SAMPLING AND ANALYSIS REPORT – ADDITIONAL DEPTH SAMPLING
MINERAL COUNTY FAIRGROUNDS
Willow Creek Reclamation Committee – February 22, 2006

INTRODUCTION

Soil sampling and analysis at the proposed Mineral County Fairgrounds Association (MCFA) fairgrounds site was first conducted during September and October 2004 by the Willow Creek Reclamation Committee (WCRC). Surface composite samples were collected from 0 to 2 inches below ground surface in defined sectors in the floodplain and middle bench areas of the site. Lead concentrations were determined using an X-Ray Fluorescence (XRF) instrument. To determine the leachability of metals, soil samples were also sent to a lab for Synthetic Precipitation Leaching Procedure (SPLP; EPA Method SW1312) with subsequent ICP analysis for cadmium, lead, and zinc. The 2004 study indicated that all of the sampled area on the surface exceeded the residential use standard for lead (400 ppm) and only one sector, sector XYZ, did not exceed the commercial use standard (2,920 ppm) for lead. The SPLP data indicated that cadmium, lead, and zinc could potentially leach into the groundwater due to precipitation or irrigation of the property as SPLP concentrations were above applicable standards for domestic and agricultural use.

Although surface concentrations were characterized, the 2004 study did not provide sufficient information about depths of contamination at the site to design a cleanup plan. Therefore, American Geological Services (AGS) collected samples from various depths within soil profiles at the site during late September of 2005. The WCRC evaluated the samples for lead concentration using their XRF instrument during January and February of 2006. A total of 325 samples from 65 sites were collected and analyzed.

This report details the sampling and analysis conducted in 2005 and 2006 to determine the extent and depth of soils to be remediated at the MCFA site. Please refer to the 2004 report for additional details about the 2004 sampling.

BACKGROUND

The Mineral County Fairgrounds Association property consists of 45.89 acres and is located southeast of the junction of Airport Road and Highway 149 west, approximately 0.75 miles outside of Creede, Colorado. The legal description is the Southwest quarter of Section 6, Township 41 North, Range 1 East, and the elevation is approximately 8,640 feet. The property is outside of Creede city limits and is zoned rural by Mineral County. Adjacent property uses include rural agriculture, the local airport, residential, open space, and a recreational vehicle park. The property consists of a raised bench area (approximately 17 acres) sloping down to the alluvial area of the Willow Creek floodplain. Environmental concerns at the site include mine waste and/or mill tailings that were inadvertently deposited on the property from failures of structures or impoundments on adjacent properties. The property has been and is currently open space. The floodplain and middle bench portions of the property were the focus of this sampling effort, as indicated in Figure 1.

