)	Soil	5/17/2005	3200		A	1	5.0
	RF3-NW-MS/MSD	POE0029-30	5/2/2005	Total Pb (EPA 6010B)	MS/MSD	5/18/2005	35000	M1	A	10	50.0
	RF3-NE-0.5	POE0029-31	5/2/2005	Total Pb (EPA 6010B)	Soil	5/18/2005	2000		A	1	5.0
	RF3-NE-1	POE0029-32	5/2/2005	Total Pb (EPA 6010B)	Soil	5/18/2005	2100		A	1	5.0
	RF3-SE-0.5	POE0029-33	5/2/2005	Total Pb (EPA 6010B)	Soil	5/17/2005	2000		A	1	5.0
	RF3-SE-1	POE0029-34	5/2/2005	Total Pb (EPA 6010B)	Soil	5/17/2005	1000		A	1	5.0
	RF10-NE-0.5	POE0029-35	5/2/2005	Total Pb (EPA 6010B)	Soil	5/18/2005	89		A	1	5.0
	RF10-NE-1	POE0029-36	5/2/2005	Total Pb (EPA 6010B)	Soil	5/18/2005	38		A	1	5.0
	RF10-SE-0.5	POE0029-37	5/2/2005	Total Pb (EPA 6010B)	Soil	5/18/2005	22		A	1	5.0
	RF10-SE-1	POE0029-38	5/2/2005	Total Pb (EPA 6010B)	Soil	5/18/2005	32		A	1	5.0
	RF12-0.5	POE0029-39	5/2/2005	Total Pb (EPA 6010B)	Soil	5/18/2005	26		A	1	5.0
	5/2/05 Rinsate	POE0029-40	5/2/2005	Total Pb (EPA 6010B)	Rinsate	5/12/2005	ND		A	1	0.050µL
	RF12-1	POE0029-41	5/2/2005	Total Pb (EPA 6010B)	Soil	5/18/2005	18		A	1	5.0
	RF5-0.5	POE0029-42	5/2/2005	Total Pb (EPA 6010B)	Soil	5/18/2005	6200		A	2	10.0
	RF5-1	POE0029-43	5/2/2005	Total Pb (EPA 6010B)	Soil	5/17/2005	81		A	1	5.0
	RF14-0.5	POE0029-44	5/2/2005	Total Pb (EPA 6010B)	Soil	5/18/2005	32		A	1	5.0
	RF14-1	POE0029-45	5/2/2005	Total Pb (EPA 6010B)	Soil	5/18/2005	36		A	1	5.0
	RF7-0.5	POE0029-46	5/2/2005	Total Pb (EPA 6010B)	Soil	5/18/2005	5000		A	2	10.0
	RF7-1	POE0029-47	5/2/2005	Total Pb (EPA 6010B)	Soil	5/18/2005	5500		A	2	10.0
	RF6-0.5	POE0029-48	5/2/2005	Total Pb (EPA 6010B)	Soil	5/18/2005	33		A	1	5.0
	RF6-1	POE0029-49	5/2/2005	Total Pb (EPA 6010B)	Soil	5/17/2005	60		A	1	5.0
	RF13-0.5	POE0029-50	5/2/2005	Total Pb (EPA 6010B)	Soil	5/18/2005	21		A	1	5.0
	RF13-1	POE0029-51	5/2/2005	Total Pb (EPA 6010B)	Soil	5/18/2005	14		A	1	5.0
	RF13-MS/MSD	POE0029-52	5/2/2005	Total Pb (EPA 6010B)	MS/MSD	5/18/2005	19		A	1	5.0
	RF9-0.5	POE0029-53	5/2/2005	Total Pb (EPA 6010B)	Soil	5/18/2005	35		A	1	5.0
	RF9-1	POE0029-54	5/2/2005	Total Pb (EPA 6010B)	Soil	5/17/2005	36		A	1	5.0
	RF2-0.5	POE0029-55	5/2/2005	Total Pb (EPA 6010B)	Soil	5/17/2005	4000		A	1	5.0
	RF2-1	POE0029-56	5/2/2005	Total Pb (EPA 6010B)	Soil	5/17/2005	1100		A	1	5.0
	RF1-0.5	POE0029-57	5/2/2005	Total Pb (EPA 6010B)	Soil	5/18/2005	23		A	1	5.0
	RF1-1	POE0029-58	5/2/2005	Total Pb (EPA 6010B)	Soil	5/17/2005	60		A	1	5.0
	RF8-0.5	POE0029-59	5/2/2005	Total Pb (EPA 6010B)	Soil	5/17/2005	49		A	1	5.0
	RF8-1	POE0029-60	5/2/2005	Total Pb (EPA 6010B)	Soil	5/18/2005	22		A	1	5.0
	RF15-SE-0.5	POE0029-61	5/2/2005	Total Pb (EPA 6010B)	Soil	5/18/2005	17		A	1	5.0
	RF15-SE-1	POE0029-62	5/2/2005	Total Pb (EPA 6010B)	Soil	5/17/2005	1200		A	1	5.0

