MACTEC

engineering and constructing a better tomorrow

October 26, 2006

Mr. Joseph T. Martella II, Senior Engineer
RIDEM Office of Waste Management
Site Remediation Program
235 Providence Street
Providence, RI 02908

RE: Former Slag Pile Area Supplemental Removal Action Work Plan
Former Gorham Manufacturing Facility, Plat 51 – Lots 323, 324, and 326
333 Adelaide Avenue, Providence, Rhode Island
Case No. 97-030 (Including Case No. 2005-029 and Case No. 2005-059)
MACTEC Project No. 3650050041.02

Dear Mr. Martella:

On behalf of Textron, Inc. (Textron), MACTEC Engineering and Consulting, Inc. (MACTEC) is submitting this Former Slag Pile Area Supplemental Removal Action Work Plan (Work Plan) for your review and approval. This Work Plan has been developed to address issues raised by the Rhode Island Department of Environmental Management (RIDEM) regarding the previously completed slag removal activities. This Work Plan is generally in conformance with Section 9: Remedial Action Work Plans of the RIDEM Remediation Regulations DEM-DSR-01-93.

Background

Between May 26, 2006 and July 18, 2006, an estimated 1,300 cubic yards of slag material from a former smelting operation was excavated at the above referenced Site for off-site cycling. This work was performed to fulfill Requirement I Removal Actions of the Rhode Island Superior Court Consent Order (Park Parcel) dated March 29, 2006. Slag removal continued until visual observations indicated that the limits of the slag pile had been removed and confirmation sampling indicated that Site contaminates of concern did not exceed RIDEM Upper Concentration Limits (UCL) in soil. This excavation extended beyond the slag pile and into native soil and industrial fill material found on the Site (See Figure 1). A Slag Removal Summary Report that documented these actions was submitted to RIDEM on September 29, 2006 in accordance with the Consent Order.

RIDEM has requested that Textron continue removal actions until Industrial/Commercial Direct Exposure Criteria (I/CDEC) are met and that TCLP analyses be conducted on remaining soils to confirm that the hazardous constituents of the former slag material was no longer present in the soil/fill material at the limits of the excavation. This Work Plan has been prepared to document actions to be taken by Textron in response to RIDEM issues.

MACTEC Engineering and Consulting, Inc.
107 Audubon Road, Bldg. 2, Suite 301 • Wakefield, MA 01880 • Phone: 781.245.6606 • Fax: 781.246.5060
www.mactec.com

Scope of Work

This Work Plan addresses the following activities: 1) Excavation and offsite disposal of soil from two areas within the footprint of the former slag pile that contained elevated residual lead concentrations, and 2) Excavation of test pits at the limits of the previously completed slag pile removal effort for visual inspection purposes.

Site Preparation Activities

Health and Safety – See May 24, 2006 Slag Removal Work Plan.

Operating Log – See May 24, 2006 Slag Removal Work Plan.

Erosion Controls – Existing controls, installed for the initial excavation activities, will remain in place (and/or be repaired as needed) in order to minimize runoff of soils and slag material during the excavation activities. The existing controls include a hay bail/silt fence barrier around the work area, extending from the upland area near Parcel B down the slope towards Mashapaug Cove. The existing hay bail/silt fence barrier from the school construction site will be connected into this erosion control system. Upon completion of the supplemental slag removal activities, the erosion control measures around the former slag pile will remain in place until the surface soil has been stabilized. A boom and silt curtain has been maintained and will remain positioned in Mashapaug Cove through the completion of the slag removal and site restoration activities.

Removal of Existing Stone Backfill – The existing stone backfill, to be used to fill areas of the excavation below the water table, is currently staged on the southern edge of the former slag pile area. To allow access to areas of elevated lead concentrations, this material will be moved to the western portion of the slag pile excavation where confirmatory soil samples were below RIDEM I/C DEC (See Figure 1).

