

**SECTION 5.0**  
**TABLES AND PLATES**

**Table 5.1. Percent of Surface Area Covered by Bullet Fragments  
Site 3 - Study Areas 1 and 2  
Volume III - Baseline Risk Assessment, Basewide RI/FS  
Fort Ord, California**

Categories by Percent of Surface Area Covered by Bullet Fragments	Surface Area of Study Area			Percent of Surface Area of Study Areas 1 and 2 by Percent Coverage Categories
	Study Area 1 (ft <sup>2</sup> )	Study Area 2 (ft <sup>2</sup> )	Total of Study Areas 1 and 2 (ft <sup>2</sup> )	
>10	132,480	91,152	223,632	4
1-10	182,736	132,048	314,784	5
<1 and non present	811,872	4,495,824	5,307,696	91
Total Area	1,127,088	4,719,024	5,846,112	--

ft<sup>2</sup>      Square feet.  
--        Not applicable.

**Table 5.2a. Statistical Data Summary of Chemicals Detected in Surface Soil (0 to 2 feet bgs)  
Site 3 - Study Area 1  
Volume III - Baseline Risk Assessment, Basewide RI/FS  
Fort Ord, California**

Chemical	Number of Detections	Number of Analyses	Frequency of Detection (percent)	Minimum Detection Value (mg/kg)	Depth of Minimum (feet)	Maximum Detection Value (mg/kg)	Depth of Maximum (feet)	Arithmetic Mean (mg/kg)	Standard Deviation of the Arithmetic Mean (mg/kg)	95% Upper Confidence Limit (UCL) of the Arithmetic Mean (mg/kg)	Lesser of 95% UCL and Maximum Concentrations (mg/kg)
Antimony	9	15	60.0	9.30E+00	1.00	3.36E+03	0.13	5.66E+02	1.11E+03	2.75E+03	2.75E+03
Chromium	19	19	100.0	1.07E+01	0.13	5.38E+01	0.13	2.71E+01	9.52E+00	4.57E+01	4.57E+01
Copper	19	19	100.0	2.20E+00	0.96	1.99E+04	0.13	1.26E+03	4.54E+03	1.02E+04	1.02E+04
Iron	19	19	100.0	5.39E+03	0.13	3.12E+04	0.13	1.40E+04	6.02E+03	2.58E+04	2.58E+04
Lead	12	19	63.2	1.27E+01	0.13	3.26E+04	0.13	5.31E+03	9.52E+03	2.40E+04	2.40E+04
Tin	8	19	42.1	1.50E+00	0.92	6.74E+01	0.13	7.04E+00	1.62E+01	3.87E+01	3.87E+01
Zinc	19	19	100.0	1.08E+01	0.96	2.16E+03	0.13	1.61E+02	4.87E+02	1.12E+03	1.12E+03

bgs           Below ground surface.  
mg/kg        Milligrams per kilogram.

**Table 5.2b. Statistical Data Summary of Chemicals Detected in Subsurface Soil (>2 feet bgs)  
 Site 3 - Study Area 1  
 Volume III - Baseline Risk Assessment, Basewide RI/FS  
 Fort Ord, California**

Chemical	Number of Detections	Number of Analyses	Frequency of Detection (percent)	Minimum Detection Value (mg/kg)	Depth of Minimum (feet)	Maximum Detection Value (mg/kg)	Depth of Maximum (feet)	Arithmetic Mean (mg/kg)	Standard Deviation of the Arithmetic Mean (mg/kg)	95% Upper Confidence Limit (UCL) of the Arithmetic Mean (mg/kg)	Lesser of 95% UCL and Maximum Concentrations (mg/kg)
Antimony	2	6	33.3	1.69E+01	2.75	2.24E+01	2.25	8.79E+00	8.59E+00	2.56E+01	2.24E+01
Chromium	11	11	100.0	7.00E+00	2.75	4.69E+01	2.25	2.49E+01	1.04E+01	4.53E+01	4.53E+01
Copper	11	11	100.0	2.40E+00	2.75	1.12E+03	2.25	1.24E+02	3.33E+02	7.76E+02	7.76E+02
Iron	11	11	100.0	3.31E+03	2.75	2.53E+04	2.25	1.25E+04	5.60E+03	2.35E+04	2.35E+04
Lead	6	11	54.6	1.45E+01	2.75	5.39E+03	2.25	5.89E+02	1.61E+03	3.74E+03	3.74E+03
Zinc	10	11	90.9	1.21E+01	2.75	1.61E+02	2.25	3.13E+01	4.38E+01	1.17E+02	1.17E+02

bgs Below ground surface.  
 mg/kg Milligrams per kilogram.

**Table 5.2c. Statistical Data Summary of Chemicals Detected in Surface Soil (0 to 2 feet bgs)  
 Site 3 - Study Area 2  
 Volume III - Baseline Risk Assessment, Basewide RI/FS  
 Fort Ord, California**

Chemical	Number of Detections	Number of Analyses	Frequency of Detection (percent)	Minimum Detection Value (mg/kg)	Depth of Minimum (feet)	Maximum Detection Value (mg/kg)	Depth of Maximum (feet)	Arithmetic Mean (mg/kg)	Standard Deviation of the Arithmetic Mean (mg/kg)	95% Upper Confidence Limit (UCL) of the Arithmetic Mean (mg/kg)	Lesser of 95% UCL and Maximum Concentrations (mg/kg)
Antimony	7	26	26.9	1.05E+01	2.00	9.70E+02	0.13	7.91E+01	2.22E+02	5.14E+02	5.14E+02
Chromium	26	26	100.0	6.80E+00	1.75	2.49E+01	0.13	1.22E+01	4.28E+00	2.06E+01	2.06E+01
Copper	26	26	100.0	1.30E+00	1.75	4.18E+03	0.08	4.99E+02	9.79E+02	2.42E+03	2.42E+03
Iron	26	26	100.0	3.01E+03	1.25	3.04E+04	0.08	7.07E+03	5.52E+03	1.79E+04	1.79E+04
Lead	21	26	80.8	1.10E+01	0.38	4.63E+04	0.08	5.89E+03	1.26E+04	3.06E+04	3.06E+04
Tin	5	25	20.0	1.00E+00	0.13	8.90E+00	0.33	1.42E+00	2.34E+00	6.02E+00	6.02E+00
Zinc	26	26	100.0	6.30E+00	1.75	5.31E+02	0.08	7.12E+01	1.22E+02	3.09E+02	3.09E+02

bgs      Below ground surface.  
 mg/kg    Milligrams per kilogram.