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Approved

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**Table 3**  
**Summary of Field Duplicate Results -**  
**SDG POE0029**  
**City of Henderson Former Police Department Small Arms Firing Range Site**

Original Sample #	Lab ID	Matrix	Element	Orig. Results	Duplicate Sample #	Lab ID	Dup. Results	RPD
RF4-SW-0.5	POE0029-05	Soil	Total Lead	300	RF4-SW-1	POE0029-06	140	73%
RF15-NW-0.5	POE0029-19	Soil	Total Lead	41	RF10-SW-0.5	POE0029-20	39	5%
RF10-SW-1	POE0029-21	Soil	Total Lead	37	RF15-SW-1	POE0029-24	31	18%
RF10-NW-1	POE0029-23	Soil	Total Lead	220	RF15-NW-1	POE0029-25	78	95%

Reviewed   
Approved Blm





June 28, 2005

Project No. 4400041025.08

**DATA VALIDATION SUMMARY REPORT FOR THE CITY OF HENDERSON FORMER  
POLICE DEPARTMENT SMALL ARMS FIRING RANGE SITE, HENDERSON, NV**

**LABORATORY: Del Mar Analytical, Las Vegas, NV**

**SAMPLING DATES: May 4 and 5, 2004**

Data validation of sample delivery group (SDG) POE0167 was performed according to the guidelines provided in EPA Test Method 6010B, SW-846 update III and the U. S. Environmental Protection Agency (EPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, July 2002.

Following USEPA Region 9 Tier 1A criteria, the data were reviewed for holding times, blanks, initial and continuing calibration verification (ICV/CCV) standards, laboratory control samples (LCS), matrix spikes (MS), matrix spike duplicates (MSD), ICP interference check standards, ICP serial dilutions and field duplicate samples.

**The following paragraphs highlight the essential findings of the data validation effort:**

**I. Total Lead (6010B)**

Overall, the data are usable as reported. Qualification was not required.

**A. Reporting Limits**

The laboratory reporting limits for lead in soil matrix samples met the project required reporting limits.

**B. Holding Times**

Technical holding time criteria were met for all project samples.

**C. Blanks**

Target analytes were not observed in any laboratory method blanks associated with the project samples.

**USABILITY**

The quality control criteria were reviewed, and other than those discussed above, all criteria were met and the data are considered acceptable. Based upon the Tier 1 data validation, all results are considered valid and usable for all purposes. The absence of rejected or qualified data indicates high usability.

**Table 1**  
**Sample Summary SDG POE0167**  
**City of Henderson Former Police Department Small Arms Firing Range Site**

