

APPENDIX F
FEASIBILITY OF LOCATING A SPENT NUCLEAR FUEL DRY STORAGE
FACILITY ON THE INEL AT A SITE REMOVED FROM ABOVE THE
SNAKE RIVER PLANE AQUIFER

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APPENDIX F

F. FEASIBILITY OF LOCATING A SPENT NUCLEAR FUEL DRY STORAGE FACILITY ON THE INEL AT A SITE REMOVED FROM ABOVE THE SNAKE RIVER PLAIN AQUIFER

F.1 Background

The agreement between the State of Idaho and the federal government involving the shipment of additional spent nuclear fuel to the Idaho National Engineering Laboratory (INEL) includes a provision that all spent nuclear fuel at INEL will be transferred from wet storage to dry storage (U.S. District Court, 1995; Paragraph E.8). The agreement also states that "DOE shall, after consultation with the State of Idaho, determine the location of the dry storage facilities within the INEL, which shall, to the extent technically feasible, be at a point removed from above the Snake River Plain Aquifer." The purpose of this Appendix is to address locations at INEL that might be removed from above the Snake River Plain Aquifer and to compare them to locations that are over the Snake River Plain Aquifer. For purposes of this Appendix, storage of special case waste is considered with spent nuclear fuel. For perspective, a maximum of approximately 12 to 15 acres would be needed for the naval spent nuclear fuel dry storage and the special case waste storage structure, depending on the alternative.

In the search for a technically feasible location at a point removed from above the Snake River Plain Aquifer, this Appendix addresses significant considerations including the recharge to the Snake River Plain Aquifer, the magnitude of potential earthquakes, and topography of the area. This Appendix also discusses ecological resources, cultural resources, land use, air quality, aesthetics, waste management, public safety, and security.

F.2 Locations Considered

Figure F.1 shows the boundaries of the INEL imposed over a map of the Eastern Snake River Basin and the Eastern Snake River Plain (USGS 1992). As seen in Figure F.1, there are two relatively small portions of the INEL that do not appear to be within the outline of the Eastern Snake River Plain but they are still within the Eastern Snake River Basin. The area at the northern end of INEL will be referred to as the Birch Creek Area and the area on the west side of INEL will be referred to as the Lemhi Range Area.

Sites where naval spent nuclear fuel is currently examined or stored are also discussed in this Appendix. These sites are the Naval Reactors Facility and the Idaho Chemical Processing Plant. The locations of these two sites are shown in Figure F.2. Both of these sites are on the Snake River Plain and over the Snake River Plain Aquifer.

This EIS evaluated a range of representative locations on the INEL for a dry storage facility for naval spent nuclear fuel. Undisturbed areas on the INEL within the Eastern Snake River Plain were not evaluated, as they offer no significant environmental advantages over those areas where spent naval fuel is already stored. Establishment of a dry storage facility in currently undisturbed areas would require construction activities in support of the needed buildings and associated infrastructure, and would potentially disturb plants which are culturally important to the Shosone-Bannock tribes.