**Table 5.2d. Statistical Data Summary of Chemicals Detected In Subsurface Soil (>2 feet bgs)  
 Site 3 - Study Area 2  
 Volume III - Baseline Risk Assessment, Basewide RI/FS  
 Fort Ord, California**

Chemical	Number of Detections	Number of Analyses	Frequency of Detection (percent)	Minimum Detection Value (mg/kg)	Depth of Minimum (feet)	Maximum Detection Value (mg/kg)	Depth of Maximum (feet)	Arithmetic Mean (mg/kg)	Standard Deviation of the Arithmetic Mean (mg/kg)	95% Upper Confidence Limit (UCL) of the Arithmetic Mean (mg/kg)	Lesser of 95% UCL and Maximum Concentrations (mg/kg)
Chromium	4	4	100.0	6.20E+00	2.25	1.34E+01	2.25	1.02E+01	3.00E+00	1.61E+01	1.34E+01
Copper	4	4	100.0	1.30E+00	2.25	3.30E+00	2.13	1.95E+00	9.10E-01	3.74E+00	3.30E+00
Iron	4	4	100.0	3.22E+03	2.25	5.21E+03	2.25	4.23E+03	8.71E+02	5.94E+03	5.21E+03
Zinc	4	4	100.0	9.80E+00	2.25	1.59E+01	2.25	1.20E+01	2.70E+00	1.73E+01	1.59E+01

bgs Below ground surface.  
 mg/kg Milligrams per kilogram.

**Table 5.2e. Statistical Data Summary of Chemicals Detected in Surface Soil (0 to 2 feet bgs)  
 Site 3 - Control Area Samples  
 Volume III - Baseline Risk Assessment, Basewide RI/FS  
 Fort Ord, California**

Chemical	Number of Detections	Number of Analyses	Frequency of Detection (percent)	Minimum Detection Value (mg/kg)	Depth of Minimum (feet)	Maximum Detection Value (mg/kg)	Depth of Maximum (feet)	Arithmetic Mean (mg/kg)	Standard Deviation of the Arithmetic Mean (mg/kg)	95% Upper Confidence Limit (UCL) of the Arithmetic Mean (mg/kg)	Lesser of 95% UCL and Maximum Concentration (mg/kg)
Chromium	8	8	100.00	3.20E+00	0.88	1.79E+01	0.88	1.04E+01	6.34E+00	2.29E+01	1.79E+01
Copper	8	8	100.00	4.70E-01	0.88	2.00E+00	0.13	1.32E+00	5.60E-01	2.41E+00	2.00E+00
Iron	8	8	100.00	1.81E+03	0.88	8.56E+03	0.13	5.03E+03	2.73E+03	1.04E+04	8.56E+03
Lead	1	8	12.50	1.42E+01	2.00	1.42E+01	2.00	6.01E+00	3.31E+00	1.25E+01	1.25E+01
Zinc	6	8	75.00	7.30E+00	2.00	1.25E+01	0.13	7.84E+00	3.71E+00	1.51E+01	1.25E+01

bgs      Below ground surface.  
 mg/kg   Milligrams per kilogram.

**Table 5.2f. Statistical Data Summary of Chemicals Detected in Subsurface Soil (>2 feet bgs)  
 Site 3 - Control Area Samples  
 Volume III - Baseline Risk Assessment, Basewide RI/FS  
 Fort Ord, California**

Chemical	Number of Detections	Number of Analyses	Frequency of Detection (percent)	Minimum Detection Value (mg/kg)	Depth of Minimum (feet)	Maximum Detection Value (mg/kg)	Depth of Maximum (feet)	Arithmetic Mean (mg/kg)	Standard Deviation of the Arithmetic Mean (mg/kg)	95% Upper Confidence Limit (UCL) of the Arithmetic Mean (mg/kg)	Lesser of 95% UCL and Maximum Concentrations (mg/kg)
Chromium	1	1	100.0	1.22E+01	2.25	1.22E+01	2.25	--	--	--	--
Copper	1	1	100.0	1.40E+00	2.25	1.40E+00	2.25	--	--	--	--
Iron	1	1	100.0	6.59E+03	2.25	6.59E+03	2.25	--	--	--	--
Zinc	1	1	100.0	1.08E+01	2.25	1.08E+01	2.25	--	--	--	--

bgs      Below ground surface.  
 mg/kg   Milligrams per kilogram.  
 --      Not applicable.

