Site Management Plan

Richter Metalcraft Site 80 Cottage Street Wallkill, New York

March 2007



Prepared For: David Richter, President Richter Metalcraft 80 Cottage Street Wallkill, New York Site Management Plan

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EXECUTIVE SUMMARY

The Richter site property has been used for manufacturing purposes since construction first took place in the early 1960's. Site operations included steel fabrication and, more recently, metal stamping. A Phase I Environmental Site Assessment (ESA) and a Phase II ESA occurred in 1999. Under a Voluntary Cleanup Agreement (VCA) with New York State (NYS), a field investigation was conducted from 2001 through 2003. This investigation indicated the presence of the following contaminants of concern (COCs) at actionable levels: copper, nickel, zinc, and Resource, Conservation, and Recovery Act (RCRA) 8 Metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver).

Richter Metalcraft entered into the NYS Voluntary Cleanup Program under an agreement to investigate site contamination and address any impacts to the property through site remediation, if found necessary. The Richter Metalcraft Corporation VCA site number is V-00327-3. The VCA recognizes the contemplated site use as restricted industrial to exclude day care, child care and medical care uses. The site cleanup objectives for Richter Metalcraft accounted for future industrial site use of the property.

This Site Management Plan (SMP) summarizes environmental remediation of COCcontaining soils at the Richter Metalcraft Site (VCA# V-00327-3), 80 Cottage Street in the Hamlet of Wallkill, Town of Shawangunk, Ulster County, New York. This SMP is a working document that includes a summary of investigation and remediation activities, identifies the COCs, depicts locations of the site where soils will remain in excess of site cleanup objectives, and describes procedures for managing soil and groundwater should these media need to be disturbed during construction or routine maintenance of the facility. The SMP also provides for the notification of Richter Metalcraft employees, grounds crew, and any other applicable parties potentially impacted by the environmental easement of its requirements and future site management obligations.

These obligations include:

- 1. Sampling of six monitoring wells located throughout the property for 5 years or until steady state conditions have been reached provided that no impacts to groundwater are detected. If these conditions are not meet within a 5 year period, site conditions will be reassessed.
- 2. Maintaining the 12 inch cover of clean fill, and vegetation or pavement depending on use, within the 4 Areas of Concern (AOC's). These AOC's

are located to the north, east, and southeast of the building in specific areas (see Figure 2).

3. Observing the protective easements which will limit the property to use as an industrial facility, limit groundwater usage, and require special measures for work or use in the AOC's. In areas covered by these deed restriction easements, care must be exercised during any excavation in these areas. Soil must not be removed without sampling and potential special handling where contamination is detected. A consultant should be contacted to determine the presence or absence of contamination as well as the appropriate health and safety measures needed.

The current site contact for Richter Metalcraft is David Richter, Owner Richter Metalcraft. The Richter Metalcraft contact can be reached at:

Richter Metalcraft Corporation 80 Cottage Street Wallkill, NY 12589-3128 (845) 895-2025

This SMP provides guidance for present and future owners of the site. This SMP briefly outlines remedial site management requirements for future owners of the site. This SMP is not an Operations, Maintenance, and Management Plan for the specific remedial system, nor does it prescribe a protocol for routine monitoring. This document will be periodically modified until remedial activities cease. Copies of the Site Investigation and Remedial Action reports prepared during evaluation and remediation of the site were provided to the site owner and to the NYSDEC and the New York State Department of Health (NYSDOH) as they were completed. These reports should be consulted for reference purposes, as they provide more detailed summaries of the remedial investigations, feasibility studies, and remedy reports completed for the site.

1.0 HISTORY OF REMEDIATION

1.1 Site Description

The Richter Metalcraft Site consists of an 8.24-acre rectangular-shaped parcel of land located at 80 Cottage Street in the Hamlet of Wallkill, Town of Shawangunk, Ulster County, New York. The Site is located approximately 0.5 mile north of the intersection of Route 208 and Wallkill Road and is currently a functioning metal stamping facility that has been in operation since the 1960's. One large steelframed building and two smaller buildings are located on the property (Figure 1). The smaller buildings are located near the southeast corner of the main building along the eastern property boundary. The main building was constructed *circa* 1960. Until 1982, the property was identified as a treatment, storage and disposal (TSD) facility for hazardous waste, however beginning in 1983, hazardous waste was shipped off site for treatment and disposal. Currently, the property is identified as a conditionally exempt small quantity generator, indicating production of less than 100 kilograms per month of hazardous waste. The main building houses the administration office and the manufacturing facility, while the two smaller buildings are presently used for storage.