Sample Area	Site Sample ID	Lab Sample ID	Date Sampled	Analyse/Method	Sample Type
Berm	CP-7-0	POE0167-01	4-May-05	Total Lead (6010B)	Soil
	CP-7-5	POE0167-02	4-May-05	Total Lead (6010B)	Soil
	CP-7-10	POE0167-03	4-May-05	Total Lead (6010B)	Soil
	CP-7-15	POE0167-04	4-May-05	Total Lead (6010B)	Soil
	CP-7-20	POE0167-05	4-May-05	Total Lead (6010B)	Soil
	CP-8-0	POE0167-06	4-May-05	Total Lead (6010B)	Soil
	CP-8-5	POE0167-07	4-May-05	Total Lead (6010B)	Soil
	CP-8-10	POE0167-08	4-May-05	Total Lead (6010B)	Soil
	CP-8-15	POE0167-09	4-May-05	Total Lead (6010B)	Soil
	CP-8-20	POE0167-10	4-May-05	Total Lead (6010B)	Soil
	S-04-05 RINSATE	POE0167-11	4-May-05	Total Lead (6010B)	Rinsate
	CP-1-0	POE0167-12	5-May-05	Total Lead (6010B)	Soil
	CP-1-5	POE0167-13	5-May-05	Total Lead (6010B)	Soil
	CP-1-10	POE0167-14	5-May-05	Total Lead (6010B)	Soil
	CP-1-15	POE0167-15	5-May-05	Total Lead (6010B)	FD#1A
	CP-12-0	POE0167-16	5-May-05	Total Lead (6010B)	FD#1B
	CP-2-0	POE0167-17	5-May-05	Total Lead (6010B)	Soil
	CP-2-5	POE0167-18	5-May-05	Total Lead (6010B)	Soil
	CP-2-10	POE0167-19	5-May-05	Total Lead (6010B)	Soil
	CP-2-15	POE0167-20	5-May-05	Total Lead (6010B)	Soil
	CP-3-0	POE0167-21	5-May-05	Total Lead (6010B)	Soil
	CP-3-5	POE0167-22	5-May-05	Total Lead (6010B)	Soil
	CP-3-10	POE0167-23	5-May-05	Total Lead (6010B)	Soil
	CP-3-15	POE0167-24	5-May-05	Total Lead (6010B)	Soil
	CP-4-0	POE0167-25	5-May-05	Total Lead (6010B)	Soil
	CP-4-5	POE0167-26	5-May-05	Total Lead (6010B)	Soil
	CP-4-10	POE0167-27	5-May-05	Total Lead (6010B)	Soil
	CP-4-15	POE0167-28	5-May-05	Total Lead (6010B)	Soil
	CP-5-0	POE0167-29	5-May-05	Total Lead (6010B)	Soil
	CP-5-5	POE0167-30	5-May-05	Total Lead (6010B)	Soil
	CP-5-10	POE0167-31	5-May-05	Total Lead (6010B)	Soil
	CP-5-15	POE0167-32	5-May-05	Total Lead (6010B)	Soil
	CP-6-0	POE0167-33	5-May-05	Total Lead (6010B)	Soil
	CP-6-5	POE0167-34	5-May-05	Total Lead (6010B)	FD#2A
	CP-12-5	POE0167-35	5-May-05	Total Lead (6010B)	FD#2B
	CP-6-10	POE0167-36	5-May-05	Total Lead (6010B)	Soil
	CP-6-15	POE0167-37	5-May-05	Total Lead (6010B)	Soil
	CP-6-20	POE0167-38	5-May-05	Total Lead (6010B)	Soil
	CP-9-0	POE0167-39	5-May-05	Total Lead (6010B)	Soil
	CP-12-10	POE0167-40	5-May-05	Total Lead (6010B)	FD#3A
	CP-9-5	POE0167-41	5-May-05	Total Lead (6010B)	FD#3B
	CP-9-10	POE0167-42	5-May-05	Total Lead (6010B)	Soil
	CP-9-15	POE0167-43	5-May-05	Total Lead (6010B)	Soil
	CP-9-20	POE0167-44	5-May-05	Total Lead (6010B)	Soil
	CP-10-0	POE0167-45	5-May-05	Total Lead (6010B)	Soil
	CP-10-5	POE0167-46	5-May-05	Total Lead (6010B)	FD#4A
	CP-12-15	POE0167-47	5-May-05	Total Lead (6010B)	FD#4B
	CP-10-10	POE0167-48	5-May-05	Total Lead (6010B)	Soil
	CP-10-15	POE0167-49	5-May-05	Total Lead (6010B)	Soil
	CP-10-20	POE0167-50	5-May-05	Total Lead (6010B)	Soil
	CP-11-0	POE0167-51	5-May-05	Total Lead (6010B)	Soil
	CP-11-5	POE0167-52	5-May-05	Total Lead (6010B)	FD#5A
	CP-13-0	POE0167-53	5-May-05	Total Lead (6010B)	FD#5B
	CP-11-10	POE0167-54	5-May-05	Total Lead (6010B)	Soil
	CP-11-15	POE0167-55	5-May-05	Total Lead (6010B)	Soil
	CP-20-0	POE0167-56	5-May-05	Total Lead (6010B)	Soil
	CP-20-5	POE0167-57	5-May-05	Total Lead (6010B)	Soil
	CP-20-10	POE0167-58	5-May-05	Total Lead (6010B)	FD#6A
	CP-13-5	POE0167-59	5-May-05	Total Lead (6010B)	FD#6B
	5-05-05 RINSATE	POE0167-60	5-May-05	Total Lead (6010B)	R

FD: Field duplicate of previous numbered sample, (1), (2), etc.

