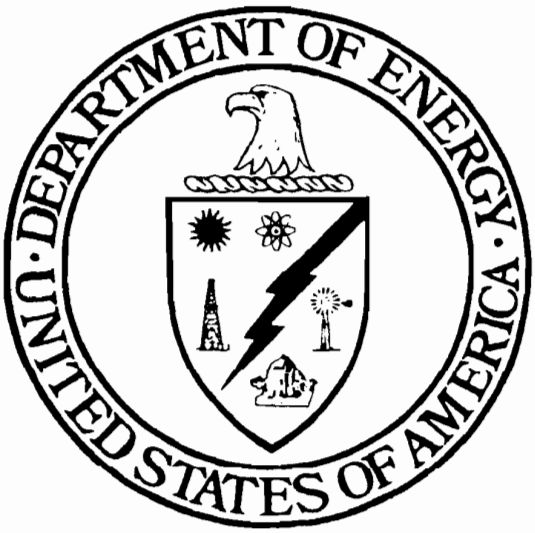
DOE/EA-1308

ENVIRONMENTAL ASSESSMENT FOR THE OFFSITE TRANSPORTATION OF CERTAIN LOW-LEVEL AND MIXED RADIOACTIVE WASTE FROM THE SAVANNAH RIVER SITE FOR TREATMENT AND DISPOSAL AT COMMERCIAL AND GOVERNMENT FACILITIES



FEBRUARY 2001

U. S. DEPARTMENT OF ENERGY
SAVANNAH RIVER OPERATIONS OFFICE
SAVANNAH RIVER SITE

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LIST OF ABBREVIATIONS/ACRONYMS

The following is an alphabetized list of the abbreviations and acronyms found within the text of this document:

CFR	-	Code of Federal Regulations
cfs	-	cubic feet per second
Ci	-	curie (a unit of measure of radioactivity)
CIF	-	Consolidated Incineration Facility
cm	-	centimeter
DC	-	District of Columbia
DOE	-	U. S. Department of Energy
DOT	-	U. S. Department of Transportation
dpm	-	disintegrations per minute
EA	-	environmental assessment
EDE	-	effective dose equivalent
EH	-	Environment, Safety, and Health
EIS	-	environmental impact statement
ER	-	Environmental Restoration
FRA	-	Federal Railroad Administration
ft	-	feet
g	-	gram
HAZMAT	-	Hazardous Materials Transportation Act
HIGHWAY 3.4	-	computerized road/highway routing model
HNUS	-	Halliburton NUS Corporation
ID	-	Idaho
INTERLINE	-	computerized railroad routing model
LLC	-	Limited Liability Corporation
LCF	-	Latent Cancer Fatality
LDR	-	Land Disposal Requirement
LLW	-	low-level radioactive waste
LSA	-	Low Specific Activity
m	-	meter
MLLW	-	mixed low-level radioactive waste
mrem	-	millirem, i.e., 1/1000 roentgen equivalent man
mSv	-	millisievert
N/A	-	Not Applicable
nCi	-	nanocurie
NEPA	-	National Environmental Policy Act
NM	-	New Mexico
NRC	-	U. S. Nuclear Regulatory Commission
NV	-	Nevada
OSHA	-	Occupational, Health and Safety Administration
PCB	-	Polychlorinated biphenyl

LIST OF ABBREVIATIONS/ACRONYMS (continued)

Pu^{239}	-	Plutonium-239
QA/QC	-	Quality Assurance/Quality Control
rad	-	radiation absorbed dose
RADTRAN 4	-	computerized model used to calculate radiological impacts resulting from transportation
RCRA	-	Resource Conservation and Recovery Act
rem	-	Unit of dose equivalent of radiation
ROD	-	Record of Decision
SC	-	South Carolina
SCDHEC	-	South Carolina Department of Health and Environmental Control
SR	-	Savannah River Operations Office
SRS	-	Savannah River Site
SRWMEIS	-	Final EIS, Savannah River Site, Waste Management
TEPP	-	Transportation Emergency Preparedness Program
TN	-	Tennessee
TR	-	Technical Report
TSCA	-	Toxic Substance Control Act
U^{235}	-	Uranium-235
U^{236}	-	Uranium-236
USC	-	United States Code
UT	-	Utah
WA	-	Washington
WCS	-	Waste Control Specialists
WMPEIS	-	Final Programmatic EIS for Managing Treatment, Storage and Disposal of Radioactive and Hazardous Waste
WSMS	-	Westinghouse Safety Management Solutions
WSRC	-	Westinghouse Savannah River Company
yr	-	year

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1.0 INTRODUCTION

The U. S. Department of Energy (DOE) prepared this environmental assessment (EA) to analyze the potential environmental impacts of the proposed offsite transportation of certain low-level radioactive waste (LLW) and mixed (i.e., hazardous and radioactive) low-level radioactive waste (MLLW) from the Savannah River Site (SRS), located near Aiken, South Carolina (Figure 1-1). DOE needs to take action because treatment and disposal capabilities for these wastes do not exist at the site and/or it is more beneficial to DOE to dispose of the waste at another location. DOE proposes to transport five forms of LLW or MLLW (Table 1-1) to offsite commercial and Government facilities for treatment and/or final disposal.

This document was prepared in compliance with the National Environmental Policy Act (NEPA) of 1969, as amended; the requirements of the Council on Environmental Quality Regulations for Implementing NEPA (40 CFR 1500-1508); and the DOE Regulations for Implementing NEPA (10 CFR 1021). NEPA requires the assessment of environmental consequences of Federal actions that may affect the quality of the human environment. Based on the potential for impacts described herein, DOE will either publish a Finding of No Significant Impact or prepare an environmental impact statement (EIS).

1.1 Background

At SRS, operations, waste management, environmental restoration, and decontamination and decommissioning activities generate a variety of LLW and MLLW streams each year. By definition, LLW is radioactive waste that is not classified as high-level waste, transuranic waste, or spent nuclear fuel, and does not contain waste designated as hazardous by either the Resource Conservation and Recovery Act (RCRA) (42 USC 6901 *et seq.*) or the Toxic Substances Control Act (TSCA) (40 CFR 116 *et seq.*). LLW management is subject to the provisions of the Atomic Energy Act (42 USC 2011 *et seq.*), DOE Order 435.1 (Radioactive Waste Management), and the accompanying DOE manual (DOE 1999b). LLW is categorized as either contact-handled (i.e., external surface dose rate does not exceed 200 millirem per hour) or remote-handled (i.e., external surface dose rate exceeds 200 millirem per hour), and as alpha or nonalpha on the basis of the waste forms and levels of radioactivity present.

Most LLW consists of relatively large volumes of waste materials contaminated with small amounts of radionuclides, such as contaminated equipment, protective clothing, paper, rags, packaging material, and solidified sludges. Most LLW contains short-lived radionuclides and generally can be handled without shielding or remote handling equipment.

MLLW contains both hazardous waste subject to regulation under RCRA and LLW subject to regulations under the Atomic Energy Act. MLLW includes such materials as tritiated mercury, tritiated oil contaminated with mercury, other mercury-contaminated materials, radioactively contaminated solvents, radioactively contaminated

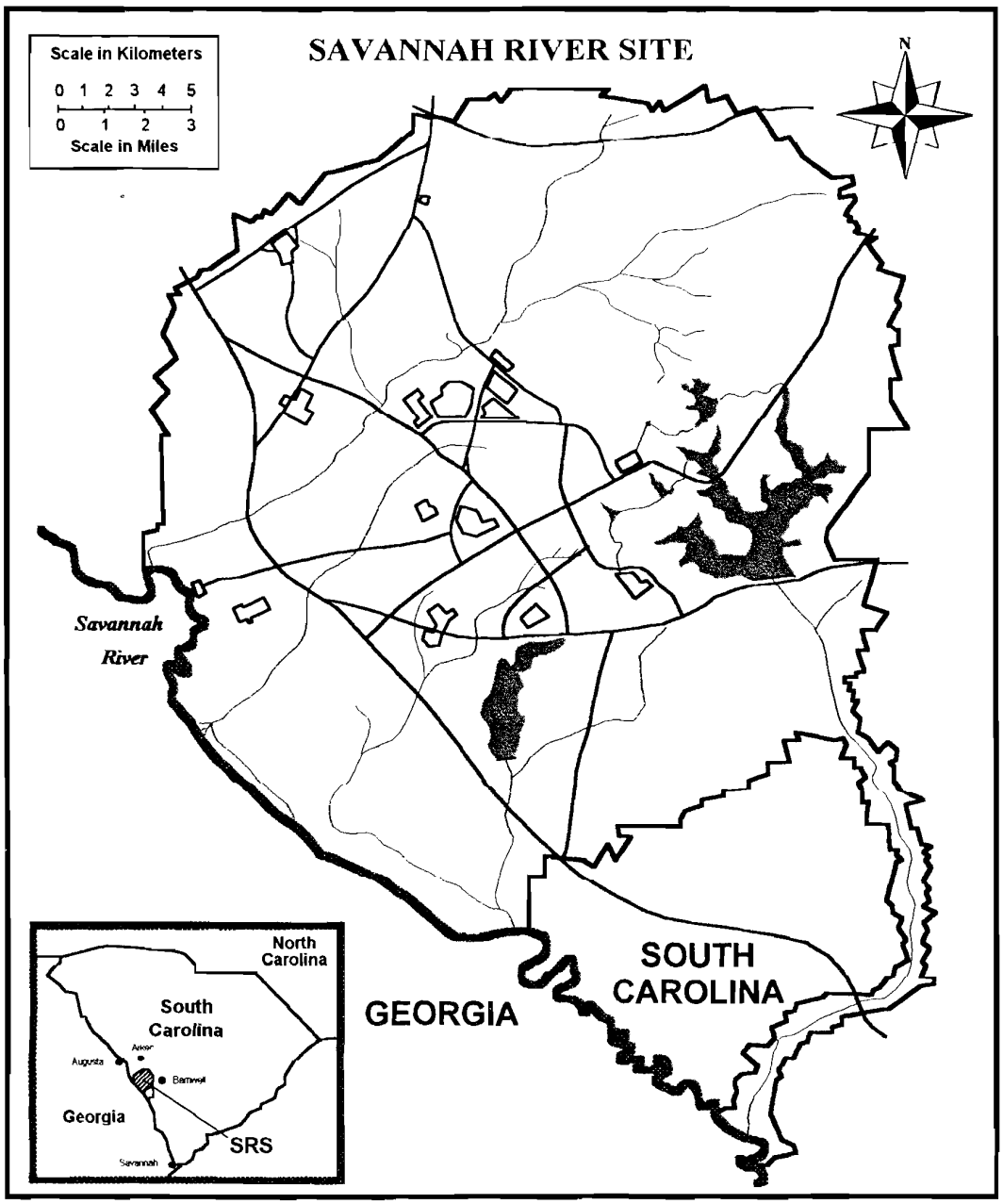

Figure 1-1. Location of the Savannah River Site (SRS), South Carolina.

Table 1-1. Low-level radioactive waste (LLW) and mixed low-level radioactive waste (MLLW) forms proposed for transportation to offsite commercial and Government treatment and disposal facilities.

Case	Waste Form	Waste Volume[a]	Type of Waste	Example of SRS Waste	Current Disposal Option[b]
1	Vitrified Blended Uranium Sludge	2,850 drums	LLW & MLLW	Vitrified Blended Uranium Sludge from M Area	RCRA Disposal or Shallow Land Disposal
2	Misc. Debris with Activity Conc. $\leq$99 nCi/g of Pu^{239}	124,891 m^3 (4.41E+06 ft^3)	LLW & MLLW	Environmental Restoration (ER) Waste; Radioactive PCB Waste; Demolition Waste; Radioactive Waste Containing Metals; Consolidated Incineration Facility (CIF) Byproducts (e.g., ashcrete and blowdown); and Used Equipment and Machinery	Some Treatment followed by RCRA Disposal or Shallow Land Disposal
3	Misc. Debris with Activity Conc. $\leq$99 nCi/g of Pu^{239}	45,000 drums	LLW & MLLW	ER Waste; Radioactive Solids and Powder Residues; Radioactive PCB Waste; Demolition Waste; Radioactive Waste Containing Metals; CIF Byproducts (e.g., ashcrete and blowdown); and Used Equipment and Machinery	Some Treatment followed by RCRA Disposal or Shallow Land Disposal
4	Misc. Liquids with Activity Conc. $\leq$99 nCi/g of Pu^{239}	5,000 drums	LLW & MLLW	Radioactive Organic and Aqueous Liquids and Sludges; and Radioactive PCB Waste	Some Treatment followed by RCRA Disposal or Shallow Land Disposal

Table 1-1. (Continued).

Case	Waste Form	Waste Volume[a]	Type of Waste	Example of SRS Waste	Current Disposal Option[b]
5	Misc. Liquids with Activity Conc. $\leq$99 nCi/g of Pu^{239}	10 tanker trailers, each containing 12,869 liters (3,400 gallons)	LLW & MLLW	Radioactive Liquids and Sludges; and Radioactive PCB Waste	Some Treatment followed by RCRA Disposal or Shallow Land Disposal

[a] Total waste volume to shipped over the ten-year period
[b] In the SRWMEIS ROD (DOE 1995b), DOE decided to dispose of the waste form in the manner indicated in this column.

polychlorinated biphenyls (PCBs), radioactively contaminated lead shielding, and equipment from the tritium facilities in H Area (DOE 1995a, 1997a).

The proposed management of the five waste forms included in this EA (Table 1-1) was previously addressed in two different EISs prepared and issued by DOE: the Final EIS, Savannah River Site, Waste Management, DOE/EIS-0217 (SRWMEIS) (DOE 1995a), and the Final Programmatic EIS for Managing Treatment, Storage and Disposal of Radioactive and Hazardous Waste, DOE/EIS-0200-F (WMPEIS) (DOE 1997a).

In the SRWMEIS, DOE's preferred alternative for managing these waste forms was through either shallow land or RCRA-licensed disposal at SRS. In addition, either onsite or offsite treatment preceded disposal for some specific wastes in four of the five general waste forms. However, treatment residuals were to be returned to SRS for onsite storage or disposal. DOE decided to implement this option and issued a Record of Decision (ROD) on October 30, 1995 (DOE 1995b).

In the WMPEIS, the five waste forms in this EA were encompassed in the two broad waste types of LLW and MLLW for evaluation. DOE's preferred alternative consisted of minimum treatment of LLW although each site may perform additional treatment if cost effective. The preferred alternative for disposal of LLW was to continue to the extent practicable onsite disposal as well as selection of Hanford Site and Nevada Test Site as regional disposal locations. DOE's preferred alternative for MLLW treatment consisted of onsite and regional treatment at Hanford Site, Idaho National Engineering and Environmental Laboratory, Oak Ridge Reservation and SRS consistent with Site Treatment Plans. The preferred alternative for MLLW disposal consisted of two regional disposal sites, Hanford Site and Nevada Test Site. DOE decided to implement the preferred alternative and issued a ROD on February 25, 2000 (DOE 2000a). The decisions did not preclude DOE's use of commercial treatment and disposal facilities, consistent with current DOE Orders and Policy.