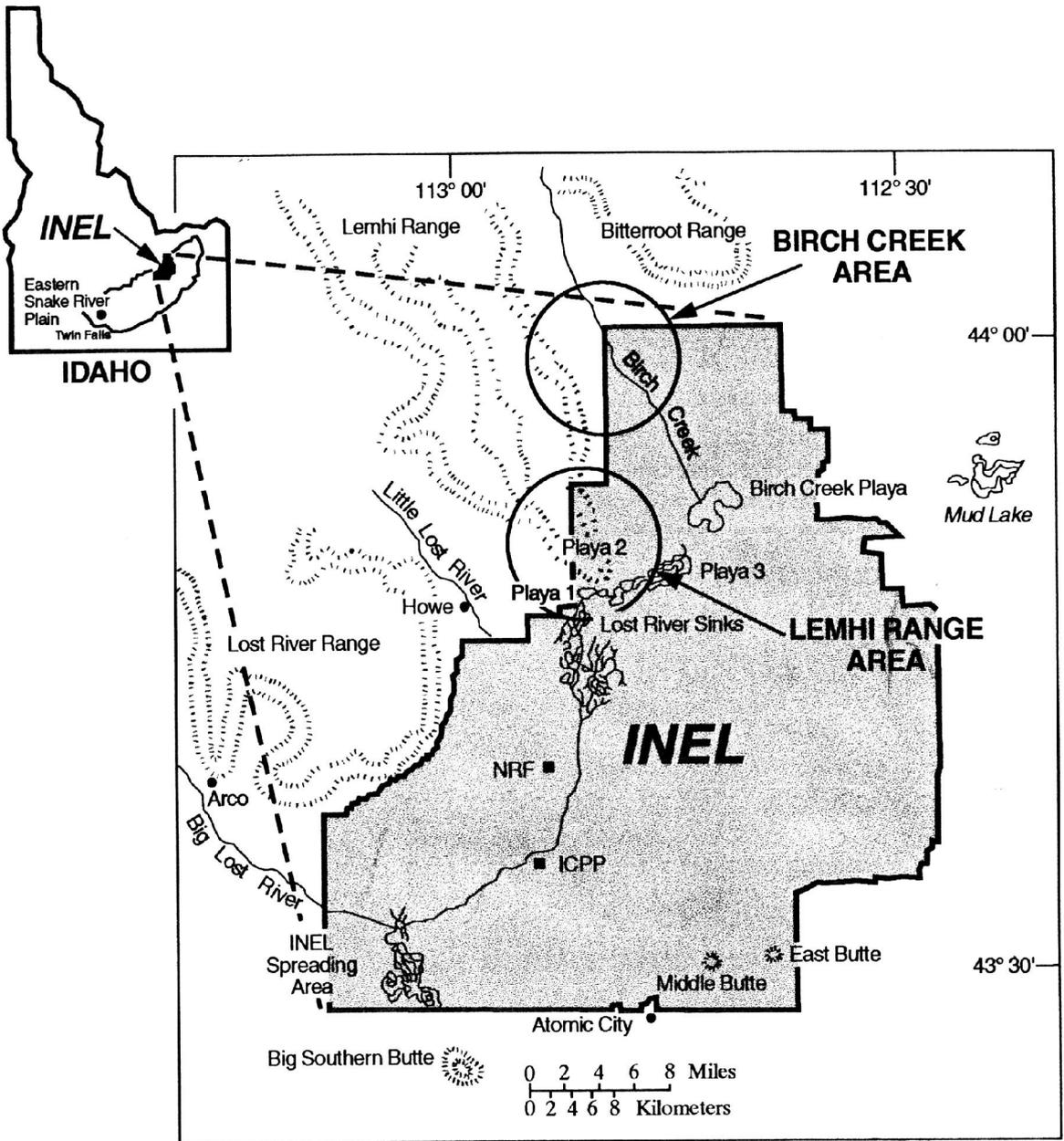


FIGURE F.2 INEL Site Showing Location of the Naval Reactors Facility (NRF) and the Idaho Chemical Processing Plant (ICPP)

F.3 Summary

This evaluation concluded that neither the Lemhi Range Area nor the Birch Creek Area are hydrologically removed from above the Snake River Plain Aquifer and therefore, do not meet the objective of the agreement between the State of Idaho and the federal government. In addition to not being hydrologically removed from above the Snake River Plain Aquifer, the Lemhi Range Area and the Birch Creek Area are not recommended for the following reasons.

- Because of the proximity to seismic faults, the Lemhi Range Area is not a technically feasible location and the Birch Creek Area is undesirable.
- From a topography and foundation perspective, the Eastern Snake River Plain is superior to the Lemhi Range Area.
- Both the Lemhi Range and Birch Creek Areas would increase the potential for impact on Native American cultural resources and sensitive species.
- Both the Lemhi Range and Birch Creek Areas would require the cancellation of some grazing permits.
- Transportation from the Naval Reactors Facility or Idaho Chemical Processing Plant to either the Lemhi Range and Birch Creek Areas would slightly increase risk.
- Construction costs for security, water supplies, electrical substations and other infrastructure would be increased.
- Construction of new highway or rail transportation routes would increase cost.

F.4 Construction Activities

In the development of a new dry storage location at a remote location of INEL, at least a road, power lines, a small office building, a parking lot, a weather-protected paved storage pad, a sanitary waste treatment facility, a well for water, and secured area would need to be constructed. The office building would be constructed to house security guards and radiological monitoring personnel. Graded and paved parking areas for post-examination naval spent nuclear fuel dry storage casks or concrete vaults would be constructed along with a simple weather protection structure. Approximately four miles of road would need to be built to provide access to a new dry storage facility at the Birch Creek Area or the Lemhi Range Area. If rail transport to the Birch Creek Area or Lemhi Range Area would be needed, then approximately 25 miles of track would be required to connect these areas to the Naval Reactors Facility. If it were necessary to build a rail line to the Lemhi Range Area it may be difficult to avoid seasonable wetlands and playas.

If a dry fuel storage facility were located at either the Naval Reactors Facility or the Idaho Chemical Processing Plant, the solid municipal and sanitary wastes generated in association with the facility would be accommodated within the existing waste management systems at those complexes with no increase in capacity. However, if one of the remote sites were selected, a new sanitary waste treatment facility, typically either a sanitation lagoon or water treatment plant, would be needed. The solid municipal wastes would be handled without increase in the capacity of the INEL system.