**Table 5.2g. Statistical Data Summary of Chemicals Detected in Surface Soil (0 to 2 feet bgs)  
 Site 3 - Surface Concentration of Spent Ammunition Less Than 1 Percent  
 Volume III - Baseline Risk Assessment, Basewide RI/FS  
 Fort Ord, California**

Chemical	Number of Detections	Number of Analyses	Frequency of Detection (percent)	Minimum Detection Value (mg/kg)	Depth of Minimum (feet)	Maximum Detection Value (mg/kg)	Depth of Maximum (feet)	Arithmetic Mean (mg/kg)	Standard Deviation of the Arithmetic Mean (mg/kg)	95% Upper Confidence Limit (UCL) of the Arithmetic Mean (mg/kg)	Lesser of 95% UCL and Maximum Concentrations (mg/kg)
Chromium /a/	13	13	100.0	6.8	1.2	5.38E+01	0.1	2.00E+01	1.25E+01	4.45E+01	4.45E+01
Copper	13	13	100.0	1.4	0.8	8.70E+00	0.1	3.27E+00	2.12E+00	7.42E+00	7.42E+00
Iron	13	13	100.0	3010.0	1.2	3.12E+04	0.1	9.38E+03	7.38E+03	2.38E+04	2.38E+04
Lead	5	13	38.5	11.5	0.1	4.32E+01	0.1	1.16E+01	1.17E+01	3.45E+01	3.45E+01
Zinc	13	13	100.0	8.6	0.7	3.35E+01	0.1	1.52E+01	6.60E+00	2.81E+01	2.81E+01

bgs Below ground surface.  
 mg/kg Milligrams per kilogram.  
 - - Not applicable.

/a/ Thirteen samples were analyzed for hexavalent chromium; none was detected. Detection limits range from 0.1 to 2.0 mg/kg.

**Table 5.2h. Statistical Data Summary of Chemicals Detected in Surface Soil (>2 feet bgs)  
 Site 3 - Surface Concentration of Spent Ammunition Less Than 1 Percent  
 Volume III - Baseline Risk Assessment, Basewide RI/FS  
 Fort Ord, California**

Chemical	Number of Detections	Number of Analyses	Frequency of Detection (percent)	Minimum Detection Value (mg/kg)	Depth of Minimum (feet)	Maximum Detection Value (mg/kg)	Depth of Maximum (feet)	Arithmetic Mean (mg/kg)	Standard Deviation of the Arithmetic Mean (mg/kg)	95% Upper Confidence Limit (UCL) of the Arithmetic Mean (mg/kg)	Lesser of 95% UCL and Maximum Concentrations (mg/kg)
Chromium /a/	5	5	100.0	6.20E+00	2.25	2.29E+01	2.25	1.26E+01	6.89E+00	2.61E+01	2.29E+01
Copper	5	5	100.0	1.30E+00	2.25	2.50E+00	2.25	2.04E+00	5.90E-01	3.20E+00	2.50E+00
Iron	5	5	100.0	3.22E+03	2.25	1.15E+04	2.25	5.96E+03	3.66E+03	1.31E+04	1.15E+04
Zinc	4	5	80.0	9.80E+00	2.25	1.57E+01	2.25	1.04E+01	4.49E+00	1.92E+01	1.57E+01

bgs Below ground surface.  
 mg/kg Milligrams per kilogram.

/a/ Five samples were analyzed for hexavalent chromium; none was detected. Detection limits range from 0.1 to 0.5 mg/kg.

**Table 5.2i. Statistical Data Summary of Chemicals Detected in Surface Soil (0 to 2 feet bgs)  
 Site 3 - Surface Concentration of Spent Ammunition Between 1 and 10 Percent  
 Volume III - Baseline Risk Assessment, Basewide RI/FS  
 Fort Ord, California**

Chemical	Number of Detections	Number of Analyses	Frequency of Detection (percent)	Minimum Detection Value (mg/kg)	Depth of Minimum (feet)	Maximum Detection Value (mg/kg)	Depth of Maximum (feet)	Arithmetic Mean (mg/kg)	Standard Deviation of the Arithmetic Mean (mg/kg)	95% Upper Confidence Limit (UCL) of the Arithmetic Mean (mg/kg)	Lesser of 95% UCL and Maximum Concentrations (mg/kg)
Antimony	2	11	18.2	2.08E+01	0.7	3.00E+02	0.1	3.19E+01	8.91E+01	2.06E+02	2.06E+02
Chromium /a/	13	13	100.0	8.40E+00	1.1	4.27E+01	0.1	1.86E+01	1.01E+01	3.83E+01	3.83E+01
Copper	13	13	100.0	1.30E+00	1.7	1.32E+03	0.1	1.67E+02	3.66E+02	8.84E+02	8.84E+02
Iron	13	13	100.0	4.10E+03	0.3	2.17E+04	0.1	8.80E+03	5.46E+03	1.95E+04	1.95E+04
Lead	10	13	76.9	1.20E+01	1.7	3.26E+04	0.1	3.13E+03	8.93E+03	2.06E+04	2.06E+04
Tin	2	13	15.4	1.90E+00	0.7	2.90E+00	0.1	7.90E-01	7.40E-01	2.25E+00	2.25E+00
Zinc	13	13	100.0	7.10E+00	1.7	1.59E+02	0.1	3.44E+01	4.20E+01	1.17E+02	1.17E+02

bgs Below ground surface.  
 mg/kg Milligrams per kilogram.  
 - - Not applicable.

/a/ Eleven samples were analyzed for hexavalent chromium; none was detected. Detection limits range from 0.1 to 2.0 mg/kg.