R: Rinsate

EB: Equipment Blank

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Table 2  
Results for Total Lead  
Henderson Firing Range

Site Sample ID	Analyses /Method	Lead Results (mg/Kg)	Dilution Factor	Lab Reporting Limit (mg/Kg)	Lab Qualifier	Validation Qualifier
CP-7-0	Total Pb (EPA 6010B)	510	1	2.0		A
CP-7-5	Total Pb (EPA 6010B)	66	1	2.0		A
CP-7-10	Total Pb (EPA 6010B)	22	1	2.0		A
CP-7-15	Total Pb (EPA 6010B)	12	1	2.0		A
CP-7-20	Total Pb (EPA 6010B)	18	1	2.0		A
CP-8-0	Total Pb (EPA 6010B)	13000	20	40.0		A
CP-8-5	Total Pb (EPA 6010B)	50	1	2.0		A
CP-8-10	Total Pb (EPA 6010B)	130	1	2.0		A
CP-8-15	Total Pb (EPA 6010B)	41	1	2.0		A
CP-8-20	Total Pb (EPA 6010B)	26	1	2.0		A
5/04/05 RINSATE	Total Pb (EPA 6010B)	ND	1	0.0050µ/L		A
CP-1-0	Total Pb (EPA 6010B)	18	1	2.0		A
CP-1-5	Total Pb (EPA 6010B)	26	1	2.0		A
CP-1-10	Total Pb (EPA 6010B)	520	1	2.0		A
CP-1-15	Total Pb (EPA 6010B)	9.3	1	2.0		A
CP-12-0	Total Pb (EPA 6010B)	9.8	1	2.0		A
CP-2-0	Total Pb (EPA 6010B)	21	1	2.0		A
CP-2-5	Total Pb (EPA 6010B)	57	1	2.0		A
CP-2-10	Total Pb (EPA 6010B)	23	1	2.0		A
CP-2-15	Total Pb (EPA 6010B)	48	1	2.0		A
CP-3-0	Total Pb (EPA 6010B)	39	1	2.0		A
CP-3-5	Total Pb (EPA 6010B)	17	1	2.0		A
CP-3-10	Total Pb (EPA 6010B)	14	1	2.0		A
CP-3-15	Total Pb (EPA 6010B)	10	1	2.0		A
CP-4-0	Total Pb (EPA 6010B)	44	1	2.0		A
CP-4-5	Total Pb (EPA 6010B)	420	1	2.0		A
CP-4-10	Total Pb (EPA 6010B)	15	1	2.0		A
CP-4-15	Total Pb (EPA 6010B)	27	1	2.0		A
CP-5-0	Total Pb (EPA 6010B)	110	1	2.0		A
CP-5-5	Total Pb (EPA 6010B)	180	1	2.0		A
CP-5-10	Total Pb (EPA 6010B)	20	1	2.0		A
CP-5-15	Total Pb (EPA 6010B)	150	1	2.0		A
CP-6-0 MS/MSD	Total Pb (EPA 6010B)	48	1	2.0		A
CP-6-5	Total Pb (EPA 6010B)	2100	5	10.0		A
CP-12-5	Total Pb (EPA 6010B)	2600	5	10.0		A
CP-6-10	Total Pb (EPA 6010B)	5600	10	20.0		A
CP-6-15	Total Pb (EPA 6010B)	30	1	2.0		A
CP-6-20	Total Pb (EPA 6010B)	9.2	1	2.0		A
CP-9-0 MS/MSD	Total Pb (EPA 6010B)	200	1	2.0		A
CP-12-10	Total Pb (EPA 6010B)	17	1	2.0		A
CP-9-5	Total Pb (EPA 6010B)	20	1	2.0		A
CP-9-10	Total Pb (EPA 6010B)	11	1	2.0		A
CP-9-15	Total Pb (EPA 6010B)	9.9	1	2.0		A
CP-9-20	Total Pb (EPA 6010B)	18	1	2.0		A
CP-10-0	Total Pb (EPA 6010B)	15	1	2.0		A
CP-10-5	Total Pb (EPA 6010B)	23	1	2.0		A
CP-12-15	Total Pb (EPA 6010B)	22	1	2.0		A
CP-10-10	Total Pb (EPA 6010B)	12	1	2.0		A
CP-10-15	Total Pb (EPA 6010B)	15	1	2.0		A
CP-10-20	Total Pb (EPA 6010B)	10	1	2.0		A
CP-11-0	Total Pb (EPA 6010B)	13	1	2.0		A
CP-11-5	Total Pb (EPA 6010B)	8.8	1	2.0		A
CP-13-0	Total Pb (EPA 6010B)	8.8	1	2.0		A
CP-11-10	Total Pb (EPA 6010B)	29	1	2.0		A
CP-11-15	Total Pb (EPA 6010B)	29	1	2.0		A
CP-11-10	Total Pb (EPA 6010B)	42	1	2.0		A
CP-20-05	Total Pb (EPA 6010B)	27	1	2.0		A
CP-20-10	Total Pb (EPA 6010B)	56	1	2.0		A
CP-13-5	Total Pb (EPA 6010B)	65	1	2.0		A
5/5/05 RINSATE	Total Pb (EPA 6010B)	ND	1	0.0050µ/L		A