While this is not a major construction effort, there may be environmental consequences from the construction activities in areas of importance to ecological and cultural resources and impact on other resources such as air quality. The Naval Reactors Facility and the Idaho Chemical Processing Plant locations are in areas already dedicated to industrial use where much of the ground has been disturbed by construction, so a dry storage facility would not have a significant impact on the ecology or cultural resources.

F.5 Hydrology

The Eastern Snake River Basin is that tract of southern Idaho that gathers water originating as precipitation and discharges it via direct run off and subsurface flow to the Snake River (Figure F.1). The Eastern Snake River Plain consists of approximately 10,000 square miles of mostly level ground located within the east-central part of the Snake River Basin. Almost all of the INEL is located in the Eastern Snake River Plain. Based on Figure 1 (USGS 1992) two relatively small areas of the INEL, the Birch Creek Area and the Lemhi Range Area, appear to be outside the Eastern Snake River Plain but they are within the Snake River Basin.

The information presented in this section and Sections F.6 (Seismicity) and F.7 (Topography) is extracted from a report (Rizzo Associates 1996) prepared to assist in this evaluation.

F.5.1 Regional Aquifers

In discussing the Snake River Plain Aquifer, it is important to recognize the relationship of the aquifer to other aquifers in the Snake River Basin. The Snake River Basin includes at least four regional aquifers that are defined by the type of rock that forms each aquifer. Two of these aquifers contain most of the water that is in storage. The first is the Snake River Plain Aquifer which is the principal groundwater storage aquifer and water source for the Snake River Basin. The second is the Alluvial Aquifer which is also an important reservoir of water in the Snake River Basin. The Snake River Plain aquifer is located under the Eastern Snake River Plain (Figure F.1) and has essentially the same boundary as the Eastern Snake River Plain. The Eastern Snake River Plain is characterized by permeable basalt and sediments that control the recharge from precipitation on the Eastern Snake River Plain to the Snake River Plain aquifer. The Alluvial Aquifer is northwest of the Eastern Snake River Plain and is located in the valleys of the basin-and-range mountains (i.e., the Bitterroot Range, Lemhi Range, and Lost River Range shown in Figure F.2). The Alluvial Aquifer consists of unconsolidated sediment between the mountains. The Alluvial Aquifer discharges to the Snake River Plain Aquifer and is characterized by having a shallow water table. In the Birch Creek Area the boundary between the Alluvial Aquifer and the Snake River Plain Aquifer is poorly defined in part because the Alluvial Aquifer is interfingering with the Snake River Plain Aquifer.

All precipitation that falls in the Eastern Snake River Basin that does not evaporate or is not transpired flows into the Eastern Snake River Plain aquifer or is transported by rivers and streams or flows underground to the Snake River. The mountainous areas north-northwest of the Eastern Snake River Plain that feed the Alluvial Aquifer receive more precipitation than the Eastern Snake River Plain. These mountainous areas normally receive 20 to 30 inches of precipitation per year. The Eastern Snake River Plain receives from 8 to 10 inches of precipitation per year with a general recharge rate of less than 1 inch per year. Therefore, the recharge to the Snake River Plain Aquifer from the Alluvial Aquifer is significant.

F.5.2 Birch Creek Area Hydrology

In the Birch Creek Area the boundary between the Alluvial Aquifer and the Snake River Plain Aquifer is poorly defined in part because the Alluvial Aquifer is interfingering with the Snake River Plain Aquifer. The Alluvial Aquifer provides significant recharge to the Snake River Plain Aquifer and in the Birch Creek Area the Alluvial Aquifer is hydrologically connected to the Snake River Plain Aquifer. Therefore, the Birch Creek Area cannot be considered to be removed from above the Snake River Plain Aquifer. This conclusion was based on the Environmental Protection Agency (EPA) report on the Snake River Plain Aquifer as a Sole Source Aquifer (EPA 1990). This conclusion is consistent with the judgement of personnel in the United States Geological Survey field office for INEL (Rizzo Associates 1996).

F.5.3 Lemhi Range Area Hydrology

The Lemhi Range Area encompasses the southern extension of the Lemhi Mountain Range. The Lemhi Range Area contains many intermittent streams (erosion channels) due to its close proximity to the Lemhi Mountains. Even though this area is not over the aquifer, the run-off from this area drains to the Snake River Plain Aquifer and recharges the aquifer. Therefore, it cannot be considered to be hydrologically removed from above the Snake River Plain Aquifer. This conclusion is consistent with the judgement of personnel in the United States Geological Survey field office for INEL (Rizzo Associates 1996). In addition, the flatter sections of land on the western side of the Lemhi Range Area are adjacent to farm land on the INEL boundary. This farm land is down gradient with respect to surface water flow from the Lemhi Range Area. Also, there is a farmhouse and other farm buildings adjacent to the INEL boundary in this area.

