

US EPA ARCHIVE DOCUMENT



Department of Energy
Carlsbad Field Office
P. O. Box 3090
Carlsbad, New Mexico 88221

JUN 20 2012

Mr. Jonathan Edwards, Director
U.S. Environmental Protection Agency
Ariel Rios Building, Mail Code: 6608J
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Subject: Notification of Revisions to the Salt Disposal Investigations Testing Concepts

The purpose of this correspondence is to provide the U.S. Environmental Protection Agency (EPA) notice that the U.S. Department of Energy (DOE) has developed an additional component, and possible alternative to the Salt Disposal Investigations (SDI) project entitled the Salt Defense Disposal Investigations (SDDI). The SDDI project activities will start no sooner than October 1, 2012. The SDDI concept plan is included as an enclosure to this letter.

The primary objective of the field-scale heater testing for SDDI is to provide thermal, structural, and hydrogeochemical data for low to intermediate temperature effects in bedded salt. The SDI project envisioned testing an alcove emplacement concept with very high thermal loads. In contrast, the SDDI project would test an in-drift emplacement concept with thermal loads more closely aligned with DOE defense high level waste canisters. The objectives of *in situ* heater tests in both SDI and SDDI concepts include:

- Measure temperatures to confirm heat transfer calculations.
- Monitor salt movement (alcove deformation) to validate salt creep calculations.
- Measure the porosity of reconsolidating salt to validate a salt-reconsolidation model.
- Determine brine and vapor movement for initial information on moisture effects.
- Validate far-field thermal modeling capability by having several interacting alcoves.
- Provide detailed *in situ* test data for three-dimensional computer code validation and benchmarking.
- Evaluate chemical effects on coupons of various materials placed in proximity to canisters and associated changes in the near-field chemistry and environment.

A detailed Test Plan for *in situ* thermal testing will be provided at a future date when it is completed and approved by DOE.

JUN 20 2012

Mr. Jonathan Edwards

-2-

If you have any questions regarding this letter or the SDDI proposal, please contact Mr. George T. Basabilvazo at (575) 234-7488.

Sincerely,



Jose R. Franco, Manager
Carlsbad Field Office

Enclosure

cc: w/enclosure

T. Peake, EPA	*ED
K. Economy, EPA	ED
J. Walsh, EPA	ED
S. Ghose, EPA	ED
R. Lee, EPA	ED
F. Marcinowski, DOE-EM	ED
C. Gelles, DOE-EM	ED
N. Buschman, DOE-EM	ED
B. Boyle, DOE-NE	ED
T. Kliphuis, NMED	ED
CBFO M&RC	

cc: w/o enclosure

R. Nelson, CBFO	ED
R. Patterson, CBFO	ED
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C. Stroud, LANL-CO	ED
D. Weaver, LANL-CO	ED
P. Shoemaker, SNL-CO	ED
F. Sharif, WTS	ED
S. Kouba, RES	ED
A. Chaves, RES	ED

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