Reviewed  
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**Table 3**  
**Summary of Field Duplicates - SDG POE0167**  
**City of Henderson Former Police Department Small Arms Firing Range Site**

Original Sample #	Lab ID	Matrix	Element	Orig. Results	Duplicate Sample #	Lab ID	Dup. Results	RPD
CP-1-15	POE0167-15	Soil	Total Lead	9.3	CP-12-0	POE0167-16	9.8	5%
CP-6-5	POE0167-34	Soil	Total Lead	2100	CP-12-5	POE0167-35	2600	21%
CP-9-5	POE0167-41	Soil	Total Lead	20	CP-12-10	POE0167-40	17	16%
CP-10-5	POE0167-46	Soil	Total Lead	23	CP-12-15	POE0167-47	22	4%
CP-11-5	POE0167-52	Soil	Total Lead	8.8	CP-13-0	POE0167-53	8.8	0%
CP-20-10	POE0167-58	Soil	Total Lead	56	CP-13-5	POE0167-59	65	15%

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June 28, 2005

Project No. 4400041025.08

**DATA VALIDATION SUMMARY REPORT FOR THE CITY OF HENDERSON FORMER  
POLICE DEPARTMENT SMALL ARMS FIRING RANGE SITE, HENDERSON, NV**

**LABORATORY:** Del Mar Analytical, Las Vegas, NV

**SAMPLING DATES:** May 24, 2004

Data validation of sample delivery group (SDG) POE0650 was performed according to the guidelines provided in EPA Test Method 6010B, SW-846 update III and the U. S. Environmental Protection Agency (EPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, July 2002.

Following USEPA Region 9 Tier 1A and Tier 2A, the data were reviewed for holding times, blanks, initial and continuing calibration verification (ICV/CCV) standards, laboratory control samples (LCS), matrix spikes (MS), matrix spike duplicates (MSD), ICP interference check standards, ICP serial dilutions, compound identification and quantitation, and field duplicate samples.

**The following paragraphs highlight the essential findings of the data validation effort:**

**I. Total Lead (6010B)**

Overall, the data are usable as reported.

**A. Reporting Limits**

The laboratory reporting limits for lead in soil matrix samples met the project required reporting limits, with the following exception:

**B. Holding Times**

Technical holding time criteria were met for all project samples.

**C. Blanks**

Target analytes were not observed in any laboratory method blanks associated with the project samples. Target analytes were not observed in the two equipment blanks associated with the project samples.