Temporary Access Road Grading and Loading Pad – Site soil and/or existing stone fill will be used to construct and relocate, as needed, a new access road and loading pad for excavation equipment and trucks transporting the soil off site for disposal. The gate and access road will remain pending construction of the proposed soil cap for Parcel D soils under the ongoing Site Investigation process. The erosion control barrier constructed for the slag removal will extend up the hill along each side of the access road and along the upgradient and downgradient sides of the loading pad. Once the soil excavation is completed the hay bales will be used to support the restoration of the excavation surface area.

Excavation and Test Pits Activities

Figure 1 shows the general area of work discussed in this Work Plan. Within the footprint of the former slag pile, confirmation sampling has indicated lead concentrations in soil range from 9.5 mg/kg to 5,580 mg/kg (See Table 1). As discussed at the October 4, 2006 meeting with RIDEM, soils in the vicinity of sample locations ss-si51S100 (5,580 mg/kg lead) and ss-si41B1 (3,770 mg/kg lead) appear to represent isolated hot spots and will be excavated, characterized, and transported offsite for appropriate disposal. In addition, test pits will be excavated at locations

shown in Figure 1 along the perimeter of the previously completed slag pile excavation for visual inspection of the soil and site fill material.

Excavation Methodology – Soil excavation will be performed using an excavator operated by Clean Harbors. Soil from the two residual areas will be excavated for off-site disposal (Figure 1). It is anticipated that approximately 50 cubic yards of material will be removed from the area around confirmatory sample ss-si51S100 and approximately 8 cubic yards of material will be removed from the area around ss-si41B1. Confirmatory samples will be collected from the two removal areas and analyzed for total lead. The stockpile generated from these excavated soils will be staged on the loading pad and will be sampled for waste characterization purposes. Based upon the results of waste characterization, Clean Harbors will load the material into trucks for transport to a waste facility under either a bill of lading or a hazardous waste manifest, as appropriate. Weight slips will be provided by the transport and disposal firm along with the shipping documentation which will be maintained in the project file.

Test pits will be excavated along the perimeter of the former slag pile removal area. RIDEM will be contacted in advance of test pit activities such that RIDEM personnel can be present to observe the conditions of the test pits. Proposed test pit areas are indicated on Figure 1, but actual locations and number of test pits will be coordinated in the field with RIDEM. Test pit soils will be temporarily stockpiled adjacent to the test pit. Test pits will provide a visual basis for identifying if residual slag is present. If slag is not identified in a specific test pit, photographs will be taken to document test pit conditions and the test pit will be backfilled. If significant slag pieces are visible in test pits, the material will be removed either mechanically (scraping of the test pit side walls with backhoe bucket) or physically removed by a laborer and the test pit will be staked/flagged. Confirmation sampling for total lead will be performed prior to backfilling areas where slag was identified.

Loading, Hauling & Disposal

Excavated soil from the two residual areas will be tested and disposed of off-site. During the proposed activities, slag material, if found, will be removed and set aside for off site disposal. Weight slips will be provided by the transport and disposal firm along with the shipping documentation. This documentation will be included in the summary letter report submitted to RIDEM at the completion of the supplemental slag removal, as discussed below.

Site Restoration

Following excavation of the two residual areas, confirmatory soil sampling, visual inspection of the test pits, and agreement among parties that the extent of the slag has been removed, Clean Harbors will backfill the slag excavation area with existing stone to one foot above the water table and then use clean backfill material meeting RIDEM criteria to bring the site up to grade. Clean Harbors will grade the surface soils to tie into existing grades at the limits of work, and seed the surface area. Hay bales from the upland area (loading pad and access road) will be broken up and spread on surface to control potential erosion of the surface material. The erosion control barrier will remain in place until after the grass seed has fully grown into place. It should be noted that pending the results of the site investigation, this area may be part of a soil cover to be installed on Parcel D.