**Table 5.2j. Statistical Data Summary of Chemicals Detected in Surface Soil (>2 feet bgs)  
 Site 3 - Surface Concentration of Spent Ammunition Between 1 and 10 Percent  
 Volume III - Baseline Risk Assessment, Basewide RI/FS  
 Fort Ord, California**

Chemical	Number of Detections	Number of Analyses	Frequency of Detection (percent)	Minimum Detection Value (mg/kg)	Depth of Minimum (feet)	Maximum Detection Value (mg/kg)	Depth of Maximum (feet)	Arithmetic Mean (mg/kg)	Standard Deviation of the Arithmetic Mean (mg/kg)	95% Upper Confidence Limit (UCL) of the Arithmetic Mean (mg/kg)	Lesser of 95% UCL and Maximum Concentrations (mg/kg)
Chromium /a/	5	5	100.0	1.01E+01	2.13	3.31E+01	2.25	2.00E+01	9.64E+00	3.89E+01	3.31E+01
Copper	5	5	100.0	1.70E+00	2.25	1.04E+01	2.75	4.08E+00	3.58E+00	1.11E+01	1.04E+01
Iron	5	5	100.0	4.63E+03	2.13	1.47E+04	2.25	9.52E+03	4.81E+03	1.90E+04	1.47E+04
Lead	1	5	20.0	4.43E+01	2.75	4.43E+01	2.75	1.27E+01	1.77E+01	4.73E+01	4.43E+01
Zinc	5	5	100.0	1.14E+01	2.13	1.76E+01	2.25	1.52E+01	2.54E+00	2.02E+01	1.76E+01

bgs Below ground surface.  
 mg/kg Milligrams per kilogram.

/a/ Six samples were analyzed for hexavalent chromium; none was detected. Detection limits range from 0.1 to 2.0 mg/kg.

**Table 5.2k. Statistical Data Summary of Chemicals Detected in Surface Soil (0 to 2 feet bgs)  
 Site 3 - Surface Concentration of Spent Ammunition >10 Percent  
 Volume III - Baseline Risk Assessment, Basewide RI/FS  
 Fort Ord, California**

Chemical	Number of Detections	Number of Analyses	Frequency of Detection (percent)	Minimum Detection Value (mg/kg)	Depth of Minimum (feet)	Maximum Detection Value (mg/kg)	Depth of Maximum (feet)	Arithmetic Mean (mg/kg)	Standard Deviation of the Arithmetic Mean (mg/kg)	95% Upper Confidence Limit (UCL) of the Arithmetic Mean (mg/kg)	Lesser of 95% UCL and Maximum Concentrations (mg/kg)
Antimony	14	19	73.7	9.30E+00	1.0	3.36E+03	0.1	5.34E+02	1.00E+03	2.50E+03	2.50E+03
Chromium /a/	19	19	100.0	7.10E+00	2.0	3.10E+01	0.1	1.74E+01	8.68E+00	3.44E+01	3.10E+01
Copper	19	19	100.0	1.60E+00	1.7	1.99E+04	0.1	1.83E+03	4.51E+03	1.07E+04	1.07E+04
Iron	19	19	100.0	3.52E+03	2.0	3.04E+04	0.0	1.13E+04	6.99E+03	2.50E+04	2.50E+04
Lead	18	19	94.7	1.10E+01	0.3	4.63E+04	0.0	1.12E+04	1.41E+04	3.88E+04	3.88E+04
Tin	11	18	61.1	1.00E+00	0.1	6.74E+01	0.1	8.48E+00	1.63E+01	4.04E+01	4.04E+01
Zinc	19	19	100.0	6.30E+00	1.7	2.16E+03	0.1	2.24E+02	4.87E+02	1.18E+03	1.18E+03

bgs Below ground surface.  
 mg/kg Milligrams per kilogram.  
 - - Not applicable.

/a/ Eighteen samples were analyzed for hexavalent chromium; none was detected. Detection limits range from 0.1 to 5.0 mg/kg.

**Table 5.2i. Statistical Data Summary of Chemicals Detected in Surface Soil (>2 feet bgs)  
 Site 3 - Surface Concentration of Spent Ammunition >10 Percent  
 Volume III - Baseline Risk Assessment, Basewide RI/FS  
 Fort Ord, California**

Chemical	Number of Detections	Number of Analyses	Frequency of Detection (percent)	Minimum Detection Value (mg/kg)	Depth of Minimum (feet)	Maximum Detection Value (mg/kg)	Depth of Maximum (feet)	Arithmetic Mean (mg/kg)	Standard Deviation of the Arithmetic Mean (mg/kg)	95% Upper Confidence Limit (UCL) of the Arithmetic Mean (mg/kg)	Lesser of 95% UCL and Maximum Concentrations (mg/kg)
Antimony	2	2	100.0	1.69E+01	2.75	2.24E+01	2.25	1.97E+01	3.89E+00	2.73E+01	2.24E+01
Chromium /a/	5	5	100.0	2.26E+01	2.25	4.69E+01	2.25	3.02E+01	9.93E+00	4.97E+01	4.69E+01
Copper	5	5	100.0	2.90E+00	2.75	1.12E+03	2.25	2.68E+02	4.78E+02	1.21E+03	1.12E+03
Iron	5	5	100.0	9.44E+03	6.25	2.53E+04	2.25	1.54E+04	5.98E+03	2.71E+04	2.53E+04
Lead	5	5	100.0	1.45E+01	2.25	5.39E+03	2.25	1.28E+03	2.32E+03	5.83E+03	5.39E+03
Zinc	5	5	100.0	2.04E+01	2.25	1.61E+02	2.25	5.29E+01	6.07E+01	1.72E+02	1.61E+02

bgs Below ground surface.  
 mg/kg Milligrams per kilogram.

/a/ Five samples were analyzed for hexavalent chromium; none was detected. Detection limits range from 0.1 to 0.5 mg/kg.