While these two EISs addressed treatment and disposal of LLW and MLLW at SRS, the onsite treatment and disposal facilities for most of the five waste forms being addressed in this EA do not exist. For various reasons, the proposed projects that would have provided the facilities, such as new low-activity waste and RCRA disposal vaults, have been cancelled. Some of the reasons for cancellation include recognition of existing DOE complex capacity, inability to meet current South Carolina Department of Health and Environmental Control (SCDHEC) RCRA waste disposal facility requirements, and funding limitations. DOE's inability to meet South Carolina's waste disposal requirements is the primary problem, and it is not correctable. SRS does not have a naturally occurring confining clay layer of sufficient thickness to meet South Carolina requirements for a RCRA disposal unit as defined in South Carolina Hazardous Waste Management Regulations R.61-104.IV.C.1.a. Because of this, DOE has no plans to construct and operate such facilities at SRS. Therefore, DOE is proposing to use offsite commercial and Government facilities for treatment and disposal of these wastes.

1.2 Purpose and Need for Action

DOE needs a viable near-term treatment and disposal option for the five LLW and MLLW forms listed in Table 1-1 that are generated at SRS. DOE needs to take action in a cost-effective and timely manner because onsite treatment and disposal capabilities for these waste forms do not exist at SRS at this time and/or it is more beneficial to DOE to dispose of the waste at another location. In addition, these waste forms would comprise an estimated volume of approximately 136,057 cubic meters (4,804,282 cubic feet). If not dispositioned upon generation, storage of this volume of waste would likely exceed RCRA and TSCA regulatory limits. Storage without treatment would not be consistent with the agreements between DOE and the State of South Carolina concerning MLLW management under the SRS Site Treatment Plan that was developed pursuant to the Federal Facility Compliance Act of 1992. Violating these agreements could result in fines and penalties for DOE as well as suspension of the site's RCRA Permit.

2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 Proposed Action

DOE proposes to transport, by rail or truck, certain SRS LLW and MLLW forms (Table 1-1) to commercial and Government facilities for treatment and disposal. SRS activities that would generate these waste forms have been evaluated in other NEPA reviews (e.g., DOE 1987, 1992, 1994, 1995a, 1998a, 1998b, 1998c, 1998d). Although the treatment and disposal operations at the commercial and Government facilities are beyond the scope of this EA, the Government facilities are separately covered through appropriate NEPA documentation (DOE, 1995c, 1996, 1997a, 1999a). Additionally, DOE would ensure all commercial facilities are properly licensed to receive the radioactive material prior to shipment and perform reviews of the facility's operations. None of these wastes, or residuals or secondary waste generated during the offsite treatment, would be returned to SRS under the proposed action. The estimated volume that would be shipped under this proposed action on an annual basis would range from 5,664 to 12,744 cubic meters (200,000 to 450,000 cubic feet).

The shipping vendor would be responsible for providing the modes of transportation (either rail or truck), equipment, security and health and safety requirements to ship the waste from SRS. The shipping containers would be provided by either DOE or the vendor. SRS personnel would be responsible for loading the waste into the appropriate U. S. Department of Transportation (DOT)-approved shipping containers. The vendor would take custody of the packaged waste at the SRS staging area. DOE would ensure that external contamination to the containers leaving SRS does not exceed DOT limits. The vendors would be responsible for ensuring that all DOT and DOE regulations and Orders are met for LLW and MLLW shipments. The vendors would also be responsible for ensuring compliance with all Federal, State, and local licenses, permits, and other required documentation to treat and/or dispose of LLW and MLLW.

The proposed action would include the transportation of the LLW and MLLW to seven potential offsite-processing locations for treatment and disposal (Zecha 2000). The seven commercial or Government facilities located within a general area are grouped such that the calculations for six destinations cover the seven potential offsite-processing locations, as well as future/additional locations that are near the six destinations (Table 2-1). The destinations chosen are: 1) Idaho Falls, Idaho; 2) Eunice, New Mexico; 3) Mercury, Nevada; 4) Oak Ridge, Tennessee; 5) Clive, Utah; and 6) Richland, Washington (Figure 2-1). The Waste Control Specialists (WCS) facility, although located at a remote site approximately 48 kilometers (30 miles) west of Andrews, in Andrews County, Texas, is geographically positioned closer to Eunice, Lea County, New Mexico. Because the specific WCS location is not contained within the computer models (i.e., HIGHWAY 3.3 and INTERLINE) used in this EA, the town of Eunice will be substituted as the modeling endpoint for the transportation analyses of the waste shipments going from SRS to WCS (Section 3.2). All destination facilities are accessible by both rail and truck, except rail ends at Pocatello, Idaho, and Mercury, Nevada. Therefore, results are presented for two separate legs consisting of 1) rail from SRS to Pocatello, Idaho, and 2) truck from Pocatello to Idaho Falls, Idaho. Rail-to-truck shipments to Mercury, Nevada, were not considered in this EA.

Although DOE-SR has cradle-to-grave responsibility for its wastes, the transportation of the treated waste from those facilities to the final disposal facility would be the responsibility of vendor. DOE does not evaluate transporting the treated waste from commercial treatment facilities to the final disposal facility in this EA. However, since the waste constituents would have been either immobilized, thermally treated, thermally encapsulated, solidified, amalgamated, volume reduced, or containerized at the commercial treatment facilities, and the radiation levels or hazard volumes of the waste have not been increased, the transportation impacts would be no greater than those that would result from transporting the untreated waste from SRS to final disposal facility, and those impacts are evaluated in this EA. The various commercial vendor facilities are accessible by either rail or truck. Each of these offsite facilities would be required by law to have in place all necessary U. S. Nuclear Regulatory Commission (NRC), State, and local licenses and/or permits to either treat or dispose of the waste forms in questions. DOE would ensure the receiving facility is properly licensed prior to shipment of the waste. In addition it should be noted that in the case of transportation accidents, the Federal Government is ultimately responsible for the cleanup after the bond limit of the carrier is exceeded.

DOE Order 435.1, Radioactive Waste Management, and DOE Manual 435.1 (which describes how the Order is implemented) identify the requirements that DOE must follow and the controls and oversight that must be in place before DOE ships waste to a commercial facility for treatment, storage or disposal. In making a decision to use a commercial facility for managing DOE radioactive waste, the DOE Field Element Manager must ensure that the decision is protective of the public and the environment. This responsibility is effected by ensuring the following: (1) the commercial facility is properly licensed and/or permitted; (2) the facility complies with applicable regulations;

Table 2-1. Listing of the offsite waste processing centers considered in this EA.

Name of Facility	Type of Facility	Waste Management Function(s)	Location [a]
Nevada Test Site	Government	Disposal	Mercury, Nevada
Envirocare of Utah, Inc.	Commercial	Treatment and Disposal	Clive, Utah
Waste Control Specialists	Commercial	Treatment and Disposal	Andrews County, Texas
Idaho National Environmental and Engineering Laboratory	Government	Treatment	Idaho Falls, Idaho
East Tennessee Technology Park	Commercial	Treatment	Oak Ridge, Tennessee
Allied Technology Group	Commercial	Treatment	Richland, Washington
Hanford Site	Government	Treatment and Disposal	Richland, Washington

[a] - or nearest municipality

and (3) the facility has an acceptable history of operational and regulatory performance. Based on the characteristics of the waste that is being considered for transfer to the commercial facility, a review would be conducted of the licenses and permits held by the facility to determine if they provide appropriate coverage for management of the waste. This would be accomplished through a reading of the licenses and permits and through discussions with the issuing authority (Federal, State, or local licensing/permitting authority). This review would confirm that the facility is authorized to receive the radionuclides in the waste to be transferred, and, if the waste contains constituents subject to RCRA or TSCA, that the facility has the appropriate authorization to receive and manage those constituents. Discussions with regulatory authorities and reviews of

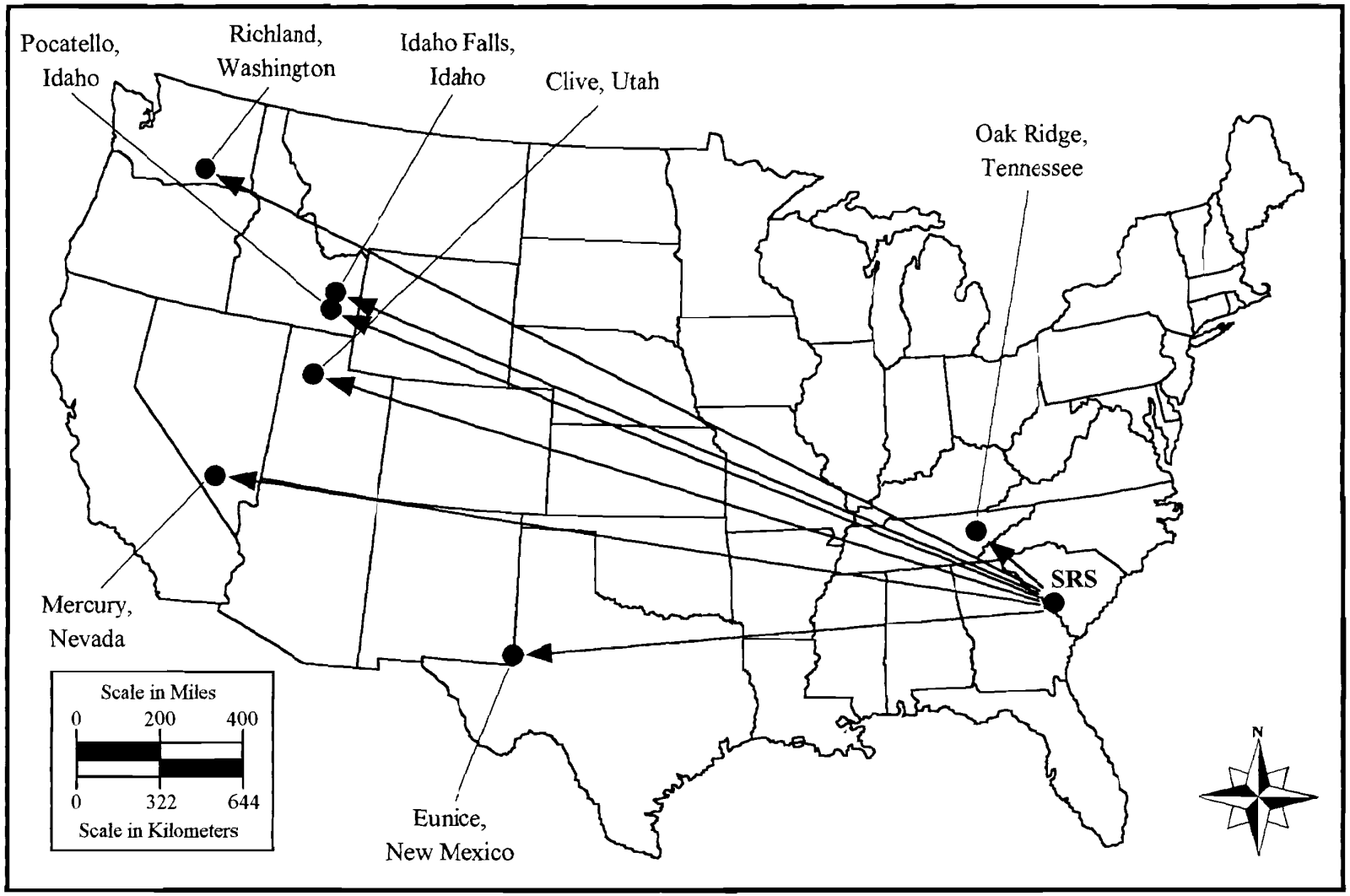

Figure 2-1. National map showing the locations of the Savannah River Site (SRS) and the six destinations being considered within the proposed action of this EA. The rail end at Pocatello, Idaho, is also depicted.

inspection reports would also be used to determine whether the facility has a history of acceptable operational and regulatory performance. Once a determination has been made by a DOE organization that a commercial facility has an acceptable operational and regulatory history, this determination can be used by other DOE organizations, e.g., a DOE organization can use the results of a review performed by another DOE organization or DOE contractor in making a decision on the acceptability of the commercial facility's performance. However, it is the responsibility of a DOE organization using a commercial facility to ensure, on an annual basis, that the facility is maintaining an acceptable performance record, either through their own review or that conducted by another DOE organization or contractor. Documentation of the results of the evaluation of regulatory compliance and acceptable operational history as discussed above is adequate for showing that the use of the commercial facility will be protective of public health and the environment.

The facility's waste acceptance criteria are essential to the proper operation of the radiological waste treatment/disposal facility. SRS will comply with the facility's waste acceptance criteria through auditable waste characterization and certification activities. This would enable DOE Savannah River Operations Office and the facility's host State to ensure that all safety, health physics/radiation monitoring procedures, Quality Assurance/Quality Control (QA/QC) procedures, transportation procedures, volume reduction procedures, and laboratory procedures at the disposal facility would be met. Further, meeting the waste acceptance criteria for disposal of MLLW is driven by RCRA. These criteria must be met before these waste forms could be offered to any commercial or Government facility for final disposal. In the event that these criteria can't be met for a specific volume of waste to be shipped, then those materials would remain at SRS until an alternative management option can be determined.

The commercial facility's activities would be closely scrutinized by way of a number of controls and oversight mechanisms throughout the process as demonstrated by the following QA/QC requirements included in the terms of the contract:

- Current NRC and/or state radioactive materials licenses;
- Health Protection/radiation monitoring procedures;
- QA/QC plans;
- Return of empty containers and equipment, as required;
- Shipping papers and manifests, as appropriate; and
- Record of waste treatment/disposal

Oversight of these activities at these facilities would be conducted by DOE, NRC, the U. S. Environmental Protection Agency, and State agencies that regulate the management of radiological and hazardous waste.

If the proposed action were selected, an amended ROD would have to be issued by DOE for the SRWMEIS. The decision in the ROD would be to further implement the Moderate Treatment Configuration Alternative through the offsite transportation of

certain LLW and MLLW for treatment and/or final disposal at commercial and Government facilities.