As part of the site restoration activities, a new monitoring well will be constructed to replace monitoring well GZA-5 which was abandoned during initial slag removal activities. The new monitoring well will be constructed in the same location, based on GPS coordinates of GZA-5, and of like materials based on the GZA-5 boring log. This well will consist of a 15 foot section of 1.5 inch PVC screen set to approximately 20 feet below ground surface.

Reporting

At the completion of these activities MACTEC will prepare a summary letter report for submittal to RIDEM.

This report will serve as an addendum to the Slag Removal Action Report submitted to the RIDEM on September 29, 2006. This report will summarize the removal activities conducted to date, visual observations, photo documentation, quantity estimates, site restoration, location and identification of metal debris removed, transportation and disposal documentation and confirmatory soil sampling results.

Proposed Schedule

Pending RIDEM approval of this Work Plan, field activities will commence at the earliest possible date as dictated by subcontractor schedules. As previously mentioned, RIDEM will be given advanced notice regarding the date of the test pit activities.

We look forward to working with RIDEM on the review and execution of this Work Plan. Feel free to contact either Greg Simpson of Textron (401) 457-2635 or David Heislein of MACTEC (781) 213-5655 with any questions. We are available either for a conference call or to meet with RIDEM to address any questions you may have on this Work Plan.

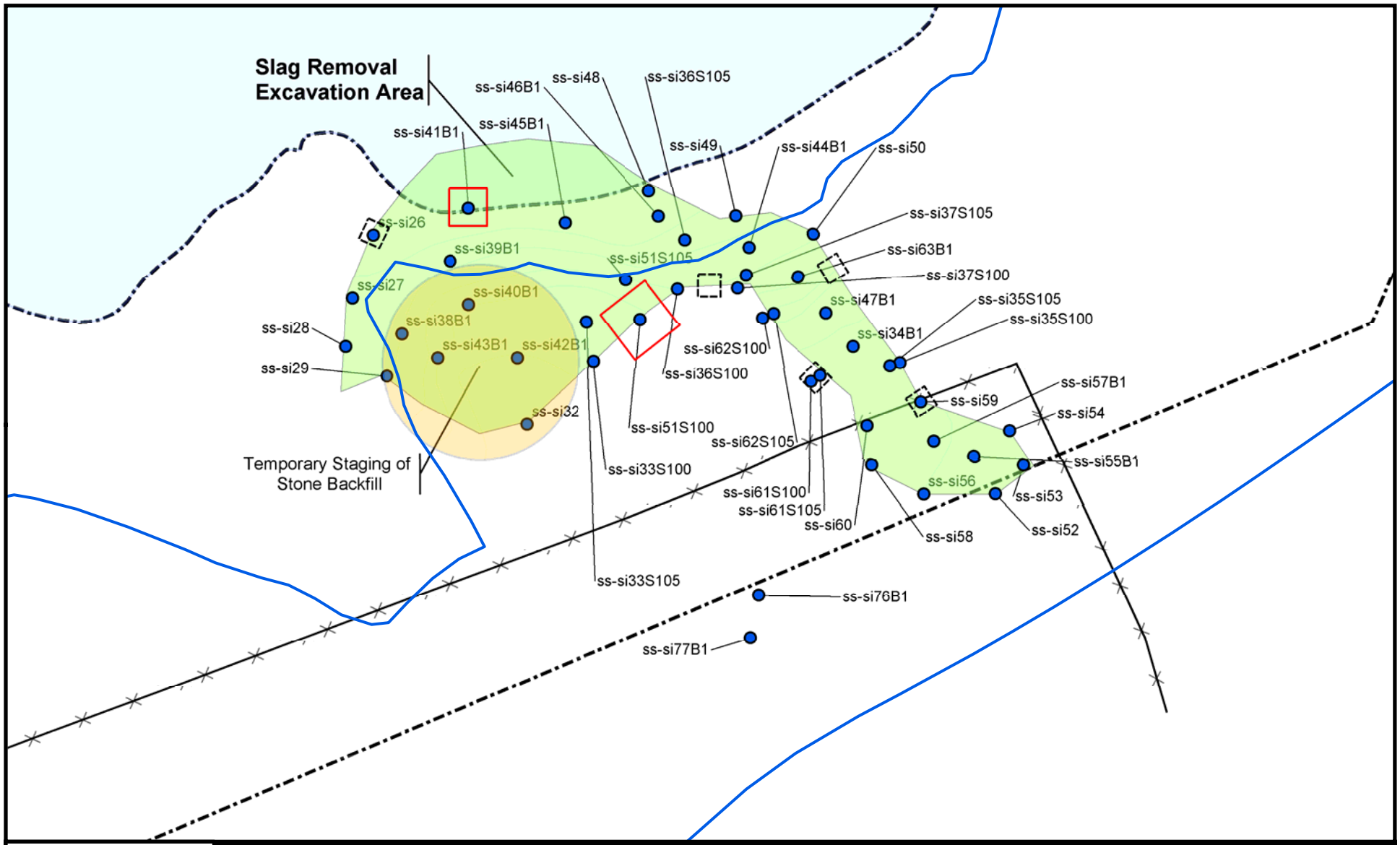
Sincerely
MACTEC Engineering and Consulting, Inc.

