

UNITED STATES

WASHINGTON, D.C. 20555-0001

MAR 0 9 1994

MEMORANDUM FOR: John W. N. Hickey, Chief Enrichment Branch Division of Fuel Cycle Safety and Safeguards

FROM: Yawar Faraz Enrichment Branch Division of Fuel Cycle Safety and Safeguards

SUBJECT: UPCOMING TECHNICAL EXCHANGE MEETING ON UF₆ ATMOSPHERIC RELEASE MODELS

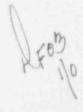
DATE AND TIME: Monday, April 4, 1994, 1:00 p.m.

LOCATION: U.S. Nuclear Regulatory Commission One White Flint North Building, Room 4-B-11 11555 Rockville Pike Rockville, MD 20852

PURPOSE: The NRC staff and its contractor SAIC will meet with representatives of the Department of Energy (DOE) and its contractor Martin Marietta Energy Systems, Oak Ridge Office (MMES-OR), to discuss technical issues related to the modeling of uncontrolled atmospheric releases of UF₆ and HF. This meeting will consist of an exchange of information and data required for adequate modeling of such releases. SAIC has extensive experience in this area and has developed, under contract to the NRC, a set of three computer codes, namely SACRUNCH, SADENZ and SAPLUME, which could be used to model such releases. There is a potential for their future use by the NRC in regulating fuel cycle facilities.

> The PLUME computer code, which models large releases of UF, and HF to the atmosphere, was reviewed by SAIC for the NRC's Division of Fuel Cycle Safety and Safeguards, and a number of shortcomings were identified. MMES-OR is currently under contract with the DOE to address the technical basis and shortcomings contained in the PLUME computer core. To accomplish this, MMES-OR intends to adapt HGSYSTEM, which is an existing state-of-the-art computer code used in the petrochemical industry to model atmospileric releases of ideal gasses and HF. MMES-OR intends to incorporate the complex UF, thermodynamic properties into this computer code. The modified version of HGSYSTEM would be publicly available and could prove useful for safety demonstrations of fuel cycle facilities which handle large quantities of UF_6 .

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Members of the public may attend the meeting as observers.

ATTENDEES: NRC staff SAIC, NRC Contractor DOE staff MMES-OR, DOE Contractor

CONTACT:

Yawar Faraz, (301)504-2669

Original Signed By

Yawar Faraz Enrichment Branch Division of Fuel Cycle Safety and Safeguards

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