In general, site topography is relatively flat with a gradual downward slope towards the Wallkill River, which is located just over 2,000 feet to the west of the Site. Underlying the area is low permeability silty clay soil, followed by the shale and siltstone bedrock of the Normanskill Formation.

1.2 Nature and Extent of Contamination

Field investigations between 2000 and 2003 conducted by The Chazen Companies (TCC) targeted several areas where chemical contamination may have been present in soils and/or groundwater from past chemical storage and use. Two site areas, previously associated with plating, were initially targeted for investigation due to reports that these areas were the primary hubs for chemical processing. These areas include: the southeast interior portion of the building, where electroplating occurred, and the TSD facility, where effluent from the electroplating area was pumped. Borings were installed beneath the southeast interior portion of the building. Shallow and subsurface soils were also studied in the TSD facility area, as well as the adjacent swale.

Three prior storage places were also investigated. These areas included: the chemical storage building, located adjacent to the TSD facility; the waste drum storage area (Composite Grid Area 1); and the trailer storage area (Composite Grid

Area 2). Figure 2 shows the location of these areas. Surface and subsurface soil sampling as well as groundwater sampling occurred in these areas.

Surface water (SW) sampling detected exceedances of TOGS 1.1.1 standards at onsite, offsite, and background locations. Analytical results from SW-2 (onsite) identified copper above TOGS 1.1.1 water quality standards. Various metals above TOGS 1.1.1 standards were identified at one off-site surface water location (SW-5). SW-5 has been included with onsite data since SW-5 is downstream from SW-2. Background surface water sampling at four off-site locations (SW-3-BACK, SW-4-BACK, SW-6-BACK, and SW-7-BACK) found analyte exceedances with respect to surface water standards reported in TOGS 1.1.1.

Sub-surface soil investigations at the Richter Metalcraft Site detected metals in soils above TAGM 4046 and/or background soil cleanup guidelines values. Impacted surface soils with elevated concentrations were found along the eastern wall of the facility and in the former TSD facility area. Additionally, composite soil sampling at prior chemical storage areas and sediment sampling in wetland areas revealed various exceedances in metal concentrations.

The groundwater portion of the investigation revealed that groundwater levels are highest under and around the Richter Metalcraft building. This finding may be correlated with rooftop drains that extend into the ground at seventeen locations around the building perimeter. During the Supplemental Investigation these drains were investigated as a possible route for contaminant transport. No drywells were found during this testing and no indications that contaminants were being discharged from these locations to below the facility exist.

Unfiltered groundwater samples from seven monitoring wells exceeded TOGS 1.1.1 groundwater standards for analytes. However, filtered groundwater samples were later collected and analyzed. Selenium was found in excess of TOGS 1.1.1 in one filtered groundwater sample.

As a result of the surficial and subsurface investigations at the Site, no Volatile Organic Compound (VOC) or Semi-Volatile Organic Compound (SVOC) were detected. Pesticides, PCBs and cyanide also were not detected above soil cleanup guidance values specified under TAGM 4046. However, in one surficial soil sample (SA-9) of the 52 samples analyzed, cyanide was detected at a concentration (1.09 ppm) slightly above the detection limit. Due to the lack in frequency of detections and since there is no NYSDEC guidance value for cyanide, it was not considered to be a COC. However, soils and sediments are impacted by metals. Therefore, the Site COCs (Copper, Nickel, Zinc, and the RCRA 8 Metals) were selected because they are associated with past electroplating operations or with waste treatment processes.

1.2.1 Heavy Metals in Surface and Subsurface Soils and Sediments

The primary contaminants of concern at the Richter site are heavy metals. Subsurface and surface investigations conducted at Richter Metalcraft have detected metals in soil above TAGM 4046 soil cleanup guideline values and in sediments above the NYSDEC's Technical Guidance for Screening Contaminated Sediments, dated January 1999.

Elevated levels of heavy metals were detected in sediments and shallow soils in four primary locations; 1) adjacent to the TSD facility including the swale (AOC 4&5), 2) adjacent to the northeast corner of the building on the east side (AOC 3), 3) in a former drum storage area located due north of the plant (AOC 2) and, 4) a drum storage area located in the northwest corner of the site (AOC 1). Samples were also collected at various depths from beneath the building slab. Concentrations of heavy metals were detected in all five borings drilled below the building's concrete slab at levels just above site background conditions, with one exception. Soils collected from site perimeter boring locations reveal only slight impacts to subsurface soils at concentrations that are consistent with, or relatively equal to, the identified background conditions with one exception.