Dan Finan, P.E.
Senior Engineer

David E. Heislein
Principal Engineer

Attachments: Figure 1. Former Slag Pile Area
Table 1. Summary of Confirmatory Soil Samples

cc: T. Deller, City of Providence
P. Grivers, EA Engineering, Science, and Technology
D. McCabe, Textron, Inc.
J. Pichardo, Senator
G. Simpson, Textron, Inc.
J. Slater, Representative
Knight Memorial Library Repository
MACTEC Project File
[P:\W2-mfg\TEXTRON\GORHAM\Slag Removal Action\Supplemental Slag Removal Action\Supplemental Removal Action Work Plan_Final.doc]



Legend

- Previous Sample Locations
- Initially Excavated Area
- Approximate Park Parcel Boundary
- Elevation
- Mashapaug Cove
- Appoximate Fill Area
- Additional Removal Area
- City Fence
- Test Pit (Final Locations To Be Determined In Field)

MACTEC

N

0 18.5 37 Feet

Prepared by BJR | Checked by DF

Figure 1
Former Slag Pile Area
Supplemental Removal Action Work Plan

333 Adelaide Avenue
Providence, Rhode Island

Document: P:\W2-mfg\TEXTRON\GORHAM\GIS\MapDocuments\ExcavatedArea.mxd PDF: P:\W2-mfg\TEXTRON\GORHAM\Slag Removal Action\Supplemental Slag Removal Action\SupplementalSlagRemovalFig1.pdf 10/19/2006 9:49 AM bjroden