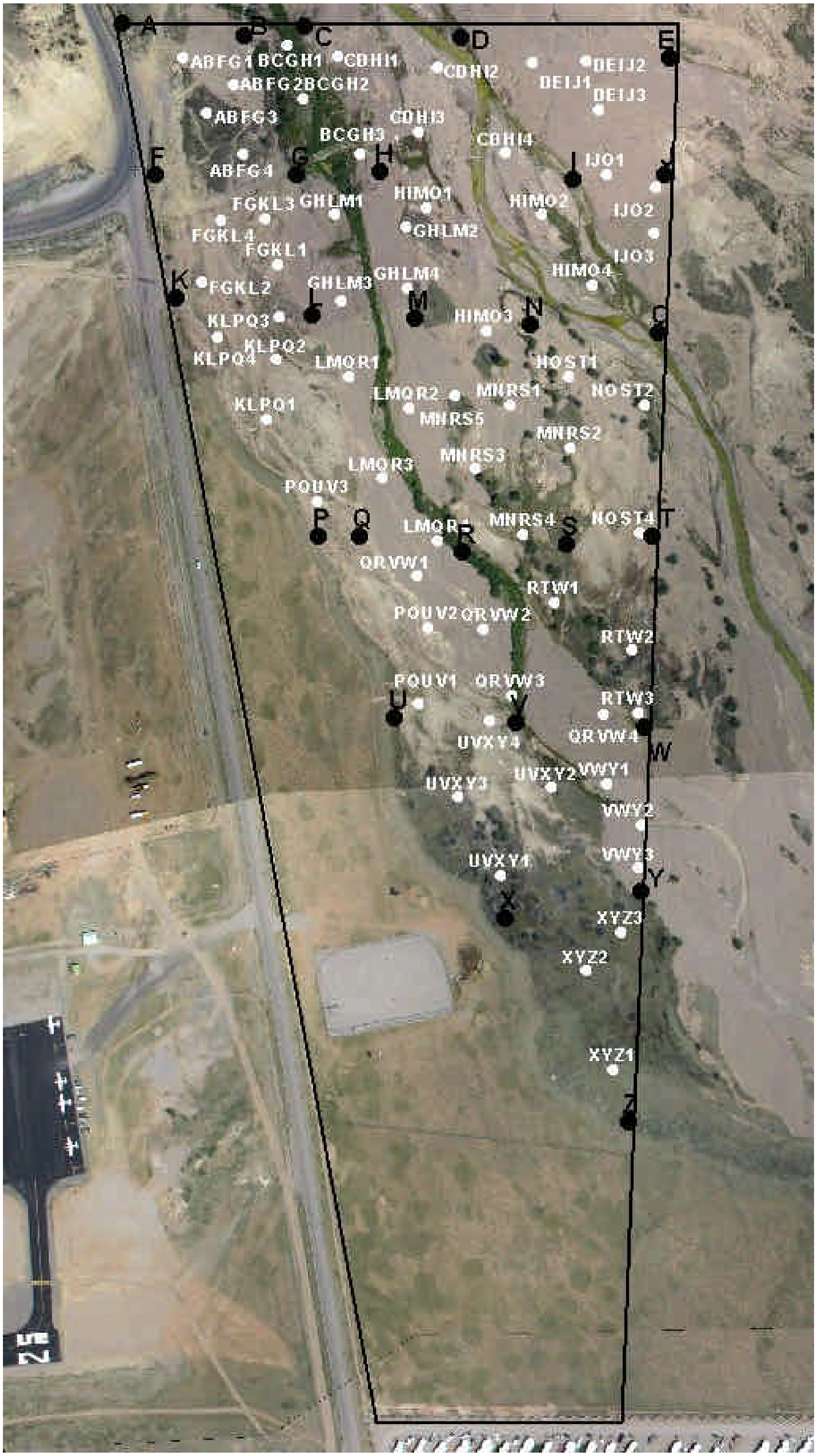


Figure 1. MCFA Site, Sector, and Sample Locations

SOIL SAMPLING

Soil samples were collected September 27 through September 30, 2005 by AGS. A total of 325 samples were collected from 65 sites. Sampling procedures were conducted as described below, in accordance with the Sampling and Analysis Plan (SAP) - 6/22/05 version proposed to support Voluntary Clean Up Plan development.

The 2004 study divided the floodplain and middle bench area of the property into sectors. Sectors were designed such that no sector exceeded three acres or a maximum dimension of 510 feet. Within each sector, samples from a minimum of three depth profiles were taken. Samples were collected from the following intervals: 0" – 3"; 3" – 6"; 6" – 9"; 9" – 12"; and 12" -18". Sample locations within sectors were located using a GPS unit. Sampling activities such as the GPS location were recorded in field notebooks. Figure 1 shows the location of soil samples.

Soil was collected from each sample depth using a freshly gloved hand, spade, trowel, or hand-operated coring device and placed into a labeled Ziploc bag. Each sample bag was labeled with the sample sector, sample number with the sector, and date.

Between samples in a sector, sampling equipment was wiped with a paper towel to remove any adhered material. Between sectors, sampling equipment was cleaned with water and a paper towel. The most stringent of cleaning protocol was not used as potential cross contamination of samples by the sampling equipment would be conservative (i.e., indicate more remediation).

In the laboratory environment, the total weight of each depth sample was weighed. For areas with a high gravel or cobble content, each depth sample was then sampled through a series of sieves with the final finest sieve being a standard #10 (2mm) sieve. The weight of materials left on the sieves was weighed. These weight measurements were used following XRF analysis to calculate in-situ "total" lead concentrations in addition to the concentration in the sieved fines.

XRF ANALYSIS

Samples were prepared for XRF analysis following procedures recommended by the XRF instrument manufacturer (Niton, Inc.) and following the general guidelines set forth in the SAP.

Prior to preparation of each sample aliquot, a dry decontamination was used to clean the work area of any residual soils, and a clean paper towel was placed on the work surface. A spectral-certified 0.2-mil Mylar® film was placed on the top end of a double open ended plastic sample cup. Sample information from the sample bag was placed on the sample cup end cap. A clean, new plastic cup (dixie cup size) was used to transfer a portion of the sample from the sample bag into the sample cup. An effort was made to transfer a portion of soil that appeared homogenous and representative of the entire sample. Filter paper was placed over the sample, and the sample was compacted within the sample cup using a plastic pestle. Additional layers were compacted until the cup was at least ¾ full.

Soil samples with any signs of moisture were dried in the sample cup in front of a gas heater. Following drying, the end cap and a small portion of polyester filler was placed on the sample cup. The polyester fill kept the sample soil tight against the film for analysis.

Soil samples were analyzed by the WCRC using a Niton XL 309 dual detector XRF instrument for lead in paint and soil with a lead in soil analysis accessory kit following the procedures and protocols of EPA SW-846 Method 6200 and the equipment manufacturer's recommendations. Samples were analyzed for a minimum of 90 nominal seconds (about 5 minutes real time). A sample time of 90 seconds was recommended by the equipment manufacturer given the current strength of the radiation source as an appropriate compromise between sampling time and confidence level. The average sample time for all samples analyzed was 146 nominal seconds.

QUALITY CONTROL

Prior to sampling, and after analysis of ten samples, a standard internal instrument correction analysis and calibration and was performed. This analysis acquires a standard spectrum and compares to a baseline spectrum for the same standard acquired after the initial calibration. The calibration regression equation is then adjusted with a correction factor to compensate for any changes in the intensity of the x-ray tube output. If this correction factor exceeds a predetermined value, the analysts will be warned. During the sampling, no instrument warnings were issued.

In order to ensure the accuracy of XRF results, soil reference standards were periodically analyzed. The blank, low (18.9ppm+/-.5), medium (1162+/-31), and high (5532+/-80) soil reference standards that were used were approved by the National Institute of Standards (NIST). The approved SAP required analysis of soil standards at the beginning and end of each analysis day. However, typically at least one reference sample was analyzed following internal calibration and also after analysis of each set of ten samples. The SAP required XRF soil reference standard results must be within 10% percent of the true value. No analyses of soil reference standards exceeded +/-10% of their true value. The average deviation from the true value of each standard was 3.08% for the 60 times the standards were analyzed.

