

## **MEMORANDUM**

To: Mr. Robert DiFondi  
Special Metals Corporation  
100 Willowbrook Drive  
Dunkirk, New York 14048  
Mobile Phone: 303-475-5295  
Email: [rdifondi@specialmetals.com](mailto:rdifondi@specialmetals.com)

From: Chris Boron  
GZA GeoEnvironmental of New York (GZA)  
364 Nagel Drive  
Buffalo, New York  
email: [cboron@gza.com](mailto:cboron@gza.com)

Date: March 9, 2007

Re: Preliminary Scope of Work for  
Site Wide Investigation  
Special Metals Corporation (SMC)  
Dunkirk, New York

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Dear Mr. DiFondi:

GZA prepared this memorandum for Special Metals Corporation (SMC) to provide a preliminary scope of work for a Site Wide Investigation. General descriptions of the services we anticipate will be provided as part of the Site Wide Investigation are further discussed below.

### **PROJECT SCOPING**

A project scoping meeting scheduled on-Site to further define the scope of work and discuss concerns that may exist.

### **PREPARATION OF WORK PLAN**

GZA will complete and provide a Work Plan that describes the scope of work. This document will be prepared in general accordance with the New York State Department of Environmental Conservation (NYSDEC) Draft DER-10 "Technical Guidance for Site Investigation and Remediation", dated December 2002.

### **SITE WIDE INVESTIGATION (SWI)**

Field activities associated with the SWI include surface soil sampling, sediment sampling, soil borings, temporary microwell installation, and analytical testing of various media (surface soil, subsurface soil and groundwater). The SWI will

focus on contaminants of concern, specifically polychlorinated biphenyls (PCBs), but will also analyze selected samples for volatile organics (VOCs), semi-volatile organics (SVOCs) and metals. Our proposed field activities include the following:

#### Surface Soil and Sediment Sampling

GZA will collect five (5) surface soil samples; two from the drainage swale located in the southeastern corner of the SMC property and three from the open swale running east-west along Willowbrook Avenue (see Figure 1). The samples will be collected by hand using a pre-cleaned stainless steel spoon.

A sediment sample will be collected from a catch basin located along the western property line, across from the guard house (see Figure 1).

The surface soil and sediment sample analysis will include SVOCs, metals and PCBs.

#### Soil Probes

GZA is proposing four (4) days of soil probe activities, at which time we estimate 40 locations can be sampled as part of the investigation (see Figure 1). The soil probes will be done across the SMC property at 100 Willowbrook Avenue and the small parcel of land owned by SMC on the south side of Willowbrook Avenue.

The soil probes will be advanced into overburden soils utilizing direct push technology via a hydraulic hammer mounted on a truck or track mounted rig equipped with a 2-inch outer diameter by 48-inch long macrocore sampler. Soil probes will be advanced to a depth of about 12 feet bgs, or refusal, whichever is encountered first. Should it be required that additional depth is needed to explore the vertical extent of potential contamination or waste material, the probe depth will be extended.

A field engineer/geologist will observe the soil probes and create a field log for each probe. Real time air monitoring will be conducted while soil probes are being completed using an OVM. Soil samples will be collected from the soil probes for classification, laboratory analysis and screening with the OVM. Soil samples will be collected at two-foot intervals to the bottom of the probes. Samples collected for analytical testing will typically be collected from contaminated soils or material, based on visual, olfactory, field screening and engineering judgment that warrant further analysis.

The subsurface soil sample analysis will include VOCs, SVOCs, metals and PCBs.

At five of the soil probes locations, probes will be advanced to attempt to reach the top of bedrock. A temporary 1-inch diameter microwell will be installed at these five (5) locations in an attempt to collect groundwater samples. The microwells will be installed and allowed to set undisturbed to allow groundwater to accumulate. Groundwater is located in the vicinity of the overburden and bedrock interface based on previous geotechnical work<sup>1</sup> done at the SMC property.

The groundwater sample analysis will include VOCs, SVOCs, metals and PCBs.

