EA-0907; Environmental Assessment and (FONSI) Idaho National Engineering Laboratory Sewer System Upgrade Project

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April 1994

U.S: Department of Energy

DOE Idaho Operations Office

Idaho Falls, Idaho

FINDING OF NO SIGNIFICANT IMPACT

SEWER SYSTEM UPGRADE PROJECT

IDAHO NATIONAL ENGINEERING LABORATORY, IDAHO

AGENCY: Department of Energy

ACTION: Finding of No Significant Impact

SUMMARY: The Department of Energy (DOE) has prepared an environmental assessment (EA), DOE/EA-0907, for a proposed Sewer System Upgrade Project at the Idaho National Engineering Laboratory (INEL) near Idaho Falls, Idaho. The proposed action would include activities conducted at the Central Facilities Area, Test Reactor Area, and the Containment Test Facility at the Test Area North at INEL. The proposed action would consist of replacing or remodeling the existing sewage treatment plants at the Central Facilities Area, Test Reactor Area, and Containment Test Facility. Also, a new sewage testing laboratory would be constructed at the Central Facilities Area. Finally, the proposed action would include replacing, repairing, and/or adding sewer lines in areas where needed.

The existing sewage treatment plants and portions of the collection systems at the Central Facilities Area, Containment Test Facility, and Test Reactor Area are at least 35 years old and are deteriorating. The equipment is outdated and inefficient and requires continual maintenance and repair. This proposed action would provide INEL with a reliable method for treating and disposing of sanitary sewage waste at the Central Facilities Area, Containment Test Facility, and Test Reactor Area that would reduce maintenance costs and be in compliance with the State of Idaho Waste Water Land Application Permit Regulations.

Based on the analyses in the EA, DOE has determined that the proposed action

is not a major Federal action significantly affecting the quality of the human environment, within the meaning of the National Environmental Policy Act (NEPA) of 1969, 42 U.S.C. 4321, et seq. Therefore, the preparation of an

environmental impact statement (EIS) is not required, and the Department is issuing this Finding of No Significant Impact.

COPIES OF THE EA ARE AVAILABLE FROM:

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PROPOSED ACTION: The DOE proposes to upgrade the existing sewer system at the INEL by: 1) replacing or remodeling the existing sewage treatment plants at the Central Facilities Area, Test Reactor Area, and Containment Test Facility at the Test Area North; 2) constructing a new sewage testing laboratory at the Central Facilities Area; and 3) replacing, repairing, and/or adding sewer lines in these areas as necessary.

The proposed sewage treatment plants would be designed to process only nonhazardous wastewater and would be located in the same general area as the existing plants to utilize the existing sewer lines and to minimize the length of new lines. The preferred alternative design involves construction of new raw sewage lift stations, force mains, gravel access roads, and lagoon systems at each location as necessary.

The proposed Sewage Treatment Plant for the Central Facilities Area would receive sanitary wastes from the existing sewer system. The Sewage Treatment Plant would require construction of a new lift station, a new force main, and a gravel access road. A partial-mix, aerated lagoon system consisting of an initial treatment pond, a facultative (natural process) lagoon, and a polishing pond would constitute a mid-treatment process for the Sewage

Treatment Plant at the Central Facilities Area. Each lagoon would have a modified soil liner to prevent release of untreated wastewater to the subsurface. The treatment process would include land application of lagoon effluent using low-pressure drip irrigation from a center pivot, covering up to 34 hectares (85 acres) of indigenous native vegetation.

The proposed Sewage Treatment Plant for the Test Reactor Area would receive sanitary wastes from the existing sewer system. The Sewage Treatment Plant design would consist of a new lift station, a new force main, a gravel access road, and two containment lagoons, each with a modified soil liner to prevent the release of untreated wastewater to the subsurface. The lagoons would cover up to 7 hectares (18 acres).

The proposed Sewage Treatment Plant for the Containment Test Facility would grind the effluent for initial treatment prior to pump transfer to a newly-constructed, lined lagoon covering approximately 2 hectares (5 acres). No other additional equipment or construction would be required.

All Sewage Treatment Plant systems would be designed to handle 2.5 times the average daily flow rate and accommodate peak flows that could occur in any 24-hour period.

The existing drainage systems at the Central Facilities Area, Test Reactor Area, and Test Area North have been sampled, monitored, and characterized to determine if there are sources of radioactive and/or hazardous contamination that have the potential to contaminate the new sewage treatment plants. Where contamination has been detected, those portions of the sewer system would be rerouted and/or reconstructed to avoid contaminating the new sewage treatment plants. Contaminated mains, equipment, and lagoons removed from service would be stabilized in place until additional characterization can be performed. Non-contaminated parts of the existing sewer system components scheduled for replacement would be removed and excessed or placed in a solid waste disposal site. DOE would conduct an appropriate, separate NEPA review before conducting any decontamination and decommissioning activities.

A new laboratory for testing and analyzing the sewage waste from the INEL Sewage Treatment Plants would be constructed within the area of the proposed Central Facilities Area Sewage Treatment Plant. The proposed facility would be a pre-engineered metal building, approximately 9.3 x 13.3 m (30.5 x 43.5 ft) in size. This facility would provide office and laboratory space for Sewage Treatment Plant personnel. Standard laboratory equipment would be installed.

ENVIRONMENTAL IMPACT: Construction of the proposed Sewage Treatment Plants for the Central Facilities Area, Test Reactor Area, and Containment Test Facility would disturb approximately 15.4 hectares (38.1 acres) at the INEL. An additional 34 hectares (85 acres) at the Central Facilities Area would be allocated for land application, and available as habitat for wildlife. The loss of habitat for the lagoons would be offset by the creation of habitat through the land application. This land would be available for other future uses if the land application is discontinued.

All proposed locations are near existing facilities and some of the locations were previously disturbed. The loss of habitat would be small when compared to the remaining undisturbed areas of the INEL and is not expected to have an effect on the viability of any critical habitat or any listed threatened or endangered species. Wildlife would likely be attracted, and native habitat would be promoted and enhanced by the land application of the treated wastewater. The Sewage Treatment Plants are not likely to be affected by flooding from the Big Lost River because the existing river channel and man-made diversions would provide adequate protection. No cultural resources would be adversely affected by this project.