2.2 Alternatives to the Proposed Action

In accordance with NEPA regulations, DOE examined the following alternatives to the proposed action:

- No action, continue to store these waste forms at SRS
- Construct and operate onsite treatment and disposal facilities

2.2.1 No Action, Continue to Store these Waste Forms at SRS

One alternative to the proposed action is to take no action. DOE would continue to store these waste forms onsite. The impacts associated with the proposed action would not occur. DOE would not provide onsite treatment or disposal capabilities for these waste forms. Storage space and disposal capacity needs would increase each year as waste was generated. Environmental restoration and decontamination and decommissioning projects at SRS would have to be postponed because of lack of available storage space and treatment and disposal capacity to handle the waste generated by these activities. If not dispositioned upon generation, storage of these waste forms could also result in violations of RCRA and TSCA regulatory limits. The potential outcome of this could be significant fines and penalties for SRS. Also, the average costs associated with the proper management of stored waste is approximately $45 per 1.0 cubic meter (35.3 cubic feet) per year. These costs would be in addition to the ultimate treatment and/or disposal costs for these SRS waste forms.

2.2.2 Construct and Operate Onsite Treatment and Disposal Facilities

One alternative to the proposed action would be to construct and operate onsite treatment and disposal facilities for these waste forms. This would include the construction and operation of the following new facilities: a non-alpha vitrification facility, a containment building, 3 low-activity waste disposal vaults, and 26 RCRA disposal vaults. The environmental impacts and administrative decisions associated with these facilities were addressed in DOE (1995a, 1995b, and 1997b). However, expenditure of capital funds for new treatment and disposal facilities while offsite capacity exists for these waste forms is not a cost-effective solution. Because of the previously mentioned lack of a clay confining layer in the area of SRS, RCRA disposal vaults could not be built onsite that would meet current SCDHEC requirements for such facilities. In addition, given the current funding limitations and alternatives available for these waste forms, DOE does not plan to build the previously proposed treatment and disposal facilities.

3.0 ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION AND ALTERNATIVES

SRS occupies an area of approximately 803 square kilometers (310 square miles) in southwestern South Carolina (Figure 1-1). The site borders the Savannah River for about 27 kilometers (17 miles) near Augusta, Georgia, and Aiken and Barnwell, South Carolina. SRS contains five non-operational nuclear production reactor areas, two chemical separations facilities, waste treatment, storage and disposal facilities, and various supporting facilities. The final EIS for the management of spent nuclear fuel at SRS (DOE 2000b) and the most recent socio-economic survey of the six-county SRS area of influence (HNUS 1997) contain additional information on SRS facilities and the areas surrounding the site.

3.1 Onsite Loading Operation

Site personnel would load the waste into the appropriate shipping containers at the onsite staging area. The vendor would take custody of the packaged waste prior to shipping. The container loading/packaging activities would be conducted in conjunction with ongoing site activities associated with the generation and storage of these waste forms. The site workforce involved with these efforts would be approximately 5 to 20 employees per loading operation. Appropriate protective clothing would be worn by the workers conducting these activities.

Site personnel working in waste management operations at SRS received an average annual dose of 0.037 rem (DOE 1995a). The current DOE worker exposure limit is 5 rem per year, and the SRS sitewide administrative exposure guideline is 0.5 rem per year. The average annual worker dose would not be expected to change under the proposed action. Arnett and Mamatey (1998a, 1998b) contain more information about SRS worker exposure.

The Occupational Safety and Health Act (OSHA) requires that employers comply with the safety and health standards set by the act (29 CFR 1910) to provide each employee with a worksite that is free from recognized hazards that are likely to cause death or serious injury. Aside from unforeseen accidents, DOE expects no impacts to human health and worker safety associated with the loading operations portion of the proposed action. Any spills which might occur during the loading operations would be cleaned-up immediately. No additional impacts would be expected as a result of the proposed action.

3.2 Transportation Impacts

3.2.1 Analyzed Scenarios

The proposed action would include the offsite transportation of LLW and MLLW generated at SRS. Waste shipments would originate at SRS and be transported offsite by either rail or truck conveyance for final treatment and/or disposal. As discussed in the

scope of the proposed action, the destinations addressed in this EA include: 1) Idaho Falls, Idaho; 2) Eunice, New Mexico; 3) Mercury, Nevada; 4) Oak Ridge, Tennessee; 5) Clive, Utah; and 6) Richland, Washington.

The LLW and MLLW proposed for shipment offsite may be in one of five forms (Table 1-1). The first case involves M-Area blended uranium immobilized in glass. The second and third cases consider miscellaneous debris at a contamination level of 99 nCi Pu^{239} per gram for volumes corresponding to 4.41E+06 ft^3 and 45,000 drums (3.31E+05 ft^3), respectively. The fourth case considers 5000 drums of liquid with a concentration of 99 nCi Pu^{239} per gram. This material is shipped in a Type A shipping container, a Low Specific Activity (LSA) drum or the equivalent of one of these. The fifth case also involves liquids with a concentration of 99 nCi Pu^{239} per gram. However, this waste would be shipped in ten tanker trailers, each with a volume of 12,869 liters (3,400 gallons).

3.2.2 Assumptions

Isotopic contents of the first case were developed from laboratory analysis and accountability reports (Thoman 2000). It should be noted that the second through fifth cases are hypothetical worst case scenarios. This is only an assumption for use in the RADTRAN model; furthermore, there are presently no known LLW or MLLW forms planned for offsite shipment that approach the hypothetical level of radioactivity of 99 nCi/g. These source terms were chosen to provide worst case bounding scenarios within the context of this EA.

Transport of the material would be containers in exclusive use vehicles. Table 3-1 presents the isotopic composition of each of the five cases. Table 3-2 presents the number of containers per shipment and the total number of shipments for each case.

Both incident-free and accident radiological impacts for the shipment of LLW and MLLW from SRS were analyzed. Routing conditions (including population densities, distance and time traveled, and fraction of highway and rail travel in urban, suburban and rural population zones) were obtained from the HIGHWAY 3.4 (Johnson et al. 1993, Maheras and Pippen 1995) and INTERLINE (Maheras and Pippen 1995) computer codes for truck and rail transport, respectively. Routing parameters are listed in Tables 3-3 and 3-4 for truck and rail shipments, respectively, and include the distance traveled and the percent of route in rural, suburban, and urban areas. Routing conditions, dose rates, and neutron-gamma fractions were used as inputs to the RADTRAN 4 computer code (Neuhauser and Kanipe 1992, 1995, Maheras and Pippen 1995) to calculate radiological impacts. The exact route chosen to ship the material depends on many factors and will be similar but probably not identical to the route projected here.

Input to RADTRAN 4 is described in Table 3-5 below for truck and rail shipments. Pathways analyzed for human exposure include direct exposure from contained material, and inhalation and airborne immersion from accidentally released material.

Table 3-1. Isotopic composition for the five cases (Hang 2000, Hang and Thoman 2000, Thoman 2000).

Case Number	Isotope	Total Activity (in Ci)	Average Activity per Drum (in Ci)	Average Activity per Railcar (in Ci)	Average Activity per Truck (in Ci)
1	U^{235}	1.86E-01	6.53E-05	1.63E-02	3.93E-03
	U^{238}	9.59E+00	3.36E-03	8.41E-01	2.02E-01
2	Pu^{239}	1.90E+04	3.16E-02	8.6E+00	1.90E+00[a]
3	Pu^{239}	1.42E+03	3.16E-02	N/A[b]	1.90E+00
4	Pu^{239}	1.65E+02	3.31E-02	N/A[b]	1.97E+00
5	Pu^{239}	1.97E+01	N/A[c]	N/A[b]	1.97E+00

[a] - Rail transport ends at Pocatello, ID. Therefore, truck was analyzed only for one case: from Pocatello to Idaho Falls, ID

[b] - The volume of material in this case is transported solely via trucks

[c] - The volume of material in Case 5 is transported solely via tanker trailer.

This analysis did not attempt to quantify risks from agricultural products contaminated as a result of dispersal of the material being transported and involved in a serious accident. Emergency Action Guidelines applicable to the area surrounding an accident would require interdiction of crops, cattle, and milk at specific thresholds, and these foodstuffs would thus be taken out of the market. In addition, any impacted surface waters used for human consumption would likewise be restricted from further use until determined to be safe. As a result, the options dealing with this analysis were set to the "off" condition, and no calculations were made by the software to assign risk values to food pathways. All other accidental exposure pathways were considered.

3.2.3 Radiological Consequences

Incident-Free Conditions – The level of the incident-free consequence depends on the dose rate at the external surface of the transport vehicle. The current analysis is based on identifying an external radiation field from the transported waste that is equivalent to the maximum allowable by Part 173 of the Code of Federal Regulations under Title 49,

Table 3-2. Transport information for each case.

Case Number	Drums or Volume per Railcar	Drums or Volume per Trainload [a]	Total Number of Trainloads	Drums per Truck	Total Number of Truckloads
1	250	2,850	1	60	50
2	57 m^3 (2,000 ft^3)	1,132.80 m^3 (~ 40,000 ft^3)	56	60	5,000
3	N/A	N/A	N/A	60	750
4	N/A	N/A	N/A	60	84
5	N/A	N/A	N/A	N/A	10 [b]

[a] Assuming a maximum of 20 railcars per trainload (Hang 2000, Hang and Thoman 2000)
[b] Case 5 is transported via tanker trailer

Transportation (CFR 1999), or 0.1 mSv/h (10 mrem/hour) at 2 meters distance from the package.

A limited radiation transport study was performed to evaluate the ratio of dose rate as a function of distance, given the package dimension and resulting field from the various waste forms (White 2000). The study indicated the ratio of 1-meter dose rate to the 2-meter dose rate in the same direction from the waste container varies from about 2 to a little above 3, and is maximum for the field at package "end" (Table 3-6). As a conservatism, the effective dose equivalent (EDE) field input to RADTRAN was scaled by a factor of 4 from the 49 CFR 173 limit of 0.1 mSv/h (10 mrem/hour) at 2 meters, to 0.4 mSv/h (40 mrem/hour) at 1 meter.

The EDE field is used in RADTRAN to predict worker and general public exposure during transit as part of the incident-free risk. In the RADTRAN analysis, the dose field parameter is not specific to radiation decay energies associated with the waste package radionuclide composition; rather as stated above, it is tied to a bounding limit allowed by 49 CFR 173. As recommended by the RADTRAN code user's manual, the external radiation field is attributed entirely to gamma radiation.

Table 3-3. Routing parameters for offsite SRS solid waste truck shipments.

Destination	Total Distance in Kilometers (in Miles)	Percent Rural	Percent Suburban	Percent Urban
SRS to Idaho Falls, Idaho	3,471.3 (2,157.0)	82.9	15.3	1.8
SRS to Eunice, New Mexico	2,349.6 (1,460.0)	77.7	21.0	1.3
SRS to Mercury, Nevada	3,559.8 (2,212.0)	83.9	14.4	1.7
SRS to Oak Ridge, Tennessee	539.1 (335.0)	66.7	32.5	0.8
SRS to Clive, Utah	3,479.3 (2,162.0)	83.2	15.2	1.6
SRS to Richland, Washington	4,240.5 (2,635.0)	84.2	14.2	1.6
Pocatello, Idaho to Idaho Falls, Idaho	90.1 (56.0)	71.7	24.5	3.8

Additional key parameters include the exposure time and distance of the receptors, and the number of receptors involved in the transport process. Additionally, on-link receptors not involved in the transport process are exposed, as are off-link receptors near the transport path. On-link receptors are members of the general public assumed to be on the transportation corridor (both railway and roadway) in other vehicles. Off-link receptors are members of the general public assumed to live or work near the transportation corridor. Table 3-7 provides the incident-free consequence results for transport of the five waste forms to the six treatment and/or disposal locations (Hang and O'Kula 2000). Additionally, Table 3-7 lists the natural background dose for the same population. By default, RADTRAN locates the maximum individual at a distance of 30 meters from the transport link (highway or rail line). Crew and handler dose calculations are based on the number of packages per shipment, the dose rate from the packages, and the average time of exposure.

Table 3-4. Routing parameters for offsite SRS solid waste rail shipments.

Destination	Total Distance in Kilometers (in Miles)	Percent Rural	Percent Suburban	Percent Urban
SRS to Pocatello, Idaho	3,885.8 (2,414.6)	85.4	13.2	1.4
SRS to Eunice, New Mexico	2,745.8 (1,706.2)	77.7	20.1	2.2
SRS to Oak Ridge, Tennessee	636.6 (395.6)	64.2	33.9	1.9
SRS to Clive, Utah	3,804.5 (2,364.1)	84.8	13.4	1.8
SRS to Richland, Washington	5,017.3 (3,117.8)	82.0	15.7	2.3

Accident Consequences – Radiological risks from accidentally released material due to transport vehicle collision would result primarily from the release of respirable radioactive particulates and subsequent inhalation by individuals downwind of the accident, either directly or after resuspension. Other exposure pathways of significance include direct radiation from the cloud of airborne material and from contamination on the ground. Consequences involving contaminated agricultural products or surface drinking water sources as a result of dispersion of the accidentally released material are not considered. Emergency Action Guidelines applicable to the area surrounding an accident would require diversion of crops, cattle, and milk at specific thresholds, and these foodstuffs would thus be taken out of the market. Impacted surface waters used for human consumption would likewise be restricted from further use until determined to be safe for drinking.

Consequences of an accident depend upon the severity and population density at the location of the accident. Table 3-8 provides the sum of the accident risks for transport of the five waste forms to the six treatment and/or disposal facilities (Hang and O'Kula 2000). Table 3-8 also lists the natural background dose for the same population.

Table 3-5. RADTRAN input data for truck and rail shipments.

Input Variable	Value or Source of Data	
	Truck	Rail
Material Dispersion Category	Immobile (Case 1), Small Powder (Cases 2 and 3), Liquid (Cases 4 and 5)	Immobile (Case 1), Small Powder (Case 2)
Packages per Shipment	See Table 3-2	See Table 3-2
Number of Shipments	See Table 3-2	See Table 3-2
External Radiation Field	40 mrem/h at 1 m	40 mrem/h at 1 m
Fraction of Gamma Radiation	1	1
Length of Package	0.86 meters[a]	20 meters
Isotopes in Package	See Table 3-1	See Table 3-1
Activity in Package	See Table 3-1	See Table 3-1
Distance Traveled	(Hang, 2000)	(Hang, 2000)
Fraction of Travel in Population Zone	(Hang, 2000)	(Hang, 2000)
Accident Severity Categories	8	8
Accident Rates (Accident Per Kilometer)	1.4E-6 rural 1.4E-6 suburban 1.4E-6 urban	2.4E-6 rural 2.4E-6 suburban 2.4E-6 urban

[a] Except for Case 5 tanker truck

Table 3-6. Radiation dose field ratios for truck and rail waste forms.

