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February 22, 2005

Mr. Tom Suozzo
New York State Department of Environmental Conservation
Division of Environmental Remediation – Region 7
Spill Prevention and Response
1679 NY Route 11
Kirkwood, NY 13795-1602

Re: Summary of Drum Recovery and Soil Sampling Activities
Emerson Power Transmission Facility, Ithaca, New York

Dear Tom:

Environmental Strategies Consulting LLC, on behalf of Emerson Electric Co. and Emerson Power Transmission (EPT), has prepared this letter report which summarizes the drum identification, recovery, and soil sampling activities performed at the EPT facility in Ithaca, New York, in December 2004 and January 2005. All work was performed in accordance with the Response Plan prepared by Environmental Strategies, dated December 14, 2004. Specifically, this report describes the following activities:

- Completion of a site reconnaissance survey to identify drums, drum remnants, and containers near the western boundary of the EPT facility
- Recovery of the identified drums and containers for offsite disposal
- Collection of soil samples for field screening and chemical analysis

Site Reconnaissance Survey

On December 13, 2004, Environmental Strategies and EPT personnel conducted a reconnaissance survey of the western portion of the EPT facility to identify and mark all drums, drum remnants, and other containers of potential concern for subsequent removal. The reconnaissance survey involved inspecting the steep wooded slope between the western boundary of the facility and the former railroad bed and the wooded area directly west of the railroad bed and NYSEG power station (Figure 1). In addition, Environmental Strategies and EPT personnel walked the railroad bed to approximately 1,000 feet south of the EPT site and visually inspected the adjacent wooded areas. Each identified container was documented in the field notebook, assigned a specific identification number (DL designation), and marked with survey ribbon. In addition, a Global Positioning System (GPS) unit was used to locate each container and the coordinates were recorded in the field notebook. Photographs of the identified containers were taken to document the reconnaissance findings (Enclosure A).

The reconnaissance survey identified drums and containers in 15 separate locations west of the EPT facility. Drum and container locations are designated DL-1, DL-2, DL-4, DL-5 through

DL-9, DL-11, DL-12, DL-14, DL-15, DL-17, and DL-20 on Figure 1. DL-9 initially comprised two locations (DL-9 and DL-10) that were subsequently combined for sampling purposes due to their close proximity. In general, the drums or containers were heavily corroded with numerous holes and no visible markings or labels, except for a container that held grease (DL-5 location). In some cases, only a portion of the drum remained (Enclosure A; see photograph of DL-6). In addition, scrap metal, including drum lids, 5-gallon buckets filled with concrete, culvert pipe, and sections of flue vent, were identified at 5 locations (DL-3, DL-13, DL-16, DL-18, and DL-19). The scrap metal locations were also assigned "DL" numbers during the reconnaissance survey and were marked with survey ribbon. However, with the approval of the New York State Department of Environmental Conservation (NYSDEC), no soil samples were collected at the scrap metal locations for chemical analysis. Therefore, these locations are not shown on Figure 1.

Drum Recovery Activities

Clean Harbors Environmental Services, Inc., was retained to recover the identified drums/containers, drum remnants, and scrap metal identified during the reconnaissance survey. On December 17, 2004, and January 5, 2005, Clean Harbors recovered the drums/containers and scrap metal from each location and transported the materials to the EPT facility. During the recovery activities, each drum/container was inspected to determine its integrity. Intact drums and containers were examined for punctures, ruptures, cracks, or evidence of over-pressurization, such as a bulging head or sides. In addition, a photoionization detector (PID) was used to monitor the atmosphere around each intact drum and container for organic vapors. No liquids were identified in any of the drums or drum remnants and no detectable levels of VOCs were detected in the atmosphere surrounding the containers or inside the containers. However, an open 5-gallon pail containing apparent petroleum-based grease was identified at location DL-5. The pail had a partial label that read "Texaco." No evidence of surface staining was observed near the drums and containers.

Partially buried drums were excavated with shovels and then placed on polyethylene sheeting on the ground next to the drum. Care was taken to contain any soil that might be present in the drums; particularly those that were only partially intact. The polyethylene sheeting was used to carry the drums to the former railroad bed where they were placed in the cargo box of an all-terrain vehicle. Drum parts and scrap metal that did not contain soil or debris were carried to the rail bed by hand and placed in the all-terrain vehicle. The recovered drums, containers, and scrap metal were transported to the groundwater treatment shed at the EPT facility and placed in appropriate DOT-authorized containers for subsequent characterization and offsite disposal. Intact drums were placed in individual over pack drums. Deteriorated drums and scrap metal were flattened, if possible, and then placed in lined 1-cubic yard boxes. At the conclusion of the drum recovery activities, the boxes and over pack drums were sealed and labeled with their contents. The recovered containers and scrap metal are currently being characterized for offsite disposal or recycling.