Air Quality. Tritium is present in potable water pumped from the Snake River Plain Aquifer at the Central Facilities Area but not at the Test Reactor Area or Test Area North. Water pumped and tested monthly from the production wells at the Central Facilities Area was determined to contain an average concentration of about 16 picocurie per liter of tritiated water which is below the maximum contaminant levels for tritium in drinking water, as stated in the National Primary Drinking Water Regulations, 40 CFR 141.16. For this analysis, it is assumed that groundwater from the Central Facilities Area

production wells would cause atmospheric releases of tritiated water from the Central Facilities Area sewer system lagoons. The entire inventory of 10,000 Curies of tritiated water that remains in the aquifer is assumed to be released to the atmosphere instantaneously by pumping the aquifer at the Central Facilities Area. Dose estimates were calculated by using the Environmental Protection Agency Clean Air Act Assessment Package-1988 dose and risk assessment code.

The nearest offsite receptor (an individual living at an existing residence where the effects of atmospheric releases from the Central Facilities Area would have the greatest impact) was considered to be located approximately 14,100 m (8.76 mi) southeast of the Central Facilities Area. The total effective dose equivalent for this receptor would be 0.001 mrem during the year of assumed release. The effective dose equivalent for the individual receptor is a small fraction of the 0.1 mrem/yr level that, if exceeded, would require emission measurements at the point of release. See Title 40 CFR Part 61.93 (b)(4)(i) of Subpart H, "National Emission Standards for Emissions of Radionuclides Other than Radon from Department of Energy Facilities." The estimated lifetime fatal cancer risk from this exposure would be 3 X 10^-8 (3 in 100 million).

An effective dose equivalent was also calculated for workers and the collective population (offsite residential population). The maximum worker effective dose equivalent would be 35 mrem/yr, which can be compared to the 5,000-mrem/yr limit specified in DOE 5480.11, "Radiation Protection for Occupational Workers." The collective population effective dose equivalent would be 0.02 person-rem/year. This dose would be expected to pose a risk of fatal cancer of 6.6 X 10^-6 (6.6 in 1 million) fatal cancers/year in the affected population. These are extremely conservative estimates because the hypothetical bounding release calculation assumes the exhaust of the entire tritiated water inventory at once, which is not possible. In fact, the risks associated with tritiated water releases would be substantially smaller.

There would be a temporary increase in fugitive dust and a minor increase in hydrocarbon emissions and noise from equipment at the proposed construction locations. Other air emissions from the Sewage Treatment Plants would include

methane, carbon dioxide, and trace amounts of hydrogen sulfide. Of these emissions, only hydrogen sulfide is regulated by the State of Idaho as a noncarcinogenic toxic air pollutant. The amount of hydrogen sulfide likely to be in the ponds was determined using numbers and percentages from anaerobic sludge digesters. The estimated maximum bounding emissions of hydrogen sulfide for the proposed Central Facilities Area ponds would be 0.0014 lb/hr and for the Test Reactor Area 0.0004 lb/hr. The State of Idaho toxic air pollutant limit is 0.993 lb/hr. The Idaho toxic air pollutant rate is one fifteenth of the Occupational Exposure Limit used by the Occupational Safety and Health Administration and the American Council of Governmental Industrial Hygienists. Emissions of hydrogen sulfide would not cause any health effects because the emission rate is far below the health-based regulatory standard. Emissions of other gases have been determined to be inconsequential.

Among the chemicals proposed for use at the Sewage Treatment Plant testing laboratory, only two on the Idaho toxic air pollutant list could produce emissions: sulfuric acid and sodium hydroxide. The estimated maximum potential emission rate from this amount of use would be 0.00043 lb/hr for sulfuric acid and 0.00035 lb/hr for sodium hydroxide, assuming 100% release. These emission rates are well below the State of Idaho regulatory limit of 0.0667 lb/hr for sulfuric acid and 0.133 lb/hr for sodium hydroxide. No health effects would be expected from the use of these two chemicals.

Biological Resources. As previously stated, activities associated with Sewage Treatment Plant construction would disturb approximately 15.4 hectares of vegetation. There is a potential for these construction activities (including both Sewage Treatment Plant and laboratory construction) to destroy some small burrowing and less mobile animals, and force larger animals and birds to relocate to adjacent areas where similar or more suitable habitat is abundant. It is not anticipated that construction activities would affect the viability of any plant species, local wildlife population, or any endangered species.

Groundwater. The effluent from the Sewage Treatment Plants would not increase contaminant concentrations in groundwater above the drinking water primary maximum contaminant levels and secondary contaminant levels based on the following considerations: 1) concentrations of contaminants in influent to the

Sewage Treatment Plants are low, 2) the Sewage Treatment Plants will decrease contaminant concentrations substantially and projected trace element nutrient loading rates would fall below state recommended levels, and 3) any interbeds present in the vadose zone may also provide treatment of infiltrate prior to reaching the aquifer.

Waste Generation. Sludge would be generated from the sewage treatment process that would require disposal in accordance with applicable State and Federal Regulations. The estimated annual generation would be of 19.1 m^3 (25 yd^3), 5.7 m^3 (7.5 yd^3), and 3.8 m^3 (5 yd^3) for the Sewage Treatment Plant facilities at the Central Facilities Area, Test Reactor Area, and Containment Test Facility, respectively. This sludge would contain approximately 93 to 97 percent water. The 3 to 7 percent consisting of solids would be 60 to 80 percent organic matter. It is projected that the sludge would be removed from the lagoons every 20 to 30 years. Based on the influent to the sewage treatment facilities, the sludge would contain only small quantities of contaminants such as metals that would not limit any management and disposal options, which include beneficial reuse, land disposal or incineration in accordance with 40 CFR parts 257 and 403.

ALTERNATIVES CONSIDERED: Alternative Sewage Treatment Plant designs were evaluated in addition to the no action alternative and the preferred alternative. The alternative selection factors included: 1) the amount of land that is available and where it is located; 2) proximity to drinking water wells; and 3) ease of permitting.

Alternative Sewage Treatment Plant designs were considered for the Central Facilities Area including: 1) the aforementioned partial-mix, aerated treatment system with a series of unlined, rapid infiltration lagoons for effluent disposal that would cover up to 16.2 hectares (40 acres); and 2) a combination of facultative lagoons that would cover an estimated 43 hectares (106 acres), each with soil liners to prevent leakage for the initial treatment process, plus land application as previously described for effluent disposal. These two alternatives were not selected due to the increased disturbed acreage.

Other reasonable alternative designs for the Test Reactor Area were not identified. Any other designs would contribute to potential contamination of drinking water wells located nearby. No other reasonable locations near the Test Reactor Area were available.