Case	Description	Ratio of Dose rate at 1 m/Dose rate at 2 m		
		Side	Top	End
1/Truck	Vitrified uranium in drums, transported by truck	1.94	1.75	2.72
1/Rail	Vitrified uranium in drums, transported by rail	1.44	1.70	1.99
2/Rail	Plutonium in soil and debris in drums, transported by rail	1.53	1.69	2.10
2/Truck	Plutonium in soil and debris in drums, transported by truck	1.97	1.72	2.76
3/Truck	Plutonium in soil and debris in drums, transported by truck	1.97	1.72	2.76
4/Truck	Plutonium in solution in drums, transported by truck	1.97	1.72	2.77
5/Truck	Plutonium in solution, transported by tanker truck	1.71	1.71	3.11

Health Effects – Tables 3-7 and 3-8 present doses for transportation under both incident-free and accident conditions. Health effects, measured as the number of potential latent cancer fatalities (LCFs), were calculated by multiplying the population consequence (in units of person-rem) by the cancer risk factor of 5E-4 potential LCFs per person-rem (DOE 1993). For maximum individual exposures, this same value is used to calculate cancer mortality probability. Table 3-9 presents the maximum calculated total incidence of potential LCFs for incident-free transport and due to an accident from shipments of LLW and MLLW from SRS.

Consequences of an accident depend upon the severity and population density at the location of the accident. Table 3-8 provides the sum of the accident risks for transport of the five source terms to the six treatment and/or disposal facilities. Additionally, Table 3-8 lists the natural background dose for the same population.

Table 3-7. Incident-free radiological consequences (Hang and O'Kula 2000, WSRC 2000).

Route Case - Mode	Incident-free workers exposure (person – rem)	Incident-free general public exposure (person – rem)	Maximum individual general public dose (rem)	Exposed population – incident-free (persons)	Natural background dose to incident-free general public (person – rem) [a]
SRS to Clive, UT					
Case 1 - Rail	1.45E+00	1.23E-01	8.40E-05	5.41E+05	1.62E+05
Case 2 - Rail	2.26E+02	1.37E+01	1.55E-02	5.41E+05	1.62E+05
Case 1 - Truck	1.80E+01	9.33E+00	9.38E-04	5.21E+05	1.56E+05
Case 3 - Truck	2.71E+02	1.40E+02	1.41E-02	5.21E+05	1.56E+05
Case 4 - Truck	3.03E+01	1.57E+01	1.58E-03	5.21E+05	1.56E+05
Case 5 - Truck	2.70E+01	2.82E+01	7.00E-05	5.21E+05	1.56E+05
SRS to Eunice, NM					
Case 1 - Rail	1.42E+00	1.18E-01	8.40E-05	5.49E+05	1.65E+05
Case 2 - Rail	2.23E+02	1.31E+01	1.55E-02	5.49E+05	1.65E+05
Case 1 - Truck	1.25E+01	6.39E+00	9.38E-04	3.91E+05	1.17E+05
Case 3 - Truck	1.87E+02	9.59E+01	1.41E-02	3.91E+05	1.17E+05
Case 4 - Truck	2.10E+01	1.07E+01	1.58E-03	3.91E+05	1.17E+05
Case 5 - Truck	1.84E+01	1.93E+01	7.00E-05	3.91E+05	1.17E+05
SRS to Oak Ridge, TN					
Case 1 - Rail	1.34E+00	5.12E-02	8.40E-05	1.61E+05	4.83E+04
Case 2 - Rail	2.14E+02	5.69E+00	1.55E-02	1.61E+05	4.83E+04
Case 1 - Truck	3.02E+00	1.51E+00	9.38E-04	1.03E+05	3.09E+04
Case 3 - Truck	4.53E+01	2.26E+01	1.41E-02	1.03E+05	3.09E+04
Case 4 - Truck	5.07E+00	2.52E+00	1.58E-03	1.03E+05	3.09E+04
Case 5 - Truck	4.24E+00	4.55E+00	7.00E-05	1.03E+05	3.09E+04
SRS to Hanford, WA					
Case 1 - Rail	1.50E+00	1.76E-01	8.40E-05	8.98E+05	2.69E+05
Case 2 - Rail	2.32E+02	1.95E+01	1.55E-02	8.98E+05	2.69E+05
Case 1 - Truck	2.18E+01	1.13E+01	9.38E-04	6.14E+05	1.84E+05
Case 3 - Truck	3.28E+02	1.70E+02	1.41E-02	6.14E+05	1.84E+05
Case 4 - Truck	3.67E+01	1.90E+01	1.58E-03	6.14E+05	1.84E+05
Case 5 - Truck	3.29E+01	3.43E+01	7.00E-05	6.14E+05	1.84E+05

Table 3-7. (Continued).

Route Case - Mode	Incident-free workers exposure (person – rem)	Incident-free general public exposure (person – rem)	Maximum individual general public dose (rem)	Exposed population – incident-free (persons)	Natural background dose to incident-free general public (person – rem) [a]
SRS to Mercury, NV					
Case 1 – Rail	NA[b]	NA[b]	NA[b]	NA[b]	NA[b]
Case 2 – Rail	NA[b]	NA[b]	NA[b]	NA[b]	NA[b]
Case 1 – Truck	1.84E+01	9.54E+00	9.38E-04	5.44E+05	1.63E+05
Case 3 – Truck	2.76E+02	1.44E+02	1.41E-02	5.44E+05	1.63E+05
Case 4 – Truck	3.09E+01	1.60E+01	1.58E-03	5.44E+05	1.63E+05
Case 5 – Truck	2.77E+01	2.88E+01	7.00E-05	5.44E+05	1.63E+05
SRS to Idaho Falls, ID					
Case 1 – Rail	NA[c]	NA[c]	NA[c]	NA[c]	NA[c]
Case 2 – Rail	NA[c]	NA[c]	NA[c]	NA[c]	NA[c]
Case 1 – Truck	1.80E+01	9.33E+00	9.38E-04	5.53E+05	1.66E+05
Case 3 – Truck	2.70E+02	1.40E+02	1.41E-02	5.53E+05	1.66E+05
Case 4 – Truck	3.03E+01	1.57E+01	1.58E-03	5.53E+05	1.66E+05
Case 5 – Truck	2.71E+01	2.83E+01	7.00E-05	5.53E+05	1.66E+05
SRS to Pocatello, ID					
Case 1 – Rail	1.45E+00	1.23E-01	8.40E-05	4.94E+05	1.48E+05
Case 2 – Rail	2.27E+02	1.36E+01	1.55E-02	4.94E+05	1.48E+05
Pocatello, ID to Idaho Falls, ID					
Case 1 – Truck	5.01E-01	2.55E-01	9.38E-04	2.78E+04	8.34E+03
Case 2 – Truck	1.00E+02	5.10E+01	1.88E-01	2.78E+04	8.34E+03

[a] Based on an average individual background dose of 300 mrem/yr (Kathren, 1984).
[b] There is no rail access to the Nevada Test Site.
[c] Rail ends at Pocatello, ID. Results are presented in table for two separate legs consisting of: (1) rail from SRS to Pocatello, ID, and (2) truck from Pocatello to Idaho Falls, ID.

Impacts of Accidental Releases – Impacts of radioactive waste transportation accidents were evaluated as a consequence of an acute liquid release into aquatic environments.

Table 3-8. Sum of accident radiological consequences (Hang and O'Kula 2000, WSMS 2000).

Route Case - Mode	Accident risk general public (person – rem)	Exposed general public – accident (persons)	Natural background dose to accident exposed general public (person – rem) [a]
SRS to Clive, UT			
Case 1 - Rail	6.69E-07	3.34E+06	1.00E+06
Case 2 - Rail	3.28E+02	3.34E+06	1.00E+06
Case 1 - Truck	3.58E-07	3.39E+06	1.02E+06
Case 3 - Truck	1.31E+01	3.39E+06	1.02E+06
Case 4 - Truck	3.07E+02	3.39E+06	1.02E+06
Case 5 - Truck	3.63E+01	3.39E+06	1.02E+06
SRS to Eunice, NM			
Case 1 - Rail	7.36E-07	3.35E+06	1.01E+06
Case 2 - Rail	3.61E+02	3.35E+06	1.01E+06
Case 1 - Truck	3.13E-07	3.13E+06	9.38E+05
Case 3 - Truck	1.14E+01	3.13E+06	9.38E+05
Case 4 - Truck	2.69E+02	3.13E+06	9.38E+05
Case 5 - Truck	3.17E+01	3.13E+06	9.38E+05
SRS to Oak Ridge, TN			
Case 1 - Rail	2.56E-07	3.10E+06	9.31E+05
Case 2 - Rail	1.26E+02	3.10E+06	9.31E+05
Case 1 - Truck	9.42E-08	2.94E+06	8.81E+05
Case 3 - Truck	3.45E+00	2.94E+06	8.81E+05
Case 4 - Truck	8.09E+01	2.94E+06	8.81E+05
Case 5 - Truck	9.56E+00	2.94E+06	8.81E+05
SRS to Hanford, WA			
Case 1 - Rail	1.09E-06	3.41E+06	1.02E+06
Case 2 - Rail	5.37E+02	3.41E+06	1.02E+06
Case 1 - Truck	4.14E-07	3.39E+06	1.02E+06
Case 3 - Truck	1.52E+01	3.39E+06	1.02E+06
Case 4 - Truck	3.56E+02	3.39E+06	1.02E+06
Case 5 - Truck	4.20E+01	3.39E+06	1.02E+06
SRS to Mercury, NV			
Case 1 – Rail	NA[b]	NA[b]	NA[b]
Case 2 – Rail	NA[b]	NA[b]	NA[b]
Case 1 – Truck	3.61E-07	3.48E+06	1.04E+06
Case 3 – Truck	1.32E+01	3.48E+06	1.04E+06
Case 4 – Truck	3.10E+02	3.48E+06	1.04E+06
Case 5 – Truck	3.67E+01	3.48E+06	1.04E+06

Table 3-8. (Continued).

Route Case - Mode	Accident risk General public (person – rem)	Exposed general public – accident (persons)	Natural background dose to accident exposed general public (person – rem) [a]
SRS to Idaho Falls, ID			
Case 1 – Rail	NA[c]	NA[c]	NA[c]
Case 2 – Rail	NA[c]	NA[c]	NA[c]
Case 1 – Truck	3.67E-07	3.41E+06	1.02E+06
Case 3 – Truck	1.35E+01	3.41E+06	1.02E+06
Case 4 – Truck	3.16E+02	3.41E+06	1.02E+06
Case 5 – Truck	3.73E+01	3.41E+06	1.02E+06
SRS to Pocatello, ID			
Case 1 – Rail	6.57E-07	3.36E+06	1.01E+06
Case 2 – Rail	3.23E+02	3.36E+06	1.01E+06
Pocatello, ID to Idaho Falls, ID			
Case 1 – Truck	1.92E-08	3.14E+06	9.41E+05
Case 2 – Truck	9.37E+00	3.14E+06	9.41E+05

[a] Based on an average individual background dose of 300 mrem/yr (Kathren, 1984)

[b] There is no rail access to the Nevada Test Site.

[c] Rail ends at Pocatello, ID. Results are presented in table for two separate legs consisting of: (1) rail from SRS to Pocatello, ID, and (2) truck from Pocatello to Idaho Falls, ID.

These assessments estimated the potential ecological impacts of an accident spilling the entire contents of a tanker truck shipment of LLW into various surface water streams. A simple volumetric dilution assessment was then performed for estimating the impact in the form of a radiation dose to aquatic biota in those drainages (Jannik 2001).

The bounding accident scenario (that is, the single largest potential release under the proposed action) used in these assessments involves a 12,869-liter (3,400-gallon) tanker truck carrying liquid LLW with an average activity of 1.97 Ci of Pu^{239} (that is, Case 5 in Tables 3-1 and 3-2) The postulated accident ruptures the tank wall, releasing the total contents into a stream over a two-hour time frame. This accident scenario was assessed using streams of different size classes ranging from a small first order headwater stream (a flow rate of one ft^3 per second or cfs) to a tenth order major continental river (a flow rate of 10,000 cfs). An aquatic biotic concentration guide (BCG) for Pu^{239} of 200 pCi/L was used to estimate the dose to the affected stream biota. This would equate to approximately one rad per day (Jannik 2001).

Table 3-9. Number of potential latent cancer fatalities for incident-free and accident transportation (Hang and O'Kula 2000, WSMS 2000).

Route Case - Mode	Potential LCFs for workers for incident-free transportation	Potential LCFs for general public for incident-free transportation	Potential LCFs for accident exposed population
SRS to Clive, UT			
Case 1 - Rail	7.25E-04	6.16E-05	3.35E-10
Case 2 - Rail	1.13E-01	6.83E-03	1.64E-01
Case 1 - Truck	9.01E-03	4.67E-03	1.79E-10
Case 3 - Truck	1.36E-01	7.02E-02	6.55E-03
Case 4 - Truck	1.52E-02	7.86E-03	1.54E-01
Case 5 - Truck	1.35E-02	1.41E-02	1.82E-02
SRS to Eunice, NM			
Case 1 - Rail	7.08E-04	5.91E-05	3.68E-10
Case 2 - Rail	1.11E-01	6.56E-03	1.81E-01
Case 1 - Truck	6.25E-03	3.19E-03	1.57E-10
Case 3 - Truck	9.36E-02	4.79E-02	5.70E-03
Case 4 - Truck	1.05E-02	5.37E-03	1.35E-01
Case 5 - Truck	9.19E-03	9.67E-03	1.59E-02
SRS to Oak Ridge, TN			
Case 1 - Rail	6.69E-04	2.56E-05	1.28E-10
Case 2 - Rail	1.07E-01	2.84E-03	6.30E-02
Case 1 - Truck	1.51E-03	7.53E-04	4.71E-11
Case 3 - Truck	2.27E-02	1.13E-02	1.73E-03
Case 4 - Truck	2.54E-03	1.26E-03	4.05E-02
Case 5 - Truck	2.12E-03	2.27E-03	4.78E-03
SRS to Hanford, WA			
Case 1 - Rail	7.50E-04	8.80E-05	5.45E-10
Case 2 - Rail	1.16E-01	9.76E-03	2.69E-01
Case 1 - Truck	1.09E-02	5.66E-03	2.07E-10
Case 3 - Truck	1.64E-01	8.51E-02	7.60E-03
Case 4 - Truck	1.84E-02	9.52E-03	1.78E-01
Case 5 - Truck	1.65E-02	1.71E-02	2.10E-02
SRS to Mercury, NV			
Case 1 – Rail	NA[a]	NA[a]	NA[a]
Case 2 – Rail	NA[a]	NA[a]	NA[a]
Case 1 – Truck	9.19E-03	4.77E-03	1.81E-10
Case 3 – Truck	1.38E-01	7.18E-02	6.60E-03
Case 4 – Truck	1.55E-02	8.02E-03	1.55E-01
Case 5 – Truck	1.38E-02	1.44E-02	1.84E-02

Table 3-9. (Continued).