#### Analytical Testing Program

The location for sample collection will be determined based upon the results of the field screening and engineering judgment. The samples collected as part of this SWI will be subject to analytical testing methodologies that follow NYSDEC Analytical Service Protocol (ASP) Category B deliverables and data validation. A five business day turn-around-time will be used to provide the analytical data for the samples collected. The full Category B deliverable package will be provided in 2 weeks for time of sample receipt. The proposed type and number of analytical samples is shown on Table 1.

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<sup>1</sup> "Subsurface Exploration and Geotechnical Report, Proposed Building Addition and Rotary Forge Installation, Special Metals – Dunkirk Facility Expansion, Dunkirk, New York" prepared for SMC by Empire Geo-Services, Inc, dated July 2006.

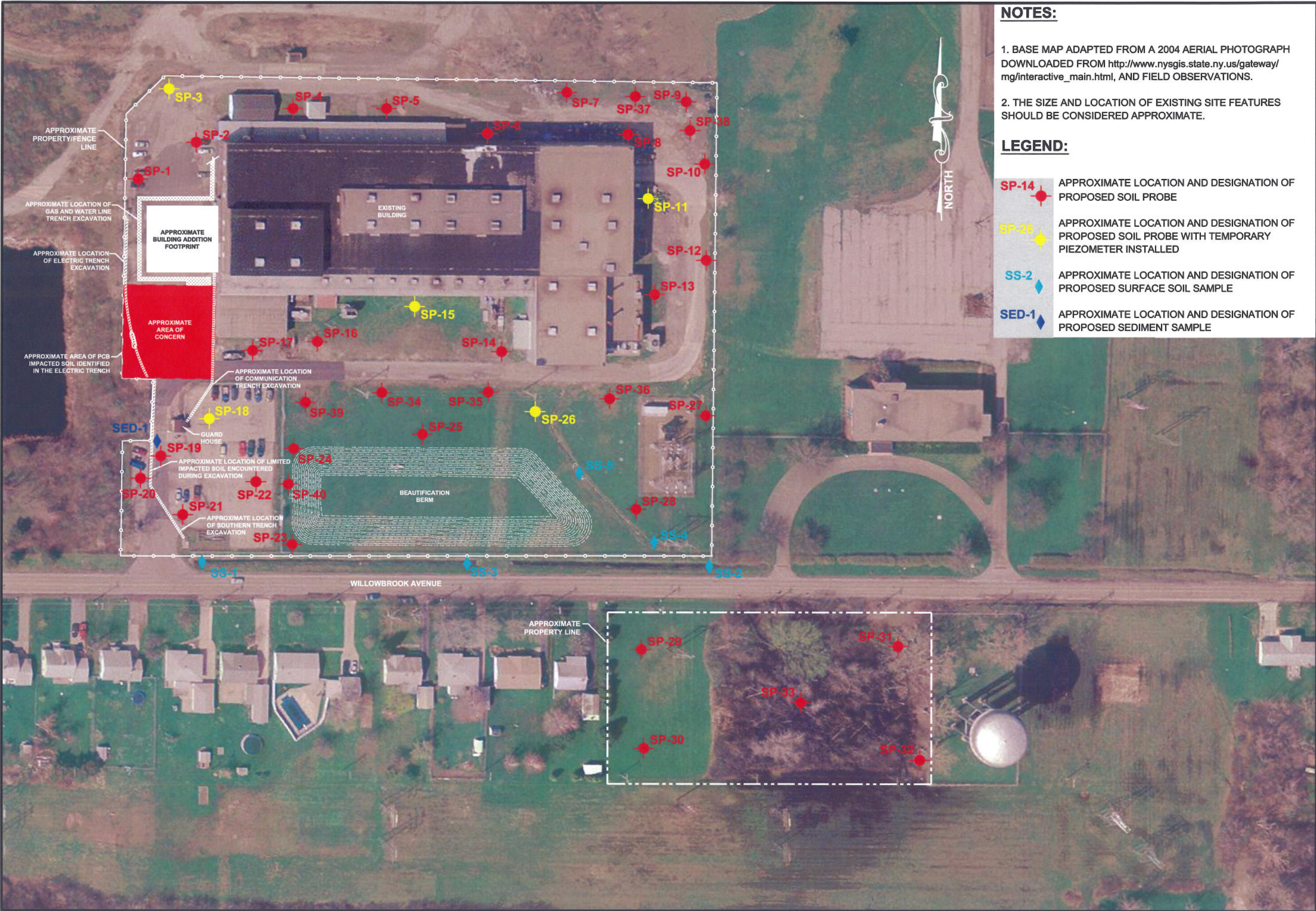
**TABLE 2**  
**Proposed Analytical Testing Program Summary**  
 Site Wide Investigation  
 Special Metals Corporation  
 Dunkirk, New York