Alternative designs considered for the Containment Test Facility include: 1) construction of flow-through aerated lagoons and discharge of effluent to the ground through infiltration/percolation trenches; 2) using septic tanks to receive the effluent initially prior to pumping to a newly constructed containment lagoon system; and 3) construction of smaller facultative ponds with modified soil liners for initial treatment followed by a series of small infiltration ponds. The proposed Sewage Treatment Plant design was selected due to space limitations, treatment effectiveness, reduced maintenance, and the lack of need to increase treatment capacity at the Containment Test Facility. No other reasonable locations near the Containment Test Facility were available.

The no action alternative would potentially impact continuing operations and practices, and might delay new facilities and/or programs due to the limited capacity and efficiency of the existing sewage treatment plants.

DETERMINATION: The proposed action to upgrade the INEL sewer system does not constitute a major Federal action significantly affecting the quality of the human environment within the meaning of the National Environmental Policy Act. This finding is based on the analyses in the EA. Therefore, the preparation of an EIS is not required for this proposed action, and the Department of Energy is issuing this Finding of No Significant Impact.

Issued at Washington, D.C., this___________day of __________, 1994.

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Tara O'Toole, M.D., M.P.H.

Assistant Secretary
Environment, Safety and Health

ACRONYMS/ABBREVIATIONS

CFA	Central Facilities Area
CWA	Clean Water Act
Ci	curie
CTF	Containment Test Facility
DOE	U.S. Department of Energy
EDE	effective dose equivalent
FR	Federal Register
gpd	gallons per day
HTO	tritiated water
IDAPA	Idaho Administrative Procedures Act
INEL	Idaho National Engineering Laboratory
lb/hr	pound per hour
MCL	maximum contaminant level
mgy	million gallons per year
mrem	milliroentgen equivalent, man
NEPA	National Environmental Policy Act
RESL	Radiological and Environmental Sciences Laboratory
SHPO	State of Idaho Historic Preservation Office
SMCL	secondary maximum contaminant level
STP	sewage treatment plant
TAP	toxic air pollutant

Environmental Assessment

Idaho National Engineering Laboratory
Sewer System Upgrade Project

1. PURPOSE AND NEED

Each facility area at the Idaho National Engineering Laboratory (INEL) has an independent sewage treatment system to accommodate all operations in that vicinity (Figure 1). Each system includes some type of sewage treatment plant (STP) and a connecting network of sewer lines to collect sewage. The existing sewage treatment plants and portions of the collection systems at the Central Facilities Area (CFA); the Containment Test Facility (CTF) located at Test Area North (TAN); and the Test Reactor Area (TRA) are at least 35 years old. The STPs at these locations are deteriorating. The equipment is outdated (parts are no longer available) and inefficient and requires continual maintenance and repair. The U.S. Department of Energy (DOE) needs a reliable method for treating and disposing of sanitary sewage waste at CFA, CTF at TAN, and TRA that would be cost effective, low maintenance, and in compliance with the State of Idaho Water Land Application Permit regulations.

The workforce at the INEL has more than doubled since the STPs were installed. To identify the ability of the existing sewage treatment systems to treat sanitary wastewater from the increased workforce and corresponding work activities, flow rates were monitored for each year between 1985 and 1989. Based on this information it has been determined that sanitary wastewater volumes at CFA, TRA, and TAN have consistently exceeded an architectural/engineering recommended design standard (Corbitt, 1990) of 30 gallons per day per person during this time period. The existing STPs would not be able to handle a peak flow rate and the projected average flow rates for any 24 hour period. Sewage collection systems are usually designed to handle 2.5 times the average daily flow rate to accommodate peak flows that can occur in any 24 hour period. All three systems have had peak flows that exceed this design standard. A sewage treatment system is needed that can accommodate a peak flow based on actual daily usage to properly treat the influent and avoid potential overflow. Generally, the sanitary wastewater is derived from various facility functions such as restrooms and showers; cooling water from air compressor systems, air conditioners, and heating systems; and, as applicable, facility work activities such as general laboratory operations, equipment maintenance, and office operations.

Additionally, some of the existing gravity flow sewer main lines in these areas are damaged and/or radiologically contaminated due to past discharge practices. The subsurface drain fields at CFA have also received effluent in the past with radionuclide concentrations. The past practices of discharge of radionuclide concentrations to the sewer system in excess of the Maximum Contaminant Levels (MCL) for drinking water has been discontinued. However, continued use of the existing system could cause the existing contamination to leach further into the ground, with potential to reach the Snake River Plain aquifer. A new sewage treatment system is needed to reduce the potential for the release of this existing contamination to the soil or the groundwater.

Figure (Page 2)

Figure 1. Facilities at the Idaho National Engineering Laboratory.

Sewage waste and sewage effluent would be sampled on an on-going basis and analyzed daily in the laboratory to determine treatment efficiency and to ensure the effluent meets all permit discharge requirements. Also, the records of sampling and analysis need to be consistently conducted and maintained for the life of the facility for permitting purposes. Testing and analysis has been moved from one laboratory facility to another several times in the past and the laboratory is currently housed in Building 640. Building 640 has been identified in "poor" condition (DOE-ID, 1993) and is inadequately designed for laboratory activities and record storage. However, other laboratory space is not available. A permanent facility is needed where sewage effluent samples would be analyzed with the appropriate equipment and where records could be maintained.

This environmental assessment evaluates the expected environmental impacts of upgrading the INEL sewer system and alternatives. This document has been prepared in accordance with the requirements of the National Environmental Policy Act (NEPA), as implemented by the Council on Environmental Quality (40 CFR 1500-1508) and the DOE (10 CFR 1021).

2. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

DOE proposes to upgrade the sewer systems at the INEL by replacing existing STPs at CFA, TRA, and the Containment Test Facility (CTF) at TAN (Figures 2,3,4); constructing a new sewage testing laboratory at CFA; and replacing, repairing, and adding necessary gravity flow sewer main lines in these areas. This upgrade would reduce maintenance and repair costs, provide capacity to prevent overflow, and ensure compliance with all regulations and permits. These new sewage treatment systems would also reduce the potential for the release of existing radionuclide contamination from existing sewer lines and STPs to the soil or the groundwater.

