ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 - (217) 782-3397
JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, IL 60601 - (312) 814-6026

ROD R. BLAGOJEVICH, GOVERNOR DOUGLAS P. SCOTT, DIRECTOR

217-524-1655

US EPA RECORDS CENTER REGION 5

486482

May 23, 2008

The Honorable James J. Eder
Associate Judge
Fourth Judicial Circuit of Illinois
Montgomery County Courthouse
120 North Main Street
Hillsboro, Illinois 62049

Re: 1358070001 - Montgomery County
Eagle Zinc National Priorities List Site
Superfund/Technical Reports

Judge Eder:

The purpose of this letter is to convey the results of the inspection and investigation of the Eagle Zinc National Priorities List (NPL) Site by the Illinois Environmental Protection Agency (Illinois EPA) to the Court as authorized and required by Administrative Search Warrant Number 08-MR-36, issued on April 17, 2008.

On April 30, 2008, Thomas Crause of the Illinois EPA Office of Site Evaluation, Richard Johnson of the Illinois EPA Field Operations Section Springfield Regional Office, and Clarence Smith, Terry Ayers, and Rick Lanham of the Illinois EPA Federal Site Remediation Section met at the Eagle Zinc NPL Site to collect data on waste materials located in and around the remaining structures, and to evaluate the remaining equipment and structures for demolition, salvage and/or scrap metal value at the abandoned facility. Also present during these investigations were Connie Hill, Public Property Commissioner for the City of Hillsboro; Morris Dodd, the project manager for the City of Hillsboro and a former Eagle Zinc Facility Superintendent; Bill Gonet, a Solid Waste Inspector with the Montgomery County Coordinated Services Office; and Beth Eckley, an engineer with Environ International Corporation, the environmental consulting firm for T. L. Diamond Corporation for the site.

Summary of Field Sampling Activities

Over the three-day period of April 30, 2008 through May 2, 2008, and with the use of the Niton Corporation X-Ray fluorescence (XRF) field-based site characterization instrument, the sampling team collected and analyzed waste materials for heavy metal concentrations at 65 distinct locations on the eastern one-third of the property. In addition to conducting the XRF analysis of the wastes materials, the sampling team collected and sent ten of these samples to

Prairie Analytical Laboratories in Springfield, Illinois for total metals conformation and a waste characterization determination.

A Trimble survey grade global positioning system (GPS) instrument was used to mark and record the location of all outdoor sample locations. Indoor sample locations were identified and marked through the collective memories of the sampling team.

The XRF analysis of the waste documented a number of these samples contained total lead concentrations in excess of current regulatory limits. The laboratory analysis also documented the fact that the majority of the conformation samples would be classified as hazardous waste by current program definition.

It should be pointed out however, that a strong correlation did not exist between the XRF readings and the laboratory analysis at a number of the samples locations. With total lead concentrations as documented through the laboratory analysis routinely running two to five times greater than the concentrations documented with the XRF. A discussion with Niton Corporation technical representatives indicated that this condition was in all likelihood a result of the extremely high zinc concentrations being present in a number of the samples, therefore masking the true lead concentration levels.

Attachment 1 to this letter is a table that summarizes concentrations of a number of metals as documented with the Niton X-Ray fluorescence instrument. Also included in this table are the totals and toxicity characteristic leaching procedure (TCLP) metal analysis from the ten laboratory confirmation samples that were taken during the sampling event.

Figures 1 and 2 are maps which denote the locations of XRF samples. Included in these figures are the assigned XRF sample number identifier and the lead concentrations as documented with the XRF.

Summary of Field Structural Investigation Activities

As a component of the Illinois EPA activities on-site, two Illinois EPA response action contracting firms were present to evaluate the condition of the abandoned equipment for scrap metal and/or salvage value, to estimate the cost of building demolition, with the segregation of the demolition debris into the categories of asbestos containing materials (ACM) for off-site disposal, putrescible wastes for off-site disposal, and non-putrescible building demolition debris for recycling or on-site disposal.

Attachment 2 to this letter is the estimate of REACT Environmental Engineers, 1120 South 6th Street, Saint Louis, Missouri and Attachment 3 to this letter is the estimate of Bodine

Environmental Services, Inc. 5350 East Firehouse Road, Decatur, Illinois to accomplish these proposed tasks.

If you should have any questions, need any additional information or wish to discuss any of these matters further please contact me at 217-524-1655 or via electronic mail at: clarence.smith@illinois.gov.