In order to evaluate XRF analysis precision, sample duplicates were prepared for every one in ten samples (the SAP specified only a 1 in 20 duplication). An additional sample aliquot was prepared from the same sample bag as the original sample and analyzed. The results gave some indication of the heterogeneity within the sample as well as precision of the XRF machine. Periodically, the same sample sample cup was analyzed twice (analytical duplicates). The sample cup was either rotated 180 degrees within the XRF base between analyses, or a sample was analyzed before and after an internal calibration.

Relative percent deviation (RPD) was calculated for each sample duplicate according to the following formula:

$$RPD(\%) = ((s1-s2)/(s1+s2)/2) \times 100\%$$

The SAP required XRF sample duplicates with RPD values outside the range of +/-50 % to be flagged. No RPD values were outside the range of +/-50 %

ANALYTICAL RESULTS

Table 1 shows the results of sample and analytical duplicates. The RPD averaged 8% for sample duplicates and 3% for analytical duplicates. The reported lead concentration for samples with duplicates was calculated as the average concentration of sample or analytical duplicates.

Lead concentration results by depth are reported in Table 2. Results are presented for the lead concentrations that were determined directly by the XRF instrument in the fines that passed through the 2mm sieve, as well as the "in-situ" concentrations that were calculated using the ratio of sieved sample weight to total sample weight. The location of each sample is also indicated in UTM NAD83 coordinates.

The lead concentration results allow an analysis of depth of contamination given a specific contamination limit. This depth also provides indications of soil that must be removed to meet cleanup goals. The depth of contamination was determined for several contamination limits. Lead concentrations in the fines generally decreased with depth. This pattern was less prominent when "in-situ" concentrations were calculated. Therefore, contamination depths were evaluated from the bottom up. For example, if soil lead concentration exceeded the 400ppm or 2920ppm limit in the 9 to 12 inch depth, but soil was not significantly contaminated above this level (potentially sediments from Willow Creek were deposited), the contamination depth was indicated as 12 inches.

The XRF instrument lists confidence limits for each sample as a +/- concentration. For all samples analyzed, this error averaged 9.8% of the concentration amount. Analysis of soil standards and sample duplicates indicated that the average accuracy of XRF results is about 3% and average precision is between 3% and 8%. Therefore, consideration of 10% less than each standard may also be a reasonable approach. Table 3 presents contamination depths in comparison to the 400ppm residential and 2920ppm commercial standards as well as 10% less than these standards for both the fines and "in-situ" concentrations.

Figures 2 and 3 show the spatial distribution of these contamination depths on an infrared image of the site. As can be observed, the depth of contamination varies throughout the site. When considering lead concentration in the sieved fines, contamination at the 400ppm residential level often extends to 18 inch depths. Soil depths with 400ppm "in-situ" concentrations are significantly less in many areas.

Table 1. Sample and Analytical Duplicates XRF Results

Sample	Depth	Description	Pb(ppm)	+/-	Pb(ppm)	+/-	RPD
ABFG1	3-6	Sample Duplicate	17689.6	550	16000	530	10%
ABFG1	12-18	Sample Duplicate	1689.6	100	1360	67.7	22%
ABFG2	3-6	Sample Duplicate	10297.6	380	10099.2	370	2%
ABFG3	0-3	Sample Duplicate	258.2	42.5	263.4	41.5	2%
ABFG4	3-6	Sample Duplicate	13696	500	12595.2	470	8%
CDHI4	0-3	Sample Duplicate	2640	130	2600	110	2%
DEIJ3	3-6	Sample Duplicate	4848	190	4947.2	170	2%
GHLM1	12-18	Sample Duplicate	1689.6	99.1	1540	89.9	9%
GHLM3	9-12	Sample Duplicate	2129.6	110	2080	110	2%
GHLM4	3-6	Sample Duplicate	2849.6	110	2739.2	120	4%
HIMO2	0-3	Sample Duplicate	3019.2	160	3049.6	130	1%
HIMO3	3-6	Sample Duplicate	2828.8	130	2788.8	130	1%
HIMO4	9-12	Sample Duplicate	2868.8	140	3289.6	170	14%
IJO1	6-9	Sample Duplicate	216.2	33.1	262	48	19%
IJO2	3-6	Sample Duplicate	3059.2	150	3657.6	150	18%
KLPQ1	9-12	Sample Duplicate	243.2	43.6	285	36	16%
KLPQ3	9-12	Sample Duplicate	<LOD	66.75	<LOD	51.15	-
KLPQ4	9-12	Sample Duplicate	117.3	40.4	<LOD	58.35	-
LMQR2	0-3	Sample Duplicate	2289.6	110	2369.6	120	3%
LMQR3	6-9	Sample Duplicate	2459.2	140	2720	140	10%
MNRS1	6-9	Sample Duplicate	1939.2	47.8	1708.8	92.2	13%
MNRS1	12-18	Sample Duplicate	860	74.8	746.4	65.3	14%
MNRS3	3-6	Sample Duplicate	2268.8	78.8	2339.2	66.8	3%
MNRS4	9-12	Sample Duplicate	4118.4	160	4067.2	150	1%
MNRS5	3-6	Sample Duplicate	434.8	51.9	524.8	50.2	19%
NOST2	9-12	Sample Duplicate	333	39.2	315.8	38.1	5%
NOST4	3-6	Sample Duplicate	8409.6	350	8537.6	270	2%
PQUV2	9-12	Sample Duplicate	1849.6	110	1819.2	110	2%
PQUV3	0-3	Sample Duplicate	2369.6	110	2668.8	110	12%
QRVW3	12-18	Sample Duplicate	2739.2	120	2579.2	130	6%
QRVW4	9-12	Sample Duplicate	2080	120	2160	120	4%
UVXY4	3-6	Sample Duplicate	10995.2	330	11795.2	350	7%
UVXY4	6-9	Sample Duplicate	907.2	65.3	700.4	66.7	26%
VWY1	6-9	Sample Duplicate	1600	95.1	1569.6	100	2%
VWY2	0-3	Sample Duplicate	2929.6	140	3169.6	140	8%
XYZ1	0-3	Sample Duplicate	344	49.8	372	50.6	8%
		AVERAGE					**8%**
ABFG3	3-6	Analytical Duplicate	5689.6	240	5718.4	200	1%
DEIJ1	12-18	Analytical Duplicate	16294.4	550	15488	530	5%
FGKL3	3-6	Analytical Duplicate	977.6	75.6	859.2	73.6	13%
GHLM1	3-6	Analytical Duplicate	2520	120	2440	110	3%
GHLM3	9-12	Analytical Duplicate	2080	110	2188.8	100	5%
HIMO2	0-3	Analytical Duplicate	3019.2	160	3059.2	150	1%
UVXY4	0-3	Analytical Duplicate	19200	840	18291.2	650	5%
		AVERAGE					**5%**