Route Case - Mode	Potential LCFs for workers for incident-free transportation	Potential LCFs for general public for incident-free transportation	Potential LCFs for accident exposed population
SRS to Idaho Falls, ID			
Case 1 – Rail	NA[b]	NA[b]	NA[b]
Case 2 – Rail	NA[b]	NA[b]	NA[b]
Case 1 – Truck	9.02E-03	4.67E-03	1.84E-10
Case 3 – Truck	1.35E-01	6.98E-02	6.75E-03
Case 4 – Truck	1.52E-02	7.83E-03	1.58E-01
Case 5 – Truck	1.35E-02	1.41E-02	1.87E-02
SRS to Pocatello, ID			
Case 1 – Rail	7.26E-04	6.14E-05	3.29E-10
Case 2 – Rail	1.13E-01	6.81E-03	1.62E-01
Pocatello, ID to Idaho Falls, ID			
Case 1 – Truck	2.51E-04	1.27E-04	9.60E-12
Case 2 – Truck	5.02E-02	2.55E-02	4.69E-03

[a] There is no rail access to the Nevada Test Site.

[b] Rail ends at Pocatello, ID. Results are presented in table for two separate legs consisting of (1) rail from SRS to Pocatello, ID and (2) truck from Pocatello to Idaho Falls, ID.

The estimated dilution factors and concentrations of Pu^{239} in the various receiving streams following the accident re provided in Table 3-10. These estimated concentrations of Pu^{239} would exceed the 200 pCi/L BCG. However, the BCG is conservatively based on an annual average exposure, where equilibrium has been reached in the aquatic environment. The Pu^{239} in the receiving streams would be transported downstream and further diluted with the distance traveled. The Pu^{239} BCG equating to 1 rad from an assumed 2-hour exposure duration is 2,400 pCi/L. All estimated Pu^{239} concentrations in the receiving streams, except for the 10,000 cfs stream, exceed this concentration (Jannik 2001).

Observable detrimental effects will occur in fish populations at exposures of about 400 rad. The Pu^{239} BCG equating to 400 rad from a 2-hour exposure duration is 960,000 pCi/L. The estimated Pu^{239} concentrations in the 1, 5, and 10 cfs receiving streams exceed this concentration. For fish, the lethal dose for 50 percent of a given population (LD-50) occurs at about 550 rad. The Pu^{239} BCG equating to 550 rad from a 2-hour exposure duration is 1,320,000 pCi/L. The estimated Pu^{239} concentrations in the 1 and 5

Table 3-10. Results of volumetric dilution assessment for an acute release of Pu^{239} into surface water streams (Jannik 2001).

Receiving Stream Flow rate (CFS)	Receiving Stream Flow rate (L/s)	Dilution Factor	Pu^{239} Concentration in Stream (pCi/L)
1	28	17	9.19E+06 [a, b]
5	140	79	1.93E+06 [a, b]
10	280	157	9.72E+05 [a]
50	1,400	783	1.95E+05
100	2,800	1,565	9.77E+04
1,000	28,000	15,643	9.78E+03
10,000	280,000	156,426	9.78E+02

[a] Observable detrimental effects would occur
[b] LD-50 would occur

cfs receiving streams exceed this concentration. However, not many fish can reside in such small headwater drainages (Jannik 2001). Therefore, no adverse affect to fish populations is expected.

Within the scope of the proposed action, there would only be ten shipments of this type (i.e., a 12,869-liter (3,400-gallon) tanker truck carrying liquid LLW). Based on the same truck accident rate used in the RADTRAN modeling and assuming that all ten trucks went to the furthest destination (i.e., Richland, Washington), no accidents would be expected to occur within this subset of the overall action. Again, the assumptions associated with this bounding accident scenario are hypothetical; there are presently no known LLW or MLLW forms planned for offsite shipment that approach this level of radioactivity of 99 nCi/g.

Emergency Planning and Response – DOE is committed to conducting all transportation-related activities in a safe and efficient manner. The Department follows applicable Federal, State, tribal and local requirements for shipments of radioactive materials, including applicable DOE Orders. Shipments of LLW and MLLW will be packaged and transported in accordance with these requirements, which effectively minimize the risk to the public during transportation operations. However, should an incident occur involving these shipments SRS has established an emergency management plan and implementing procedures to ensure appropriate notifications and response actions are initiated on a 24-hour basis.

Table 3-11. Expected accident levels for the designated truck travel routes (O'Kula 2000, WSMS 2000).

Route Case	Expected Number of Nonfatal Accidents	Expected Number of Fatal Accidents
SRS to Clive, UT		
Case 1	2.44E-01	1.83E-02
Case 3	3.65E+00	2.74E-01
Case 4	4.09E-01	3.07E-02
Case 5	4.87E-02	3.65E-03
SRS to Eunice, NM		
Case 1	1.64E-01	1.23E-02
Case 3	2.47E+00	1.85E-01
Case 4	2.76E-01	2.07E-02
Case 5	3.29E-02	2.47E-03
SRS to Oak Ridge, TN		
Case 1	3.77E-02	2.83E-03
Case 3	5.66E-01	4.25E-02
Case 4	6.34E-02	4.75E-03
Case 5	7.55E-03	5.66E-04
SRS to Hanford, WA		
Case 1	2.97E-01	2.23E-02
Case 3	4.45E+00	3.34E-01
Case 4	4.99E-01	3.74E-02
Case 5	5.94E-02	4.45E-03
SRS to Mercury, NV		
Case 1	2.49E-01	1.87E-02
Case 3	3.74E+00	2.81E-01
Case 4	4.19E-01	3.14E-02
Case 5	4.99E-02	3.74E-03

Table 3-11. (Continued)

Route Case	Expected Number of Nonfatal Accidents	Expected Number of Fatal Accidents
SRS to Idaho Falls, ID		
Case 1	2.43E-01	1.82E-02
Case 3	3.64E+00	2.73E-01
Case 4	4.08E-01	3.06E-02
Case 5	4.86E-02	3.64E-03
Pocatello, ID to Idaho Falls, ID		
Case 1	6.31E-03	4.73E-04
Case 2	1.26E-00	9.46E-03

State, tribal, and local governments having jurisdiction over areas through which these shipments will pass have the responsibility for protecting the public and the environment and for establishing incident command for incidents involving these shipments. The carrier for these shipments is responsible for providing emergency response assistance and recovery/restoration actions, if required. DOE-SR (Savannah River Operations Office) will provide technical advice and assistance to these authorities and ensure that the carrier of these shipments performs the necessary cleanup and site recovery/restoration activities. DOE-SR will also coordinate with the appropriate DOE Regional Coordinating Office and/or DOE Headquarters to provide additional radiological support or technical assistance from the DOE Emergency Response Assets (e.g., Radiological Assistance Program teams, etc.) as necessary.

To provide an adequate response for transportation incidents, State, tribal, and local governments are responsible for developing emergency response plans and procedures; organizing, training, and deploying first responders; and negotiating mutual aid agreements for incidents close to jurisdictional boundaries. Many States also maintain specialized Hazardous Materials Transportation Act (HAZMAT) and/or radiological response teams that already possess the capabilities for responding to the most plausible incidents involving LLW and MLLW. To assist in establishing and maintaining these capabilities, DOE has developed planning and training materials through the Transportation Emergency Preparedness Program (TEPP) to help provide the incremental skills necessary for response to incidents involving DOE radioactive material shipments.

Table 3-12. Expected accident levels for the designated rail travel routes (O'Kula 2000).

Route Case	Expected Number of Nonfatal Accidents	Expected Number of Fatal Accidents
SRS to Clive, UT		
Case 1	9.13E-03	7.40E-04
Case 2	1.01E+00	8.21E-02
SRS to Eunice, NM		
Case 1	6.59E-03	5.34E-04
Case 2	7.31E-01	5.92E-02
SRS to Oak Ridge, TN		
Case 1	1.53E-03	1.24E-04
Case 2	1.70E-01	1.37E-02
SRS to Hanford, WA		
Case 1	1.20E-02	9.75E-04
Case 2	1.34E+00	1.08E-01
SRS to Pocatello, ID		
Case 1	9.33E-03	7.55E-04
Case 2	1.04E+00	8.38E-02

The planning materials can be accessed through the DOE Office of Transportation and Emergency Management web site, http://www.em.doe.gov/otem. In addition, each DOE Regional Coordinating Office has appointed a TEPP Coordinator to ensure emergency planning and preparedness activities are integrated into the transportation planning process. The TEPP Coordinator can provide assistance to State, tribal, and local agencies in preparing for DOE transportation activities (e.g., assist in using the TEPP planning products, coordinate delivery of DOE training, provide technical assistance, resolve emergency preparedness issues, etc.).

3.2.4 Non-radiological Transportation Accidents

The nonfatal and fatal accident probabilities per shipment for material transported along the postulated truck routes are listed in Table 3-11. The average nonfatal accident rate for vehicles is 1.4E-06 accidents per kilometer (DOT 1999b). The traffic fatality rate used in the analysis is from DOT 1998 data for large trucks (DOT 1999b). DOE assumes that the percent of accidents resulting in a fatality would be the same as that for interstate travel by truck, 7.5 percent (DOT 1989). This is conservative with respect to the 1998 DOT data which shows that only 1.2 percent of large truck accidents resulted in fatalities (DOT 1999b).

Based on the data from the third column, this proposed action is not expected to result in a fatal accident. As indicated in the second column, some nonfatal accidents may be expected from the proposed action.

The nonfatal and fatal accident probabilities per shipment for material transported along the postulated rail routes are listed in Table 3-12. For train events, the 1998 accident rate was 3.77 accidents per million train miles, corresponding to an accident probability rate of 2.4E-06 accidents per kilometer (DOT 1999a). Fatal accident probabilities were not provided by DOT, although 8.1 percent of all reported casualties were fatal. Based on the data from the third column of Table 3-12, this proposed action is not expected to result in a fatal accident. As indicated in the second column, some nonfatal accidents may be expected from the proposed action.

3.2.5 Environmental Justice

In general, the consequences associated with incident free and accident conditions of the offsite transportation were small for the exposed population. This is due to the low expected frequency of such accident scenarios and the ability to mitigate the impacts of such events with the existing training and technology for controlling spills or releases from vehicles. These rare events would also be expected to occur randomly in time with equal distribution throughout various types of communities. Based on the percentage breakdown of the routes analyzed, the highest risk would be along rural interstate highways (Table 3-3). Minorities are found to be disproportionately lower in representation in the populations residing near interstate highways (DOT 1992). Therefore, there would be little to no potential for a disproportionately high adverse impact on either poor or minority communities from the proposed shipments from SRS to the offsite commercial and Government facilities.

Based on the radioactive and hazardous materials transportation analyses conducted in support of the DOE programmatic waste management EIS (DOE 1997a), minority or low-income populations in either the Hanford Site, Idaho National Engineering Laboratory, Nevada Test Site, SRS or Oak Ridge areas would not be expected to experience disproportionately high adverse health impacts associated with LLW or MLLW shipments from the DOE sites at those locations. The Envirocare of Utah, Inc.,

and Waste Control Specialists vendor facilities are located in such remote, unpopulated areas that no environmental justice impacts would be expected.

3.2.6 Conclusion

Doses have been calculated from each of the transportation options using the RADTRAN 4 computer code for the following conservative assumptions:

- 99 nCi/g Pu^{239} (maximum amount of worst case isotope for low-level waste)
- 10 mrem/hour @ 2 meters (interpretation of maximum radiation field allowed by 49 CFR 173)

The health effects, measured as the number of potential LCFs, due to exposure from the radioactive waste during incident free and accident conditions of transportation are specified in Table 3-9. To conservatively determine the cumulative effects from transporting all five waste forms, the highest number for each case should be added together. This results in a potential LCF to workers of 0.437, to the public of 0.184, and during an accident of 0.475 (assuming an accident occurs for each waste type). No LCFs are expected from the proposed action since the numbers are all less than 1. The expected number of nonfatal and fatal accidents from truck and rail transportation is specified in Tables 3-11 and 3-12, respectively. To conservatively determine the cumulative effects of transportation the highest number for each case should be added together to determine the overall expected number of accidents, both non-fatal and fatal. Statistically, based on these transportation analyses, there is a probability of about nine non-fatal accidents and no fatal accidents as a result of implementing the proposed action.

3.3 Waste Processing Centers Operations

This EA does not assess local impacts associated with the ongoing operation of an already-licensed offsite vendor facility proposed to receive DOE waste for treatment or disposal. DOE's proposed waste load associated with this ongoing operation will be a small part of that facility's throughput. The facility would operate well within its established standards and the vendor's part of this proposal is of low potential for significant impacts. Under the terms of the proposed contracts, the vendors would be responsible for identifying and complying with all applicable laws and regulations governing the operation of the offsite facility and transportation of LLW and MLLW from SRS. The waste treatment and/or disposal operations at the Government facilities (i.e., Hanford Site, Idaho National Environmental and Engineering Laboratory, and Nevada Test Site) were addressed in DOE (1995c, 1996, 1997a, 1999a).

3.4 Environmental Consequences of the Alternatives

The no-action alternative would create none of the transportation impacts associated with the proposed action. However, implementation of the no-action alternative would ultimately result in a shortage of interim storage and disposal space for the five waste

forms. This situation would create problems associated with the management of large and increasing volumes of waste in these storage areas. There would be an increase in onsite land use to accommodate these larger waste volumes. However, all of this would likely be in already developed or industrialized areas onsite. In addition, the worker exposure would be higher because of increased time period in storage. Moreover, storage without treatment would not be consistent with the agreements between DOE and the State of South Carolina concerning MLLW management under the SRS Site Treatment Plan that was developed pursuant to the Federal Facility Compliance Act of 1992. Violating these agreements could result in fines and penalties for DOE as well as suspension of the site's RCRA permit.

The alternative to construct and operate treatment and disposal capabilities at SRS would result in a variety of impacts associated with these facilities. The impacts resulting from this alternative were addressed in DOE (1995a). These consequences would include land use, socioeconomic, and human health impacts. The new facilities would require a minimum of approximately 40 hectares (99 acres) of currently undeveloped land onsite. Depending upon the specific location for these facilities, other impacts (e.g., hydrological, ecological, and archaeological) could also be realized. In addition, since the project planning for such facilities has not even been initiated at this time, the storage of existing waste inventories and those volumes generated in the near-term would also present problems similar to those stated for the no-action alternative. The cost of this alternative would also be significantly greater than the proposed action.

3.5 Cumulative Impacts

The principle cumulative impacts from the proposed action would be those associated with the offsite transportation of the five waste forms. There would be no change in the site workforce. No excess LCFs would be expected to result from radiation doses resulting from non-incident and accident scenarios during transportation of the waste forms in this proposed action. The human population exposures resulting from this proposed action are several orders of magnitude less than naturally occurring background radiation exposure to the same population; thus, no impacts are expected on human health. Although nine accidents may be expected from transportation of the proposed action, no fatalities associated with these accidents are expected. In addition, no disproportionately high adverse environmental justice impacts would be expected from the proposed action.