Respectfully,

Clarence L. Smith, Manager
Federal Site Remediation Section
Division of Remediation Management
Bureau of Land

Figures (2)
Attachments (3)

cc: The Honorable William M. Baran
Mayor
City of Hillsboro
Post Office Box 556
Hillsboro, Illinois 62049

Ms. Allison Beth Eckley, EIT
Environ International Corporation
5401 Veterans Memorial Parkway, Suite 201
Saint Peters, Missouri 63376

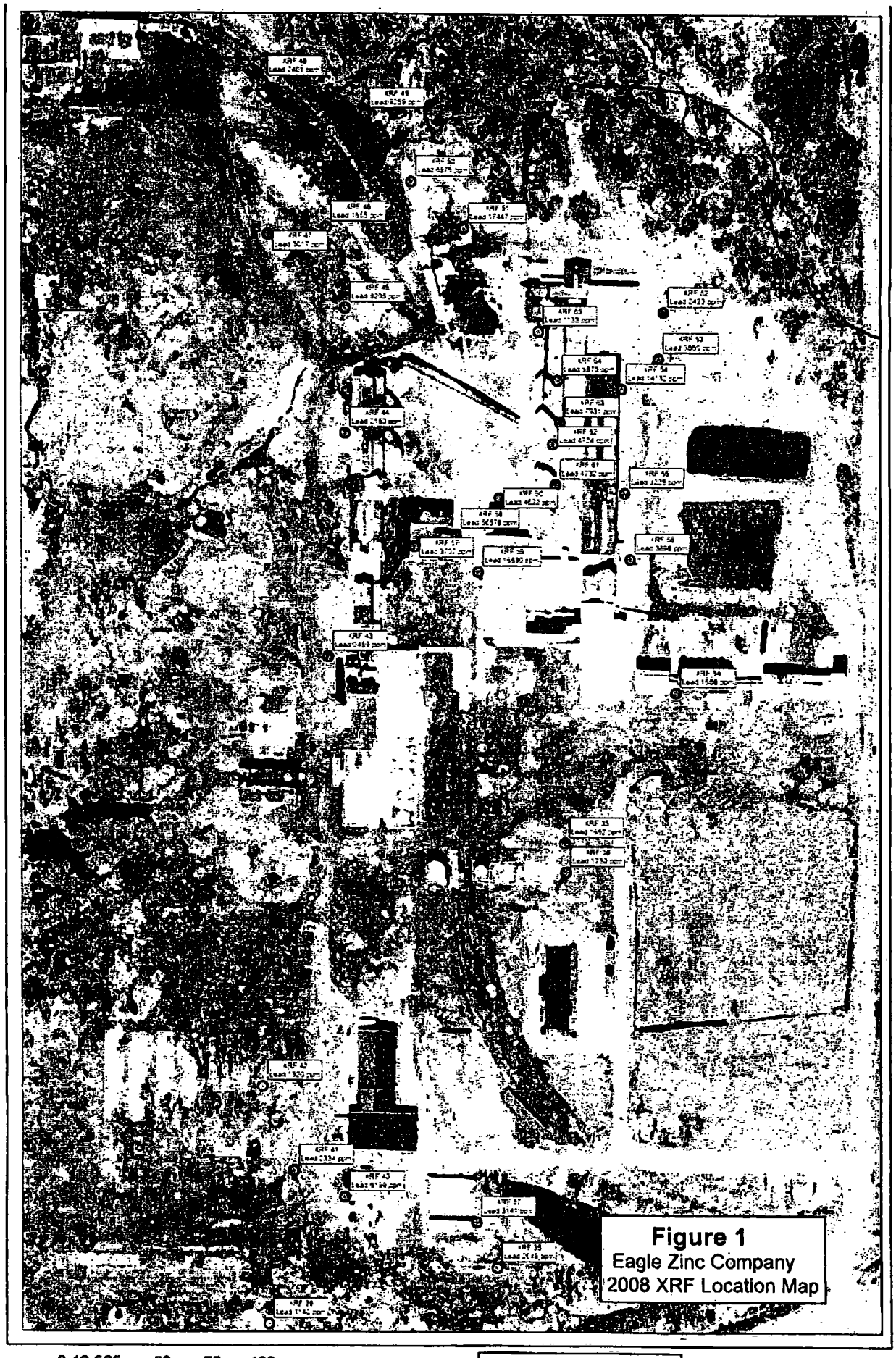

Figure 1
Eagle Zinc Company
2008 XRF Location Map

0 12.525 50 75 100
Meters

Source: Illinois Department of Natural Resources
Geospatial Data Clearinghouse:
Digital Orthographic Quadrangles, 1999, accessed 2005

Legend

- XRF Location with Lead concentrations < 1,500 ppm
- XRF Location with Lead concentrations > 1,500 ppm (May fail TCLP for Lead)