1.2.2 Concentration of Heavy Metals in Groundwater

Analysis of unfiltered groundwater samples collected from the overburden monitoring wells showed COC analyte concentrations exceeding TOGS 1.1.1 standards with exception of cyanide and silver. Due to the highly turbid nature of the groundwater samples, groundwater was resampled and filtered prior to analysis. When compared to unfiltered groundwater sample results, the filtered samples had significantly lower levels of COCs. With the exception of selenium, filtering the samples removed all metals to a point where the metal was not detected or the metal was at a concentration below the TOGS 1.1.1 standard. Selenium was detected at low levels (13.7 ppb) in the filtered sample from RM-2. This concentration is just above the TOGS 1.1.1 standard of 10 ppb.

Therefore, it appears that metal concentrations in groundwater are related to the high amount of suspended sediments, not to groundwater itself. Examination of the filtered versus unfiltered groundwater sampling results suggests that the metals are relatively immobile and are related to the native soils. Contaminant mobility is further limited by the relatively low permeability of the silty clay soils underlying the Richter Site. Future groundwater quality monitoring will confirm the effectiveness of the remedy in controlling the migration of COCs.

<u>1.2.3 Concentration of Heavy Metals in Surface Water</u>

Analysis of surface water samples collected downstream from Richter's operations (SW-2 and SW-5) identified COCs above TOGS 1.1.1 standards. Results from SW-2, located in the on-site swale, detected only copper (235 ppb) above TOGS 1.1.1 limits. Greater exceedances were detected in SW-5, located offsite and downstream from SW-2. COCs detected in SW-5 exceeding TOGS 1.1.1 standards were barium, cadmium, chromium, copper, lead, nickel, and selenium. However, it is difficult to attribute much of the contamination at SW-5 to Richter Metalcraft operations since these concentrations were not present in SW-2 collected at the southern end of the swale (closest to the property boundary). Additionally, no elevated levels of metals were identified in any other water or sediment location on or off-site at this magnitude. No background surface water sample had any exceedances of COCs.

1.2.4 Effects of Onsite Contaminants

A Sensitive Receptor Analysis was conducted by TCC during the site investigation to determine any impact to nearby water bodies or drinking water supplies. Since residences and other buildings near the subject property are serviced with a public water supply, the only sensitive receptors of concern are neighboring wetlands and surface water bodies.

Wetland areas exist east and south of the Richter Metalcraft facility, and two tributaries to the Wallkill River are located less than 200 feet to the north and about 400 feet to the southeast. Subsurface migration of the contaminants is limited, however, because the heavy metals are mostly fixed to soil particles.

2.0 REMEDIATION

2.1 Summary of Remedial Actions

Remediation conducted by TCC occurred in the Fall of 2005. A remediation plan was chosen based on review of the five screening criteria for response actions, including long-term effectiveness, reduction of toxicity/mobility/volume, short-term effectiveness, implementability, and cost. Excavation and off-site disposal was the selected remedy, with several other monitoring and land use requirements to be discussed later in this report.

Impacted soil was excavated to a minimum of 12 inches below ground surface (bgs) in all five AOCs (Figure 3). These areas include:

- AOC 1: Former Drum Storage Area,
- AOC 2: Trailer/Inventory Area,
- AOC 3: Rear of Manufacturing Building,
- AOC 4: Former TSD Area,
- AOC 5: Swale (connected to AOC 4).

Surficial soils were screened to ensure that they met TAGM or site background clean-up values. Confirmatory soil samples were collected and analytical results were compared to the site-specific subsurface soil cleanup objectives. At locations where bottom soil samples exceeded cleanup objectives, excavation continued in 12-inch increments. No locations of the excavation were required to be completed greater than 24-inches below ground surface. Sidewall soil sample results were reviewed by the NYSDEC and compared to site-specific cleanup objectives. Sidewall soil sample locations that exceeded the site-specific cleanup objectives as determined by the NYSDEC were excavated an additional 24-inches horizontally and vertically. Sidewalls were then resampled, and results were compared to the site-specific subsurface soil cleanup objectives. Upon completion of excavation, a geotextile layer was placed as a demarcation boundary layer and the area was then backfilled with NYSDEC approved fill material. No excavated soils were returned to an excavation. Instead the impacted soil was covered and staged for removal in a secure location onsite. Upon removal, approximately 1.635 tons of soil and 95 tons of concrete were disposed of off-site at the Albany Landfill.