**Table 5.3. Statistical Data Summary of Chemicals Detected In Soil  
 Site 3 - Weighted Surface-Area Concentrations  
 Volume III - Baseline Risk Assessment, Basewide RI/FS  
 Fort Ord, California**

Chemical	Number of Detections	Number of Analyses	Frequency of Detection (percent)	Minimum Detection Value (mg/kg)	Depth of Minimum (feet)	Maximum Detection Value (mg/kg)	Depth of Maximum (feet)	Arithmetic Mean (mg/kg)	Standard Deviation of the Arithmetic Mean (mg/kg)	95% Upper Confidence Limit (UCL) of the Arithmetic Mean (mg/kg)	Lesser of 95% UCL and Maximum Concentrations (mg/kg)
Antimony	16	41	39	3.70E-01	1.00	1.34E+02	0.13	1.12E+01	2.87E+01	6.73E+01	6.73E+01
Chromium	45	45	100.0	2.80E-01	2.00	4.90E+01	0.13	5.83E+00	9.96E+00	2.54E+01	2.54E+01
Copper	45	45	100.0	6.00E-02	1.75	7.96E+02	0.13	3.42E+01	1.21E+02	2.70E+02	2.70E+02
Iron	45	45	100.0	1.41E+02	2.00	2.84E+04	0.13	2.78E+03	5.11E+03	1.28E+04	1.28E+04
Lead	33	45	73	4.40E-01	0.38	1.85E+03	0.08	2.38E+02	4.69E+02	1.16E+03	1.16E+03
Tin	13	44	30	4.00E-02	0.13	2.70E+00	0.13	2.80E-01	4.40E-01	1.15E+00	1.15E+00
Zinc	45	45	100.0	2.50E-01	1.75	8.64E+01	0.13	8.27E+00	1.37E+01	3.52E+01	3.52E+01

mg/kg Milligrams per kilogram.

**Table 5.4a. Selection of COPCs for Chemicals Detected in Soil /a/  
 Site 3 - Weighted Surface-Area Concentrations  
 Volume III - Baseline Risk Assessment, Basewide RI/FS  
 Fort Ord, California**

Chemicals Detected	Maximum /b/ Concentration (mg/kg)	Background Concentration (mg/kg)	Essential Nutrient EDD /c/ (mg/day)	HBSL /d/ (mg/kg)	Screening Results /e/		COPC (Yes/No)
					Hazard Quotient	Cancer Risk	
Antimony	134.40	ND	--	--	0.5	--	YES
Chromium (total) /f/	48.96	46.1	--	--	0.00007	--	NO
Copper	796.00	18.2	--	--	0.03	--	YES
Iron	28392	ND	2.8	--	--	--	NO
Lead	1852.00	51.8	--	240	--	--	YES
Tin	2.70	ND	--	--	0.000006	--	NO
Zinc	86.40	75.8	0.009	--	--	--	NO

mg/kg Milligrams per kilogram.  
 ND Not detected.  
 -- Not available or not applicable.

/a/ See Section 5.3 for explanation.

/b/ From Table 5.3.

/c/ Estimated daily dose (see Appendix B for explanation). This was compared to the Recommended Daily Allowance of 6 to 10 mg/day for iron and 5 to 10 mg/day for zinc (National Research Council, 1989).

/d/ Health based screening level (Harding Lawson Associates, Draft Final Technical Memorandum, Preliminary Remediation Goals, Fort Ord, California, June 24, 1994).

/e/ See Table C9 of Appendix C for development of screening values.

/f/ Evaluated as chromium III. Chromium VI was not detected.

**Table 5.4b. Selection of COPCs for Chemicals Detected in Soil /a/  
 Site 3 - Three Bullet Distribution Areas  
 Volume III - Baseline Risk Assessment, Basewide RI/FS  
 Fort Ord, California**

Concentration of Spent Ammunition	Chemicals Detected	Maximum /b/ Concentration (mg/kg)	Background Concentration (mg/kg)	Essential Nutrient EDD /c/ (mg/day)	HBSL /d/ (mg/kg)	Screening Results /e/		COPC (Yes/No)
						Hazard Quotient	Cancer Risk	
<1 Percent	Chromium	53.80	46.1	--	--	7.70E-05	--	NO
	Copper	8.70	18.2	--	--	--	--	NO
	Iron	31200.00	--	6.24	--	--	--	NO
	Lead	43.20	51.8	--	--	--	--	NO
	Zinc	33.50	75.8	--	--	--	--	NO
Between 1 and 10 Percent	Antimony	300.00	--	--	--	1.10E+00	--	YES
	Chromium	42.70	46.1	--	--	--	--	NO
	Copper	1320.00	18.2	--	--	5.10E-02	--	YES
	Iron	21700.00	--	4.34	--	--	--	NO
	Lead	32600.00	51.8	--	240	--	--	YES
	Tin	2.90	--	--	--	6.90E-06	--	NO
	Zinc	159.00	75.8	0.03	--	7.60E-04	--	NO
>10 Percent	Antimony	3360.00	--	--	--	1.20E+01	--	YES
	Chromium	31.00	46.1	--	--	--	--	NO
	Copper	19900.00	18.2	--	--	7.70E-01	--	YES
	Iron	30400.00	--	6.08	--	--	--	NO
	Lead	46300.00	51.8	--	240	--	--	YES
	Tin	67.40	--	--	--	1.60E-04	--	NO
	Zinc	2160.00	75.8	0.43	--	1.00E-02	--	NO

**Table 5.4b. Selection of COPCs for Chemicals Detected in Soil /a/  
 Site 3 - Three Bullet Distribution Areas  
 Volume III - Baseline Risk Assessment, Basewide RI/FS  
 Fort Ord, California**

Concentration of Spent Ammunition	Chemicals Detected	Maximum /b/ Concentration (mg/kg)	Background Concentration (mg/kg)	Essential Nutrient EDD /c/ (mg/day)	HBSL /d/ (mg/kg)	Screening Results /e/		COPC (Yes/No)
						Hazard Quotient	Cancer Risk	

mg/kg Milligrams per kilogram.  
 ND Not detected.  
 -- Not available or not applicable.

/a/ See Section 5.3 for explanation.

/b/ From Table 5.3.