4.0 REGULATORY AND PERMITTING PROVISIONS CONSIDERED

DOE policy is to carry out its operations in compliance with all applicable Federal, State and local laws and regulations, as well as all DOE Orders. This section provides a discussion of the major regulatory permit programs that might be applicable to the proposed action.

4.1 National Environmental Policy Act of 1969, as amended (42 USC 4321 et seq.)

This EA has been prepared in accordance with NEPA of 1969, as amended, and with the requirements of the Council of Environmental Quality Regulations for Implementing NEPA (40 CFR 1500-1508), DOE Regulations (10 CFR 1021), and DOE Order 451.1B. NEPA, as amended, requires "all agencies of the Federal Government" to prepare a detailed statement on the environmental effects of proposed "major Federal actions significantly affecting the quality of the human environment." This EA has been written to comply with NEPA and assess the environmental effects of the proposed offsite transportation of certain LLW and MLLW from SRS.

4.2 Waste Shipment Regulations

The vendor must comply with DOT regulation 49 CFR 173 for shipments of radioactive and hazardous materials and any applicable State regulations for transportation of radioactive and hazardous materials. The shipping vendor/motor carrier must pass a pre-trip inspection checklist in conformance with the requirements of the Federal Motor Carrier Safety Regulations (49 CFR 390-399).

4.3 Occupational Safety and Health Act of 1970, as amended (29 USC 651 et seq.)

The Occupational Safety and Health Act and the regulations thereunder do not directly apply to Federal agencies or Government–owned corporations. However, Section 19 of the Act (29 USC 668) requires all Federal agencies to have occupational safety programs “consistent” with the Occupational Safety and Health Act standards. This requirement has been applied to Government-owned corporations, as well as agencies, through 5 USC 7902 and Executive Order 12196.

5.0 AGENCIES AND PERSONS CONSULTED

Westinghouse Safety Management Services, LLC. were consulted during the preparation of this EA.

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APPENDIX A

Glossary

GLOSSARY

The following is a glossary of definitions of technical terms found within the text of this document:

Atomic Energy Act of 1954 – A Federal statute that, along with other related legislation (including the Energy Reorganization Act of 1974 and the Department of Energy Organization Act of 1977), provides the U. S. Department of Energy with the authority for developing generally applicable standards for protecting the environment from radioactive materials.

Background Dose – Radiation dose from cosmic sources, naturally occurring radioactive materials, including radon (except as a decay product of source or special nuclear material), and global fallout as it exists in the environment from the testing of nuclear explosive devices.

Bounding – In the context of accident analysis, bounding is a term used to identify conservative assumptions that will likely overestimate actual risks or consequences.

Cancer – A group of diseases characterized by uncontrolled cellular growth. Increased incidence of cancer can be caused by exposure to radiation or chemicals at sufficient concentrations and exposure durations.

Code of Federal Regulations (CFR) – All Federal regulations in force are published in codified form in the Code of Federal Regulations.

Contact-Handled Waste – Waste with a surface dose rate that does not exceed 200 millirem per hour.

Contamination – The deposition of unwanted radioactive or hazardous material on the surfaces of structures, areas, objects, or personnel.

Cradle-to-Grave – In the context of waste management, cradle-to-grave means from the time of generation through permanent disposal.

Cumulative Impact - The impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Curie – The basic unit used to describe the intensity of radioactivity in a sample of material. The curie is equal to 37 billion disintegrations per second, which is approximately the rate of decay of 1 gram of radium. A curie is also a quantity of any radionuclide that decays at a rate of 37 billion disintegrations per second.

Decommissioning – The process of removing a facility from operation, followed by decontamination, entombment, dismantlement, or conversion to another use.

Decontamination – The actions taken to reduce or remove substances that pose a substantial present or potential hazard to human health or the environment, such as radioactive contamination from facilities, soil, or equipment by washing, chemical action, mechanical cleaning, or other techniques.

Dose (of Radiation Dose) – The amount of energy deposited in body tissue as result of radiation exposure.

Dose Equivalent - The product of the absorbed dose in the tissue or organ of interest, the applicable quality factor(s), and all other necessary modifying factors at the point of interest.

Dose Rate – The radiation dose from a shipping package delivered per unit time (for example, rem per year).

Effective Dose Equivalent – The summation of products of the dose equivalent received by specified tissues (or organs) of the body and a tissue-specific weighting factor. This sum is a risk-equivalent value and can be used to estimate the health-effects risk of the exposed individuals. The tissue-specific weighting factor represents the fraction of the total health risk resulting from uniform whole-body irradiation that would be contributed by that particular tissue.

Environmental Impact Statement - A detailed written statement that helps public officials make decisions that are based on understanding of environmental consequences and to take actions that protect, restore, and enhance the environment.

Environmental Justice – The fair treatment of people of all races, cultures, and income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

Environmental Restoration – Cleanup and restoration of sites, and decontamination and decommissioning of facilities contaminated with radioactive and/or hazardous substances during past production, accidental releases, or disposal activities.

Exclusive Use Vehicles - Vehicles that, per a contractual arrangement, would only be shipping the contracted waste packages, and no other cargo. In addition, that vehicle would be involved in shipments where the waste packaging/containers are handled by only the shipper and the receiver. Further, the dose rate for external radiation during normal transportation must be maintained below the following limits (49 CFR Part 173): (1) dose of 10 mrem/hr at any point 2 m from the vertical planes projected by the outer lateral surfaces of the car or vehicle; and (2) dose of 2 mrem/hr in any normally occupied position in the car or vehicle.

Federal Facility Compliance Act (FFCAct) – Federal law signed in October 1992 amending the Resource Conservation and Recovery Act. The objective of the FFCAct is to bring all Federal facilities into compliance with applicable Federal and State hazardous waste laws, to waive Federal sovereign immunity under those laws, and to allow the imposition of fines and penalties. The law also requires the U. S. Department of Energy to submit an inventory of all of its mixed waste and to develop a treatment plan for mixed wastes.

Hazardous Waste - Wastes that are designated as hazardous by the EPA or State regulations. Hazardous waste, defined under RCRA, is waste from production or operation activities that poses a potential hazard to human health or the environment when improperly treated, stored, or disposed. Hazardous wastes that appear on special EPA lists or possess at least one of the following characteristics: ignitability, corrosivity, reactivity, and toxicity.

High-Level Waste – The highly radioactive waste material that results from the reprocessing of spent nuclear fuel, including liquid waste produced directly from reprocessing and any solid waste derived from the liquid that contains a combination of transuranic and fission product nuclides in quantities that require permanent isolation. High-level waste may include other highly radioactive material that the U. S. Nuclear Regulatory Commission, consistent with existing law, determines by rule requires permanent isolation.

Impact – The positive or negative effect of an action (past. present, or future) on the environment.

Isotope – A variation of an element that has the same number of protons, but a different weight because the number of neutrons differs from that of its other isotope(s). A given element may have many isotopes. For example, uranium occurs naturally in three forms: uranium-234 (142 neutrons), uranium-235 (143 neutrons), and uranium-238 (146 neutrons); each of these isotopes has 92 protons. Various isotopes of the same element may have different radioactive behaviors – some are highly unstable (that is, they decay spontaneously and/or emit radiation).

Low-Level Radioactive Waste - Radioactive waste not classified as high-level waste, transuranic waste, or spent nuclear fuel, or tailing or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content. Test specimens of fissionable material irradiated for research and development only, and not for the production of power or plutonium, may be classified as low-level waste, provided the concentration of transuranic elements is less than 100 nCi per gram.

Mixed Waste - Waste containing both radioactive and hazardous components, as defined by the Atomic Energy Act and RCRA, respectively.

Radiation - The emissions, either electromagnetic or particulate, resulting from the transformation of an unstable atom or nucleus.

Radioactive Waste - Solid, liquid, or gaseous material that contains radioactive nuclides regulated under the Atomic Energy Act of 1954, as amended, and of negligible economic value considering costs of recovery.

Record of Decision - A public document that explains which alternative will be selected from the area of concern.

Rem (Roentgen Equivalent Man) – A unit of individual dose of absorbed ionizing radiation used to measure the effect on human tissue. The dosage of an ionizing radiation that will cause the same biological effect as one roentgen of x-ray or gamma-ray exposure.

Resource Conservation and Recovery Act (RCRA) – A Federal law addressing the management of waste. Subtitle C of the law addresses hazardous waste under which a waste must either be "listed" on one of the U. S. Environmental protection Agency's (EPA's) hazardous waste lists or meet one of EPA's four hazardous characteristics of ignitability, corrosivity, reactivity, or toxicity, as measured using the toxicity characterization leaching procedure. Cradle-to-grave mangement of wastes classified as RCRA hazardous wastes must meet stringent guidelines for environmental protection as required by law. These guidelines include regulation of transportation, treatment, storage, and disposal of RCRA-defined hazardous waste. Subtitle D of the law addresses the mangement of nonhazardous, nonradioactive solid waste, such as municipal wastes.

Significant - The common meaning of significant is "having or likely to have considerable influence or effect". As it pertains to NEPA, "significant" requires that both context and intensity be considered in evaluating impacts (40 CFR 1508). Context could include surrounding circumstances such as society as a whole, the affected region, the affected interests, and the locality. Intensity refers to the severity of the impact, and requires that several factors be evaluate. These factors may include the degree to which public health and safety are affected, unique characteristics of the geographic area, and others.

Spent Nuclear Fuel – Fuel that has been withdrawn from a nuclear reactor after irradiation, the constituent elements of which have not been separated.

Transportation Accident – In a mobile event, the harmful effects of an unplanned event on the human environment with respect to both safety and health.

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APPENDIX B

Response to Public Comments

Table of Contents

Section I. Introduction

In early 1999, the Department of Energy (DOE) Savannah River Operations Office decided to initiate the preparation of an environmental assessment (EA) for the proposed offsite transportation of certain low-level radioactive waste and mixed (i.e., hazardous and radioactive) low-level radioactive waste from the Savannah River Site (SRS). This document preparation effort was implemented in compliance with the National Environmental Policy Act (NEPA) of 1969, as amended, the requirements of the Council on Environmental Quality Regulations for Implementing NEPA (40 CFR 1500-1508), and the DOE Regulations for Implementing NEPA (10 CFR 1021). The assessment of environmental consequences of Federal actions that may affect the quality of the human environment is required under NEPA. Based on the potential for impacts described in the resultant document, DOE would either publish a Finding of No Significant Impact (FONSI) or prepare an environmental impact statement (EIS).

An initial internal scoping meeting was held on March 25, 1999, for this EA pursuant to the guidelines specified in the **Savannah River Site NEPA Program Quality Assurance Plan Preparation and Review: Environmental Assessments, NEPA Values Impact Assessments, Environmental Impact Statements (U)** (WSRC-RP-2000-00283). The proposed action, alternatives, specific assessment studies needed, project time frame, and public participation were discussed at that meeting. Notification was sent to the States of South Carolina and Georgia on June 17, 1999, regarding DOE's intent to prepare this EA. On June 25, 1999, a notice was published in the **SRS Environmental Bulletin** announcing to the general public DOE's intent to prepare this EA. Additional notifications to States along the potential routes were mailed out on July 7, 1999. Over the next 12 months, the status of the preparation of the draft EA was reported in the **SRS Environmental Bulletin**.

On June 27, 2000, the Waste Management Committee (WMC) of the SRS Citizen's Advisory Board (CAB) discussed the proposed action in the EA as part of the planned meeting agenda. This action had been requested by one the WMC's members. As a follow-up to that meeting, several members of the CAB's WMC met with DOE on August 24, 2000, to discuss the results of the WMC's June meeting. To address questions that the WMC had on the proposed action in the EA, a presentation was made before the WMC during a meeting on September 11, 2000. Based on that presentation, the CAB issued Recommendation No. 131 on the draft EA, requesting three clarifications on or corrections to the document.

The preliminary draft EA was completed by August 2000. As required in 10 CFR 1021, the predecisional draft EA was transmitted to American Indian Tribes, the host States of South Carolina and Georgia, States along the potential shipping routes, and potentially interested Federal and State agencies on September 13, 2000, for review and comment. The associated State comment period, scheduled for 14-30 days as per DOE NEPA regulations, began on September 20, 2000, the date of receipt of the draft EA transmittal

package by both States. The availability of the predecisional draft EA for the proposed action was announced in the October 18, 2000, issue of the **SRS Environmental Bulletin**, which had been distributed to several thousand stakeholders in both South Carolina and Georgia, including Federal, State, and local agencies, Government officials, and members of environmental interest groups as well as interested citizens. At the request of several State agencies, the public comment period was extended to allow for the submittal of additional comments. This comment period was closed on November 30, 2000, after the receipt of those additional comment letters. A total of fourteen responses were received, ranging in length from one to seven pages. State and local agency responses numbered ten. The remaining two were provided by private sector stakeholder groups.

The remainder of this appendix is contained in one section. That section (i.e., Section II) presents the unedited text of all letters received and the direct response to each question or comment raised or references another location where the issue has already been addressed in the EA.

Section II. Public Comments and DOE-SR Responses

The following pages include the public comment letters received on the draft EA and the DOE-SR letters sent in response to those comment letters. These documents are arranged with the comments first and the associated response letter immediately following.

Savannah River Site
CITIZENS ADVISORY BOARD
A U.S. Department of Energy Site-Specific Advisory Board

Chairperson
Karen Patterson
1103 Conger Drive
Aiken, S.C. 29803

Vice Chairperson
Brendolyn Jenkins
P. O. Box 228
Elko, SC 29826

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Ex-Officio Members

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SCDHEC
Keith Collinsworth
Myra Reece

September 27, 2000

Mr. Greg Rudy, Manager
U.S. Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, S.C. 29808

Dear Mr. Rudy:

On behalf of the SRS CAB, I am pleased to forward you three recommendations adopted yesterday at our Board meeting in Barnwell, S.C.

Recommendation 129 asks DOE-HQ to expand the mission of the Blue Ribbon Panel established to explore technological alternatives to incineration to identifying the best available technology for treatment of transuranic, mixed transuranic, low-level, mixed low-level and other incinerable waste. We request your assistance in forwarding this to the appropriate individuals at DOE-Headquarters.

Recommendation 130 regarding acceptance of Mound transuranic waste and Recommendation 131 regarding the Environmental Assessment for Offsite Transportation of LLW and MLLW are also enclosed. Regarding the EA, the Board has requested a comprehensive briefing on the emergency response actions that would be taken in the event of a transportation incident involving shipments of radioactive material.

Our next meeting will be held November 13-14, 2000 in North Augusta, S.C. As always, your thoughtful consideration of this advice is appreciated.

