

QUARTERLY PROGRESS REPORT

October 14th, 2005 – January 13th, 2006

PROJECT TITLE: The feasibility of removing inorganic arsenic from landfill leachate via sorption to mineral oxide surfaces.

PRINCIPAL INVESTIGATOR(S): Dr. Maya Trotz

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COMPLETION DATE: 1/13/06 PHONE NUMBER: 813-974-3172

Work accomplished during this reporting period:

1. Website developed for project at www.landfillinfo.net. This will be updated as the project progresses.
2. Updated the list of contacts for Florida landfills provided by the FDEP. We attempted to contact via email and phone a total of 68 landfills to learn about their leachate disposal practices and leachate As concentrations. Of the 68, we got 26 responses and of those 26 responses we identified 7 landfills that would benefit from this study.
3. Completed site visits to Polk County North Central landfill facility to collect leachate for development of analytical protocols. Historical leachate concentration records for Polk county were also obtained from the records at the FDEP office in Mango.
4. Analytical protocols developed for leachate digestion and analysis of total arsenic using a graphite furnace atomic absorption spectrophotometer. Comparison was made between analysis of samples compared with clean As standards and a standard additions procedure. It was evident that the leachate matrix affected the concentration recorded and hence the standard additions procedure will be used for As analysis on the Graphite Furnace AA.
5. HPLC instrument ordered from Perkin Elmer for As speciation analysis and instrument was installed on 1/11/06.
6. A literature review on landfill leachate treatment techniques in general and especially for As is 70% complete.
7. Surface characterization has begun on GFH.

Information Dissemination Activities: Project information provided on landfillinfo.net

TAG meetings: The first TAG meeting for this group has not been held as yet, but is planned for the last week of January/first week of February.