

# **Long-Term Column Leaching of Phase II Mercury Control Technology By-products**

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## **ABSTRACT**

An NETL research, development and demonstration program under DOE/Fossil Energy Innovations for Existing Plants is directed toward the improvement of the performance and economics of mercury control from coal-fired plants. The current Phase II of the RD&D program emphasizes the evaluation of performance and cost of control technologies through slip-stream and full scale field testing while continuing the development of novel concepts. One of the concerns of the NETL program is the fate of the captured flue gas mercury which is transferred to the condensed phase by-product stream. The stability of mercury and any co-captured elements in the by-products could have a large economic impact if it reduced by-product sales or increasing their disposal costs. As part of a greater characterization effort of Phase II facility baseline and control technology sample pairs, NETL in-house laboratories have performed continuous leaching of a select subset of the available sample pairs using four leachants: water (pH=5.7), dilute sulfuric acid (pH=1.2), dilute acetic acid (pH=2.9), and sodium carbonate (pH=11.1). This report describes results obtained for mercury, arsenic, and selenium during the 5-month leaching experiment.

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