

Environmental Site Investigation of Manganese Metal Production in Hunan Province and Chongqing City, People's Republic of China

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An international consulting firm, a Chinese environmental volunteer union and the environmental institute at a Chinese university performed an environmental site investigation at selected sites in Hunan Province and the city of Chongqing, People's Republic of China. The site investigation was conducted during October and November, 2004.

- There were 16 completed and operating electrolytic manganese metal plants in the Chongqing region; all but two add selenium to the process to reduce production costs.
- Only three of the operating plants had wastewater treatment facilities; none had testing equipment to monitor or control air emissions, wastewater discharges, or solid wastes or tailings disposal.
- Most plants were observed to have old equipment, poor maintenance and lax production management. The working environments were generally in poor condition and employees basically had no personal protective equipment (PPE).
- Groundwater wells, rice and corn fields were polluted (based on visual assessment) by the tailings discharged from manganese metal plants. Local residents were not using the wells due to the poor condition of the water.
- In March 2004, farmers in one village received a small amount of money as compensation from two manganese metal plants as a result of protests against environmental pollution that resulted in blockage of the entrances to the plants.
- In August and September 2004, farmers from three other villages received compensation from two manganese metal plants for pollution of 150 acres of rice farmland.
- Most of the manganese metal plants were constructed along the Meijiang River. Wastewater discharges and stockpiled tailings have resulted in substantial pollution of the river. The water of Miaoquan Lake (downstream of the Meijiang River) cannot be used for domestic water sources and the groundwater wells near the lake have also become polluted. As a result it is now difficult for the surrounding residents to find drinking water sources. Although the local residents have reported the pollution, the local authorities have not taken serious action.
- The area around the town of Hongan was seriously impacted, in terms of air and water pollution, by upstream manganese mining, ore processing and metal production. Analytical results for 11 surface water samples exceed the China Class

V criterion for selenium indicating that surface waters were highly impacted and unfit for agricultural or any other use.

- The portion of the Chadong River running through Hongan has not been used as a potable water source for local residents for many years and the town government is spending large sums of money to bring drinking water to residents.
- According to the local residents, children have developed skin rashes after playing or swimming in river water.