**Table 1**  
**Sample Summary -SDG POE0650**  
**City of Henderson Former Police Department**  
**Small Arms Firing Range Site**

Sample Area	Site Sample ID	Lab Sample ID	Date Sampled	Analyse/Method	Sample Type
Range Floor Sampling Round 2	RF-2A-1.5	POE0650-01	24-May-05	Total Lead (6010B)	Soil
	RF-2A-2.0	POE0650-02	24-May-05	Total Lead (6010B)	Soil
	RF-3A-NE-1.5	POE0650-03	24-May-05	Total Lead (6010B)	Soil
	RF-3A-NE-2.0	POE0650-04	24-May-05	Total Lead (6010B)	Soil
	RF-3A-NW-1.5	POE0650-05	24-May-05	Total Lead (6010B)	Soil
	RF-3A-NW-2.0	POE0650-06	24-May-05	Total Lead (6010B)	Soil
	RF-3A-SW-1.5	POE0650-07	24-May-05	Total Lead (6010B)	Soil
	RF-3A-SW-2.0	POE0650-08	24-May-05	Total Lead (6010B)	Soil
	RF-3A-SE-1.5	POE0650-09	24-May-05	Total Lead (6010B)	Soil
	RF-3A-SE-2.0	POE0650-10	24-May-05	Total Lead (6010B)	Soil
	RF-1A-SW-1.5	POE0650-11	24-May-05	Total Lead (6010B)	Soil
	RF-4A-NE-1.5	POE0650-12	24-May-05	Total Lead (6010B)	Soil
	RF-4A-NE-2.0	POE0650-13	24-May-05	Total Lead (6010B)	Soil
	RF-4A-SE-1.5	POE0650-14	24-May-05	Total Lead (6010B)	Soil
	RF-4A-SE-2.0	POE0650-15	24-May-05	Total Lead (6010B)	Soil
	RF-7A-1.5	POE0650-16	24-May-05	Total Lead (6010B)	Soil
	RF-7A-2.0	POE0650-17	24-May-05	Total Lead (6010B)	Soil

**BOLD:** EPA Tier 2A validation

**FD:** Field duplicate Samples

**R:** Rinsate

**EQ:** Equipment Rinse



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*[Signature]*

Table 2 Results for Total Lead -  
SDG POE0650  
Henderson Firing Range  
May 2005

Work Area	Site Sample ID	Analyses /Method	Lead Results (mg/Kg)	Dilution Factor	Lab Reporting Limit (mg/Kg)	Validation Qualifier
Range Floor	RF-2A-1.5	Total Pb (EPA 6010B)	18	1	5.0	A
	RF-2A-2.0	Total Pb (EPA 6010B)	16	1	5.0	A
	RF-3A-NE-1.5	Total Pb (EPA 6010B)	6400	2	10.0	A
	RF-3A-NE-2.0	Total Pb (EPA 6010B)	870	1	5.0	A
	RF-3A-NW-1.5	Total Pb (EPA 6010B)	83	1	5.0	A
	RF-3A-NW-2.0	Total Pb (EPA 6010B)	110	1	5.0	A
	RF-3A-SW-1.5	Total Pb (EPA 6010B)	390	1	5.0	A
	RF-3A-SW-2.0	Total Pb (EPA 6010B)	490	1	5.0	A
	RF-3A-SE-1.5	Total Pb (EPA 6010B)	38	1	5.0	A
	RF-3A-SE-2.0	Total Pb (EPA 6010B)	37	1	5.0	A
	RF-1A-SW-1.5	Total Pb (EPA 6010B)	56	1	5.0	A
	RF-4A-NE-1.5	Total Pb (EPA 6010B)	290	1	5.0	A
	RF-4A-NE-2.0	Total Pb (EPA 6010B)	110	1	5.0	A
	RF-4A-SE-1.5	Total Pb (EPA 6010B)	220	1	5.0	A
	RF-4A-SE-2.0	Total Pb (EPA 6010B)	730	1	5.0	A
	RF-7A-1.5MS/MSD	Total Pb (EPA 6010B)	130	1	5.0	J
	RF-7A-2.0	Total Pb (EPA 6010B)	150	1	5.0	A

Reviewed   
Approved 





June 17, 2005

Project No. 4400041025.08

**DATA VALIDATION SUMMARY REPORT FOR THE CITY OF HENDERSON FORMER  
POLICE DEPARTMENT SMALL ARMS FIRING RANGE SITE, HENDERSON, NV**

**LABORATORY: Del Mar Analytical, Las Vegas, NV**

**SAMPLING DATES: May 25, 2004**

Data validation of sample delivery group (SDG) POE0722 was performed according to the guidelines provided in EPA Test Method 6010B, SW-846 update III and the U. S. Environmental Protection Agency (EPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, July 2002.