TABLE 1: SUMMARY OF CONFIRMATORY SOIL SAMPLES
RCRA METALS
INITIAL SLAG PILE EXCAVATION

chemical_name	Frequency of Detection	Range of Non Detects	Range of Detected Concentrations	Average of Samples	Residential (ppm)	Industrial / Commercial (ppm)	SS-SI26 7/12/2006 0-1ft	SS-SI27 7/12/2006 0-1ft	SS-SI28 7/12/2006 0-1ft	SS-SI29 7/12/2006 0-1ft	SS-SI32 7/12/2006 0-1ft	SS-SI33 S100 7/12/2006 0-1ft	SS-SI33 S105 7/12/2006 5-6ft
Inorganics (mg/kg)													
Antimony	3 / 49	5.5 - 28.9	7.1 - 18.2	3.9	10	820	<28.9	<6.8	<6.8	<6.2	<6.5	<6.8	<6
Arsenic	37 / 49	1.4 - 7.2	1.5 - 13.3	3.5	7	7	<7.2	2.7	3.1	1.6	3.6	5.7	3.5
Barium	47 / 47		5.1 - 355	51	5500	10000	355	103	203	16.1	40.6	81.1	29.7
Beryllium	47 / 49	0.07 - 0.07	0.06 - 1.63	0.23	0.4	1.3	0.37	0.22	0.23	0.14	0.25	0.25	0.21
Cadmium	25 / 49	0.56 - 2.89	0.7 - 7.76	1.3	39	1000	<2.89	<0.68	1.83	<0.62	1.07	3	1.07
Chromium	49 / 49		2.1 - 349	35	390	10000	349	10.8	167	12.5	26.6	14.1	13.6
Copper	55 / 55		3 - 4680	728	3100	10000	2320	132	3670	121	596	321	143
Lead	46 / 49	6.8 - 7.8	9.5 - 2540	595	150	500	**1740**	55.6	473	57	320	**698**	486
Mercury	37 / 49	0.035 - 0.045	0.043 - 2.23	0.35	23	610	1.2	<0.037	0.916	0.337	0.2	1.03	0.085
Nickel	44 / 49	3.4 - 3.9	4 - 357	33	1000	10000	61.1	5.4	42.7	5	21.9	22.5	14.7
Selenium	0 / 49	5.5 - 28.9		3.4	390	10000	<28.9	<6.8	<6.8	<6.2	<6.5	<6.8	<6
Silver	43 / 49	0.67 - 0.78	1.42 - 223	53	200	10000	102	5.78	133	4	44.8	120	20.1
Thallium	0 / 49	1.4 - 7.2		0.86			<7.2	<1.7	<1.7	<1.5	<1.6	<1.7	<1.5
Zinc	49 / 49		5.2 - 1860	331	6000	10000	492	72.8	1860	131	438	538	190

Shading indicates an exceedance of the Industrial / Commercial RI Direct Exposure Criteria.

