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Fort St. Vrain	Plan	For Additional Info: <a href="http://EDMS">http://EDMS</a>	Effective Date: 09/02/10
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## 1. PURPOSE

### 1.1 Introduction [Responsive to 10 CFR 72.32(a)(1), (13), and (14)]

The Fort St. Vrain (FSV) Independent Spent Fuel Storage Installation (ISFSI) is owned and operated by the Department of Energy (DOE). The Nuclear Regulatory Commission (NRC) licenses the FSV ISFSI to DOE. Routine daily operation of the facility will be conducted by a DOE Contractor. Spent nuclear fuel from the decommissioned FSV Nuclear Generating Station is stored in the ISFSI.

The Federal Radiological Emergency Response plan (FREPP) identifies the NRC as the lead federal agency (LFA) responsible for leading and coordinating all aspects of the Federal response to an incident at an NRC licensed facility.

The ISFSI is located about 3.5 mi northwest of Platteville, in Weld County, Colorado, and about 35 mi north of Denver.

Population density in the rural area surrounding the site is relatively low. Based on the 2000 census, the population within a 5-mi radius of the ISFSI was estimated to be 5,369. The nearest town is Platteville, which has a 2000 census population of 2,370. The majority of land within 5 mi of the site is agricultural. The area is characterized by irrigated farmland and pasture land with gently rolling hills. The ISFSI location is about 1.5 mi south of the confluence of the South Platte River and St. Vrain Creek.

The Modular Vault Dry Store (MVDS) provides for vertical, dry storage of irradiated graphite fuel elements in a reinforced concrete structure covered by a clad steel framework. The MVDS civil structure consists of a transfer cask reception bay, charge face, container handling machine, charge face isolation valve, MVDS crane, cooling air outlet chimney, and cooling air inlet structure.

The MVDS is designed for interim storage of fuel for 40 years in a contained shielded system. The design provides for up to six fuel elements stacked vertically in each fuel storage container. The fuel storage containers are tubular, closed at the lower end and sealed at the top. They are located and supported at their lower ends on the floor of the concrete vault module and supported at their upper ends by the charge face structure. Concrete walls provide shielding, as well as protection from tornado missiles and earthquakes. Fuel storage containers are positioned in an array of up to 45 to form a module surrounded by massive concrete shielding.

Decay heat from the loaded fuel storage container in a storage well is dissipated to the surrounding air by a once through buoyancy driven air flow that is ducted out of and back into the adjacent vault module structure surrounding the storage wells. Cooling air enters the vault module through a mesh covered opening. The

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cooling air is exhausted to the atmosphere through a concrete cooling air outlet chimney.

The physical barriers at the ISFSI consist of two fences. The inner fence immediately surrounding the ISFSI is for security purposes. The outer fence approximately 100 meters from the outer surface of the MVDS defines the Emergency Planning Zone (EPZ) boundary.

The Emergency Planning and Community Right-to-Know Act (EPCRA), also known as the Superfund Amendments and Reauthorization Act of 1986 (SARA), Title III, is referred to in *10 CFR 72.32(a)(13)* with respect to hazardous materials at an ISFSI. The Idaho National Laboratory (INL) Environmental Compliance Planning Manual (DOE/ID-10166) and Management Control Procedure 3480, Environmental Instruction for Facilities, Processes, Materials, and Equipment, discuss and implement the EPCRA requirements, which specify that if a facility has an extremely hazardous substance in an amount greater than the appropriate threshold planning quantity, then the facility must designate a facility Emergency Coordinator to participate in the local planning process. Under DOE direction, the INL contractor has evaluated and determined that extremely hazardous substances are not stored at the ISFSI in amounts greater than threshold planning quantities. DOE certifies that it has met its responsibilities under EPCRA with respect to hazardous materials at the ISFSI.

The Emergency Response Plan (ERP) consists of this manual. The ERP is implemented through procedures, the topics of which are listed in Appendix A of this manual. The ERP:

- Describes the facility
- Identifies types of accidents
- Provides a mechanism to classify emergencies according to the severity of the situation
- Identifies how accidents are identified
- Describes methods to be used to mitigate the consequences of an emergency
- Describes the methods used to assess the releases of radioactive materials
- Describes the responsibilities of both DOE and contractor personnel
- Describes the methods to be used to notify and coordinate with offsite response organizations and request offsite assistance

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- Identifies the information to be communicated to NRC and offsite agencies
- Describes the training provided to workers on how to respond to emergencies at the facility
- Describes the means of restoring the facility to a safe condition after an accident
- Describes the Exercise program to be used to ensure the readiness of the facility to respond to emergencies
- Certifies DOE has met its responsibilities under the EPCRA of 1986 with respect to hazardous materials at the facility
- Provides for comments of this plan by offsite response organizations
- Describes arrangements made for requesting and effectively using offsite assistance onsite and provisions that exist for using other organizations capable of augmenting the planned onsite response
- Describes the arrangements that have been made for providing information to the public.