F.5.4 Infiltration into the Eastern Snake River Plain

In the Eastern Snake River Plain, infiltration into the Snake River Plain aquifer is controlled by the texture and thickness of the sediment overlying the more permeable basalt. Fine-grained sediments are intercalated with basalt and greatly impede the vertical movement of water. The Eastern Snake River Plain can be divided into three types of recharge areas depending on the amount of sediment fill overlying the basalt (USGS 1992). Those areas of the Eastern Snake River Plain with soil cover greater than 40 inches (i.e., thick soil cover) recharge the aquifer at about one-third the rate of areas with thin soil cover (i.e., less than 40 inches) and about ten times less than areas of recent lava flows (i.e., minimal soil cover). At the Idaho Chemical Processing Plant the soil thickness is approximately 16 to 50 feet and at a Naval Reactors Facility seismic station the soil thickness is approximately 33 feet. Consequently, infiltration at the Naval Reactors Facility and the Idaho Chemical Processing Plant is much lower than areas with less than 40 inches of soil thickness. Also, under the conditions found at the Idaho Chemical Processing Plant and the Naval Reactors Facility, infiltrating water may be prevented from recharging the Snake River Plain aquifer for a long time (i.e., the water may become perched water).

At INEL, the water table elevation ranges from 200 feet below grade in the north part of the site, to about 900 feet below grade in the southeastern part. At the Naval Reactors Facility the water table is at a depth of approximately 370 feet below the surface and at the Idaho Chemical Processing Plant the water table is approximately 450 feet below the surface.

The Naval Reactors Facility and the Idaho Chemical Processing Plant sites are above the Snake River Plain Aquifer. However, the thick layers of soil at these locations, the low recharge rates, the great depth to the water table, and the lack of water associated with dry storage results in an extremely low probability that a dry storage facility at these sites could contaminate the Snake River Plain Aquifer.

F.5.5 Water Resources

Limited quantities of water would be required to support the operation of the dry storage facility. Water would be required for drinking, a sanitary system and possibly some equipment such as air conditioners. The water requirements would not be significant at any of the four locations. At the Birch Creek and Lemhi Range Areas it would be necessary to drill a new well and to build a system to handle the sanitary waste. The amount of water withdrawn from the well at the Birch Creek Area or the Lemhi Range Area is estimated to be approximately one to two million gallons per year. This is well within the allocation of INEL (DOE 1995).

F.6 Seismicity

The Eastern Snake River Plain is not seismic in nature; however, the adjacent basin-and-range structures (i.e., the Bitterroot Range, Lemhi Range and Lost River Range shown in Figure F.2) are characterized by seismic activity. Figure F.3 shows the faults in the vicinity of INEL which are sources of potential earthquakes. Consequently, many studies have been performed to predict earthquake magnitudes, and locations near INEL. In the earthquake scenarios that have been studied, the maximum predicted seismic event (Borah Peak-type event which was a 7.0 on the moment magnitude scale and a 7.3 on the surface magnitude scale) has been placed as close as tectonically possible to the facility being evaluated. This is standard practice in the nuclear industry. For the Naval Reactors Facility, the Idaho Chemical Processing Plant and the Lemhi Range Area, this seismic event is on the Lemhi Fault with the epicenter placed at Howe. As seen in Figure F.3 the Lemhi Fault is very close to the Lemhi Range Area and the Beaverhead Fault is very close to the Birch Creek Area which places these areas much closer to possible seismic epicenters than the Naval Reactors Facility or the Idaho Chemical Processing Plant.

The peak ground acceleration values predicted by calculations indicates that the Lemhi Range Area and the Birch Creek Area would have a much higher peak ground acceleration (i.e., seismic shaking) than the Idaho Chemical Processing Plant and the Naval Reactors Facility because the former are closer to the epicenters. This can be seen in Figure F.4 which shows a potential peak ground acceleration of approximately 0.4 g in the Lemhi Range and Birch Creek Areas compared to 0.24 g at the Naval Reactors Facility. This indicates that the magnitude of the peak ground acceleration at the Lemhi Range and Birch Creek Areas could be approximately 70% greater than at the Naval Reactors Facility. Because of the proximity of the Birch Creek Area to the Beaverhead Fault, the U.S. Nuclear Regulatory Commission would suggest looking elsewhere for a site.

The Lemhi Range Area is a zone where surface ruptures are associated with the fault movement, and therefore surface ruptures are a definite siting and design consideration. It is well known that surface rupture occurred with the Borah Peak Earthquake. Since the Lemhi Range Area is within one mile of known capable faults, a site in this zone would, in all probability, be prone to surface rupturing. Even if one could characterize the nature, direction, and magnitude of the rupture sufficient for design, civil structure designs are not yet able to accommodate a surface rupture.