TABLE 1: SUMMARY OF CONFIRMATORY SOIL SAMPLES
RCRA METALS
INITIAL SLAG PILE EXCAVATION

chemical_name	SS-SI34 B1 7/13/2006 1-2ft	SS-SI35 S100 7/13/2006 0-1ft	SS-SI35 S105 7/13/2006 5-6ft	SS-SI36 S100 7/13/2006 0-1ft	SS-SI36 S105 7/13/2006 5-6ft	SS-SI37 S100 7/13/2006 0-1ft	SS-SI37 S105 7/13/2006 5-6ft	SS-SI38 B1 7/13/2006 1-2ft	SS-SI38 S1 DUP 7/13/2006 1-2ft	SS-SI39 B1 7/13/2006 2-3ft	SS-SI40 B1 7/13/2006 5-6ft	SS-SI42 B1 7/13/2006 2-4ft	SS-SI42 DUP 7/13/2006 2-4ft	SS-SI43 B1 7/13/2006 2-4ft	SS-SI44 B1 7/13/2006 4-5ft	SS-SI45 B1 7/13/2006 3-5ft	SS-SI46 B1 7/13/2006 4-5ft	SS-SI47 B1 7/13/2006 2-3ft	SS-SI48 7/13/2006 0-1ft
Inorganics (mg/kg)																			
Antimony	<6.9	<6.2	<6.1	<6.3	<6	<6.8	<6.6	<7	<6.7	<7	<6.8	<6.7	<6.7	<6.2	<7	<6.8	<6.9	18.2	<8.2
Arsenic	<1.7	3.1	3.1	6.7	3.3	5.9	**9.7**	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	3.3	5	<1.7	<1.7	3.3	6.4
Barium	11.1	32.9	61.5	52.1	29.1	200	99.2	8.9	8	13.9	6.8	10.6	9.9	21.7	105	7.1	5.1	49.7	17
Beryllium	0.12	0.18	0.17	0.29	0.24	0.77	**1.63**	0.15	0.12	0.29	0.1	0.17	0.15	0.16	0.37	<0.07	<0.07	0.3	0.21
Cadmium	<0.69	0.7	0.81	7.76	1.13	4.88	7.13	<0.7	<0.67	<0.7	<0.68	<0.67	<0.67	<0.62	2.9	<0.68	<0.69	<0.67	1.18
Chromium	7.7	13	11.9	193	19.6	144	169	3.8	3.1	5.8	4.3	5	5	6.7	75	10.7	2.1	45	32.2
Copper	161	181	254	862	231	1680	2570	3.7	3.4	3	40.2	12.6	10.2	189	919	24.9	3.2	435	3950
Lead	21	**579**	303	**2230**	**750**	**2540**	**2180**	9.5	14.8	13	50.9	29.8	17.6	126	**1440**	<6.8	<6.9	**1810**	388
Mercury	0.412	2.23	0.216	0.636	0.202	0.567	0.543	<0.037	<0.039	<0.041	<0.04	<0.035	<0.039	0.101	1.08	<0.037	<0.036	0.145	0.07
Nickel	11.9	23.8	30.4	52.5	19.8	82.6	75.4	<3.5	<3.4	4.5	5	4.3	4.1	21.6	76.7	<3.4	<3.4	62	31.3
Selenium	<6.9	<6.2	<6.1	<6.3	<6	<6.8	<6.6	<7	<6.7	<7	<6.8	<6.7	<6.7	<6.2	<7	<6.8	<6.9	<6.7	<8.2
Silver	2.07	40.8	86.9	118	29.8	111	138	<0.7	<0.67	<0.7	1.42	2.42	2.33	21.5	124	<0.68	<0.69	94.9	42.7
Thallium	<1.7	<1.5	<1.5	<1.6	<1.5	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.6	<1.7	<1.7	<1.7	<1.7	<2
Zinc	143	140	160	777	221	840	1020	8.8	8.1	8.6	24.5	27.8	16.2	90.5	510	8.5	5.2	278	1140

Shading indicates an exceedance of the Industrial / Commercial RI Direct Exposure Criteria.