Table 2. Lead Concentrations by Depth in Fines and "In-Situ" on MCFA Site

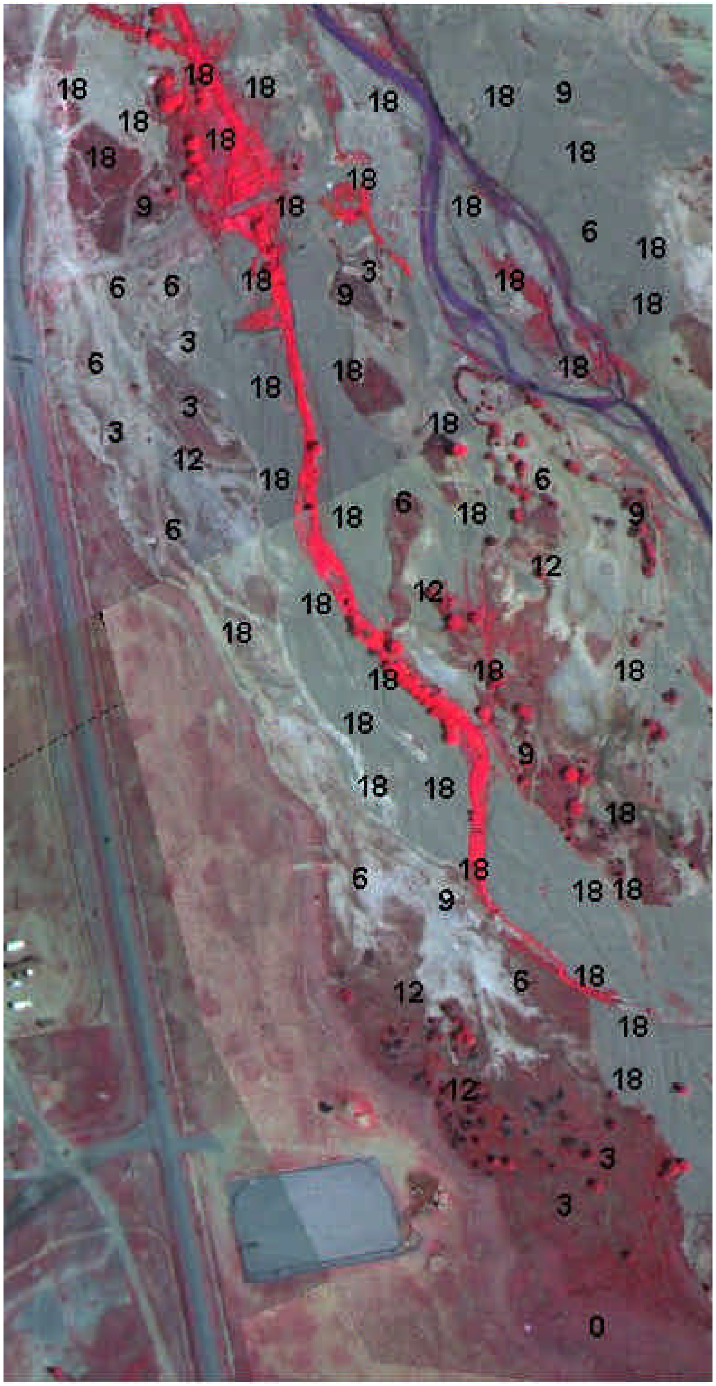
Sample	Lead Concentration (ppm) in fines < 2mm					"In-Situ" Lead Concentration (ppm)					Location-UTM NAD83	
Depth:	0"-3"	3"-6"	6"-9"	9"-12"	12"-18"	0"-3"	3"-6"	6"-9"	9"-12"	12"-18"	X	Y
ABFG1	12595.2	16844.8	21094.4	6249.6	1524.8	10314.2	13160.0	14018.4	4751.8	1030.9	331256.0	4188673.0
ABFG2	18892.8	10198.4	1840.0	257.6	683.6	16915.6	9283.2	1717.3	182.9	146.9	331284.6	4188658.2
ABFG3	260.8	5704.0	11897.6	4998.4	1009.6	97.7	3961.1	8498.3	4192.2	797.1	331269.6	4188641.2
ABFG4	4067.2	13145.6	1929.6	203.2	94.4	1768.3	10316.8	1691.7	203.2	39.0	331289.9	4188618.1
BCGH1	3577.6	2299.2	1729.6	2019.2	1449.6	490.2	381.8	360.8	274.3	267.5	331315.2	4188680.2
BCGH2	2440.0	1868.8	2169.6	3019.2	3280.0	428.6	242.7	562.4	1935.4	796.7	331325.0	4188649.6
BCGH3	2729.6	1420.0	1708.8	1659.2	1220.0	448.7	368.3	383.0	408.7	195.3	331357.4	4188617.9
CDHI1	3449.6	2760.0	2499.2	1649.6	756.4	1094.6	780.2	591.2	183.5	106.2	331344.4	4188674.2
CDHI2	2948.8	2828.8	2249.6	2668.8	2748.8	1857.4	468.3	378.7	507.7	527.4	331401.4	4188667.7
CDHI3	2609.6	1760.0	1868.8	1640.0	1540.0	736.2	195.3	501.6	486.4	342.8	331391.2	4188631.0
CDHI4	2620.0	2329.6	1929.6	1549.6	1149.6	332.9	359.3	244.4	243.8	77.1	331441.0	4188618.6
DEIJ1	5347.2	3827.2	3619.2	5120.0	15891.2	1667.7	1289.1	1057.5	2356.2	11466.9	331456.3	4188670.1
DEIJ2	6169.6	15398.4	998.4	125.9	155.1	2009.4	7866.4	741.0	98.5	105.3	331487.0	4188671.9
DEIJ3	5718.4	4897.6	3228.8	3188.8	3417.6	1892.0	614.5	361.6	517.8	460.2	331494.0	4188643.7
FGKL1	1300.0	82.8	57.6	<69.3	47.9	1127.8	43.4	17.0	<20.5	36.7	331309.8	4188554.6
FGKL2	5238.4	603.6	153.6	182.1	85.1	4431.7	211.8	45.1	37.6	18.7	331266.6	4188544.2
FGKL3	7929.6	918.4	394.8	168.1	92.6	5407.1	426.6	62.5	24.3	18.6	331302.8	4188581.0
FGKL4	7168.0	3529.6	350.0	141.7	141.4	4443.4	577.8	48.2	25.6	36.9	331277.3	4188580.3
GHLM1	2899.2	2668.8	1880.0	1529.6	1614.8	489.9	361.4	309.0	286.4	342.9	331342.5	4188583.1