2.1 Sewage Treatment Plants

The proposed new sewage treatment plants would be located in the same general areas as the existing plants to use the existing gravity-flow sewer main lines and minimize the length of new force mains (see Figures 2,3, and 4). Different design alternatives have been proposed for each facility area because of varying constraints at the different locations. The designs differ in treatment process and effluent disposal. Electrical power would be supplied by connections to existing transformers, where possible, and connecting feeders would be placed underground, where possible. Most feeders would be less than 61 m (200 ft) in length and located in previously disturbed areas. Areas disturbed by construction of the sewage treatment plants would be restored and revegetated. All sewage treatment plants would have appropriate fencing and monitoring.

The proposed facilities would be designed, constructed, and monitored to meet the specifications in "Recommended Standards for Wastewater Facilities," by the Great Lakes-Upper Mississippi Board of State Environmental Managers. The STPs would meet the requirements in the

Idaho Water Quality Standards and Wastewater Treatment Requirements referenced in IDAPA 16.01.02299.04 and .05 for protection of groundwaters; 16.01.02420 for point source sewage wastewater discharges; and 16.01.17000 for land application units.

2.1.1 Central Facilities Area

The proposed site for the STP (Figure 2) was identified based upon an evaluation of potential sites at CFA. It was determined that the proposed site was the only area that would be feasible based upon the amount of land area required and the siting criteria for STPs (IDAPA 16.01.02 et al). The proposed STP for CFA would require construction of a new raw sewage life station, a new force

Figure (Page 4)

Figure 2. Location of sewage treatment plant and evaporation pond at Central Facilities Area.

Figure (Page 5)

Figure 3. Location of sewage treatment plant at Test Reactor Area.

Figure (Page 6)

Figure 4. Location of sewage treatment plant at Containment Test Facility at Test Area North.

main, and a gravel access road. The proposed STP design would be a partial-mix, aerated lagoon system for initial treatment, a facultative lagoon, and a polishing pond followed by a land application method for disposal of effluent. The present usage of the system is 161,000 gpd (58.8 mgy) as determined from flow data from January 1992 through November 1992. The proposed system would have a design maximum flow capacity of 250,000 gallons per day (91.3 mgy) projected for a 20 year period using a 2% forecast of growth. This would handle 2.5 times the average daily flow rate and accommodate peak flows that could occur in any 24 hour period. Approximately 30% of the wastewater is derived from restrooms, showers, and the cafeteria. The remainder is wastewater discharge from bus and vehicle maintenance areas, analytical laboratory operations, a medical dispensary, and non-contact cooling water from air compressor systems, air conditioners, and heating systems.

The proposed site would require approximately 1,829 m (6,000 ft) of new force main. The partial-mix, aerated lagoon treatment system would consist of three connected lagoons (treatment, storage, and polishing), each with a treatment depth up to 2.4 m (8 ft) and covering a total area up to 6 hectares (15 acres). The dikes around the lagoons would be up to 3 m (10 ft) above the existing ground level. The first lagoon (treatment) would have three floating, 10-horsepower electrical devices to provide oxygen (aeration). Each lagoon would have a modified soil liner to prevent the release of untreated wastewater to the subsurface. Land application would be accomplished by low-pressure drip irrigation from a center pivot covering up to 34 hectares (85 acres) of indigenous native vegetation. The pivot would be located adjacent to the treatment lagoons. An aboveground distribution system or other land application methods through a center pivot such as a high pressure sprinkler could also be used; all land application methods would need a similar land area. A new pole mounted transformer and up to 914 m (3000 ft) of overhead transmission line would be required.

Alternative STP designs have also been considered at CFA. One of the following alternatives could also be selected depending on the amount of land that is available and where it is located, proximity to drinking water wells, and ease of permitting as identified in Section 4.8 "Permits." An alternative design would be a partial-mix, aerated treatment system (described above) and a series of unlined, rapid infiltration lagoons for effluent disposal. This combination would cover an area up to 16.2 hectares (40 acres). Another combination would be facultative lagoons, each with soil liners to prevent leakage for the initial treatment process, plus land application as described above for effluent disposal. Facultative lagoons rely on photosynthetic algae and surface reaeration as the major source of oxygen and as a result would usually require a larger land area than aerated lagoons. This combination would cover an estimated 43 hectares (106 acres). The treatment depth would be up to 2.4 m (8 ft) and the dikes around the lagoons would be up to 3 m (10 ft) above the existing ground level.

2.1.2 Test Reactor Area

The proposed STP for TRA also would require construction of a new raw sewage lift station, a new force main, and a gravel access road. The proposed STP design would use two containment lagoons that have a modified soil liner to prevent the release of untreated wastewater to the subsurface. This design relies on biological decomposition to treat and dispose of waste through natural evaporative processes. The proposed system would have a design maximum flow capacity of 50,000 gallons per day (18.25 mgy) projected for a 20 year period using a 1.25% forecast of growth. This would handle 2.5 times the average daily flow rate and accommodate peak flows that could occur in any 24 hour period.

The waste would be pumped from a new lift station directly into the initial lagoon to begin the treatment process. No other additional equipment or construction would be required for this alternative. It is projected that these lagoons would cover up to 7.2 hectares (18 acres) of land. Other alternative designs were not considered for TRA because this is the only design that would prevent any possible contamination of drinking water wells located nearby. No other reasonable locations near TRA and away from the drinking water wells were available.

2.1.3 Test Area North

The proposed STP design for CTF at TAN would grind the effluent for initial treatment, and the effluent would be pumped to a newly constructed, lined lagoon system. No other additional equipment or construction would be required for this alternative. This design would cover approximately 2.2 hectares (5.4 acres). An increase in sewage treatment capacity for future facility growth is not necessary at this location and the proposed system would provide sufficient capacity for the existing facilities at CTF by handling 2.5 times the average daily flow rate and accommodate peak flows that could occur in any 24 hour period. The lagoon system would have a design capacity of 20,000 gallons per day (gpd). An estimated 16,000 gpd would be septic effluent with the remaining 4,000 gpd being boiler blowdown effluent.

Other alternative designs were considered for CTF including construction of flow through aerated lagoons and discharge of effluent to the ground through infiltration/percolation trenches; using septic tanks to receive the effluent initially prior to pumping to a newly constructed containment lagoon system; and construction of smaller facultative (natural process) ponds with modified soil liners for initial treatment followed by a series of small infiltration ponds. The proposed STP design was selected due to space limitations, treatment effectiveness, reduced maintenance, and the lack of need to increase treatment capacity at CTF. No other reasonable locations near CTF were available.