All previously paved areas that were excavated were repaved to grade. All unpaved areas that were excavated were graded and seeded.

Affected portions of the swale (Figure 2) were excavated during seasonably dry periods to avoid dewatering. Any moist soils were stockpiled in a specially designated area onsite for drying prior to off-site removal.

In addition to excavating soils, two pipes of unknown function in the TSD facility area and adjacent swale were addressed as well as the TSD facility drying beds and the soils beneath the two sheds.

The pipe that extends from the south side of the southern storage building was removed to the extent physically possible without compromising the building structure. The previous function of this pipe is also unknown. No sample from within this pipe was collected.

A steel pipe leading from the facility building to the drying bed was also removed. The pipe was cut and capped at the building's foundation.

The cover and sides to the drying bed were removed and disposed of. The drying bed was full of rainwater. A sample of the water was submitted for laboratory analysis. The laboratory results were reviewed by the NYSDEC and approval to discharge to on-site ground surface was granted. The sides and bottom of drying bed were then power washed and the remaining solids and fluids were disposed of. The drying bed was then completely removed and disposed of off-site. Because the beds are within the footprint of AOC 4, 12 inches of material below the beds bottom were removed and disposed of offsite. Two bottom soil samples were collected from the footprint of the drying bed and submitted for laboratory analysis of the COCs. The laboratory results were compared to the subsurface soil cleanup objectives and were determined to be below the site standards.

Soils beneath the storage sheds were sampled to determine the concentrations of COCs. One soil boring was advanced in the center of each shed. Due to the small entrances to these buildings, it was not possible to mechanically drill borings. A concrete core bit was used to remove a 3.5-inch diameter core of the 18-inch thick floor. A bucket style hand auger was used to collected soil samples from the 0-1' depth below the bottom of the concrete floot (representative of surface soils) and the 1'-2' depth (representative of subsurface soil). Each sample was analyzed for the list of COCs by a NYSDOH ELAP certified laboratory and compared to the appropriate cleanup objectives. Soil concentrations did not exceed the applicable site-specific subsurface soil cleanup objectives.

2.2 Monitoring Requirements

Groundwater will be monitored from 6 existing monitoring (RM-1 through RM-6) wells and sampling is expected to continue on a quarterly basis for the first two years then on a annual basis for years three through five as needed. Samples will be analyzed using EPA methods for target dissolved COC metals and subsequently reported to the NYSDEC. It is likely that groundwater monitoring will be discontinued once it is demonstrated to the NYSDEC that steady state conditions have been reached, as long as no impacts to groundwater are detected. The six monitoring wells can be located on Figure 2. The NYSDEC will be notified of any adjustments to the monitoring plan, and adjustments will not be implemented without NYSDEC approval.

2.3 Notification and Reporting

Richter Metalcraft is responsible for quarterly groundwater monitoring and analyses. Records of sampling results are submitted regularly to NYSDEC for review.

It would be helpful if any observed malfunctions or irregular conditions, especially within the areas of concern, are communicated to Richter Metalcraft's consultant via David Richter, whose address is shown in the Executive Summary of this report.

All environmental reporting for the Richter Metalcraft Site should be directed to the NYSDEC. The current site Project Manager at NYSDEC is Mr. Salvatore Priore, reachable at:

625 Broadway, 11th Floor NYSDEC, DER BURC RSB Albany, NY 12233-7017 (518) 402-9665

3.0 OBLIGATIONS TO PRESENT SITE OWNER

3.1 Engineering Controls

Two engineering controls will remain in effect as part of the remedy. These include: 1) the six monitoring wells and 2) the soil cover and geotextile marker. These installations are generally self-sustaining and updates on each control will be included with the annual certification report. The annual certification report will be submitted to the NYSDEC within 30 days of receipt of the fourth quarter groundwater sampling laboratory report. Submittal of the first annual certification report is anticipated for early 2008.

Richter Metalcraft is responsible for maintaining the well-heads at each monitoring well location and for maintaining pathways needed to reach these wells and clearance around the wells. Monitoring wells are to be protected from damage such that their integrity is maintained during the groundwater monitoring phase of the remedy.