GHLM2	5168.0	3657.6	488.4	230.8	146.0	3207.2	3279.0	459.5	225.5	142.9	331384.0	4188576.3
GHLM3	3337.6	3308.8	2299.2	2132.8	1939.2	750.7	463.2	348.8	482.0	258.8	331346.2	4188533.6
GHLM4	3520.0	2794.4	2640.0	1828.8	3299.2	2856.1	1152.0	732.7	309.2	539.5	331384.6	4188541.2
HIMO1	1819.2	385.4	102.3	95.1	68.7	1489.7	339.1	96.2	14.5	12.0	331395.0	4188587.4
HIMO2	3042.7	1899.2	1739.2	1668.8	1460.0	1393.0	232.3	300.1	297.9	202.5	331461.1	4188583.1
HIMO3	5929.6	2808.8	1699.2	1589.6	1389.6	2312.3	433.8	289.0	318.1	732.6	331429.5	4188516.4
HIMO4	4278.4	2579.2	3019.2	3079.2	1629.6	1481.8	996.1	866.8	865.3	553.6	331491.0	4188542.6
IJO1	6249.6	3360.0	239.1	83.9	<61.8	4487.2	2573.2	221.4	67.6	<28.7	331498.4	4188606.1
IJO2	4777.6	3358.4	2628.8	2628.8	2779.2	1884.3	1211.1	859.8	1522.4	1587.2	331527.1	4188599.0
IJO3	4857.6	3888.0	2689.6	3009.6	2828.8	2115.7	553.8	707.8	659.9	805.7	331525.6	4188572.2
KLPQ1	4368.0	766.4	260.4	264.1	129.4	2285.2	219.3	46.3	59.8	23.6	331303.8	4188466.0
KLPQ2	16396.8	15296.0	4259.2	1149.6	293.8	13099.0	12237.9	3661.9	1086.5	205.1	331309.6	4188499.8
KLPQ3	2948.8	195.7	60.7	<58.95	<64.65	2801.6	189.6	59.5	<58.3	<29.2	331311.1	4188524.2
KLPQ4	7059.2	276.8	77.0	<87.83	<44.55	5821.7	251.2	56.6	<16.3	<7.7	331275.9	4188512.4
LMQR1	3587.2	2508.8	1800.0	2320.0	3657.6	1140.5	481.2	455.8	1024.9	872.1	331351.0	4188490.0
LMQR2	2329.6	2360.0	1939.2	1569.6	1988.8	867.4	461.0	285.1	408.6	421.0	331385.1	4188472.1
LMQR3	2769.6	2280.0	2589.6	1549.6	1369.6	572.1	649.7	773.8	193.1	162.9	331370.1	4188431.9
LMQR4	2200.0	1779.2	1849.6	1460.0	2228.8	398.7	326.2	432.7	281.4	311.5	331402.0	4188396.1
MNRS1	3868.8	1560.0	1824.0	850.4	803.2	1972.7	1106.6	625.5	326.3	371.3	331443.3	4188473.9
MNRS2	10995.2	5148.8	606.4	450.8	360.4	10098.4	4539.2	521.9	417.1	229.2	331478.2	4188449.3
MNRS3	7334.4	2304.0	1788.8	863.2	341.0	4021.4	717.6	434.3	278.5	110.0	331423.1	4188437.4
MNRS4	8876.8	9158.4	6604.8	4092.8	2209.6	6711.6	3516.2	1978.4	479.0	402.5	331450.7	4188399.9
MNRS5	4067.2	479.8	133.2	75.6	62.1	2964.3	392.7	118.7	58.6	23.0	331411.2	4188479.3