2.2 Laboratory

A new laboratory for testing and analyzing the sewage waste from the INEL sewage treatment plants would be constructed within CFA. The proposed facility would be a pre-engineered metal building, approximately 9.3 X +3.3 m (30.5 X 43.5 ft) in size, and electrically heated. Utilities would be connected to existing services nearby. This facility would provide space for a laboratory for testing, offices, restrooms, and change rooms for STP personnel. Standard laboratory equipment, such as metering equipment, incubators, sterilizer, refrigerators, range hood, and drying ovens, would be installed. Small quantities of standard laboratory chemicals would be used and stored in two standard, free-standing cabinets in the laboratory. Other alternatives to building a separate laboratory, i.e., use of existing surplus space and use of offsite analytical services, were investigated but were not evaluated because they were not reasonable. A facility with adequate space that meets applicable codes is not available at CFA for this laboratory function. It was also determined that the volume of samples needed to be tested on a daily basis and the recordkeeping requirements would not make it practical nor cost effective to have the work performed by an offsite contractor.

2.3 Dismantling Existing Facilities

The existing sewage systems at CFA, TRA, and TAN have been sampled, monitored, and characterized to determine if radioactive and hazardous contamination would be able to contaminate the new sewage treatment systems. In some areas, contamination was found. Additional studies would be conducted to determine the full extent of contamination, and wherever contamination would be detected, those portions of the sewer system would be rerouted and/or reconstructed to avoid contaminating the new sewage treatment plants. (Note: no construction would take place within any operable unit identified in the Comprehensive Environmental Response Compensation Liability Act, Federal Facility Agreement and Consent Order for the INEL.) Contaminated mains, equipment, and lagoons taken out of service would be stabilized in place until additional characterization could be performed and decontamination and decommissioning methods determined. Any decontamination and decommission activities would be conducted by a separate program at the INEL at a future date and discussed in separate NEPA documentation. Parts of the existing sewer system that are not contaminated but need to be removed would be excessed or placed in a solid waste disposal site and the area restored if necessary.

2.4 No Action

The no-action alternative would continue the present operations using existing facilities. No new construction would take place, and the existing facilities would not be upgraded. Contaminated sewer lines and drain fields, if they exist, would not be replaced. A new laboratory would not be constructed, and because the facility that houses the current laboratory is substandard, the required testing, analysis and recordkeeping capability would be severely limited.

3. AFFECTED ENVIRONMENT

The INEL covers approximately 2,315 km^2 (894 mi^2) along the edge of the Upper Snake River Plain. The climate and vegetation are typical of a cool, high desert (semiarid steppe) environment. Dominate vegetation is sagebrush, rabbitbrush, and various species of bunchgrass. Crested wheatgrass has also been reseeded in some locations (primarily previously disturbed areas). The surface of the plain is covered by windblown and waterborne topsoil underlain by composite layers of interbedded volcanic (principally basaltic lava) and sedimentary rocks. Studies indicate that the Upper Snake River Plain is aseismic for earthquakes above magnitude 2.5 relative to the surrounding region (Anders et al., 1989). No known critical wildlife habitats are located on the INEL, and there are no known endangered or threatened species residing year-round on the INEL; however, the bald eagle, an endangered species, has been observed wintering on or near the INEL.

Surface water features at the INEL consist of three intermittent streams and localized runoff. The INEL is located in a closed basin, and no surface water flows leave the site. The Snake River Plain Aquifer is the principal groundwater feature in southeastern Idaho, underlying nearly all of the Upper Snake River Plain. The aquifer is listed as a Class I aquifer, and EPA has designated it as a sole source aquifer pursuant to section 1424(e) of the Safe Drinking Water Act (FR Vol. 56, No. 194,50634-50638). At CFA, the aquifer is 128-142 m (420-465 ft) below the ground surface. Depth to aquifer averages 140 m (460 ft) at TRA and 61 m (200 ft) at TAN. The physical and biological environment at the INEL has been extensively described in previous documents (DOE 1991; Bowman et al., 1984).

There are no permanent residents at the INEL. The population center nearest to any INEL facility is Atomic City (pop. 25). The majority of employees reside in Bonneville and Bingham counties, east of the INEL. The largest community in Bonneville County is Idaho Falls (pop. 43,929) and in Bingham County, Blackfoot (pop. 9,646), according to 1990 census data. Approximately 1,294 employees currently work at CFA, 710 at TAN, and 695 at TRA.

Archaeological surveys of the proposed sewage treatment plant locations were conducted by qualified archaeologists in August and September 1990, August 1992, and May 1993. No resources were found in the areas proposed to be disturbed that would be considered eligible for the National

Register of Historic Places, and the State of Idaho Historic Preservation Office (SHPO) has concurred with the findings.^a,b As recommended by the SHPO, archaeological sites near the projects would be identified and avoided. Construction would be monitored by Cultural Resources Management personnel on a regular basis to ensure on-going compliance.

4. ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION AND ALTERNATIVES

Standard construction equipment and techniques would be used to construct the proposed STPs and laboratory. A local construction work force is available and would be used. Construction of this project is not expected to have an impact on the local economy or infrastructure systems.

4.1 Air Emissions

Construction activities at all locations would involve earth moving and cause temporary dust suspension, which would be controlled by applying water. Standard industry earth moving and construction equipment would cause a temporary increase in hydrocarbon emissions.

4.1.1 Sewage Treatment Plants

Tritium is present in potable water pumped from the Snake River Plain Aquifer at CFA but not at TRA or TAN. The United States Geological Survey has reported that in the past the INEL operations had released a total of 30,900 curies (Ci) of tritium [as tritiated water HTO)] to the aquifer (DOE-ID 1990). Approximately 10,000 Ci of HTO is likely to still remain in the aquifer after correcting for decay. Water pumped and tested monthly from the production wells at CFA was determined to contain an average concentration of about 16 picocurie (1.6×10^{-11} Ci) per liter of HTO, which is below the maximum contaminant levels for tritium in drinking water, as stated in the National Primary Drinking Water Regulations, 40 CFR 141.16 (Anderson 1992). For this impact analysis, it is assumed that groundwater from the CFA production wells would cause atmospheric releases of HTO from the CFA sewer system lagoons. The inventory of 10,000 Ci of HTO that remains in the aquifer is the maximum possible quantity of INEL-generated HTO that could be released to the atmosphere by pumping the aquifer at CFA. This impact analysis assumes that the entire inventory of HTO in the aquifer would be released to the atmosphere at once when, in fact, releases would be chronic and occur over a long period of time. Although it is not possible to release all of the inventory at once, using this assumption for impact analysis provides a worst-case radiation dose estimate from atmospheric releases of HTO. It was assumed that the release point for all dose calculations would be a one-acre area at CFA and releases would occur at ground level. (The size of the area is not a significant factor in the dose calculations because of the release assumptions.) These conservative impact analysis results reflect the maximum reasonably foreseeable impacts that could

a. Letter from D. W. Watts, Deputy State Historic Preservation Officer to T. Perkins, DOE-ID NEPA Compliance Officer, "Archaeological Survey: INEL Sewer Upgrade Project 1990," December 12, 1990.

b. Letter from R. M. Yohe, State Archaeologist and Deputy SHPO, to B. L. Ringe, Cultural Resource Management, "Archaeological Survey and Testing for the Central Facilities Area Sewer Facility", January 4, 1994.

result from any of the alternative designs for CFA. Dose estimates were calculated by using the mainframe version of the Environmental Protection Agency Clean Air Act Assessment Package- 1988 dose and risk assessment code (EPA 1989).

