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RESULTS OF A SITE DEMONSTRATION OF THE COGNIS TERRAMET® LEAD EXTRACTION PROCESS TO REMOVE HEAVY METALS FROM SOIL

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The COGNIS, Inc. Terramet® process is a chemical process that extracts and recovers lead and other metals from contaminated soil, dust, sludge, or sediment. The process begins by removing and washing oversize material and then separating the remaining soil into sands and fines fractions. The sands fraction is further treated by density separation methods to isolate particulate metals as a concentrate. The sands and fines fractions are then separately leached in the Terramet® portion of the process by a proprietary leachant to bring fine metallic particles and ionic metals into solution. Leached metals are recovered through proprietary reductive electrochemical cells, producing a metal concentrate and regenerating the leachant for recycling. Clean soil exiting the system can be returned to the site. The recovered metals are recyclable. No wastewater streams are generated during process operations.

The COGNIS, Inc. Terramet® process was selected to remediate approximately 10,000 tons of heavy-metal (predominantly lead) contaminated soil at the Twin Cities Army Ammunition Plant (TCAAP), New Brighton, Minnesota. EPA's Superfund Innovative Technology Evaluation (SITE) program is currently evaluating the COGNIS, Inc. Terramet® process. The evaluation included a 4-day sampling effort (August 2-5, 1994) during the TCAAP remediation. The SITE sampling effort focussed primarily on determining the effectiveness of the leaching processes for removing lead from both the sands and the fines fractions of the soil. Other results that will be reported as part of the evaluation include overall effectiveness of lead removal, efficiency of lead recovery cells, and costs.

For More Information: Contact Michael Royer, See Address Above