NOST1	5427.2	694.4	392.0	78.1	<62.55	4812.7	368.6	269.8	61.0	<43.7	331476.7	4188490.4
NOST2	8275.2	10195.2	4249.6	324.4	332.2	7634.9	9990.4	3671.3	255.1	260.1	331520.7	4188474.1
NOST4	3968.0	8473.6	17996.8	24998.4	26598.4	2182.8	4386.4	12248.3	17829.0	23604.6	331517.3	4188400.3
PQUV1	7616.0	816.8	164.6	90.7	<57.9	6423.8	639.5	118.4	37.2	<34.8	331390.6	4188302.8
PQUV2	4358.4	2708.8	1620.0	1834.4	1908.8	2093.6	607.9	298.6	233.6	1041.9	331396.2	4188346.2
PQUV3	2519.2	712.8	64.3	77.1	2840.0	1395.6	528.7	60.3	71.2	2047.1	331333.0	4188418.4
QRVW1	3648.0	2889.6	1880.0	1739.2	2099.2	923.5	1035.2	207.6	267.1	387.0	331390.2	4188375.5
QRVW2	2299.2	1920.0	1819.2	1840.0	1569.6	831.5	142.8	278.1	129.1	52.7	331428.3	4188344.9
QRVW3	4707.2	4729.6	5008.0	5280.0	2659.2	3431.2	2362.6	3513.6	1522.2	802.7	331444.1	4188307.1
QRVW4	2480.0	3068.8	3968.0	2120.0	1449.6	878.3	1474.3	1011.1	375.9	283.0	331497.2	4188296.5
RTW1	3619.2	1849.6	522.0	118.4	198.1	1936.3	1203.4	387.2	100.7	80.6	331468.8	4188360.8
RTW2	7244.8	11699.2	8665.6	4518.4	4617.6	6529.3	10918.1	4220.5	2621.5	945.3	331513.1	4188333.1
RTW3	3478.4	2249.6	1788.8	1720.0	1788.8	1085.0	689.7	1121.1	990.1	778.3	331516.6	4188297.3
UVXY1	6118.4	8249.6	2649.6	1440.0	345.0	5037.7	3440.1	383.9	327.3	107.8	331438.2	4188203.6
UVXY2	3520.0	973.6	173.7	220.8	160.1	2971.8	910.2	162.0	102.1	45.8	331466.6	4188254.2
UVXY3	3817.6	6537.6	837.6	405.0	94.3	3079.5	3508.5	159.0	124.5	55.0	331413.6	4188248.8
UVXY4	18745.6	11395.2	803.8	169.4	228.0	14512.7	11157.8	725.0	145.8	116.6	331431.5	4188292.5
VWY1	1429.6	1680.0	1584.8	1309.6	1329.6	197.8	360.0	264.5	162.0	193.2	331498.3	4188256.6
VWY2	3049.6	1580.0	1189.6	1120.0	1699.2	1011.5	191.1	190.8	174.1	297.0	331518.6	4188232.9
VWY3	2809.6	2068.8	1729.6	1939.2	2320.0	824.0	268.6	271.8	272.0	659.6	331516.7	4188208.0
XYZ1	358.0	110.3	<55.65	66.2	64.1	294.3	66.0	<22.6	12.4	14.1	331502.0	4188092.1
XYZ2	1240.0	158.7	<52.8	<60.6	<55.05	858.5	129.0	<13.5	<13.8	<22.2	331486.7	4188149.0
XYZ3	407.8	48.0	<58.8	<57	<39.75	296.6	35.7	<26.3	<32.3	<16.5	331507.0	4188171.2