Maintenance of the soil cover includes caring for the vegetative growth and/or asphalt within the AOCs such that erosion does not reduce the cover thickness. Any planned alteration or disturbance of the soil cover should be approached in accordance stipulations of the environmental easement, detailed in the following section.

Further controls involve the limitations to altering the footprint of the existing building which are also discussed in the following section.

3.2 Institutional Controls

To protect the health and safety of future site workers and visitors, in addition to the surrounding community, an environmental easement has been incorporated for the Richter Metalcraft site. This easement limits the property to use only as an industrial facility or setting and restricts groundwater use. Groundwater shall not be used for drinking water or for industrial use without proper pre-treatment.

A restriction is attached to the Richter Metalcraft Site deed describing areas where special procedures are required if conducting site soil excavation. These areas include the 5 AOCs and the building footprint. Any work conducted within these areas may require special handling and/or special disposal procedures due to the potential for underlain soils to contain elevated heavy-metals. In the 5 AOCs, a geotextile (filter fabric) was placed as a demarcation layer to identify the vertical limit of excavation. These areas, which have been either reseded with grass or re-paved with asphalt, can be located using Figure 2. The replacement surface in these areas should be maintained to grade to preserve this protective layer and prevent exposure to impacted soil.

If excavation is necessary within an area of concern, workers can expect to encounter clean backfill up to the geotextile layer (a minimum of 12 inches). However, deeper excavation (beyond 12 inches or the geotextile), may expose soils containing heavy metals. Careful planning in advance, including the notification and approval of NYSDEC will be required to ensure safety during the project. An early notification may save time if an alternative plan is needed or if safety measures are applicable.

Any planned change to the building footprint or adjacent soil cover will also require special measures, due to the role these play in site remediation. Currently, the building limits any potential exposure pathway and is effectively acting as a barrier to prevent migration of the COCs observed beneath the building. Therefore, both the building and soil up to 12 inches beneath the building should remain in place. The NYSDEC must be notified for approval before any plans are finalized to alter the building footprint, foundation or associated soil.

3.2.1 Excavation Plans

Any excavation of soils known to be impacted by heavy metals and not previously subjected to remediation (such as beneath the existing building footprint), excavation of soils below the demarcation layer that were undisturbed during remediation, and/or excavation of the clean soil covering the demarcation material must be conducted in accordance with this section. Any disturbed site soils that have not been previously replaced as part of the clean soil cover must be disposed of offsite at a permitted facility and, if necessary, replaced with clean soil.

Disposition of removed soils will be determined following hazardous characteristics testing of the soil, as required by the accepting disposal facility. Any required clean fill must be either secured from a DOT-approved source or will require testing for the full priority pollutant list if from a non-DOT-approved source. Proof of borrow source certification or analytical results will be required before the clean fill is applied. The clean fill will be sampled at a frequency of one per approximately 1,000 cubic yards and will be analyzed at a NYSDOH-ELAP approved testing laboratory. Results will be compared with NYSDEC TAGM #4046 cleanup guidance values and site-specific background. The fill will be rejected if any COCs are detected above TAGM #4046/site background.

3.2.2 Notifications

The current site contact for Richter Metalcraft Corporation is Mr. David Richter. The site contact can be reached at:

Richter Metalcraft Corporation 80 Cottage Street Wallkill, NY 12589-3128 (845) 895-2025

The current site contact at NYSDEC is Mr. Salvatore Priore. The NYSDEC contact can be reached at:

625 Broadway, 11th Floor NYSDEC, DER BURC RSB Albany, NY 12233-7017 (518) 402-9669

Richter Metalcraft Corporation's current environmental site consultant is Mr. Douglas McClure, PE, at The Chazen Companies, in Poughkeepsie, NY. The environmental site consultant can be reached at:

The Chazen Companies 21 Fox Street Poughkeepsie, NY 12601 Phone: 845-454-3980

FIGURES



CON 1PANIE ENGINEERS/SURVEYORS PLANNERS ENVIRONMENTAL SCIENTISTS

Orange County Office: 263 Route 17K Newburgh, NY 12550

Capital District Office: 20 Gurley Avenue Troy, NY 12182

Glens Falls Office: 110 Glen Street Glens Falls, NY 12801

FIGURE 1-SITE LOCATION MAP

Richter Metalcraft Property 80 Cottage Street Town of Wallkill, Ulster County, New York USGS Topographic Map of the Walden Quadrangle. 7.5 Minute Series. May, 2003 Scale: 1 inch : 2000 ft Project #: 29926.01