The nearest offsite receptor (an individual living at an existing residence where the effects of atmospheric releases from CFA would have the greatest impact) was considered to be located approximately 14,100 m (8.76 mi) southeast of CFA. The total effective dose equivalent (EDE)[c] for this receptor would be 0.001 milliroentgen equivalent, man (mrem). This would be a one-time-only dose because the entire inventory would be released in one year using the bounding assumptions. The EDE for the individual receptor is a small fraction of the 0.1 mrem/yr level that, if exceeded, would require emission measurements at the point of release (see Title 40 CFR Part 61.93(b)(4)(i) of Subpart H, "National Emission Standards for Emissions of Radionuclides Other Than Radon from Department of Energy Facilities"). The lifetime fatal cancer risk from this exposure would be 2.7×10^{-08}.

An EDE was also calculated for workers and the collective population (offsite residential population). The maximum worker EDE would be 35 mrem/yr, which can be compared to the 5,000-mrem/yr limit specified in DOE 5480.11, "Radiation Protection for Occupational Workers." The collective population EDE would be 0.0173 person-rem/year. This dose would be expected to pose a risk of fatal cancer of 6.6×10^{-06} (6.6 in 1 million) fatal cancers/year in the affected population. These are extremely conservative estimates because the hypothetical bounding release would exhaust the entire HTO inventory at once. This dose could only occur in a single year.

Other air emissions from the STPs include methane, carbon dioxide, and trace amounts of hydrogen sulfide. Of these emissions, only hydrogen sulfide is regulated by the State of Idaho as a noncarcinogenic toxic air pollutant (TAP). The amount of hydrogen sulfide likely to be in the ponds was determined using numbers and percentages from anaerobic sludge digesters (James 1976). This is a conservative approach because the ponds at CFA and TRA would have both aerobic and anaerobic processes, whereas digesters only have anaerobic processes, which create greater volumes of gas. The estimated maximum bounding emissions of hydrogen sulfide for the proposed CFA ponds would be 0.0014 lb/hr and for TRA 0.0004 lb/hr. The State of Idaho TAP limit is 0.993 lb/hr. The Idaho TAP rate is one fifteenth of the Occupational Exposure Limit used by the Occupational Safety and Health Administration and the American Council of Governmental Industrial Hygienists. Emissions of hydrogen sulfide would not cause any health effects because the emission rate is far below the health-based regulatory standard. Emissions of other gases would be inconsequential.

Emissions of regulated pollutants are not anticipated from the STP design proposed for CTF at TAN. The proposed action and alternatives for each facility would not be expected to result in any health effects among workers or members of the public.

4.1.2 Laboratory

Among the chemicals proposed for use at the STP testing laboratory, only two on the Idaho TAP list could produce emissions: sulfuric acid and sodium hydroxide. A maximum of 4 milliliters of each would be used when performing routine wastewater tests at normal room temperatures. The estimated maximum potential emission rate from this amount of use would be 0.00043 lb/hr for

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c. The radiation dose to the whole body that would have the same biological effect as a given dose equivalent to a particular organ or tissue.

sulfuric acid and 0.00035 lb/hr for sodium hydroxide, assuming 100% release. An emission rate for sodium hydroxide has been included only to acknowledge the source. It is unlikely that any sodium hydroxide would be released to the atmosphere because sodium hydroxide will not volatile at room temperature and would be consumed by the testing process. These emission rates are well below the State of Idaho regulatory limit of 0.0667 lb/hr for sulfuric acid and 0.133 lb/hr for sodium hydroxide. No health effects would be expected from the use of these two chemicals.

4.1.3 Dismantling Existing Facilities

Emissions generated by dismantling the noncontaminated portions of the existing facilities would be similar to the construction emissions and would be temporary and inconsequential. Potential emissions from dismantling contaminated portions of the existing facilities could not be determined until the contamination would be fully characterized. The impacts of decontamination or removal would be evaluated in a separate NEPA document (see Section 2.3).

4.2 Biological Resources and Floodplain

Construction of the proposed STP at CFA would disturb up to 6 hectares (15 acres) of vegetation for the treatment lagoon system. The dikes would be revegetated after the lagoons are constructed. Land application would require clearing vegetation only for the wheels of the center pivot irrigation system. Trenching for the additional lengths of force main would also disturb a small area of vegetation, but these areas would be revegetated after construction is completed. The other design alternatives for CFA would require disturbing vegetation in an area up to 16.2 hectares (40 acres) in size. Construction of the STP at TRA would disturb up to 7.2 hectares (18 acres) of vegetation. Construction of the STP at TAN would disturb up to 2.2 hectares (5.4 acres). Vegetation at many of the sites has been previously disturbed.

Soil would be excavated in all locations and graded to create the berms around the lagoons. Additional soil and gravel would be excavated from existing borrow and gravel pit areas on the INEL to complete construction of the STPs. It is estimated that 20,000 m^3 (26,000 yd^3) of soil for liners and 10,000 m^3 (13,000 yd^3) of gravel for fill material would be required. Pending classification of the INEL for wetlands, these activities would be conducted in compliance with Clean Water Act requirements.