Soil Screening and Analytical Testing

During the recovery activities, Environmental Strategies identified appropriate soil sample locations in concert with Carl Cuipylo, the NYSDEC's onsite representative. In accordance with the Response Plan, shallow soil samples were collected from each location for headspace screening and laboratory analysis. The sample locations are designated DL-1, DL-2, DL-4,

DL-5, DL-6, DL-7, DL-8, DL-9, DL-11, DL-12, DL-14, DL-15, DL-17, and DL-20 on Figure 1. In general, each drum and drum remnant location was selected for soil sampling. However, drum locations DL-9 and DL-10 were in close proximity and, thus, only one soil sample was collected (designated DL-9). No soil samples were collected from the remaining scrap metal locations with approval from the NYSDEC's onsite representative.

On December 17, 2004, and January 5, 2005, surface soil samples were collected from each location for field screening and laboratory analysis. The soil samples were collected from approximately 0.5 to 1.0 foot below ground surface (bgs) using a dedicated stainless steel scoop. Soil samples for headspace analysis were placed in a zipper-style plastic bag, sealed, and then placed in a heated vehicle to equilibrate. The headspace analyses were conducted with a PID equipped with a 10.6 eV lamp in accordance with Environmental Strategies' standard operating procedure (SOP) 22 (Enclosure B). In addition, a shallow soil sample was collected at each location and submitted to Severn Trent Laboratories (STL) in Buffalo, New York, for analysis of volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (EPA) Method 8260, semi-volatile organic compounds (SVOCs) by EPA Method 8270, and polychlorinated biphenyls (PCBs) by EPA method 8082.

Soil samples for laboratory analysis were collected in accordance with Environmental Strategies' SOP 11 (Enclosure B). The sample material was placed in a dedicated stainless steel mixing bowl using the dedicated scoop and rocks, twigs, and other debris were removed. Soil samples for VOC analysis were transferred directly into the appropriate sample container with minimal headspace. The remaining sample material was thoroughly homogenized in the bowl before filling the remaining sample containers. Disposable nitrile gloves were worn by the sampling personnel and the gloves were changed before each sample was collected. The sample containers were labeled with the time and date of sampling, the sample location, the sampler's initials, and the types of analyses to be performed. The containers were placed in a cooler with ice and were maintained in a chilled state until they were delivered to the analytical laboratory. A chain-of-custody form was completed and placed in the cooler containing the samples. Custody seals were placed on the outside of the coolers and the coolers were forwarded to STL Buffalo by overnight delivery.

Each soil sample location was marked in the field with a wooden stake bearing the drum location number. A surveyor, licensed in the state of New York, was retained to survey the soil sample locations and determine the elevations. The elevations of the ground surface near each sample were surveyed to the nearest 0.01 foot. The horizontal locations were determined to the nearest 0.1 foot. The soil sample locations are shown on Figure 1.

Results and Discussion

The results of the headspace analyses indicated trace levels of organic vapors (i.e., 0.1 parts per million) in soil samples collected at DL-2 and DL-6. No VOCs were detected by headspace analysis at the remaining sample locations. The analytical results showed that five samples contained non-detectable concentrations of VOCs. A trace level of trichloroethene was detected in one soil sample at an estimated concentration of 2 ug/kg which is well below the recommended soil cleanup objective of 700 ug/kg (NYSDEC's Technical and Administrative Guidance Memorandum (TAGM) 4046 Recommended Soil Cleanup Objectives, January 1994). We note that the presence of methylene chloride in certain of the soil samples is likely attributable to laboratory contamination (Table 1). Low levels of dichlorodifluoromethane were

detected in four soil samples; however, this compound does not have a recommended soil cleanup objective. Based on the sampling results, Environmental Strategies finds that no further action is necessary with respect to the trace concentrations of VOCs that were detected in certain soil samples collected in the identified drum locations.