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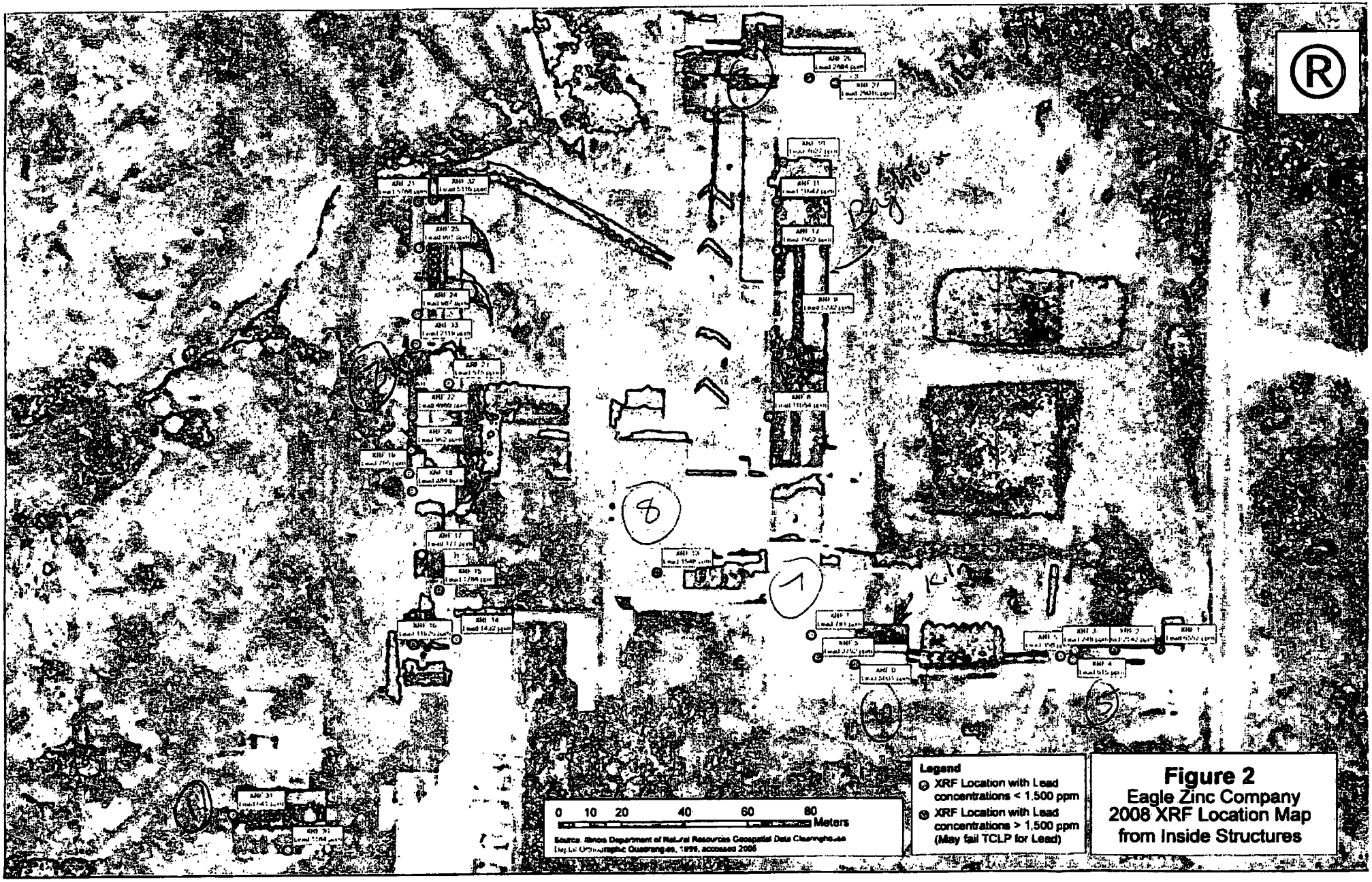