Table 3. Contamination Depth for Selected Limits for Fines and "In-Situ" Concentrations

Sample	Compared to "fines"				Compared to "In-Situ"				Location-UTM NAD83	
Limit (ppm):	360	400	2628	2920	360	400	2628	2920	X	Y
ABFG1	18	18	12	12	18	18	12	12	331256.0	4188673.0
ABFG2	18	18	6	6	9	9	6	6	331284.6	4188658.2
ABFG3	18	18	12	12	18	18	12	12	331269.6	4188641.2
ABFG4	9	9	6	6	9	9	6	6	331289.9	4188618.1
BCGH1	18	18	3	3	9	3	0	0	331315.2	4188680.2
BCGH2	18	18	18	18	18	18	0	0	331325.0	4188649.6
BCGH3	18	18	3	0	12	12	0	0	331357.4	4188617.9
CDHI1	18	18	6	3	9	9	0	0	331344.4	4188674.2
CDHI2	18	18	18	3	18	18	0	0	331401.4	4188667.7
CDHI3	18	18	0	0	12	12	0	0	331391.2	4188631.0
CDHI4	18	18	0	0	0	0	0	0	331441.0	4188618.6
DEIJ1	18	18	18	18	18	18	18	18	331456.3	4188670.1
DEIJ2	9	9	6	6	9	9	6	6	331487.0	4188671.9
DEIJ3	18	18	18	18	18	18	0	0	331494.0	4188643.7
FGKL1	3	3	0	0	3	3	0	0	331309.8	4188554.6
FGKL2	6	6	3	3	3	3	3	3	331266.6	4188544.2
FGKL3	9	6	3	3	6	6	3	3	331302.8	4188581.0
FGKL4	6	6	6	6	6	6	3	3	331277.3	4188580.3
GHLM1	18	18	6	0	6	3	0	0	331342.5	4188583.1
GHLM2	9	9	6	6	9	9	6	6	331384.0	4188576.3
GHLM3	18	18	6	6	12	12	0	0	331346.2	4188533.6
GHLM4	18	18	18	18	18	18	3	0	331384.6	4188541.2
HIMO1	6	3	0	0	3	3	0	0	331395.0	4188587.4
HIMO2	18	18	3	3	3	3	0	0	331461.1	4188583.1
HIMO3	18	18	6	3	18	18	0	0	331429.5	4188516.4
HIMO4	18	18	12	12	18	18	0	0	331491.0	4188542.6
IJO1	6	6	6	6	6	6	3	3	331498.4	4188606.1
IJO2	18	18	18	6	18	18	0	0	331527.1	4188599.0
IJO3	18	18	18	12	18	18	0	0	331525.6	4188572.2
KLPQ1	6	6	3	3	3	3	0	0	331303.8	4188466.0
KLPQ2	12	12	9	9	12	12	9	9	331309.6	4188499.8
KLPQ3	3	3	3	3	3	3	3	0	331311.1	4188524.2
KLPQ4	3	3	3	3	3	3	3	3	331275.9	4188512.4
LMQR1	18	18	18	18	18	18	0	0	331351.0	4188490.0
LMQR2	18	18	0	0	18	18	0	0	331385.1	4188472.1
LMQR3	18	18	3	0	9	9	0	0	331370.1	4188431.9
LMQR4	18	18	0	0	9	9	0	0	331402.0	4188396.1
MNRS1	18	18	3	3	18	9	0	0	331443.3	4188473.9
MNRS2	18	12	6	6	12	12	6	6	331478.2	4188449.3
MNRS3	12	12	3	3	9	9	3	3	331423.1	4188437.4
MNRS4	18	18	12	12	18	18	6	6	331450.7	4188399.9
MNRS5	6	6	3	3	6	3	3	3	331411.2	4188479.3
NOST1	9	6	3	3	6	3	3	3	331476.7	4188490.4
NOST2	9	9	9	9	9	9	9	9	331520.7	4188474.1
NOST4	18	18	18	18	18	18	18	18	331517.3	4188400.3
PQUV1	6	6	3	3	6	6	3	3	331390.6	4188302.8
PQUV2	18	18	6	3	18	18	0	0	331396.2	4188346.2
PQUV3	18	18	18	0	18	18	0	0	331333.0	4188418.4
QRVW1	18	18	6	3	18	6	0	0	331390.2	4188375.5
QRVW2	18	18	0	0	3	3	0	0	331428.3	4188344.9
QRVW3	18	18	18	12	18	18	9	9	331444.1	4188307.1
QRVW4	18	18	9	9	12	9	0	0	331497.2	4188296.5
RTW1	9	9	3	3	9	6	0	0	331468.8	4188360.8
RTW2	18	18	18	18	18	18	9	9	331513.1	4188333.1
RTW3	18	18	3	3	18	18	0	0	331516.6	4188297.3
UVXY1	12	12	9	6	9	6	6	6	331438.2	4188203.6
UVXY2	6	6	3	3	6	6	3	3	331466.6	4188254.2
UVXY3	12	12	6	6	6	6	6	6	331413.6	4188248.8
UVXY4	9	9	6	6	9	9	6	6	331431.5	4188292.5
VWY1	18	18	0	0	0	0	0	0	331498.3	4188256.6
VWY2	18	18	3	3	3	3	0	0	331518.6	4188232.9
VWY3	18	18	3	0	18	18	0	0	331516.7	4188208.0
XYZ1	0	0	0	0	0	0	0	0	331502.0	4188092.1
XYZ2	3	3	0	0	3	3	0	0	331486.7	4188149.0
XYZ3	3	3	0	0	0	0	0	0	331507.0	4188171.2

Figure 2. Depth of Contaminated Soil Considering Residential Standards

Lead > 400 ppm (fines concentration)



Lead > 400 ppm (“in-situ” concentration)