Sincerely,

Karen K. Patterson

Karen Patterson
Chairperson

cc: Tom Heenan, DOE-SR
Helen Belencan, EM22
Francesca McCann, MA
Ralph Cavanaugh, NRDC
Drew Grainger, DOE-SR
Jon Wright, EM22
SSAB Chairs

Comment L1. Page 1 of 3.

Savannah River Site

Citizens Advisory Board

Recommendation No. 131

Environmental Assessment for the Transportation of SRS MLLW and Certain LLW for Treatment and Disposal at Commercial and Government Facilities

Background

DOE proposes to transport five forms of Low Level Waste (LLW) and Mixed Low Level Waste (MLLW) to offsite commercial and government facilities for treatment and/or final disposal. These waste forms include vitrified blended uranium sludge and four forms of waste (miscellaneous soil/debris in bulk, miscellaneous soil/debris in drums, miscellaneous liquids in drums, and miscellaneous liquids in tanker trucks) with activity levels equal to or less than 99 nCi/gram. DOE needs to take this action because treatment and disposal capabilities for these wastes do not exist at SRS and/or it is more cost effective or beneficial to DOE to dispose of these wastes at another location. This Environmental Assessment (EA) was prepared to analyze the potential environmental and health impacts of the proposed offsite transportation.

The EA analysis used actual data for the vitrified blended uranium sludge but worst case scenarios were used to calculate environmental effects of transporting the other four waste streams. Eleven potential offsite locations were identified and grouped into six geographic destinations that were evaluated. Routing conditions were developed using DOE computer codes and included population densities, distance traveled, and the fraction of highway and rail travel in urban, suburban, and rural population zones.

Exposure, as a result of an accident, was evaluated and the dose was based on immersion in a cloud of contaminated material and the direct inhalation of the contaminated material. The EA did not analyze dose from ingestion because any contaminated foodstuffs (crops, cattle, and milk) as a result of serious accidents were assumed to be taken out of the marketplace as a result of emergency cleanup actions.

The EA concluded that there would be no adverse environmental impacts of transporting these materials to other locations for disposal and no disproportionate environmental justice impacts. It found no latent cancer fatality to worker and the public during normal operations or as the result of a traffic accident. DOE expects the transportation to result in about nine non-fatal accidents but no fatal accidents based on Department of Transportation statistics. Injuries would be the result of vehicle collisions and not release of radioactive materials.

Comments

The EA analyses the offsite shipment of SRS LLW and MLLW with difficult disposition paths and supports the Record of Decision (ROD) of the Waste Management Programmatic EIS for offsite treatment/disposal of LLW and MLLW. The SRS Citizens Advisory Board (CAB) likes the use of the conservative scenarios utilized in the EA and supports the conclusion that it is safe to transport these waste shipments to offsite commercial and government facilities.

Recommendation

1. The SRS CAB recommends that DOE incorporate the following comments into the Draft EA:.

   a) In Section 2.1 (Proposed Action pp. 9-10), the SRS CAB would like additional clarification on the level of controls and oversight that will be implemented at the commercial facilities receiving waste shipments, specifically whether DOE plans on conducting annual audits of these facilities.
   b) In Section 3.2.2 (Assumptions p. 12), the first sentence of the second paragraph needs a verb correction and the SRS CAB would like to see an explanation of "exclusive use vehicles".
   c) The SRS CAB would like to know why agricultural risks are not discussed. (Section 3.2.2 - Assumptions pp. 13-14).

References

1. Draft Environmental Assessment for the Offsite Transportation of Certain Low-Level and Mixed Radioactive Waste from Savannah River Site for Treatment and Disposal at Commercial and Government Facilities, DOE/EA-1308, September 2000.

2. Environmental Assessment (EA) for the Offsite Transportation of Low-Level Radioactive and Mixed Waste, presentation to the CAB WM Committee by Don Zecha, September 11, 2000.

Recommendation 131
Adopted September 26, 2000

Comment L1. Page 3 of 3.

Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, South Carolina 29802

FEB 1 5 2001

Ms. Karen K. Patterson, Chair
SRS Citizens Advisory Board
1103 Conger Drive
Aiken, SC 29803

Dear Ms. Patterson:

SUBJECT: Response to Citizens Advisory Board (CAB) Recommendation No. 131 - Draft Environmental Assessment (EA) for the Proposed Offsite Transportation of Certain Low-Level Radioactive Waste (LLW) and Mixed Low-Level Radioactive Waste (MLLW) from the Savannah River Site (SRS) for Treatment and Disposal at Commercial and Government Facilities

Thank you for your participation and recommendation on the Draft Transportation EA (DOE/EA-1308). I appreciate your interest and time in providing comments to the Department of Energy (DOE) Savannah River Operations Office (SR). The responses to your recommendation are provided in the following paragraphs, and appear in the Final EA.

Comment A: In Section 2.1 (Proposed Action pp. 9-10), the SRS CAB would like additional clarification on the level of controls and oversight that will be implemented at the commercial facilities receiving waste shipments, specifically whether DOE plans on conducting annual audits of these facilities.

Response A: DOE Order 435.1, Radioactive Waste Management, and DOE Manual 435.1 (which describes how the Order is implemented) identify the requirements that DOE must follow and the controls and oversight that must be in place before DOE ships waste to a commercial facility for treatment, storage or disposal. In making a decision to use a commercial facility for managing DOE radioactive waste, the DOE Field Element Manager must ensure that the decision is protective of the public and the environment. This responsibility is effected by ensuring the following: (1) the commercial facility is properly licensed and/or permitted; (2) the facility complies with applicable regulations; and (3) the facility has an acceptable history of operational and regulatory performance. Based on the characteristics of the waste that is being considered for transfer to the commercial facility, a review would be conducted of the licenses and permits held by the facility to determine if they provide appropriate coverage for management of the waste. This would be accomplished through a reading of the licenses and permits and through discussions with the issuing authority (Federal, State, or local licensing/permitting authority). This review would confirm that the facility is authorized to receive the radionuclides in the waste to be transferred, if the waste contains constituents subject to the Resource Conservation and Recovery Act or the Toxic Substance Control Act, and that the facility has the appropriate authorization to receive

Comment L1 Response. Page 1 of 3.

and manage those constituents. Discussions with regulatory authorities and reviews of inspection reports would also be used to determine whether the facility has a history of acceptable operational and regulatory performance. Once a determination has been made by a DOE organization that a commercial facility has an acceptable operational and regulatory history, this determination can be used by other DOE organizations, (e.g. a DOE organization can use the results of a review performed by another DOE organization or DOE contractor in making a decision on the acceptability of the commercial facility's performance). However, it is the responsibility of a DOE organization using a commercial facility to ensure, on an annual basis, that the facility is maintaining an acceptable performance record, either through their own review or that conducted by another DOE organization or contractor. Documentation of the results of the evaluation of regulatory compliance and acceptable operational history as discussed above is adequate for showing that the use of the commercial facility will be protective of public health and the environment. The previously mentioned information has been added to the final EA.

Comment B: In Section 3.2.2 (Assumptions p. 12), the first sentence of the paragraph needs a verb correction and the SRS CAB would like to see an explanation of "exclusive use vehicles".

Response B: DOE has reviewed the sentence indicated [i.e., "Isotopic contents of the first source term case were developed from laboratory analysis and accountability reports (Thoman 2000)."] and determined that the verb usage is correct as initially written. Exclusive use vehicles are vehicles that, per a contractual arrangement, would only be shipping the contracted waste packages, and no other cargo. In addition, that vehicle would be involved in shipments where the waste packaging/containers are handled by only the shipper and the receiver. Further, the dose rate for external radiation during normal transportation must be maintained below the following limits (49 CFR 173): (1) dose of 10 mrem/hr at any point 2 m from the vertical planes projected by the outer lateral surfaces of the car or vehicle; and (2) dose of 2 mrem/hr in any normally occupied position in the car or vehicle. This definition has been included in a glossary that was added to the final EA.

Reference: Thoman, D. C., 2000. *The Source Term For Use in the NEPA Transport Analysis (U),* S-CLC-G-00183, Rev. 2., Westinghouse Safety Management Solutions LLC, Aiken, South Carolina.

Comment C: The SRS CAB would like to know why agricultural risks were not discussed (Section 3.2.2 – Assumptions pp. 13-14).

Response C: As stated in the EA, Emergency Action Guidelines applicable to the area surrounding an accident would require interdiction of crops, cattle, and milk at specific thresholds, and these foodstuffs would thus be taken out of the market. Therefore, no pathway would exist for the introduction of harmful levels of contaminants into the human food chain as a result of an accident scenario.

Again, I want to thank you and your agency for your interest and comments on SRS activities. Enclosed is a copy of the final EA and Finding of No Significant Impact (FONSI). If you wish to receive further information concerning either this project or about DOE-SR's NEPA process, please contact Drew Grainger, of my staff, at P. O. Box A, Aiken, SC 29802, telephone number (803) 725-1523, or e-mail: drew.grainger@srs.gov.

Sincerely,

Greg Rudy
Manager

VH-01-011

2 Enclosures:
(1) Final DOE/EA-1308
(2) FONSI

Comment L1 Response. Page 3 of 3.

OSCAR B. GOODMAN
MAYOR

OCT 16 REC'D

October 9, 2000

Mr. Andrew R. Grainger
National Environmental Policy Act (NEPA)
Compliance Officer
Evaluation and Performance Division
Savannah River Operations Office
P.O. Box A
Aiken, South Carolina 29802

Dear Mr. Grainger:

SUBJECT: Draft Environmental Assessment (EA) for the Offsite Transportation of Certain Low-Level and Mixed Radioactive Waste from Savannah River Site for Treatment and Disposal at Commercial and Government Facilities (DOE/EA – 1308)

It has come to my attention that the Department of Energy (DOE) Savannah River Operations Office (SR) has prepared a draft Environmental Assessment (EA) to analyze the potential environmental consequences of the proposed transportation of certain low-level and mixed radioactive waste for treatment and disposal at the Nevada Test Site via an intermodal rail/truck transfer station at Las Vegas, Nevada.

As Mayor of Las Vegas, I am writing to express my strongest possible objection to the establishment of such a facility within our community for the possible transfer of radioactive waste to the Nevada Test Site (NTS). I find it incomprehensible that the Department of Energy wants to bring low-level waste by train to essentially the heart of downtown Las Vegas for a period of ten years and transfer it by truck over city streets and highways to the NTS.

I understand that this decision is in part the result of DOE's inability to meet current South Carolina Department of Health and Environmental Control waste disposal facility requirements and funding limitations. Therefore, DOE is proposing to use offsite commercial and government facilities such as the NTS for disposal and treatment of this waste.

While I empathize with the residents of Savanna River and Aiken, South Carolina, I do not believe this situation is justification for putting the citizens of

CITY OF LAS VEGAS
400 STEWART AVENUE
LAS VEGAS, NEVADA 89101

VOICE 702.229.6241
FAX 385.7960
TDD 702.386.9108
MAIL ogoodman@ci.las-vegas.nv.us
WEBSITE www.ci.las-vegas.nv.us

Comment L2. Page 1 of 3.

Las Vegas at risk with the establishment of an intermodal transfer station in Las Vegas where 450,000 cubic feet of radioactive waste would pass through our community annually.

Health effects mentioned in the EA, which are concluded to be minimal, appears to be calculated using 1993 data. With over 5,000 people per month moving to the Las Vegas valley over the past 10 years, calculations using today's figures would be considerably different. As the EA states, the consequences of an accident depend upon the severity and the population density at the location of an accident and the population of Las Vegas has grown considerably since 1993.

When addressing environmental justice, the EA states that consequences associated with incident-free and accident conditions of offsite transportation were small for the exposed population due to the low expected frequencies of such accidents and DOE's ability to mitigate such events. The EA further states that the DOE Programmatic Waste Management Environmental Impact Statement indicates that minority or low-income populations at the Nevada Test Site would not expect to experience disproportionately high adverse health impacts associated with low-level and mixed-low-level radioactive waste shipments. The fact of the matter is no one lives at the NTS. Minority and low-income populations live along the proposed routes that will likely be used for the transportation of radioactive waste through the Las Vegas community.

The EA indicates that studies have been conducted to determine impacts at the Nevada Test Site. I believe that it is imperative that studies be conducted on the impacts at Valley Siding, Nevada, where the proposed intermodal station is likely to be located. The likely scenario there would be train and truck loads of radioactive waste possibly sitting for days waiting to be unloaded and moved to the NTS. Over a 10-year period, the cumulative effects of radiological build-up at the proposed intermodal site would be significant and undoubtedly a health risk to the Las Vegas community.

In conclusion, the EA states that consequences of not moving this waste from Savannah River would ultimately result in a shortage of storage space, an increase in land use, an increase in worker exposure, and would not be consistent with the agreements DOE has with the State of South Carolina. I think very little concern has been give to the consequences of an intermodal transfer station in Las Vegas. The consequences of an intermodal station would include land use, socioeconomic and human health impacts, as well as possible hydrological and ecological factors which undoubtedly would directly impact our tourist based economy.

Comment L2. Page 2 of 3.

The City of Las Vegas, along with the City of North Las Vegas, the City of Henderson, Boulder City, Clark County and the State Of Nevada have worked tirelessly to get DOE to re-route low-level waste coming from Rocky Flats, Colorado and Fernald, Ohio around the Las Vegas Valley, which DOE has agreed to do.

I am perplexed that an intermodal transfer facility is being considered for Las Vegas and I am perplexed that there is no DOE-wide policy on how low-level radioactive waste is moved from the over 40 sites throughout the U. S. Instead, it seems that each new site coming on line for clean up requires a new set of negotiations to keep this waste out of the Las Vegas Valley.

Again, as Mayor of Las Vegas, I do not want an intermodal transfer station in the Las Vegas community and I ask the Department of Energy to reconsider this proposal.

Sincerely,

Oscar B. Goodman
Mayor

OBG/JP

cc: State of Nevada Nuclear Waste Project Office
Clark County Nuclear Waste Projects Office
DOE Nevada Operations Office
City of North Las Vegas

Comment L2. Page 3 of 3.

Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, South Carolina 29802

FEB 16 2001

Mr. Oscar B. Goodman, Mayor
City of Las Vegas
400 Stewart Avenue
Las Vegas, NV 89101

Dear Mr. Goodman:

SUBJECT: Response to Comments on Draft Environmental Assessment (EA) for the Proposed Offsite Transportation of Certain Low-Level Radioactive Waste (LLW) and Mixed Low-Level Radioactive Waste (MLLW) from the Savannah River Site (SRS) for Treatment and Disposal at Commercial and Government Facilities

Thank you for your letter of October 9, 2000, with the comments on the Draft Transportation EA (DOE/EA-1308). I appreciate your interest and time in providing these comments to the Department of Energy (DOE) Savannah River Operations Office (SR). The responses to your comments are provided in the following paragraphs:

Comment 1: As Mayor of Las Vegas, I am writing to express my strongest possible objection to the establishment of such a facility (an intermodal rail/truck transfer station) within our community for the possible transfer of radioactive waste to the Nevada Test Site (NTS).