Figure 2
Eagle Zinc Company
2008 XRF Location Map
from Inside Structures

EAGLE ZINC SITE: WASTE CONCENTRATIONS

Map Number	Units	Pb	As	Zn	Cu	Ni	Cr	Ba	Cd	TCLP
XRF 001	ppm	6552	198	1556094	1259	419	4099		137	
XRF 002	ppm	2142	5	634212	751	1053	2720		7	
XRF 003	ppm	248		281809	5111	2094	1201	200		
XRF 004	ppm	615	26	383566	857	77	571		142	
XRF 005	ppm	358	19	416348	127	16	133		53	
XRF 006	ppm	3792		1817547	933	478	3565			
XRF 007	ppm	781	70	310744	275	202	1246		59	
XRF 008	ppm	11054		666681	6216	2920	1958	221	14	
XRF 008C	ppm	27700	61	332000	5010	1460	43	655	140	56.0
XRF 009	ppm	5232		1677085	1481	1146	2022		253	
XRF 010	ppm	7627	138	685126	1766	1603	2621	136	103	
XRF 011	ppm	11642	131	1445490	2563	-42	3350		198	
XRF 012	ppm	7962	168	876729	15619	6947	2622		54	
XRF 013	ppm	1548		1883523	1239	110	2144			
XRF 014	ppm	1432		409707	1397	120	2471	190	203	
XRF 015	ppm	1788	68	444812	1770	553	524	205	131	
XRF 016	ppm	11926	546	589829	2321	1373	1944		24	
XRF 017	ppm	171		698262	8165	10513	2287	293	26	
XRF 018	ppm	384		702091	6122	2996	2415			
XRF 019	ppm	795	23	324037	3764	1420	427	149	16	
XRF 020	ppm	962	9	772174	1703	3078	2655		66	
XRF 021	ppm	5788	202	373476	75	2377	6807			
XRF 022	ppm	4969	196	428556	2011	786	1381	162	100	
XRF 023	ppm	575	25	206463	5198	1952	1543	313		
XRF 024	ppm	987		2258555	183	392	1513			
XRF 025	ppm	991	0	282480	2008	2395	849	160	13	
XRF 026	ppm	2884	113	117072	179644	1986	1559		51	
XRF 027	ppm	29016	526	1037859	26600	11559	7087		41	
XRF 028	ppm	5671	214	816391	8558	2861	2804	3555	44	
XRF 028C	ppm	6750	47	273000	4000	638	75	4670	133	9.2
XRF 029	ppm	584	30	334927	1448	513	1505	419	2	
XRF 030	ppm	1184		1779565	1692	-584	129			
XRF 031	ppm	641	44	715180	1792	1192	1329		21	
XRF 000	ppm	5001	195	627962	1301	332	805		4	
XRF 034	ppm	1688	13	602841	1135	454	237		11	
XRF 035	ppm	1662	67	205106	2952	250	583	236	4	
XRF 036	ppm	1730	55	269767	3693	414	484	235	11	
XRF 037	ppm	3141	131	100785	825	-23	411	298	65	
XRF 038	ppm	2649	39	28110	465	78	168	390	25	
XRF 039	ppm	1140	36	330531	953	412	229	227		
XRF 040	ppm	6199	282	139802	842	53	295	440	144	
XRF 041	ppm	2334	44	86946	994	37	177	426	240	
XRF 042	ppm	1320	70	127641	901	378	190		105	
XRF 043	ppm	2459	104	196580	48343	20215	2597	559	50	
XRF 043C	ppm	3880	62	70600	49900	17800	288	537	14	8.7
XRF 033	ppm	2119	60	240640	2399	75	397	242	263	
XRF 033C	ppm	5460	4	137000	1280	49	6	107	284	20.4
XRF 044	ppm	2150	39	454792	1859	2120	736		72	
XRF 032	ppm	5116	124	331536	1595	3649	-24	129	7	
XRF 045	ppm	8205	58	524161	18362	9734	1745	121	6	
XRF 047	ppm	3017	83	237868	7807	2855	616	195	36	
XRF 047C	ppm	15500	28	183000	27300	15300	419	160	69	7.8
XRF 048	ppm	2401		306170	4202	1476	471	168	13	
XRF 049	ppm	9259	287	543159	32969	9313	-351		38	
XRF 050	ppm	6575	142	577278	25274	9338	2404			
XRF 050C	ppm	15200	36	314000	36100	13800	365	85	40	4.4
XFR 051	ppm	17447	712	624661	25575	19704	2493	120		
XRF 052	ppm	2423	72	374672	6715	2015	1525	207		
XRF 053	ppm	3860	43	450937	13344	6966	770			
XRF 054	ppm	14132	98	451511	14831	9539	2207		35	
XRF 055	ppm	3228	24	423580	2731	306	653	172	22	
XRF 056	ppm	3698		816477	2115	470	778		78	
XRF 056C	ppm	12200	38	403000	2320	281	15	110	108	11.7
XRF 057	ppm	3707	152	295775	809	153	593	151	26	
XRF 058	ppm	56578	2015	230400	1551	268	360	108	11	
XRF 059	ppm	16830	457	979131	1095	508	1004		43	
XRF 060	ppm	4622	55	660123	1765	789	576	112	43	
XRF 060C	ppm	8200	13	130000	900	167	14	57	42	10.6
XRF 061	ppm	4732	19	678888	2484	601	202		45	
XRF 061C	ppm	10300	19	290000	1610	291	19	175	120	26.6
XRF 062	ppm	4724	102	708869	1868	560	1180			
XRF 063	ppm	7931	340	218328	997	133	28	287	6	
XRF 063C	ppm	11700	41	357000	890	309	104	383	64	8.5
XRF 064	ppm	5870	174	254351	3225	824	512	290		
XRF 065	ppm	1133	8	619345	2550	1235	831	98	49	
XRF 046	ppm	1655	73	207324	5430	1260	591	199	13	

Attachment 1
XRF and TCLP Sampling Results
Eagle Zinc NPL Site
Hillsboro, Illinois