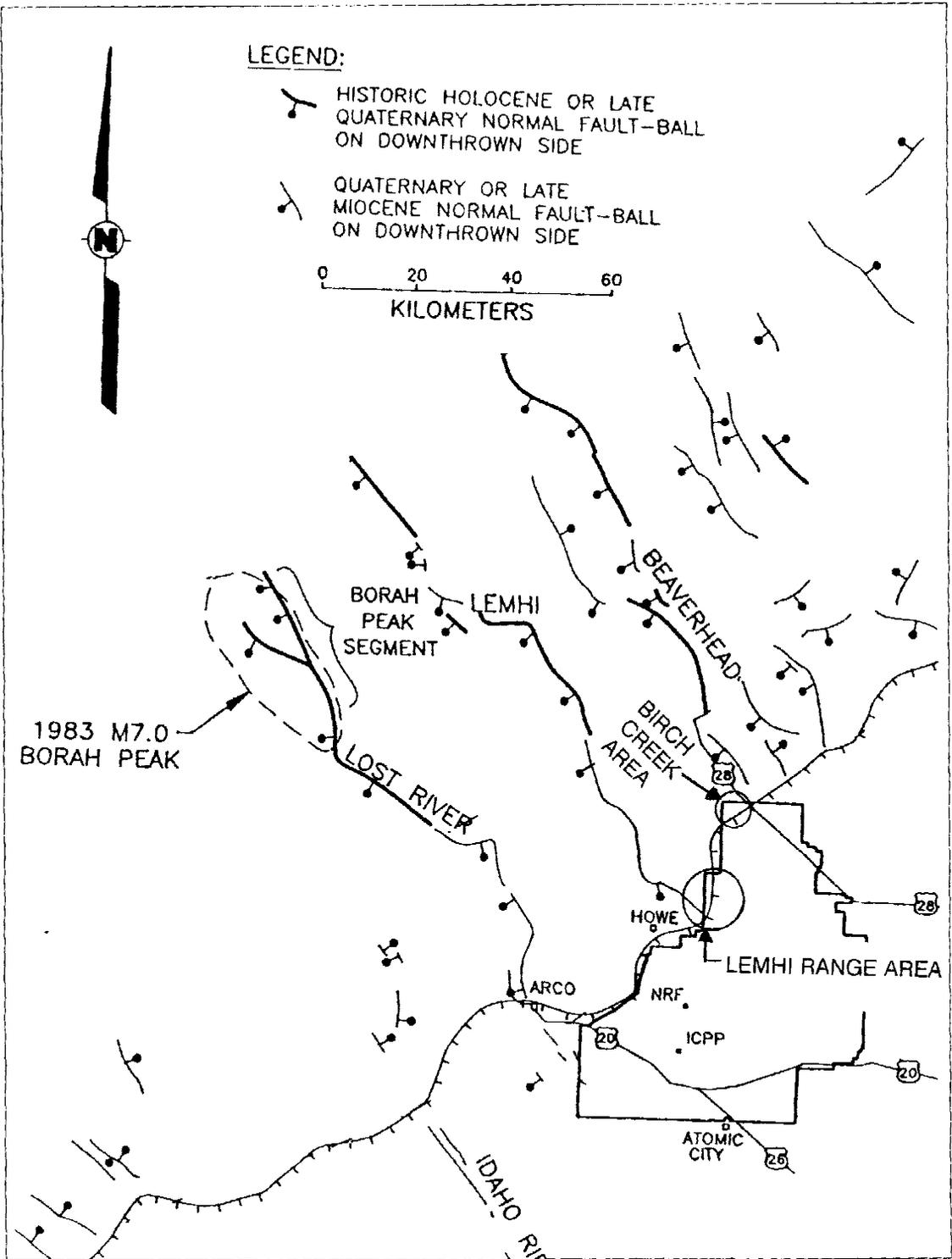


FIGURE F.3 Fault Locations

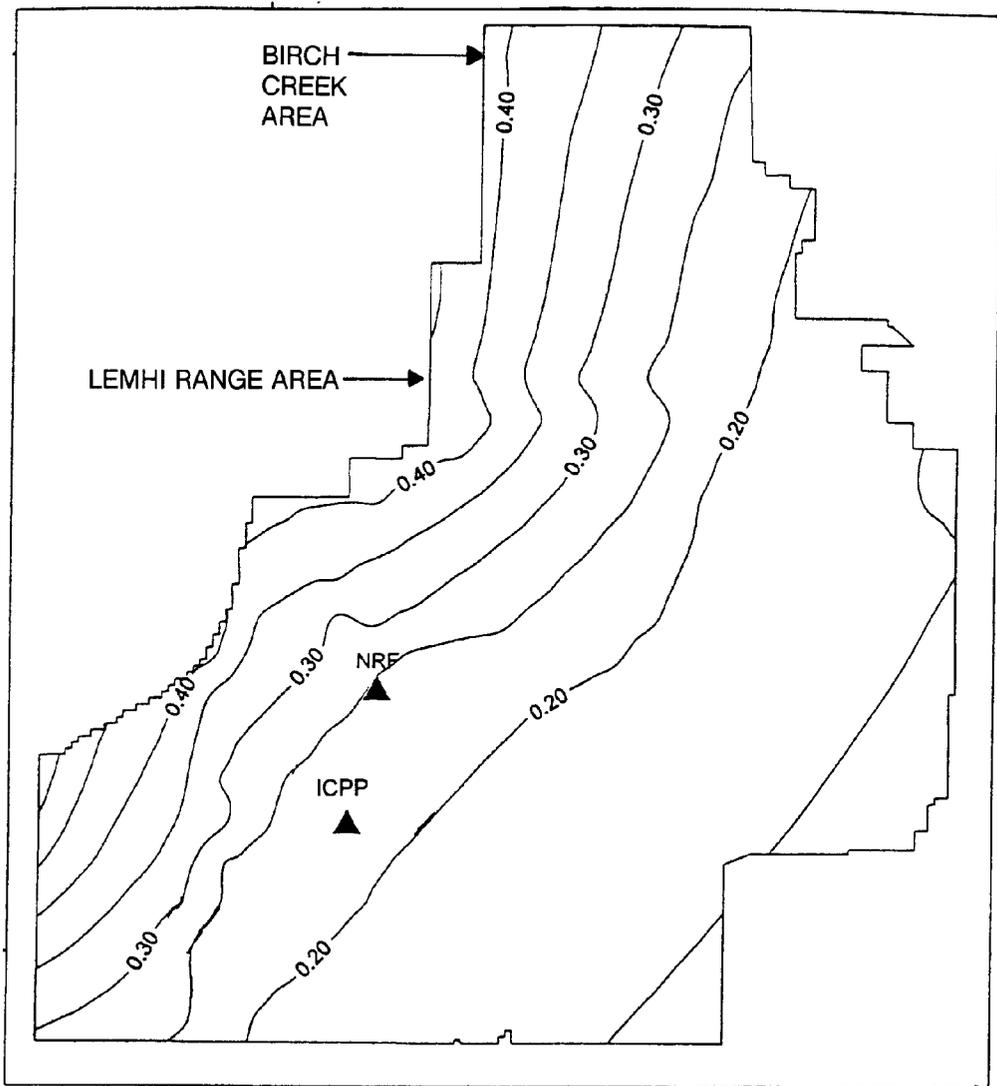


FIGURE F.4 Calculated INEL Seismic Peak Horizontal Ground Acceleration (g)
Based on a 5,000 year return period

Based on seismic considerations, the Lemhi Range Area is not considered technically acceptable for a dry storage area. Also the Birch Creek Area would be a less desirable location for a dry storage facility than the Naval Reactors Facility or the Idaho Chemical Processing Plant relative to the magnitude of potential seismic ground motion.

F.7 Topography

The Eastern Snake River Plain is characterized by having low local topographic relief (i.e., it is relatively level). This is true for the Naval Reactors Facility and the Idaho Chemical Processing Plant locations, which would make these sites suitable for a dry storage facility. The Birch Creek Area at the northwest corner of INEL includes land which is also level enough to lend itself to the construction of the necessary paved areas and buildings required for a dry storage facility.

The Lemhi Range Area encompasses the southern extension of the Lemhi Mountain Range. As a result most of this area is characterized by steep slopes. The slopes in the Lemhi Range Area have slopes of between 4 and 30%. The lower reaches of this area that are relatively flat are comprised of several consolidated alluvial fans with local erosion channels. Some areas have the potential for problems with foundation bearing capacity and/or excessive settling. From a topographical and foundation perspective, the Eastern Snake River Plain is superior to the Lemhi Range Area.

F.8 Cultural Impacts

Cultural resource surveys have been conducted within the INEL site and at the INEL site borders. A detailed discussion of cultural resources at INEL is provided in the Programmatic SNF and INEL EIS (DOE 1995 in Volume 2, Part A, Section 4.4) and the pertinent results are summarized here. The site surveys along with a predictive model indicate that there may be cultural resources of special significance to Native Americans at the Birch Creek Area and the Lemhi Range Area. The Lemhi Range Area is known to contain many significant resource sites near the spur of the Lemhi Range that intersects the Snake River Plain. Rocks in this area contain deposits which are sources of tool grade stones, and tool working sites have been identified near this area. The Birch Creek Area, particularly near the Birch Creek channel, is expected to have the highest chance of containing cultural resource sites. This preliminary review indicates that the development of either of the two remote dry storage locations on the INEL site could impact Native American cultural resources.

