HADCO XL Project Close-out Agreement

This Close-out Agreement formally acknowledges the termination of the HADCO Corporation XL Project, and dissolves all Project XL-specific commitments and obligations of the Parties to the Final Project Agreement (FPA), namely, the HADCO Corporation, the United States Environmental Protection Agency (EPA), the New Hampshire Department of Environmental Services (NHDES), and the New York State Department of Environmental Conservation (NYSDEC). The decision to undertake project close-out has been jointly agreed upon by all project signatories.

Although the Parties agree that the original goals and premise of this XL pilot appeared promising, changing circumstances now allow HADCO to manage the company's electroplating sludge waste in an efficient manner outside of the XL program. Furthermore, originally anticipated environmental gains do not appear to be achievable, negating the "Superior Environmental Benefit" criterion of all XL projects. In order to maintain the credibility of the XL program as an experimental arena for innovative ideas, realistic appraisals must dictate whether Agency and sponsor resources should be applied to more promising ventures. Close-out of the HADCO XL Project will allow the sponsor company as well as EPA and the State Parties to focus resources in areas where greater environmental gains are possible.

Project Background

The HADCO Corporation, now a wholly-owned subsidiary of Sanmina Corporation, is a manufacturer of printed wiring boards (PWB) and electronic interconnection products. In July of 1995, HADCO submitted a Project XL proposal, outlining an experimental initiative designed to test whether copper metals could be more cost effectively recovered from wastewater treatment sludge through direct reuse by a primary metals smelter rather than shipping these sludges to a permitted RCRA treatment facility. On October 2, 1997, EPA Regions 1 and 2, NYSDEC and NHDES signed an FPA allowing implementation of the pilot project to move forward.

Three HADCO facilities, one located in Owego, NY, and two located in Derry and Hudson, NH are currently participating in this XL experiment. The electroplating sludge waste that is the focus of the XL project is listed as an F006 hazardous waste, subject to Resource Conservation and Recovery Act (RCRA) management, treatment, storage, disposal and transportation provisions. Due to process changes involving the substitution of less toxic raw materials, HADCO believes that the sludges created as a result of its operations are far less toxic than they had been and no longer need to be regulated as a hazardous waste. HADCO's XL project proposed to remove these sludges, which are rich in reusable copper, from regulation under RCRA on the condition that they are sent to be directly reclaimed. Any cost savings realized from this modification would be directed towards expanding HADCO's recovery of other recyclables from its wastes or to investigate further pollution prevention opportunities. The flexibility needed to implement HADCO's direct recycling project would be accomplished by granting either a solid waste variance or a conditional delisting to HADCO's sludges.

From the time of FPA signature until July of 1998, HADCO provided sludge sampling analyses to determine whether the sludge was eligible for either a solid waste variance or a conditional delisting.

Based on these analyses, EPA and NHDES determined that HADCO could pursue either a delisting or a variance for the sludges from the New Hampshire facilities; while NYSDEC determined that the sludge from the Owego, N.Y. facility was eligible for a solid waste variance. In September of 1998, HADCO indicated that it would submit petitions for a conditional delisting for the NH facilities, and an application for a solid waste variance for the NY facility. By letter dated December 18, 1998, HADCO submitted to Region 1 its Delisting Application for the Derry and Hudson, New Hampshire facilities. The HADCO facility in Owego, NY submitted a petition for a solid waste variance to NYSDEC on September 28th, 1999.

A recent project assessment yielded the following rationale for project closeout:

- Given the additional burden of reporting, sampling and potential capital expenditures that this XL project imposes on HADCO facilities, the company has indicated that a withdrawal would best serve their current needs, especially as both the delisting in Region 1 and the processing of a solid waste variance in Region 2 can continue regardless of the company's XL status.

- HADCO has had difficulty identifying smelters that would directly accept its RCRA-exempt wastewater treatment sludge. F006 sludge is generally a good candidate for raw material substitution at smelters, however these smelters do not have the administrative support structure to receive relatively small amounts of waste sludges from numerous generators. Although HADCO is a larger generator, its inability to secure contracts with smelters indicates that the project would not be transferable to most companies. The metal recovery market has created intermediary companies which aggregate these sludges and which are then able to ship quantities of waste sludges which are meaningful to smelters (e.g., greater than 40,000 pounds/shipment). Individual companies like HADCO generally are not able to ship sludges at such volumes. Currently, market forces do not support a generator's direct recycling of these sludges without the use of the aforementioned intermediary metals aggregators.

- Over the course of the HADCO XL Project term, the delisting process has been delegated by EPA Headquarters to the Regions and has been redesigned to offer decision-making within an average of 180 days, versus a delisting process that traditionally took as long as four to six years. These time-savings have been achieved through a streamlined application process, more uniform sampling requirements and an updated, user-friendly fate-transport model. Thus, HADCO no longer needs to rely on the XL process to expedite the delisting request.

- Obtaining a solid waste variance from NYSDEC does not require any federal regulatory flexibility, thus eliminating the main incentive for HADCO to retain its XL status.

Analysis of Environmental Benefits:

1. Reduction of Mobile Source Emissions Associated with Recycling/ Disposal:

No benefits have been realized to date. HADCO anticipates that actual reductions in mobile source emissions would be minimal.

2. Copper Dust Recycling:

HADCO had committed to applying all project-related cost savings to the reclamation and reduced production of copper dusts. However, even without any cost savings from the XL Project, in 1999 the Owego facility sent 45.9 tons, 52% of all edging dusts produced, to facilities for copper reclamation rather than to solid waste landfills. The evolved state of the metal recovery market has allowed HADCO to find economically competitive and environmentally beneficial alternatives to landfilling commodity-like solid waste.

3. Sludge Reduction and Pollution Prevention:

Over the course of the project, HADCO has installed sludge dryers at both of the New Hampshire facilities to reduce the volume of sludge material that would need to be transported to recycling facilities. HADCO has also agreed to consider additional ways that cost savings associated with the project could be used to implement other pollution prevention activities at the participating facilities. Given that no cost savings have yet been realized, this environmental benefit has also been negligible over the course of the project. At Owego, a sludge dryer was installed prior to EPA's acceptance of the HADCO XL project, so additional cost savings from advanced dewatering in the New York portion of the project are not anticipated.

Termination Procedures

As detailed in Section I.E.6. of the Final Project Agreement:

"If EPA or a State Party terminates its participation after the XL Implementation Date, the party will provide written notice to HADCO and to all other parties, and will publish the decision in the Federal Register or appropriate state analogue to the Federal Register."

The XL Implementation Date, as defined in Section I.D.4.g. of the FPA, "will mean the latest date on which a State Party or EPA issues its final decision on HADCO's petitions requesting regulatory relief pursuant to Section III of the FPA, and publishes that decision in the Federal Register or state analogue." That date has not yet been triggered. Therefore, this Close-out Agreement, signed by all original FPA signatories will serve as the sole termination mechanism for the project. Notice of this Close-Out Agreement will follow the notice provisions found at Section V of the FPA. Copies of this Close-out Agreement will be distributed to all major project stakeholders and will be posted on the EPA XL website at: http://www.epa.gov/ProjectXL/hadco/index.htm .

Close-out Agreement Signatories

HADCO Corporation Derry Business Unit

_____ Date: _____

HADCO Corporation Owego Business Unit

_____ Date: _____

United States Environmental Protection Agency

Region 1

_____ Date: _____

Region 2

_____ Date: _____

New Hampshire Department of Environmental Services

_____ Date: _____

New York State Department of Environmental Conservation

_____ Date: _____