/c/ Estimated daily dose (see Appendix B for explanation). This was compared to the Recommended Daily Allowance of 6 to 15 mg/day for iron and 5 to 10 mg/day for zinc (National Research Council, 1989). All other chemicals listed in this table are not considered an essential nutrient.

/d/ Health based screening level (Harding Lawson Associates, Draft Final Technical Memorandum, Preliminary Remediation Goals, Fort Ord, California, June 24, 1994).

/e/ See Tables C10-C12 of Appendix C for development of screening values for the <1 percent, 1-10 percent, and >10 percent areas, respectively.

/f/ Total chromium was evaluated as chromium III. Chromium VI was not detected.

**Table 5.5a. Visitor Use Survey for Marina State Park, Site 3 /a/  
 Volume III - Baseline Risk Assessment. Basewide RI/FS  
 Fort Ord, California**

Months in 1993	Number of Visitors
January	4,888
February	5,340
March	6,351
April	7,568
May	9,622
June	10,962
July	11,296
August	12,569
September	22,369
October	21,578
November	17,896
December	10,258

/a/ Source: Monterey District of Parks and Recreation, 1994.

**Table 5.5b. Site-Specific Intake Assumptions, Site 3 /a/  
Volume III - Baseline Risk Assessment, Basewide RI/FS  
Fort Ord, California**

Scenario/Receptor	Intake Assumptions			
	Exposure Time ET (hours/day)	Fraction of Intake FI (unitless)	Exposure Frequency EF (days/year)	Exposure Duration ED (years)
<u>Average Exposure Scenario</u>				
Nearby Child (0 - 6 and 6 - 9 years) and Adult Resident	2	0.5	57	9
Onsite Park Ranger	8	0.5	250	10
<u>RME Scenario</u>				
Nearby Child (0 - 6 and 6 - 18 years) and Adult Resident	2	1.0	97	30
Onsite Park Ranger	8	1.0	250	25

RME Reasonable maximum exposure.

/a/ See Section 5.4.3 for explanation.

**Table 5.6a. Exposure Point Concentrations (EPCs) for Soil and Air  
Site 3 - Weighted Surface Area  
Volume III - Baseline Risk Assessment, Basewide RI/FS  
Fort Ord, California**

Chemicals of Potential Concern	Average Exposure Scenario		RME Scenario	
	Soil Concentration /a/ (mg/kg)	Air Concentration /b/ (mg/m <sup>3</sup> )	Soil Concentration /c/ (mg/kg)	Air Concentration /b/ (mg/m <sup>3</sup> )
<u>Surface Soil (0 to 2 feet bgs)</u>				
Antimony	1.12E+01	1.29E-07	6.73E+01	7.74E-07
Copper	3.42E+01	3.93E-07	2.70E+02	3.11E-06
Lead	2.38E+02	2.74E-06	1.16E+03	1.33E-05

RME Reasonable maximum exposure.  
 mg/kg Milligrams per kilogram.  
 mg/m<sup>3</sup> Milligrams per cubic meter.  
 bgs Below ground surface.  
 1.12E+01 1.12 x 10<sup>+1</sup>.  
 PM10 Particles with a diameter less than or equal to 10 microns.

/a/ Arithmetic mean of surface-area weighted concentrations (Table 5.3).  
 /b/ Air concentration (mg/m<sup>3</sup>) = soil concentration (mg/kg) x site-specific PM10 (1.15E-2 mg/m<sup>3</sup>) x conversion factor (1E-6 kg/mg).  
 /c/ Lesser of the maximum concentration and 95 percent upper confidence limit of the arithmetic mean (Table 5.3).

**Table 5.6b. Exposure Point Concentrations (EPCs) for Soil and Air  
Site 3 - 1 to 10 Percent Area  
Volume III - Baseline Risk Assessment, Basewide RI/FS  
Fort Ord, California**

Chemicals of Potential Concern	Average Exposure Scenario		RME Scenario	
	Soil Concentration /a/ (mg/kg)	Air Concentration /b/ (mg/m <sup>3</sup> )	Soil Concentration /c/ (mg/kg)	Air Concentration /b/ (mg/m <sup>3</sup> )
<u>Surface Soil (0 to 2 feet bgs)</u>				
Antimony	3.19E+01	3.67E-07	2.06E+02	2.37E-06
Copper	1.67E+02	1.92E-06	8.84E+02	1.02E-05
Lead	3.13E+03	3.60E-05	2.06E+04	2.37E-04

RME Reasonable maximum exposure.  
 mg/kg Milligrams per kilogram.  
 mg/m<sup>3</sup> Milligrams per cubic meter.  
 bgs Below ground surface.  
 3.19E+01 3.19 x 10<sup>+1</sup>.  
 PM10 Particles with a diameter less than or equal to 10 microns.

/a/ Arithmetic mean of surface-area weighted concentrations (Table 5.3).

/b/ Air concentration (mg/m<sup>3</sup>) = soil concentration (mg/kg) x site-specific PM10 (1.15E-2 mg/m<sup>3</sup>) x conversion factor (1E-6 kg/mg).

/c/ Lesser of the maximum concentration and 95 percent upper confidence limit of the arithmetic mean (Table 5.3).

**Table 5.6c. Exposure Point Concentrations (EPCs) for Soil and Air  
Site 3 - ≥10 Percent Area  
Volume III - Baseline Risk Assessment, Basewide RI/FS  
Fort Ord, California**

Chemicals of Potential Concern	Average Exposure Scenario		RME Scenario	
	Soil Concentration /a/ (mg/kg)	Air Concentration /b/ (mg/m <sup>3</sup> )	Soil Concentration /c/ (mg/kg)	Air Concentration /b/ (mg/m <sup>3</sup> )
<u>Surface Soil (0 to 2 feet bgs)</u>				
Antimony	5.34E+02	6.15E-06	2.50E+03	2.87E-05
Copper	1.83E+03	2.10E-05	1.07E+04	1.23E-04
Lead	1.12E+04	1.29E-04	3.88E+04	4.46E-04

RME Reasonable maximum exposure.  
mg/kg Milligrams per kilogram.  
mg/m<sup>3</sup> Milligrams per cubic meter.  
bgs Below ground surface.  
5.34E+02 5.34 x 10<sup>+2</sup>.  
PM10 Particles with a diameter less than or equal to 10 microns.