Following USEPA Region 9 Tier 1A and Tier 2A, the data were reviewed for holding times, blanks, initial and continuing calibration verification (ICV/CCV) standards, laboratory control samples (LCS), matrix spikes (MS), matrix spike duplicates (MSD), ICP interference check standards, ICP serial dilutions, compound identification and quantitation, and field duplicate samples.

**The following paragraphs highlight the essential findings of the data validation effort:**

**I. Total Lead (6010B)**

Overall, the data are usable as reported. Qualification was not required.

**A. Reporting Limits**

The laboratory reporting limits lead in soil matrix samples met the project required reporting limits.

**B. Holding Times**

Technical holding time criteria were met for all project samples.

**C. Blanks**

Target analytes were not observed in any laboratory method blanks associated with the project samples. Target analytes were not observed in the two equipment blanks associated with the project samples.

**Table 1**  
**Sample Summary - SDG POE0722**  
**City of Henderson Former Police Department**  
**Small Arms Firing Range Site**

Sample Area	Site Sample ID	Lab Sample ID	Date Sampled	Analyse/Method	Sample Type
	EQ RINSE	POE0722-01	25-May-05	Total Lead (6010B)	EQ
	RF-5A-1.5	POE0722-02	25-May-05	Total Lead (6010B)	Soil
	RF-5A-2.0	POE0722-03	25-May-05	Total Lead (6010B)	Soil
	RF-8A-1.5	POE0722-04	25-May-05	Total Lead (6010B)	Soil

**BOLD:** EPA Tier 2A review

**EQ:** Equipment Rinse

Reviewed

Approved

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Table 2  
Results for Total Lead - SDG POE0722  
Henderson Firing Range  
May 2005

Work Area	Site Sample ID	Analyses /Method	Lead Results (mg/Kg)	Dilution Factor	Lab Reporting Limit (mg/Kg)	Lab Qualifier	Validation Qualifier
Range Floor	5/5/2005 rinsate	Total Pb (EPA 6010B)	ND	1	0.0050µ/L		A
	RF-5A-1.5	Total Pb (EPA 6010B)	1200	1	5.0		A
	RF-5A-2.0	Total Pb (EPA 6010B)	1100	1	5.0		A
	RF-8A-1.5	Total Pb (EPA 6010B)	6600	2	10.0		A

Reviewed SH  
Approved BW





June 28, 2005

Project No. 4400041025.08

**DATA VALIDATION SUMMARY REPORT FOR THE CITY OF HENDERSON FORMER  
POLICE DEPARTMENT SMALL ARMS FIRING RANGE SITE, HENDERSON, NV**

**LABORATORY: Del Mar Analytical, Las Vegas, NV**

**SAMPLING DATES: May 25, 2004**

Data validation of sample delivery group (SDG) POE0725 was performed according to the guidelines provided in EPA Test Method 6010B, SE-846 update III and the U. S. Environmental Protection Agency (EPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, July 2002.

Following USEPA Region 9 Tier 1A criteria, the data was reviewed for holding times, blanks, initial and continuing calibration verification (ICV/CCV) standards, laboratory control samples (LCS), matrix spikes (MS), matrix spike duplicates (MSD), ICP interference check standards, ICP serial dilutions and field duplicate samples.

**The following paragraphs highlight the essential findings of the data validation effort:**

**I. Total Lead (6010B)**

Overall, the data are usable as reported.

**A. Reporting Limits**

1. The laboratory reporting limits for lead in soil matrix samples met the project required reporting limits.

**B. Holding Times**

Technical holding time criteria were met for all project samples.

**C. Blanks**

Target analytes were not observed in any laboratory method blanks associated with the project samples. Target analytes were not observed in the two equipment blanks associated with the project samples.

