

# RODNEY STREET NICKEL REMEDIATION

## INCO LIMITED, PORT COLBORNE, ONTARIO



Soil sampling and analysis work was carried out on residential properties in the vicinity of the Inco nickel and cobalt refinery in Port Colborne Ontario by the Ministry of the Environment following a request by local resident. Elevated concentrations of nickel and other metals as compared to the provincial Table B residential criteria. Inasmuch as the refinery had been operating since 1918 and a number of other metal smelting, refining and processing industries had operated in the area, the MOE undertook a community based risk assessment to identify appropriate regional cleanup targets that would be protective of human and ecological receptors. A draft order requiring Inco to conduct an extended residential property sampling to extend the Ministry's coverage and to effect a cleanup of 15 properties with indicated nickel levels exceeding 10,000 ppm was subsequently issued to Inco.

DCS' services were retained by Inco to comply with the order. The assignment involved four phases of work. The first involved a comprehensive property-by-property sampling program at 120 properties and an extended sampling program at 90 representative sites over a wider area to determine

whether properties beyond the MOE's delimited zone required remediation. The second involved designing the cleanup program and developing cost estimates for the remedial work at the identified properties, conducting pre-remedial property and structure inspections and preparing and issuing tenders for exterior soil removal and site restoration work. The third stage involved designing and implementing an indoor dust sampling and testing protocol, developing risk-based inhalation and contact criteria for nickel and implementing a sampling program. Subsequent testing demonstrated that indoor dust constituted a negligible exposure risk and thus interior residential decontamination was not required. The fourth stage involved contracting and supervising the remedial program, conducting verification sampling and post remediation inspections and issuing Records of Site Condition for Ministry acknowledgement.

Subsequent MOE risk review reduced cleanup levels to 8,000 ppm which increased the number of properties requiring remedial action to 25. Cleanup under DCS direction is scheduled for completion in October 2004.

## PROPERTY INVESTIGATION, NICKEL CLEANUP AND RISK MITIGATION: COMMUNITY-BASED REMEDIATION PROGRAMS

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