Vegetation occurring within the Lemhi Range and Birch Creek Areas includes plants which are used by the Shoshone-Bannock tribes, as shown in Table F.1, originally published in the Programmatic SNF and INEL EIS (DOE 1995). Some disturbance of these plants could occur if a dry storage facility were to be located at either the Lemhi Range or Birch Creek Areas. (It should be noted that transportation and other activities related to the management of naval spent nuclear fuel, whether at the Expanded Core Facility or the Idaho Chemical Processing Plant, will not disturb these plants.)

TABLE F.1 Plants used by the Shoshone-Bannock that are located on or near the Idaho National Engineering Laboratory site.

Plant family	Type of use	Location on INEL site	Abundance
Desert parsley	Medicine, food	Scattered	Common
Milkweed	Food, tools	Roadsides	Scattered, uncommon
Sagebrush	Medicine, tools	Throughout	Common, abundant
Balsamroot	Food, medicine	Around buttes	Common but scattered
Thistle	Food	Scattered throughout	Common but scattered
Gumweed	Medicine	Disturbed areas	Common
Sunflower	Medicine, food	Roadside	Common
Dandelion	Food, medicine	Throughout	Common
Beggar's ticks	Food	Disturbed areas throughout	Common, abundant
Tansymustard	Food, medicine	Disturbed areas	Common
Cactus	Food	Throughout	Common, abundant
Honeysuckle	Food, tools	Big Southern Butte	Common on butte
Goosefoot	Food	Throughout	Common, abundant
Russian Thistle	Food	Disturbed areas throughout	Common, abundant
Dogwood	Food, medicine, tools	Webb Springs, Birch Creek	Common where found
Juniper	Medicine, tools, food	Throughout	Common to abundant
Gooseberry	Food	Scattered throughout	Common
Mentha arvensis	Medicine	Big Lost River	Uncommon
Wild onion	Food, medicine, dye	Throughout	Common
Calochortus spp.	Food	Buttes	Common
Fireweed	Food	Throughout	Common
Pine	Food, tools, medicine	Big Southern Butte	Common on butte
Douglas fir	Medicine	Big Southern Butte	Common on butte
Plantain	Medicine, food	Throughout	Uncommon
Wildrye	Food, tools	Throughout	Common, abundant
Indian ricegrass	Food	Throughout	Common, abundant
Bluegrass	Food, medicine	Throughout	Common, abundant
Serviceberry	Food, tools, medicine	Buttes	Common where found
Chokecherry	Food, medicine, tools, fuel	Buttes	Common where found
Wood's rose	Food, smoking, medicine, ritual	Big Lost River, Big Southern Butte	Common, abundant
Red raspberry	Food, medicine	Big Southern Butte	Uncommon
Willow	Medicine	Throughout in moist areas	Common
Coyote tobacco	Smoking, medicine	Big Lost River, Webb Springs	Uncommon
Cattail	Food, tools	Sinks, outflow from facilities	Uncommon

The Naval Reactors Facility and the Idaho Chemical Processing Plant location would be within existing industrial complexes where much of the ground has already been disturbed so construction at these locations would not be expected to uncover new cultural sites. In addition the area not disturbed has been extensively surveyed and a dry storage facility would not interfere with cultural sites.

F.9 Ecological Impacts

Ecological resource surveys have been conducted within the INEL site. A detailed discussion of ecological resources at INEL is provided in the Programmatic SNF and INEL EIS (DOE 1995 Volume 2, Part A, Section 4.9). Surveys pertaining to the biotic resources on the INEL indicate that although no federal endangered species have been identified, federal candidate Category 2 ferruginous hawk nests have been observed primarily in juniper woodlands, such as those occurring in the Lemhi Range Area. The Lemhi Range Area contains many trails that criss-cross the area, and indicates that the area is the habitat for a variety of animals (Taylor 1994). Construction and industrial activities in these areas could disturb these species.

The vegetation in the Birch Creek Area is primarily grassland, in the Lemhi Range Area it is primarily Juniper trees with some grass and around the Naval Reactors Facility and the Idaho Chemical Processing Plant the vegetation is sagebrush and grass. No endangered plant species were identified on federal or state listed as potentially occurring on the INEL site. However, eight plant species identified by other federal agencies and the Idaho Native Plant Society as sensitive, rare, or unique are known to occur on the INEL site. The merging of the foothills and the plains in the Lemhi Range Area provides a potential habitat for several sensitive plant species found on the INEL (Taylor 1994).