SVOCs

Six of the 14 soil samples contained non-detectable levels of SVOCs. SVOCs were detected in 5 of the 14 soil samples at concentrations above their respective recommended soil cleanup objectives (Table 1). The compounds most frequently detected at levels above the TAGM criteria were benzo(a)anthracene (480 to 5,200 micrograms per kilogram [ug/kg]), benzo(a)pyrene (450 to 2,800 ug/kg), and chrysene (510 to 5,400 ug/kg). The recommended soil cleanup objectives for these compounds are 224 ug/kg for benzo(a)anthracene, 61 ug/kg for benzo(a)pyrene, and 400 ug/kg for chrysene.

SVOCs are generated by industrial activities, such as burning wood and fossil fuels. Given the long history of coal burning at the EPT plant, the urban nature of the area as well as the presence of a railroad adjacent to the EPT site, shallow soils in the vicinity of the site would be expected to contain concentrations of certain SVOCs. In addition, it is likely that many of the homes in the South Hill area also historically burned coal and wood as a source of heat. An additional factor is that the drum locations were adjacent to a railroad bed where fill, ash, and cinders are likely to be present.

Given the industrial history of the area, the steep topography, and the nearby railroad bed and associated fill material, the source of the detected SVOCs is uncertain. We would like to further review the sampling results with you and discuss any future actions.

PCBs

PCBs were detected in one soil sample, DL-14, at a concentration of 1,600 ug/kg, which is slightly above the recommended soil cleanup objective of 1,000 ug/kg for surface soil. The NYSDEC's TAGM 4046 surface soil cleanup objective for PCBs is based on the EPA's health-based cleanup value of 1 milligram per kilogram (mg/kg). However, since the NYSDEC's TAGM 4046 was issued in January 24, 1994, the EPA has established cleanup levels for bulk PCB remediation waste (which includes soil) based on "the potential exposure to PCBs left after cleanup is completed" (40 CFR 761.61(a)(4)). Cleanup levels for bulk PCB remediation waste are subcategorized for "high occupancy areas" and "low occupancy areas." These classifications are based on average hours of exposure on a calendar basis for unprotected permits. A "high occupancy area" is defined in 40 CFR 761.3 as:

> any area where PCB remediation waste has been disposed of on-site and where occupancy for any individual not wearing dermal and respiratory protection for a calendar year is...335 hours or more (an average of 6.7 hours per week) for bulk PCB remediation waste. Examples could include a residence, school, day care center, sleeping quarters, a single or multiple occupancy, 40 hours per week work station, a school class room, a cafeteria in an industrial facility, a control room, and a work station at an assembly line.

A "low occupancy area" is defined in 40 CFR 761.3 as:

> any area where PCB remediation waste has been disposed of on-site and where occupancy for any individual not wearing dermal and respiratory protection for a calendar year is...less than 335 hours or more (an average of 6.7 hours per week) for bulk PCB remediation waste. Examples could include an electrical substation or a location in an industrial facility where a worker spends small amounts of time per week (such as an unoccupied area outside a building, an electrical equipment vault, or in the non-office space in a warehouse where occupancy is transitory).

Based on the definitions above, Environmental Strategies believes that the steep wooded slope west of the EPT facility would be characterized as a low occupancy area. The cleanup levels for bulk PCB remediation waste in low occupancy areas are as follows (40 CFR 761.61(a)(4)(i)(B):

- $\leq$ 25 parts per million (ppm) of PCBs
- >25 ppm and $\leq$50 ppm of PCBs if the site is secured by a fence and marked with a PCB label
- >25 ppm and $\leq$100 ppm of PCBs if the site is covered with a cap meeting the requirements of 40 CFR 761.61(a)(7) and (8)

The PCB concentration detected at location DL-14 is well below the EPA cleanup level of 25 ppm for low occupancy areas. In addition, the presence of PCBs above the TAGM criterion is restricted to a single drum location. Given the isolated nature of the PCBs, and the steep topography in the area, the potential for human exposure to these soils is limited. We would like to review the PCB sampling results with you to determine any future actions.

We look forward to discussing this matter with you. Please call me or Derek Chase of Emerson at (314) 553-2767 if you have any questions or need further information.

Sincerely yours,

Brian Silfer
Project Director

k/client/emerson/Ithaca/drum/021101drum

Enclosures

cc\encl.: Derek E. Chase, Emerson Electric Co.
Jim Burke, NYSDEC

Figures

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Figure 1
Soil Sample Location Plan
Emerson Power Transmission
Ithaca, New York

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Tables