

life. At the end of testing, the salt would be stored for reuse or disposed as an oxidizer (special waste or other designation as appropriate). Any disposal would be done following all NREL procedures and any applicable state and federal regulations. Extra salt would be stored in bins or cabinets along the east wall of the lab.

No criteria pollutants would be emitted as a result of this project; however, some nitrogen gas (estimated 35 ft³) would be emitted once per day during testing, as molten salt is forced to flow from one tank to another. This gas would be vented from the building safely. This is accomplished by vents from the ceiling to which the exhaust of analytical equipment is snorkeled. Safety protocols are in place that govern laboratory behavior regarding instruments, chemicals handling, waste disposal, and laboratory operations. These protocols would be monitored by the EH&S department.

All tank components would be fabricated from an appropriate alloy (instrumentation, piping, and vessels) and would be compatible with the molten salt's maximum operating temperature (800oC) and maximum pressure (up to 20 psig). The system would be designed to be compatible with the addition of minor amounts of lithium and calcium nitrate, Na/K/Li carbonate salts and molten metals, such as tin, zinc and aluminum to the molten salts. If these items are added to the system, proper management and disposal requirements shall be addressed, in accordance with NREL's waste, safety and spill procedures.

The process is not expected to produce any liquid effluent because the salt and metal (potentially minor amounts) freeze as it approaches room temperature. Any intentional or unintentional release of liquid salts or metal would collect in secondary containment and solidify.

Compressed nitrogen would be housed in the laboratory, as stated above, and shall be stored in a cool, dry, well-ventilated area in tightly sealed containers that are labeled in accordance with OSHA's Hazard Communication Standard [29 CFR 1910.1200]. Containers of nitrogen shall be protected from physical damage and heat.

With respect to safety (including electrical hazards and pressurized vessels), after the fabrication subcontract is in place, a Safe Operating Procedure (SOP) for the test unit would be written that identifies risks and safeguards for its operation. All OSHA requirements, building codes, H&S procedures and requirements would be followed. In addition, pressurized vessels must be constructed and tested to meet pressure vessel codes. Once the equipment is ready for use and the SOP is approved, a readiness verification (RV) would be conducted and only when all requirements are met and issues addressed, the RV would be approved. Furthermore, during the 100% review meeting, the Subcontractor shall work with NREL safety staff to identify safety risks to personnel and the environment and determine appropriate design and procedural controls for maintaining adequate safety during the operation of each test unit. The Subcontractor will provide support documentation that is required for generating a SOP for the test unit.

Originally, oil and molten salt test units were envisioned and designed. However, this project would fabricate only the molten salt test unit because of new guidance from the DOE Concentrating Solar Power (CSP) Program and budget limitations. The oil unit does not align with DOE's current research priorities; therefore, NREL does not have plans to build this unit. DOE/NREL could decide to build the oil unit in the future; however, the oil unit is not a part of this scope of work. If implemented, an additional NEPA review would be required, at that time.

Based on the information above, this proposed action would qualify for Categorical Exclusion B3.6.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Insert the following language in the award:

You are required to:

If you intend to make changes to the scope or objective of your project, you are required to contact the Project Officer. You must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved.

Note to Specialist :

EF2a completed by Amy Van Dercook on 4/24/2012.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____

 Electronically Signed By Lori Gray
NEPA Compliance Officer

Lori Gray

Date: 4/24/2012

FIELD OFFICE MANAGER DETERMINATION

Field Office Manager review required

NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:

- Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
- Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature: _____
Field Office Manager

Date: _____