TABLE 1: SUMMARY OF CONFIRMATORY SOIL SAMPLES
RCRA METALS
INITIAL SLAG PILE EXCAVATION

chemical_name	SS-SI49 7/13/2006 0-1ft	SS-SI50 7/13/2006 0-1ft	SS-SI51 S105 7/13/2006 5-6ft	SS-SI52 105 7/14/2006 5-6ft	SS-SI52 S100 7/14/2006 0-1ft	SS-SI53 100 7/14/2006 0-1ft	SS-SI53 105 7/14/2006 5-6ft	SS-SI54 S100 7/14/2006 0-1ft	SS-SI54 S105 7/14/2006 5-6ft	SS-SI55 B1 7/14/2006 1-2ft	SS-SI56 S100 7/14/2006 0-1ft	SS-SI56 S105 7/14/2006 5-6ft	SS-SI57 B1 7/14/2006 6-7ft	SS-SI58 7/14/2006 0-5ft	SS-SI59 7/14/2006 0-1ft	SS-SI60 7/14/2006 0-1ft
Inorganics (mg/kg)																
Antimony	7.1	<6.9	7.1	<6.1	<5.8	<6	<6.2	<6.2	<6.9	<5.9	<5.5	<5.6	<7.8	<6.1	<5.9	<5.9
Arsenic	3.6	1.7	**8.1**	4.4	6.4	5.6	1.8	2.9	**13.3**	3.8	4.6	1.7	<2	2.1	3.5	5.6
Barium	54.1	6.8	66	43.6	53	42.2	27.9	26	130	18.2	36.7	17.3	21.5	19.6	25.5	48.8
Beryllium	0.33	0.08	0.42	0.17	0.17	0.2	0.09	0.1	0.36	0.15	0.15	0.06	0.08	0.06	0.14	0.16
Cadmium	1.18	<0.69	4.95	1.63	1.68	1.15	<0.62	<0.62	2.11	1.38	0.83	<0.56	<0.78	<0.61	1.29	1.21
Chromium	41	13.9	44.2	7.2	12.6	8.6	4.2	8.6	6.7	5.4	6.9	6.3	4.9	4.3	8.1	8.7
Copper	971	1530	439	636	4680	219	251	805	367	729	352	15.1	6.7	68.4	190	386
Lead	**975**	**1060**	**2510**	436	**573**	399	85.7	160	372	393	482	11.1	<7.8	99.6	**1240**	**808**
Mercury	0.361	<0.039	0.692	0.489	0.418	0.453	0.101	0.159	0.428	0.121	0.297	0.253	<0.045	0.488	0.4	1.08
Nickel	36.4	13.6	41.4	27.6	357	32.2	19.7	12.7	103	47.1	20.3	5.1	<3.9	8.4	27	44.1
Selenium	<6.1	<6.9	<6.1	<6.1	<5.8	<6	<6.2	<6.2	<6.9	<5.9	<5.5	<5.6	<7.8	<6.1	<5.9	<5.9
Silver	104	27.1	117	38.7	38.8	32.8	5.31	17.7	37.9	51.3	23.8	2.05	<0.78	14.4	212	79.6
Thallium	<1.5	<1.7	<1.5	<1.5	<1.5	<1.5	<1.5	<1.6	<1.7	<1.5	<1.4	<1.4	<2	<1.5	<1.5	<1.5
Zinc	513	691	342	387	982	208	178	389	476	394	235	110	18.3	68.4	161	183

TABLE 1: SUMMARY OF CONFIRMATORY SOIL SAMPLES
RCRA METALS
INITIAL SLAG PILE EXCAVATION

chemical_name	SS-SI61 S100 7/14/2006 0-1ft	SS-SI61 S105 7/14/2006 5-6ft	SS-SI62 S100 7/14/2006 0-1ft	SS-SI62 S105 7/14/2006 5-6ft	SS-SI63 B1 7/14/2006 11-12ft	SS-SI71 W1 8/14/2006 0-1ft	SS-SI72 N1 8/14/2006 0-1ft	SS-SI73 B1 8/14/2006 2-3ft	SS-SI73 B1 Dup 8/14/2006 2-3ft	SS-SI74 E1 8/14/2006 0-1ft	SS-SI75 S1 8/14/2006 0-1ft	SS-SI76 B1 8/14/2006 0-1ft	SS-SI77 B1 8/14/2006 0-2ft
Inorganics (mg/kg)													
Antimony	<6.4	<6.4	<5.9	<6	<6.2							<5.8	<6
Arsenic	5.8	4.6	2.6	1.5	2.3							<1.4	2.3
Barium	59.3	66.4	20.2	11	14.7								
Beryllium	0.57	0.26	0.28	0.07	0.09							0.07	0.11
Cadmium	2.44	<0.64	1.37	<0.6	<0.62							<0.58	0.78
Chromium	73.3	10.2	44.2	8.4	5.6							4.3	15.5
Copper	909	359	2570	57.1	38.4	801	2650	616	524	122	473	81.1	341
Lead	**1720**	65.2	441	17.6	15.2							298	**630**
Mercury	0.473	0.345	0.25	0.06	<0.038							0.043	0.174
Nickel	57.3	26.5	39.6	4	7.8							5.1	13.5
Selenium	<6.4	<6.4	<5.9	<6	<6.2							<5.8	<6
Silver	214	18.5	223	2.02	5.65							81.4	12.3
Thallium	<1.6	<1.6	<1.5	<1.5	<1.5							<1.4	<1.5
Zinc	425	173	716	89.4	85.7							36.8	193

Shading indicates an exceedance of the Industrial / Commercial RI Direct Exposure Criteria.