This preliminary review of ecological resources indicates that there may be impacts resulting from the potential development of either the Birch Creek Area or the Lemhi Range Area. The Naval Reactors Facility and the Idaho Chemical Processing Plant locations are in areas already dedicated to industrial use where much of the ground has been disturbed by construction, so a dry storage facility would not impact sensitive, rare or unique species.

F.10 Land Usage

Both the Naval Reactors Facility and the Idaho Chemical Processing Plant are areas already developed and dedicated to industrial use; therefore, constructing a dry storage facility at these areas would not require a change in the land use. However, both the Birch Creek Area and the Lemhi Range Area are currently under grazing permits. The construction of a dry storage facility at either of these locations would require the cancellation of grazing permits on approximately 30 acres¹ of land, representing a change in land use. This change is contrary to the long-term plans to reduce the area removed from public use at INEL.

F.11 Air Quality

Construction of a covered storage pad, office buildings, and possibly roads would result in construction-related airborne emission of fugitive dust typical of excavation activities. This dust could be controlled within local requirements. The amount of dust would be similar for the Naval Reactor Facilities and the Idaho Chemical Processing Plant with a slightly larger impact at the Birch Creek Area and the Lemhi Range Area due to the need for road and railroad access and an administrative building.

After construction the dry storage facility should have no impact on the air quality at any of the locations. Additional information on air quality is found in Chapter 5, Section 5.2.

F.12 Aesthetics and Scenic Values

The dry storage facility would consist of buildings with relatively low profiles. The building would be consistent with those structures that already exist at the Naval Reactors Facility and the Idaho Chemical Processing Plant. These facilities are not highly visible from public highways as would probably be the case in the Birch Creek Area. In the Lemhi Range Area the dry storage area would be visible from state highway 33, but because of the low building profile there should be no significant impact on the view.

¹ The actual storage structures would occupy approximately 12 to 15 acres but a new site would require approximately 30 acres.

F.13 Public Health and Safety

F.13.1 Radiation Exposure

The radiological impacts of normal operations at a dry storage facility at the Naval Reactors Facility, the Idaho Chemical Processing Plant, the Birch Creek Area, or the Lemhi Range Area would all be extremely small. However, at the Birch Creek Area and the Lemhi Range Area the dry storage facility would be closer to the site boundary (approximately 1 mile) and, therefore, the maximally exposed off-site individual could receive a slightly larger radiation dose. Under accident conditions the maximally exposed off-site individual could also receive a slightly larger dose if the dry storage facility were located at the Birch Creek Area or the Lemhi Range Area rather than at the Naval Reactors Facility or the Idaho Chemical Processing Plant. However, the collective general population dose would be approximately the same for the sites that are being considered due to the differences in distances to concentrations of population.

The details of radiological evaluation associated with normal and accident conditions are discussed in Appendix A. The radiological implication associated with transportation to the sites are addressed in Appendix B.

F.13.2 Effects on Security

The storage of spent nuclear fuel requires a trained guard force to protect the material from potential terrorist attack and sabotage. At INEL this force consists of the guards at the individual facilities and a central response team that can respond quickly to assist against an attack on an individual facility. The construction of a dry storage facility at a remote site in the Birch Creek Area or the Lemhi Range Area would require the addition of another facility specific guard force. In case of a terrorist attack a small four person helicopter is available to the central response team but the main body of the central response team travels by road. Therefore, in case of a terrorist attack at the Birch Creek Area it would require approximately 30 minutes longer for the main body of the central response team to reach the dry storage facility than it would for the team to reach the Naval Reactors Facility or the Idaho Chemical Processing Plant. At the Lemhi Range Area an additional 20-25 minutes would be added to the response time of the main body of the central response team. In case of a terrorist attack this delay could significantly affect the possibility of successfully dealing with the attack.

F.14 Other Areas of Impact

The potential impacts of increased energy consumption, noise, traffic and transportation have been evaluated for a dry storage facility at all four sites being considered. At the Naval Reactors Facility and the Idaho Chemical Processing Plant there would be essentially no increase over the current operations. Existing administrative buildings, roads, parking lots, and bus service currently exist and ten to twelve additional employees would not have a significant impact. Also this small number of additional people would not significantly increase the heating, cooling, and lighting requirements for the existing administrative facilities.

Impacts would be somewhat larger with the Lemhi Range Area or Birch Creek Area, because lighting and heating and cooling for the new administrative buildings would be needed as well as lighting for the security area. Similarly, people would be traveling to work at locations remote from the existing facilities at INEL. These impacts would still not be large because the maximum

number of employees at a remote dry storage facility would be expected to be less than approximately 50. There would be limited activity at a dry storage facility so most of the effects on the environment would result from workers providing maintenance and security services to the facility.