Procedures have been developed to implement the ERP, provide the foundation for the Emergency Preparedness Program, and comply with *10 CFR 72.32(a)*.

DOE allowed the offsite response organizations expected to respond in case of an accident 60 days to comment on the initial submittal of the Emergency Response Plan before submitting it to the NRC. Subsequent plan changes need not have the offsite comment period unless the plan changes affect the offsite organizations. DOE shall provide any comments received within the 60 days to the NRC with the emergency plan.

## 1.2 Definitions

The following are selected terms commonly used in the ERP.

- A. *Assessment Actions*: Actions taken during or after an accident to obtain and process information necessary to implement specific emergency measures.
- B. *Accountability*: Process of identifying missing personnel.

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- C. *ALERT*: An event is in progress or has occurred that involves an actual or potential substantial degradation of the level of safety of the ISFSI. Any radioactive releases are expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels.
- D. *Command Post (CP)*: During an emergency the CP operates under the direction of the Emergency Coordinator (EC) and is normally located in the modular building on the access road, approximately 150 ft from the MVDS. It is the primary point at which corrective actions are coordinated to mitigate an abnormal occurrence. The CP provides information and analysis regarding system problems and long and short-term guidance on corrective actions, serves as a staging area and support base for emergency personnel, and as the staff marshaling point for personnel awaiting assignment to emergency teams. It is the location where initial assessment and classification of an incident is initiated. Alternate CP location(s) may be established as necessary by the EC.
- E. *Corrective Actions*: Measures to reduce the severity of (or terminate) an emergency situation.
- F. *Emergency Action Levels (EALs)*: Parameters or symptoms used to designate a particular class of emergency. These parameters are indicators of the severity of an emergency, or potential severity, and are guides in determining appropriate emergency response measures. EALs can also be referred to as “initiating events” for those events severe enough to cause an event classification.
- G. *Emergency Coordinator*: This DOE contracted individual has the responsibility and authority to initiate emergency actions immediately and unilaterally.
- H. *Emergency Director (ED)*: The senior contractor management official with overall strategic responsibility for emergency response.
- I. *Emergency Operations Center (EOC)*: The facility is located in Idaho and is maintained and operated by the INL contractor for the Department of Energy, Idaho Operations Office under the direction of the ED. Emergency response support for the FSV ISFSI is coordinated through the EOC and the INTEC ECC.
- J. *Emergency Planning Zone (EPZ)*: An area surrounding the MVDS approximately 100 meters from the outer surface of the building. It is also referred to as the controlled area.

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- K. *Emergency Response Organization (ERO)*: DOE contracted personnel who are assigned a specific emergency position as defined in this plan and who are trained to perform specific emergency response functions.
- L. *Fort St. Vrain Advisor (FSVA)*: The FSVA acts as a single point of contact for the Emergency Coordinator to ensure needed resources are obtained.
- M. *Idaho Nuclear Technology and Engineering Center Emergency Action Manager (INTEC EAM)*: The INTEC (EAM) is responsible for managing all emergencies within INTEC.
- N. *Idaho Nuclear Technology and Engineering Center Emergency Control Center (INTEC ECC)*: The facility is located in Idaho, and is maintained and operated by the ICP contractor for the Department of Energy, Idaho Operations Office under the direction of the EAM. Emergency response support for the FSV ISFSI is coordinated through the INTEC ECC and the EOC.
- O. *Incident Commander (IC)*: The initial qualified responder to an event who is responsible for incident activities including the development and implementation of strategic decisions and for approving the ordering and releasing of resources.
- P. *Independent Spent Fuel Storage Installation (ISFSI)*: The ISFSI is owned and operated by DOE. The ISFSI comprises an MVDS structure and facilitates interim storage of FSV spent nuclear fuel and other radioactive materials (if necessary) associated with spent fuel storage.
- Q. *Notification of Unusual Event (NOUE)*: An event is in progress or has occurred that indicates a potential for degradation of the level of safety of the ISFSI. No release of radioactive material requiring offsite response or monitoring is expected unless further degradation of the ISFSI occurs.
- R. *Public Information Officer (PIO)*: The DOE authorized spokesperson that is responsible for interfacing with the media during an emergency event.
- S. *Senior Management Advisor (SMA)*: The ICP contractor individual in the EOC responsible for coordinating with the FSVA to obtain needed ICP resources.
- T. *Warning Communications Center (WCC)*: The communications center located in Idaho Falls, ID.