

January 28, 1997

MEMORANDUM

TO: Anita Cummings

FROM: Howard Finkel

SUBJECT: Transferability of UTS to Mineral Processing Wastes

As discussed below, the transferability of the universal treatment standards to mineral processing wastes is well supported because the derivation of the newest treatment standards were based on the selection of the highest treatment level calculated using (1) treatment data obtained from INMETCO and (2) treatment data obtained from both Rollins Environmental and GNB.

Specifically, as shown in Exhibit 1, the majority of the waste streams comprising the Rollins Environmental and GNB database were derived from facilities involved in either primary or secondary mineral processing (21 of 31; 68%). The remaining waste streams were produced by facilities that generated metal-bearing remediation wastes (3 of 31; 9.6%), metal manufacturing wastes (3 of 31; 9.6%), foundry wastes (2 of 31; 6.4%), and spent metallic wastes (2 of 31; 6.4%).

EXHIBIT 1

Rollins Environmental and GNB Treatment Data - Waste Stream Identifiers

| Waste Stream Identifier | Type of Waste | Waste Stream Description | Primary Constituents (pH, RAW TCLPs - mg/L) |
|--------------------------------|-----------------------|--|--|
| WP-1672 | Remediation | Baghouse Dust (Sprayed and Dried) From Incinerator | pH=7.5, Pb - 3.0 |
| WP-1731 | Mineral Processing | Cadmium Sponge Residue | pH=11, Cd-4090, Pb-13, Zn-430 |
| WP-1772 | Foundry | Grey Iron Cupola Melting Waste | pH=6.25, Pb-114 |
| WP-6458 | 2° Mineral Processing | Lead Slag Waste | pH=10, all metals <1 |
| WP-6766 | Foundry | Baghouse Dust Waste | pH=6.8, Cd-11.7, Pb-338 |
| WP-6795 | Mineral Processing | Cupels From Fire Assay Laboratory | pH=10.3, Pb-4430 |
| WP-6797 | Mineral Processing | Crucibles From Fire Assay Laboratory | pH=7.5, Pb-77.2 |
| WP-6798 | Mineral Processing | Slag From Fire Assay Laboratory | pH=11.7, Pb-8.67 |
| WP-6969 | Mineral Processing | Soils and Debris With Sulfuric Acid | pH=2, Pb-18.8 |
| WP-7124 | 2° Mineral Processing | Lead-Bearing Assay Laboratory Wastes | pH=11, Pb-900 |
| WP-7280 | 2° Mineral Processing | Lead Contaminated Wastes, Cupels, and Debris | pH=11.3, Pb-1280 |
| WP-7393 | Mineral Processing | Blast Furnace Slag | pH=10.23, Ba-13.5, Pb-50.7 |
| WP-7397 | 2° Mineral Processing | Blast Furnace Slag | pH=10.23, Ba-13.5, Pb-50.7 |

EXHIBIT 2 (Continued)

| Waste Stream Identifier | Type of Waste | Waste Stream Description | Primary Constituents (pH, RAW TCLPs - mg/L) |
|--------------------------------|-------------------------|---|--|
| WP-8036 | Spent Metallic Products | Lead Aprons | pH=5.2, Pb-783 |
| WP-10073 | Metal Manufacturing | Bottom Concentrated Plating Tank Sludge | pH=4.0, Cr-284 |
| WP-10076 | Metal Manufacturing | Chromium Contaminated Sand and Dirt | pH=2.81, Cr-317 |
| WP-10078 | 2° Mineral Processing | Lead Recycling By-Products | pH=9.7, Pb-2690 |
| WP-10081 | Metal Manufacturing | Porous Pot Solids | pH=8.76, Sb-16.1, Cr-1580 |
| WP-11262 | Remediation Waste | Chromium Contaminated Soils | pH=8.79, Cr-40.6 |
| WP-11504 | Spent Metallic Products | Lead Oxide Catalyst Waste | pH=6.54, Pb-1400 |
| WP-12111 | 2° Mineral Processing | Lead Contaminated Soils | pH=7.31, Pb-246 |
| WP-12651 | Mineral Processing | Baghouse Dust Waste | pH=7.04, Cd-13, Pb-220, Zn-3100 |
| WP-12967 | Remediation Waste | Lead Contaminated Surface Soil | pH=8.11, Pb-390, Zn-44.2 |
| WP-13041 | Mineral Processing | Lead/Lead Bromide Residue | pH=8.95, Pb-1900 |
| WP-14700 | Mineral Processing | Gold Ore Leach Tailings | pH=9.06, As-33.1 |
| GNB-1 - GNB-6 | 2° Mineral Processing | Lead Battery Recycling Slag Waste | Ba-32, Pb-898 (Pb Total - 4.6%) |

Therefore, as a result of the new UTS levels being based on the highest of either the INMETCO treatment data or the Rollins/GNB treatment data (which were predominantly based on the treatment of mineral processing wastes), the new UTS levels are thoroughly transferable to mineral processing wastes.

If you have any questions, please call me at (703) 934-3656.