

REVERE SMELTING AND REFINING MIDDLETOWN WET ELECTROSTATIC PRECIPITATOR



PROJECT NAME: Middletown Wet Electrostatic Precipitator (WESP)

PROJECT OWNER: Revere Smelting & Refining Inc. (RSR)

OWNER REPRESENTATIVE: Chazen Engineering

PROJECT DESCRIPTION:

This project consists of an 8,000 square foot WESP facility in support of the client's ongoing battery recycling operation at their existing Plant in Walkill, New York. This new facility will filter exhausted process air beyond what is currently required by permit. The sophisticated electrostatic component of the WESP units are powered by seven (7) transformer rectifier (T/R) units. The T/R units are supplied with a 480 V, 3-phase service and output -35,000 volt DC to the electrostatic plates. The plates attract the induced negatively charged particle and remove them from the exhaust air stream. The proposed building will house seven WESP units along with most of the supporting process equipment, including seven 50 hp process pumps, seven heat exchangers, a process water treatment system, Motor Control Center, PLC, and HMI. Support equipment housed outside of the building consists of dual 400 hp induction fans which provide a total airflow of 185,000 CFM, an exhaust stack, a three-cell cooling tower, and a backup generator. A new gas line and 13.2 KV electric service will be coordinated with the utility. A new outdoor 2,500/3,750 KVA transformer will step down the 13.2 KV service to 480/277 Volts 3-phase service to the WESP building.

RCM Technologies has been asked to provide programming, design engineering services, and engineering construction administrative services associated with the following systems;

- HVAC system
- Plumbing system
- Fire Protection system
- Building Electrical system
- Fire Alarm
- Emergency Power system
- site utilities (i.e. gas and electric). RCM will also be responsible for the coordination with the appropriate utilities regarding

PROJECT START DATE: October 2012

EST. PROJECT DURATION: 3 years

EST. CONSTRUCTION COSTS: \$25,000,000