

June 6, 2014

MEMORANDUM TO: Kathy Gibson, Director  
Division of Systems Analysis  
Office of Nuclear Regulatory Research

FROM: Larry Camper, Director **/RA/**  
Division of Waste Management  
and Environmental Protection  
Office of Federal, State and  
Environmental Management Programs

SUBJECT: USER NEED MEMORANDUM - REQUEST FOR ASSISTANCE  
IN MAINTAINING THE MILDOS-AREA COMPUTER CODE

The Office of Federal and State Materials and Environmental Management Programs (FSME) requests assistance from the Office of Nuclear Regulatory Research (RES) in supporting the MILDOS-AREA computer code used to perform routine radiological impact and compliance evaluations for various uranium recovery facilities.

#### Background

MILDOS-AREA is a computer code developed at the Argonne National Laboratory (ANL). The code's purpose is to estimate radiological impacts from airborne emissions from uranium mining and milling facilities, conventional uranium ore operations, and in-situ leach facilities. MILDOS-AREA is used by U.S. Nuclear Regulatory Commission (NRC) staff, Agreement States, licensees, new applicants, and contractors to perform confirmatory calculations in support of staff reviews of applications involving uranium recovery facilities. The code has been successfully developed and maintained by ANL for use by the NRC and its contractors for many years.

FSME needs to ensure that the MILDOS-AREA is continually upgraded to incorporate the most up to date models and maintained to meet new information technology requirements, so that it can be effectively used for future uranium licensing evaluations, and others users, such as Agreement States. In addition, user support for those who utilize the code has to be maintained. These activities include web server support and maintenance, maintaining the web page, Java upgrades, addressing debugging issues, and help desk support.

CONTACTS: Steve Giebel, FSME/RDB  
(301) 415-5526

cc: A. Persinko, DURLD  
B. Watson, RDB  
B. Abu-Eid, DWMEP

As the demands from industry change it may become necessary to incorporate applicable industry changes. Other modifications may include the use of updated International Committee on Radiation Protection (ICRP) dose coefficients; file transfer protocols for importing and exporting data; incorporation of uncertainty analyses in results (if applicable); quality assurance testing; improving models and components; and fixing known errors in the code among other items.

Area of Needed Assistance

TASK 1: Maintenance and Oversight of MILDOS-AREA

Assistance from RES is requested to provide oversight of ANL in maintaining and updating the MILDOS-AREA code as part of the agency's suite of assessment tools used for uranium recovery facilities.

TASK 2: Provide periodic training to Users

Assistance is requested from RES to lead periodic training of the MILDOS-AREA code. This could include coordinating with OCHCO, Agreement States and other entities to organize the training.

TASK 3: Incorporate State of the Art Models

Assistance from RES is requested to monitor contracts with ANL to input state of the art models and databases into MILDOS-AREA as they become available. This includes ICRP coefficients, and atmospheric dispersion models.

TASK 4: Explore putting MILDOS-AREA into RAMP Program

FSME understands that RES is consolidating code maintenance and distribution for all NRC owned and funded radiation protection computer codes. We request that MILDOS-AREA be a part of the RAMP program wherever FSME and RES see mutual benefit.

The FSME point of contact for this effort is Steve Giebel, FSME/RDB (301) 415-5526.

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<b>OFC</b>	DURLD/RDB	DURLD/RDB	DURLD	DWMEP
<b>NAME</b>	SGiebel	BWatson	APersinko	LCamper
<b>DATE</b>	6/4/14	6/4/14	6/4/14	6/6 /14

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