/a/ Arithmetic mean of surface-area weighted concentrations (Table 5.3).  
/b/ Air concentration (mg/m<sup>3</sup>) = soil concentration (mg/kg) x site-specific PM10 (1.15E-2 mg/m<sup>3</sup>) x conversion factor (1E-6 kg/mg).  
/c/ Lesser of the maximum concentration and 95 percent upper confidence limit of the arithmetic mean (Table 5.3).

**Table 5.7a. Total Hazard Index for the Nearby Resident Receptor  
Site 3 - Weighted Surface Area  
Volume III - Baseline Risk Assessment, Basewide RI/FS  
Fort Ord, California**

<u>Scenario</u> Receptor	Ingestion of Soil	Dermal Contact with Soil	Inhalation of Dust	Total HI
<u>Average Exposure Scenario</u>				
Resident (0 - 6 years)	NA	NA	0.000009	0.000009
Resident (6 - 9 years)	NA	NA	0.000007	0.000007
<u>RME Scenario</u>				
Resident (0 - 6 years)	0.7	0.03	0.0001	0.7
Resident (6 - 18 years)	0.1	0.02	0.00005	0.1
Resident (18 - 30 years)	0.07	0.01	0.00002	0.08

HI Hazard index.  
RME Reasonable maximum exposure.  
NA Not applicable.

**Table 5.7b. Total Hazard Index for the Park Ranger Receptor  
Site 3 - Weighted Surface Area  
Volume III - Baseline Risk Assessment, Basewide RI/FS  
Fort Ord, California**

<u>Scenario</u> Receptor	Ingestion of Soil	Dermal Contact with Soil	Inhalation of Dust	Total HI
<u>Average Exposure Scenario</u>				
Park Ranger	0.007	0.005	0.00002	0.01
<u>RME Scenario</u>				
Park Ranger	0.2	0.3	0.0002	0.4

HI Hazard index.  
RME Reasonable maximum exposure.

**Table 5.7c. Total Hazard Index for the Nearby Resident Receptor  
Site 3 - 1 to 10 Percent Area  
Volume III - Baseline Risk Assessment, Basewide RI/FS  
Fort Ord, California**

<u>Scenario</u> Receptor	Ingestion of Soil	Dermal Contact with Soil	Inhalation of Dust	Total HI
<u>Average Exposure Scenario</u>				
Resident (0 - 6 years)	NA	NA	0.00003	0.00003
Resident (6 - 9 years)	NA	NA	0.00003	0.00003
<u>RME Scenario</u>				
Resident (0 - 6 years)	2	0.1	0.0003	2
Resident (6 - 18 years)	0.3	0.05	0.0001	0.4
Resident (18 - 30 years)	0.2	0.04	0.0001	0.2

HI Hazard index.  
RME Reasonable maximum exposure.  
NA Not applicable.

**Table 5.7d. Total Hazard Index for the Park Ranger Receptor  
Site 3 - 1 to 10 Percent Area  
Volume III - Baseline Risk Assessment, Basewide RI/FS  
Fort Ord, California**

<u>Scenario</u> Receptor	Ingestion of Soil	Dermal Contact with Soil	Inhalation of Dust	Total HI
<u>Average Exposure Scenario</u>				
Park Ranger	0.02	0.01	0.0001	0.03
<u>RME Scenario</u>				
Park Ranger	0.5	0.8	0.0006	1
HI	Hazard index.			
RME	Reasonable maximum exposure.			

**Table 5.7e. Total Hazard Index for the Nearby Resident Receptor  
Site 3 -  $\geq 10$  Percent Area  
Volume III - Baseline Risk Assessment, Basewide RI/FS  
Fort Ord, California**

<u>Scenario</u> Receptor	Ingestion of Soil	Dermal Contact with Soil	Inhalation of Dust	Total HI
<u>Average Exposure Scenario</u>				
Resident (0 - 6 years)	NA	NA	0.0004	0.0004
Resident (6 - 9 years)	NA	NA	0.0004	0.0004
<u>RME Scenario</u>				
Resident (0 - 6 years)	25	1	0.004	26
Resident (6 - 18 years)	4	0.6	0.002	5
Resident (18 - 30 years)	2	0.5	0.0007	3

HI Hazard index.  
RME Reasonable maximum exposure.  
NA Not applicable.

**Table 5.7f. Total Hazard Index for the Park Ranger Receptor  
 Site 3 -  $\geq 10$  Percent Area  
 Volume III - Baseline Risk Assessment, Basewide RI/FS  
 Fort Ord, California**

<u>Scenario</u> Receptor	Ingestion of Soil	Dermal Contact with Soil	Inhalation of Dust	Total HI
<u>Average Exposure Scenario</u>				
Park Ranger	0.3	0.2	0.001	0.6
<u>RME Scenario</u>				
Park Ranger	6	10	0.007	16

HI Hazard index.  
 RME Reasonable maximum exposure.