| Location                                   | Matrix      | TCL<br>VOCs | TCL<br>SVOCs | TAL<br>Metals | TCL<br>PCBs |
|--|-------------|-------------|--------------|---------------|-------------|
| <b>Soil Probe Subsurface Soil Samples</b>  |             |             |              |               |             |
| Soil                                       | Soil        | 14          | 14           | 20            | 40          |
| Duplicate                                  | Soil        | 1           | 1            | 1             | 2           |
| MS/MSD                                     | Soil        | 2           | 2            | 2             | 4           |
| Rinsate                                    | Water       | 1           | 1            | 1             | 1           |
| Total                                      |             | 18          | 18           | 24            | 47          |
| <b>Surface Soil &amp; Sediment Samples</b> |             |             |              |               |             |
| Various                                    | Soil        | 6           | 6            | 6             | 6           |
| Duplicate                                  | Soil        | 1           | 1            | 1             | 1           |
| MS/MSD                                     | Soil        | 2           | 2            | 2             | 2           |
| Rinsate                                    | Water       | 1           | 1            | 1             | 1           |
| Total                                      |             | 10          | 10           | 10            | 10          |
| <b>Temporary Well Groundwater Samples</b>  |             |             |              |               |             |
| New Monitoring Wells                       | Groundwater | 5           | 5            | 5             | 5           |
| Duplicate                                  | Groundwater | 1           | 1            | 1             | 1           |
| MS/MSD                                     | Groundwater | 2           | 2            | 2             | 2           |
| Rinsate Blank                              | Water       | 1           | 1            | 1             | 1           |
| Trip Blank                                 | Water       | 1           | -            | -             | -           |
| Total                                      |             | 10          | 9            | 9             | 9           |
| <b>TOTAL</b>                               |             | <b>38</b>   | <b>37</b>    | <b>43</b>     | <b>66</b>   |

**Notes:**

- 1) Actual sample location to be selected based on field observation.
- MS/MSD - Matrix Spike/Matrix Spike Duplicate.  
 TCL VOCs - Target Compound List Volatile Organic Compounds.  
 TCL SVOCs - Target Compound List Semi-volatile Organic Compounds.  
 TAL Metals - Target Analyte List Metals.  
 TCL PCBs - Target Compound List Polychlorinated Biphenyls.





**NOTES:**

1. BASE MAP ADAPTED FROM A 2004 AERIAL PHOTOGRAPH DOWNLOADED FROM [http://www.nysgis.state.ny.us/gateway/mg/interactive\\_main.html](http://www.nysgis.state.ny.us/gateway/mg/interactive_main.html), AND FIELD OBSERVATIONS.
2. THE SIZE AND LOCATION OF EXISTING SITE FEATURES SHOULD BE CONSIDERED APPROXIMATE.

**LEGEND:**

- SP-14** (red dot with cross) APPROXIMATE LOCATION AND DESIGNATION OF PROPOSED SOIL PROBE
- SP-26** (yellow dot with cross) APPROXIMATE LOCATION AND DESIGNATION OF PROPOSED SOIL PROBE WITH TEMPORARY PIEZOMETER INSTALLED
- SS-2** (blue diamond) APPROXIMATE LOCATION AND DESIGNATION OF PROPOSED SURFACE SOIL SAMPLE
- SED-1** (blue diamond) APPROXIMATE LOCATION AND DESIGNATION OF PROPOSED SEDIMENT SAMPLE

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