Construction activities may destroy some burrowing and less mobile animals (such as invertebrates, reptiles, and small mammals) that may reside in the area and force larger animals and birds to relocate to adjacent areas where similar or more suitable habitat is abundant. The loss of habitat due to construction of the lagoons is not expected to affect the viability of any plant species, local wildlife populations, or any endangered species. The DOE Idaho Field Office regularly receives from the U.S. Fish and Wildlife Service an updated list of endangered or threatened species that may be present on the INEL (see Section 3). The Radiological and Environmental Sciences Laboratory of DOE has analyzed this project and determined that the proposed action would not affect a listed or threatened species; therefore, a formal Section 7(a) consultation as specified in the Endangered Species Act of 1973 would not be required.^de

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d. Letter from T. D. Reynolds, RESL, to T. L. Perkins, NEPA Compliance Officer, DOE-ID, "Sites of Proposed CFA and TRA Sewage Lagoons," AM/EP-RESL-92-253, August 12, 1992.

Wildlife is likely to be attracted to the sewage treatment lagoons and, in particular, the area where land application would take place. Native habitat would be promoted in this area and enhanced by the application of the treated waste water.

The floodplain of the Big Lost River on the INEL has not been clearly defined to date. An INEL flood control diversion system (diversion dam, dikes, and a series of spreading areas) was constructed in 1958 to reduce the threat of floods on the INEL from the Big Lost River. Since 1958, floodwaters from the Big Lost River have not been of sufficient volume to spill into all of the spreading areas, and studies of a projected 100-year flood indicate the river channel and diversions would provide adequate protection (Bennett 1986). Therefore, the proposed sewage treatment plants are not likely to be affected by flooding.

4.3 Groundwater/Surface Water Protection

The groundwater and surface water would not be adversely affected by activities associated with the implementation of improvements to the STPs. This is due to the plans and designs that would be in place to protect these resources. The proposed facilities would be designed, constructed, and monitored to meet the specifications in "Recommended Standards for Wastewater Facilities," by the Great Lakes-Upper Mississippi Board of State Environmental Managers. The plans would be submitted to the State of Idaho Division of Environmental Quality for review. The STPs would meet the requirements in the Idaho Water Quality Standards and Wastewater Treatment Requirements referenced in IDAPA 16.01.02299.04 and .05 for protection of groundwaters and 16.01.02420 for point source sewage wastewater discharges. A land application unit would also meet the land application regulations found at IDAPA 16.01.17000.

The INEL Storm Water Pollution Prevention Plan (SWPPP) for Construction Activities requires that SWPPPs be prepared to prevent contamination of surface water and groundwater during construction activities. Run-off from the STP locations would be required to minimize the disturbance to areas in the immediate proximity of the project; practice good housekeeping; store chemicals, pesticides, fertilizer, fuels, etc., properly and orderly; dispose sanitary, construction, and hazardous wastes properly and regularly; clean any liquid or dry material spills promptly according to the spill plans in place at the facility; stabilize any disturbed ground upon project completion, which may include reseeding; and to minimize offsite tracking of sediments by construction vehicles.

Existing drinking water wells would be protected from contamination from the STPs' operations due to compliance with the siting requirements of the State of Idaho's Draft Wellhead Protection Plan. The design criteria protects the area of contribution to a well; provides a response action area to protect wells from unexpected releases; and provides an area to allow attenuation of the concentrations of specific contaminants to desired concentrations at the time they reach the well-head.

The INEL SWPPP for Industrial Activities requires that SWPPPs be prepared for industrial activities to prevent contamination of groundwater and surface water during facility operation. In addition, administrative and physical controls such as pH and temperature limitations or oil/water separators are currently in place to prevent the release of hazardous or radioactive substances to sinks, drains, and STPs.

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e. Letter from T. D. Reynolds, RESL, to T. L. Perkins, NEPA Compliance Officer, DOE-ID, "SMC Sewage Pond Revisited," AM/EP-RESL-92-406, October 5, 1992.

In summary, the effluent from the STPs would not increase contaminant concentrations in groundwater above the drinking water primary maximum contaminant levels (MCL) and secondary contaminant levels (SMCL). This is based upon the following

* Concentrations of contaminants in influent to the STPs are low (generally below MCL and SMCL standards).

* STP will decrease contaminant concentrations substantially. Projected trace element nutrient loading rates would fall below state recommended levels.

* Any interbeds present in the vadose zone may also provide treatment of infiltrate prior to reaching the aquifer.

DOE Order 5400.5, II.3e, "Radiation Protection of the Public and the Environment, Discharges of Liquid Waste to Sanitary Sewerage," provides an exemption for tritium because there is no practicable technology available for removing tritium from dilute liquid waste streams.

4.4 Archaeological Resources

An archaeological survey of areas potentially impacted by the sewer system upgrade was completed by qualified archaeologists in 1990, 1992, and 1993. The proposed location of sewage treatment plants, access roads, and force mains would not interfere with any potentially significant archaeological sites,^f however, if any resources would be discovered or threatened by construction activities, appropriate consultations would be conducted and a mitigation plan developed if necessary.

4.5 Waste Generation

Site preparation and construction activities would generate solid waste such as sagebrush and construction debris. As practical, recycling of this solid waste by processes including wood chipping would occur. If recycling is not possible, the solid waste would be disposed of at the INEL Landfill Complex, where there is adequate disposal capacity. Existing laboratory equipment would be moved to the new laboratory with outdated laboratory equipment being decontaminated and recycled where possible. Small quantities of hazardous waste could be generated at the proposed laboratory from small amounts of chemicals used for standard analysis of sewage effluent. Typically, the hazardous waste would be transferred to the INEL Hazardous Waste Storage Facility at CFA and prepared for shipment to an offsite, commercial treatment, storage, and disposal facility according to the requirements of the Resource Conservation and Recovery Act.

Sludge would be generated from the sewage treatment process that would require disposal in accordance with applicable State and Federal Regulations. The estimated annual generation would be of 19.1 m^3 (25 yd^3), 5.7 m^3 (7.5 yd^3), and 3.8 m^3 (5 yd^3) for the STP facilities at CFA, TRA, and TAN CTF respectively. This sludge would contain approximately 93 to 97 percent water with the 3 to 7 percent solids being 60 to 80 percent organic matter. It is projected that the sludge would be removed from the lagoons every 20 to 30 years. In the past, sewage sludge was first analyzed and then appropriately disposed of at either the Radioactive Waste Management Complex (Figure 1) or the CFA landfill. No radioactive waste or soil would be generated as a result of the construction of the sewage treatment plants and sewer system. Based on the influent to the sewage treatment facilities,

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f. Same as footnotes a and b.

the sludge would contain only small quantities of contaminants such as metals that would not limit any management and disposal options, including beneficial reuse, land disposal or incineration in accordance with 40 CFR parts 257 and 403.