**Table 5.8a. Summary of Model-Predicted Blood-Lead Levels from Multipathway Exposures  
Site 3 - Weighted Surface Area  
Volume III - Baseline Risk Assessment, Basewide RI/FS  
Fort Ord, California**

Receptor, Model Application, Name Exposure Pathway	Blood-Lead Level ( $\mu\text{g}/\text{dl}$ )			
	Average		RME	
<u>Child Receptors, LEAD6 UBK Model /a,b/</u>				
Offsite Child Resident (0 - 6 years)	2.76		7.15	
<u>Child and Adult Receptors, LEADSPREAD Model /b,c/</u>				
	Average		RME	
	95th Percentile	99th Percentile	95th Percentile	99th Percentile
Offsite Child Resident (6 - 9 years)	3.06	3.90	NA	NA
Offsite Child Resident (6 - 18 years)	NA	NA	4.40	5.61
Offsite Adult Resident	NA	NA	4.40	5.61
Onsite Park Ranger	3.33	4.25	4.40	5.61

$\mu\text{g}/\text{dl}$       Micrograms lead per deciliter blood.  
RME            Reasonable maximum exposure.  
UBK            Uptake/Biokinetic.  
Cal/EPA      California Environmental Protection Area.  
NA            Not applicable.

/a/ Value represents the highest blood-lead level estimated in the child receptor 0 through 6 years of age. Age-specific blood-lead level estimates from the LEAD6 model are presented in Tables F11 and F12 in Appendix F.

/b/ Site-related lead-in-air concentrations were well below ambient background levels. Therefore estimated blood-lead levels in this table are based almost exclusively on exposure to background levels of lead. Target blood-lead level is 10  $\mu\text{g}/\text{dl}$  (EPA, 1990; Cal/EPA, 1992f); blood-lead levels below this level are not expected to result in adverse health effects.

/c/ These LEADSPREAD Model results are presented in Tables F13 through F16 in Appendix F.

**Table 5.8b. Summary of Model-Predicted Blood-Lead Levels from Multipathway Exposures  
Site 3 - Surface-Area Concentrations Between 1 and 10 Percent  
Volume III - Baseline Risk Assessment, Basewide RI/FS  
Fort Ord, California**

<u>Receptor, Model Application, Name</u> <u>Exposure Pathway</u>	Blood-Lead Level ( $\mu\text{g}/\text{dl}$ )			
	Average		RME	
<u>Child Receptors, LEAD6 UBK Model /a,b/</u>				
Offsite Child Resident (0 - 6 years)	2.77		89.36	
<u>Child and Adult Receptors, LEADSPREAD Model /b,c/</u>				
	Blood-Lead Level ( $\mu\text{g}/\text{dl}$ )			
	Average		RME	
	95th Percentile	99th Percentile	95th Percentile	99th Percentile
Offsite Child Resident (6 - 9 years)	3.16	4.03	NA	NA
Offsite Child Resident (6 - 18 years)	NA	NA	27.05	34.46
Offsite Adult Resident	NA	NA	27.05	34.46
Onsite Park Ranger	6.70	8.53	26.97	34.36

$\mu\text{g}/\text{dl}$       Micrograms lead per deciliter blood.  
RME          Reasonable maximum exposure.  
UBK          Uptake/Biokinetic.  
Cal/EPA      California Environmental Protection Area.  
NA          Not applicable.

- /a/ Value represents the highest blood-lead level estimated in the child receptor 0 through 6 years of age. Age-specific blood-lead level estimates from the LEAD6 model are presented in Tables F 17 and F 18 in Appendix F.
- /b/ Site-related lead-in-air concentrations were well below ambient background levels. Therefore estimated blood-lead levels in this table are based almost exclusively on exposure to background levels of lead. Target blood-lead level is 10  $\mu\text{g}/\text{dl}$  (EPA, 1990; Cal/EPA, 1992f); blood-lead levels below this level are not expected to result in adverse health effects.
- /c/ These LEADSPREAD Model results are presented in Tables F19 through F22 in Appendix F.

**Table 5.8c. Summary of Model-Predicted Blood-Lead Levels from Multipathway Exposures  
Site 3 - Surface-Area Concentrations Greater Than 10 Percent  
Volume III - Baseline Risk Assessment, Basewide RI/FS  
Fort Ord, California**

Receptor, Model Application, Name Exposure Pathway	Blood-Lead Level ( $\mu\text{g}/\text{dl}$ )			
	Average	RME		
<u>Child Receptors, LEAD6 UBK Model /a,b/</u>				
Offsite Child Resident (0 - 6 years)	2.79	177.42		
<hr/>				
	Blood-Lead Level ( $\mu\text{g}/\text{dl}$ )			
	Average		RME	
	95th Percentile	99th Percentile	95th Percentile	99th Percentile
<u>Child and Adult Receptors, LEADSPREAD Model /b,c/</u>				
Offsite Child Resident (6 - 9 years)	3.43	4.37	NA	NA
Offsite Child Resident (6 - 18 years)	NA	NA	48.14	61.32
Offsite Adult Resident	NA	NA	48.14	61.32
Onsite Park Ranger	16.09	20.50	48.14	61.32

$\mu\text{g}/\text{dl}$       Micrograms lead per deciliter blood.  
RME          Reasonable maximum exposure.  
UBK          Uptake/Biokinetic.  
Cal/EPA      California Environmental Protection Area.  
NA          Not applicable.

- /a/ Value represents the highest blood-lead level estimated in the child receptor 0 through 6 years of age. Age-specific blood-lead level estimates from the LEAD6 model are presented in Tables F23 and F24 in Appendix F.
- /b/ Site-related lead-in-air concentrations were well below ambient background levels. Therefore estimated blood-lead levels in this table are based almost exclusively on exposure to background levels of lead. Target blood-lead level is 10  $\mu\text{g}/\text{dl}$  (EPA, 1990; Cal/EPA, 1992f); blood-lead levels below this level are not expected to result in adverse health effects.
- /c/ These LEADSPREAD Model results are presented in Tables F25 through F28 in Appendix F.