**Table 1**  
**Sample Summary SDG POE0725**  
**City of Henderson Former Police Department Small Arms Firing Range Site**

Sample Area	Site Sample ID	Lab Sample ID	Date Sampled	Analyse/Method	Sample Type
Berm	CP-5A/6A-5	POE0725-01	25-May-05	Total Lead (6010B)	Soil
	CP-5A/5	POE0725-02	25-May-05	Total Lead (6010B)	Soil
	CP-5A/6A/10	POE0725-03	25-May-05	Total Lead (6010B)	Soil
	CP-6A-5	POE0725-04	25-May-05	Total Lead (6010B)	Soil
	CP-6A-10	POE0725-05	25-May-05	Total Lead (6010B)	Soil
	CP-6A-15	POE0725-06	25-May-05	Total Lead (6010B)	Soil
	CP-6A/7A-5	POE0725-07	25-May-05	Total Lead (6010B)	Soil
	CP-6A/7A-10	POE0725-08	25-May-05	Total Lead (6010B)	Soil
	CP-7A-5	POE0725-09	25-May-05	Total Lead (6010B)	Soil
	CP-7A/8A-5	POE0725-10	25-May-05	Total Lead (6010B)	Soil
	CP-8A-5	POE0725-11	25-May-05	Total Lead (6010B)	Soil
	CP-7A/8A-10B	POE0725-12	25-May-05	Total Lead (6010B)	Soil
	CP-9A-10	POE0725-13	25-May-05	Total Lead (6010B)	Soil
	CP-7A/8A-10A	POE0725-14	25-May-05	Total Lead (6010B)	Soil
	CP-7A/8A-5B	POE0725-15	25-May-05	Total Lead (6010B)	Soil
	CP-7A-10B	POE0725-16	25-May-05	Total Lead (6010B)	Soil
	CP-7A-10A	POE0725-17	25-May-05	Total Lead (6010B)	Soil
	CP-7A-5B	POE0725-18	25-May-05	Total Lead (6010B)	Soil
	CP-6A/7A-10B	POE0725-19	25-May-05	Total Lead (6010B)	Soil
	CP-6A/7A-5B	POE0725-20	25-May-05	Total Lead (6010B)	Soil
	CP-8A/9A-5/CP-8A/9A-5 MS/MSD	POE0725-21	25-May-05	Total Lead (6010B)	Soil
	EQ Rinse 5-25-05B	POE0725-22	25-May-05	Total Lead (6010B)	R

R: Rinsate

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Table 2  
Results for Total Lead - SDG POE0725  
Henderson Firing Range  
May 2005

Work Area	Site Sample ID	Analyses /Method	Lead Results (mg/Kg)	Dilution Factor	Lab Reporting Limit (mg/Kg)	Lab Qualifier	Validation Qualifier
Berm	CP-5A/6A-5	Total Pb (EPA 6010B)	2200	1	5.0		
	CO-5A-5	Total Pb (EPA 6010B)	1500	1	5.0		
	CP-5A/6A-10	Total Pb (EPA 6010B)	65	1	5.0		
	CP-6A-5	Total Pb (EPA 6010B)	8600	2	10.0		
	CP-6A-10	Total Pb (EPA 6010B)	36	1	5.0		
	CP-6A-15	Total Pb (EPA 6010B)	13	1	5.0		
	CP-6A/7A-5	Total Pb (EPA 6010B)	460	1	5.0		
	CP-6A/7A/10	Total Pb (EPA 6010B)	15	1	5.0		
	CP-7A-5	Total Pb (EPA 6010B)	14000	5	25.0		
	CP-7A/8A-5 MS/MSD	Total Pb (EPA 6010B)	13	1	5.0	M1	J
	CP-8A-5	Total Pb (EPA 6010B)	16	1	5.0		
	CP-7A/8A-10B	Total Pb (EPA 6010B)	13	1	5.0		
	CP-9A-10	Total Pb (EPA 6010B)	13	1	5.0		
	CP-7A/8A-10A	Total Pb (EPA 6010B)	15	1	5.0		
	CP-7A/8A-5B	Total Pb (EPA 6010B)	14	1	5.0		
	CP-7A-10B	Total Pb (EPA 6010B)	14	1	5.0		
	CP-7A-10A	Total Pb (EPA 6010B)	12	1	5.0		
	CP-7A-5B	Total Pb (EPA 6010B)	62	1	5.0		
	CP-6A/7A/10B	Total Pb (EPA 6010B)	19	1	5.0		
	CP-6A/7A-5B	Total Pb (EPA 6010B)	290	1	5.0		
	CP-8A/9A/5 MS/MSD	Total Pb (EPA 6010B)	23	1	5.0		
	2/25/2005 Rinsate	Total Pb (EPA 6010B)	ND	1	0.0050µ/L		

Reviewed

Approved

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