4.6 No Action

Temporary emissions from construction and dismantling would not occur if no action would be taken. Emissions from the existing lagoons, which are similar to the proposed lagoons, would not change.

The existing systems at CFA, TRA and CTF at TAN constantly require repair because of the age of the equipment, and some parts are becoming unavailable (no longer manufactured). If obsolete parts cannot be replaced, there could be a total system failure, effluent would not get effectively treated, and raw sewage could be discharged to the ground. Inadequate capacity for peak flow could also result in incomplete treatment. Facilities at CFA, TRA and CTF at TAN would not be able to operate if a system failure occurred.

The capability for onsite analysis of sewage samples would be severely limited if a new laboratory were not constructed, because the existing facility is scheduled for demolition and other laboratory space is not available.

Continuing use of the drainage system and disposal of waste water to the existing drainfields at CFA and the lagoons at TRA and CTF at TAN may cause the existing concentrations of radionuclides to continue leaching into the ground. These areas could require more extensive remediation in the future if that were allowed to continue.

4.7 Cumulative Impacts

Construction of the proposed STPs for CFA, TRA, and CTF at TAN would disturb approximately 15.4 hectares (38.1 acres) at the INEL if the partial-mix, aerated treatment system with land application is selected at CFA. A total of 25.6 hectares (63.3 acres) would be disturbed if the partial-mix, aerated treatment system and rapid infiltration lagoons, which requires the largest land area, is selected at CFA. This area would be committed to developed use. An additional 34 hectares (85 acres) at CFA would be allocated for land application but would be available as habitat for wildlife and could be available for other future uses if the land application would be discontinued. Some of the proposed STP locations were previously disturbed, and the loss of habitat for the lagoons would be offset by the creation of habitat through land application.

Nonhazardous solid waste would be generated by the potential disposal of the out-dated, non-recyclable laboratory equipment. The disposal of this waste would take up a small amount of space at the INEL landfill.

The total bounding estimate of hydrogen sulfide that would be emitted from the STPs is 0.0018 lb/hr. The INEL has reported a total rate of 0.00086 lb/hr of hydrogen sulfide in the INEL toxic emissions inventory.[g] The State of Idaho limit is 0.993 lb/hr. An estimated total of 0.00043 lb/hr of sulfuric acid would be emitted from the STP testing laboratory. This amount would be an 0.8% increase in the total INEL emission rate of 0.0528 lb/hr for sulfuric acid as reported in the

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g. Unpublished DOE draft Toxic Emissions Inventory of INEL for CY 1989, September 1992.

INEL toxic emissions inventory.^g The State of Idaho limit is 0.0667 lb/hr. Sodium hydroxide is not expected to be emitted to the atmosphere, and there are no reportable quantities at the INEL according to the emissions inventory (see discussion in Section 4.1).

The construction and operation of the sewer treatment plants would provide for the improvement of groundwater quality. This is a result of the elimination of a potential source of water that could cause the existing concentration of radionuclides in existing drainfields and lagoons at CFA, TRA and CTF at TAN to continue leaching into the ground. The groundwater should also improve as a result of improved and more consistent effluent quality due to the increased treatment capacity of the facilities.

4.8 Permits

The plans and specifications for construction, alteration, or expansion of a sewage treatment system would be submitted to the State of Idaho Division of Environmental Quality for review. A State of Idaho Wastewater Land Application permit would be obtained for any of the alternative STP designs that utilize any infiltration system (discharge to a soil column). A permit to construct application for State of Idaho review, satisfying the requirements of the Idaho Administrative Procedures Act, 16.01.01000, "Rules and Regulations for the Control of Air Pollution in Idaho," would be prepared for laboratory building and the STPs at TRA and CFA (because of the tritiated water). An air permit for the STPs and the laboratory is not anticipated because the emissions are below regulatory concern.

5. CONSULTATION AND COORDINATION

The Radiological and Environmental Sciences Laboratory of the DOE Idaho Field Office has evaluated the proposed projects and determined that construction and operation of the sewer upgrades would not have a measurable effect on any currently listed species, therefore, a formal Section 7 consultation with U.S. Fish and Wildlife Service as required under the Endangered Species Act would not be necessary.[h] Prior to construction, the most recent INEL endangered species list from the Fish and Wildlife Service would be reviewed, as required, to see if any additional species have been added to the list that could be affected by the project.

The SHPO would be consulted if any significant archaeological resources would be discovered during construction activities. All proposed locations have been surveyed by qualified archaeologists and the finding of no significant resources has received concurrence from the SHPO.

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h. Same as footnotes d and e.

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APPENDIX A

HOST STATE AND TRIBE REVIEW OPPORTUNITY
AND RESPONSE TO COMMENTS

APPENDIX A

HOST STATE AND TRIBE REVIEW OPPORTUNITY

AND RESPONSE TO COMMENTS

The draft Environmental Assessment for the Idaho National Engineering Laboratory Sewer System Upgrade Project was provided for preapproval review to the State of Idaho and the Shoshone and Bannock Tribes in a letter dated January 19, 1994. This letter requested comments on the Environmental Assessment be submitted within 14 days from receipt of the letter with comments sent after that being considered to the extent possible. A representative of the Shoshone-Bannock Tribes notified the DOE-ID acting NEPA Compliance Officer, Roger Twitchell, that they had no significant issues related to the action requiring discussion in the EA.

This appendix contains a copy of comments provided by the State of Idaho. The appropriate references cited by the State of Idaho have been incorporated on pages 3 and 13 of this environmental assessment.

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March 2, 1994

Roger Twitchell
U.S. Department of Energy
Idaho Operations Office
785 DOE Place
Idaho Falls, ID 83402

RE: Sewer System Upgrade

Dear Mr. Twitchell:

The state of Idaho, INEL oversight Program, has reviewed the Sewer System Upgrade environmental assessment (EA) prepared by the Department of Energy. We offer the following comments.

The EA references the treatment standards for discharges to surface waters in several places. The correct standard for these projects is the water quality standards found at IDAPA 16.01.02299.04 and

05. Instead, the EA references IDAPA 16.01.02424,02.b, a section reserved under the regulations. Any land application unit chosen as a preferred alternative must also meet the land application regulations found at IDAPA 16.01.17000.

Please contact Teresa Hampton, (208)334-0494, should you have any questions regarding these comments.

Sincerely,

STEVE R. HILL
Administrator
INEL Oversight Program
Central Office

SRH/lvh

cc: Teresa Hampton, Deputy Attorney General
Dick Rogers, Division of Environmental Quality