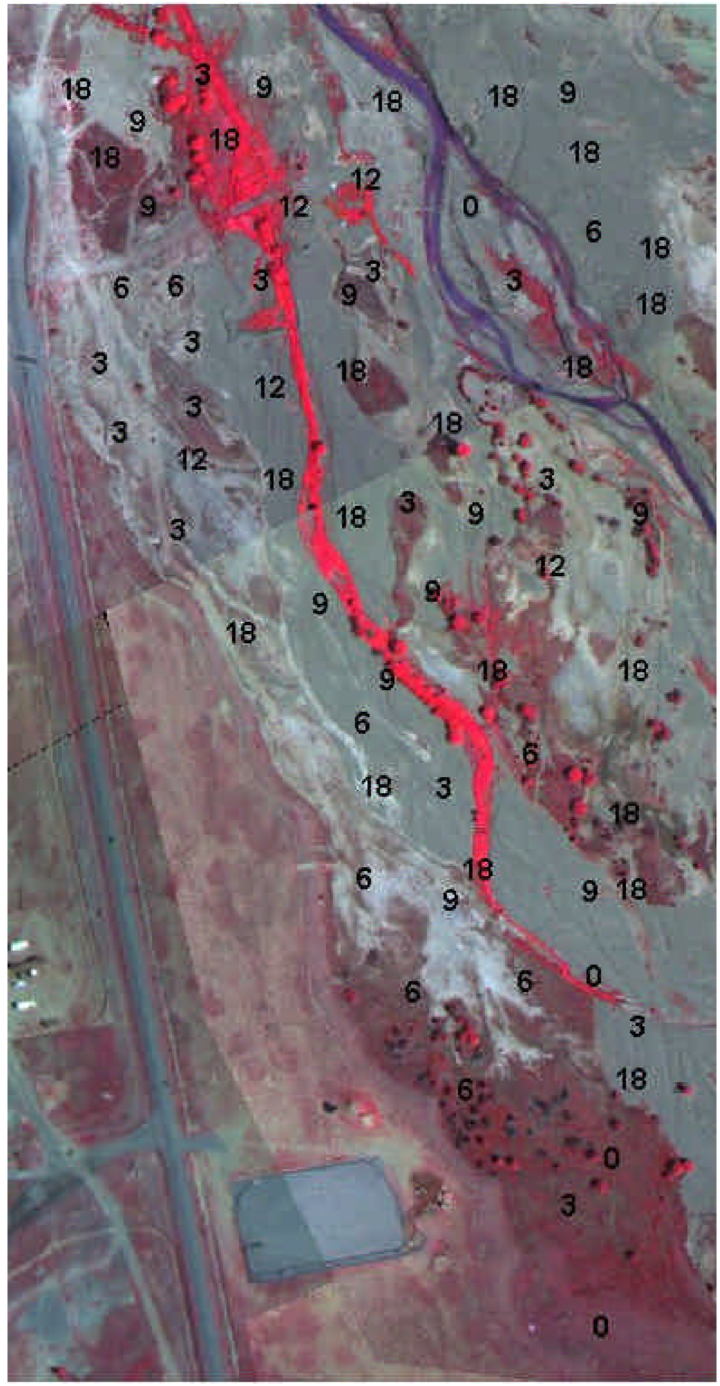
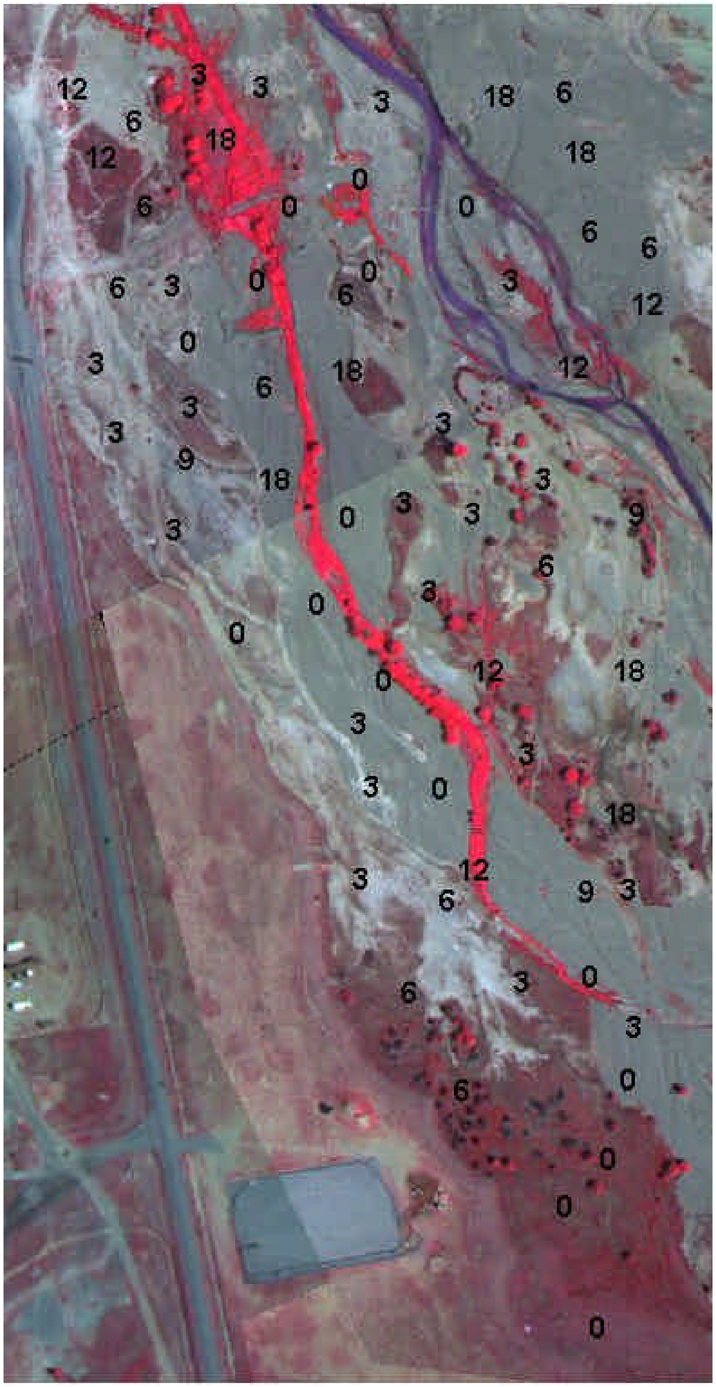


Figure 2. Depth of Contaminated Soil Considering Commercial Standards

Lead > 2920 ppm (fines concentration)



Lead > 2920 ppm (“in-situ” concentration)