Response 1: DOE is not proposing to establish an intermodal transfer station for LLW or MLLW shipments from SRS to NTS. The EA has been revised to clarify this point.

Comment 2: I find it incomprehensible that the DOE wants to bring low-level waste by train to essentially the heart of downtown Las Vegas for a period of ten years and transfer it by truck over city streets and highways to the NTS.

Response 2: DOE would transport waste from SRS for disposal at NTS using trucks via routes currently used by other LLW generators. These routes would avoid both the Las Vegas Valley and Hoover Dam.

Comment 3: I am perplexed that there is no DOE wide policy on how low-level radioactive waste is moved from the over 40 sites through out the U.S.

Response 3: With input from interested stakeholders, DOE is in the process of finalizing Transportation Protocol documents that provide departmental policy concerning transportation activities. These protocols do not change current agreements between DOE and States and tribes regarding the routing of DOE shipments.

Comment L2 Response. Page 1 of 2.

Again, I want to thank you and your agency for your interest and comments on SRS activities. Enclosed is a copy of the final EA and Finding of No Significant Impact (FONSI). If you or any of the commentors wish to receive further information concerning either this project or about DOE-SR's NEPA process, please contact me at P. O. Box A, Aiken, SC 29802, telephone (803) 725-1523 or e-mail: drew.grainger@srs.gov.

Sincerely,

for Andrew R. Grainger
NEPA Compliance Officer
Evaluation and Performance Division

VH-01-010

2 Enclosures:
(1) Final DOE/EA-1308
(2) FONSI

Comment L2 Response. Page 2 of 2.

Mel Carnahan
Governor

Richard A. Hanson
Commissioner

State of Missouri
OFFICE OF ADMINISTRATION
Post Office Box 809
Jefferson City
65102

Stan Perovich
Director
Division of General Services

OCT 17 REC'D

October 10, 2000

Andrew Grainger
NEPA Compliance Officer, Evaluation & Performance Division
Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, SC 29802

Dear Mr. Grainger:

Subject: 0009066 - Department of Energy
Draft Environmental Assessment for the Offsite Transportation of Certain Low-Level and Mixed Radioactive Waste from the Savannah River Site

The Missouri Federal Assistance Clearinghouse, in cooperation with state and local agencies interested or possibly affected, has completed the review on the above project application.

None of the agencies involved in the review had comments or recommendations to offer at this time. This concludes the Clearinghouse's review.

A copy of this letter is to be attached to the application as evidence of compliance with the State Clearinghouse requirements.

Sincerely,

Lois Pohl, Coordinator
Missouri Clearinghouse

LP:cm

Comment L3. Page 1 of 1.

RF/ECL

NOV 1 3 REC'D

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DOE OVERSIGHT DIVISION
761 EMORY VALLEY ROAD
OAK RIDGE, TENNESSEE 37830-7072

October 11, 2000

Andrew R. Grainger, NEPA Compliance Officer
US Department Of Energy
Savannah River Operations Office
PO Box A
Aiken SC 29802

Dear Mr. Grainger

Document NEPA Review: Draft Environmental Assessment for the Offsite Transportation of Certain Low-Level and Mixed Radioactive Waste from the Savannah River Site (SRS) for Treatment and Disposal at Commercial and Government Facilities

The Tennessee Department of Environment and Conservation, DOE Oversight Division (TDEC/DOE-O) has reviewed the subject document in accordance with the requirements of the National Environmental Policy Act (NEPA) and associated regulations of 40 CFR 1500-1508 and 10 CFR 1021 as implemented.

General Comments

The document should provide an estimate or breakdown of the wastes evaluated for the government owned Department of Energy (DOE) Oak Ridge Reservation (ORR). This breakdown should include estimated volumes, wastes classifications, and planned treatments.

Specifically, for wastes destined for the ORR:

a. What types of mixed and low-level wastes are planned to be sent, other than those proposed for the Toxic Substance Control Act (TSCA) incinerator?
b. How and where will these wastes or residuals be disposed?
c. Is funding for storage, treatment, and disposal of SRS waste proposed for ORR fully funded by Savannah River Site?
d. Does the Department Of Energy (DOE) anticipate a need to store any SRS mixed or low level wastes on the ORR while waiting treatment options or will the wastes have available treatment options on site?
e. Please provide an anticipated schedule of waste shipments proposed for the ORR.

Comment L4. Page 1 of 2.

Andrew R. Grainger
October 11, 2000
Page Two

Specific Comments

2.1 Proposed Action, Page 6-8, and Table 2-1 *"Listing of offsite waste processing centers and the grouped destinations evaluated in this EA"*, Page 7.

The EA should be corrected to indicate that:

1) The East Tennessee Materials and Energy Corporation (ETM&EC) commercial treatment capability in Oak Ridge, Tennessee will be available at the East Tennessee Technology Park (ETTP) site of the former DOE Oak Ridge Gaseous Diffusion Plant.

2) M4 Environmental is now in bankruptcy. The facility located in Oak Ridge Tennessee is closed pending decontamination and decommissioning by TDEC.

3) The Oak Ridge Gaseous Diffusion Plant is not a commercial treatment facility, but it is a DOE site undergoing Environmental Restoration. The site is also known as East Tennessee Technology Park. Through DOE's Reindustrialization efforts, it has leased its land and buildings to various commercial entities on this site. (Example: ETM&EC)

If you have any questions concerning these comments, please contact me at (865) 481-0995.

Sincerely

Earl C. Leming
Director

xc: Dodd Galbreath - TDEC
Eddie Nanny - TDEC
Rodney Nelson - DOE
Bob Poe - DOE
Robert Brown - DOE

Ecl545.12

Comment L4. Page 2 of 2.

Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, South Carolina 29802

FEB 16 2001

Mr. John W. Owsley, Director
Tennessee Department of Environment and Conservation
DOE Oversight Division
761 Emory Valley Road
Oak Ridge, TN 37830-7072

Dear Mr. Owsley:

SUBJECT: Response to Comments on Draft Environmental Assessment (EA) for the Proposed Offsite Transportation of Certain Low-level Radioactive Waste (LLW) and Mixed Low-Level Radioactive Waste (MLLW) from the Savannah River Site (SRS) for Treatment and Disposal at Commercial and Government Facilities

Thank you for your letter of October 11, 2000, with the comments from your agency on the Draft Transportation EA (DOE/EA-1308). I appreciate your interest and time in providing these comments to the Department of Energy (DOE) Savannah River Operations Office (SR). The responses to these comments are provided in the following paragraphs:

Comment 1: What types of mixed and low-level wastes are planned to be sent, other than those proposed for the Toxic Substance Control Act (TSCA) incinerator?

Response 1: The EA provides general descriptions of the waste forms and the shipment destinations. Decisions pertaining to selection of treatment and disposal for LLW and MLLW will be documented in an amended Record of Decision for the SRS Waste Management Environmental Impact Statement (DOE/EIS-0217). The near term actions encompassed by this EA and subsequent anticipated NEPA documentation would include the shipment of some MLLW to commercial treatment facilities in the Oak Ridge area. Presently, an immediate possibility exists for sending some mixed and low-level liquids to Diversified Scientific Services, Inc. and some debris type waste to East Tennessee Materials and Energy Corporation (ETM&EC) for treatment by utilizing the DOE broad-spectrum contract. As commercial vendor capabilities change, so will treatment vendors. DOE's procedures for ensuring that the operation of commercial facilities treating or disposing of DOE waste are protective of human health and the environment are described in DOE Manual 435.1-1, which implements DOE Order 435.1, Radioactive Waste Management. These references have been added to the EA.

Comment 2: How and where will these wastes or residuals be disposed?

Response 2: Decisions pertaining to LLW and MLLW treatment and disposal will be documented in an amended Record of Decision for the SRS Waste Management

Comment L4 Response. Page 1 of 3

Environmental Impact Statement (DOE/EIS-0217). However, the disposal of residuals will depend on the type of treatment employed. Debris type material, where no volume reduction occurs, would be returned to a DOE disposal facility or sent to Envirocare of Utah based on the radioisotopes and/or hazardous components. Liquids treated by thermal destruction would be disposed of in accordance with the disposal program established by the treatment facility because the residual ash is very small in volume and difficult to distinguish from other facility residuals. SRS would retain responsibility for treatment facility disposal as required by DOE Order 435.1, which ensures responsibility and compliant disposal.

Comment 3: Is funding for storage, treatment, and disposal of SRS waste proposed for ORR fully funded by Savannah River Site?

Response 3: The issue of funding for actual treatment and disposal of mixed waste is beyond the scope of this transportation analysis. However, funding will be secured by SRS prior to entering into any contract with a commercial treatment or disposal facility. There are no plans for off-SRS long-term storage of any waste. Furthermore, only waste destined for the TSCA incinerator is currently planned for ORR.

Comment 4: Does the Department of Energy (DOE) anticipate a need to store any SRS mixed or low level wastes on the ORR while waiting treatment options or will the wastes have available treatment options on site?

Response 4: There are no plans for off-SRS long-term storage of any waste.

Comment 5: Please provide an anticipated schedule of waste shipments proposed for the ORR.

Response 5: Shipments of debris type material could begin in the spring or summer of 2001 and will be documented in an amended Record of Decision for the SRS Waste Management Environmental Impact Statement (DOE/EIS-0217). Any shipments to ORR past October 2001 are contingent upon funding and regulatory requirements as delineated in SRS's Site Treatment Plan.

Comment 6: The EA should be corrected to indicate that the ETM&EC commercial treatment capability in Oak Ridge, Tennessee will be available at the East Tennessee Technology Park (ETTP) site of the former DOE Oak Ridge Gaseous Diffusion Plant.

Response 6: Table 2-1 of the EA has been revised to reflect these corrections.

Comment 7: The EA should be corrected to indicate that M4 Environmental is now in bankruptcy. The facility located in Oak Ridge, Tennessee is closed pending decontamination and decommissioning by TDEC.

Response 7: Table 2-1 of the EA has been revised to reflect these corrections.

Comment 8: The EA should be corrected to indicate that the Oak Ridge Gaseous Diffusion Plant is not a commercial treatment facility, but it is a DOE site undergoing Environmental Restoration. The site is also known as East Tennessee Technology Park. Through DOE's Reindustrialization efforts, it has leased its land and buildings to various commercial entities on this site (Example: ETM&EC).

Response 8: Table 2-1 of the EA has been revised to reflect these corrections.

Again, I want to thank you and your agency for the interest and comments on SRS activities. Enclosed is a copy of the final EA and Finding of No Significant Impact (FONSI). If you or any of the commentors wish to receive further information concerning either this project or about DOE-SR's NEPA process, please contact me at P. O. Box A, Aiken, SC 29802, telephone (803) 725-1523 or e-mail: drew.grainger@srs.gov.

Sincerely,

for Andrew R. Grainger
NEPA Compliance Officer
Evaluation and Performance Division

VH-01-003

2 Enclosures:
(1) Final DOE/EA-1308
(2) FONSI

Comment L4 Response. Page 3 of 3.

LOC INC
Oak Ridge Reservation
Local Oversight Committee

OCT 18 REC'D

October 12, 2000

Andrew R. Grainger
SR NEPA Compliance Officer
Engineering and Analysis Division
Savannah River Operations Office
773-42A, Room 212
Aiken, SC 29808

Subject: Comments on Draft Environmental Assessment (EA) for the Offsite Transportation of Certain Low-level and Mixed Radioactive Waste from the Savannah River Site (SRS) for Treatment and Disposal at Commercial and Government Facilities (September 2000; DOE/EA-1308)

Dear Mr. Grainger:

The Citizens' Advisory Panel (CAP) of the Oak Ridge Reservation Local Oversight Committee, Inc., (LOC) has studied the subject draft EA and provides the attached general and specific comments in light of the possible treatment of SRS wastes at facilities in or near Oak Ridge, Tennessee. Please note that these comments are submitted by the CAP only and have not been reviewed or approved by the LOC Board.

The CAP is primarily concerned that the proposed action is not in keeping with the Records of Decision for the SRS Waste Management (WM) Environmental Impact Statement (EIS) and the DOE WM Programmatic EIS. The choice of offsite transportation and disposal of SRS low-level and mixed wastes represents a new decision with numerous potential environmental impacts that have not been adequately addressed in this EA, the scope of which is limited to the transportation decision only. The CAP strongly urges DOE to revise the SRS WM EIS rather than attempting to take a new direction justified only under such a limited EA.

The LOC is a non-profit regional organization funded by the State of Tennessee and established to provide local government and citizen input into the environmental management and operation of the DOE's ORR. The Board of Directors of the LOC is composed of the elected and appointed officials of the seven surrounding counties and the City of Oak Ridge, and the Chair of the CAP. The CAP has up to 20 members with diverse backgrounds representing the greater ORR region; the CAP studies problems in depth and provides advice to the LOC Board and other governmental agencies.

If you have any questions regarding the CAP's comments, please feel free to contact me at (865) 483-1333.

Sincerely,

Norman A. Mulvenon
Chair, Citizens' Advisory Panel

Enclosure

Anderson • Meigs • Rhea • Roane • City of Oak Ridge • Knox • Loudon • Morgan

136 S. Illinois Avenue, Suite 208 • Oak Ridge, Tennessee 37830 • Phone (423) 483-1333 • Fax (423) 482-6572 • E-mail: loc@icx.net

Comment L5. Page 1 of 4.

cc: LOC Document Register
LOC Board
LOC CAP
Luther Gibson, Chair, ORSSAB
Earl Leming, Director, TDEC DOE-O
Justin Wilson, Special Policy Advisor to the Governor
Joe Sanders, General Counsel, TDEC
Ed Nanney, Director TDEC DRH
Pat Halsey, FFA Administrative Coordinator, DOE ORO
Leah Dever, Manager DOE ORO
Carolyn Huntoon, Asst. Manager for EM

Comment L5. Page 2 of 4.

Citizens' Advisory Panel (CAP) Comments on
Draft Environmental Assessment (EA) for the Offsite Transportation of Certain Low-level and Mixed Radioactive Waste from the Savannah River Site (SRS) for Treatment and Disposal at Commercial and Government Facilities (September 2000; DOE/EA-1308)

October 12, 2000

General Comments

The 1995 Savannah River Site Waste Management (WM) Environmental Impact Statement (EIS) looked at (and the subsequent Record of Decision decided on) a program of sending some wastes offsite for commercial treatment, then repatriating those wastes to SRS for storage or disposal on DOE property. The SRS WM EIS considered the environmental impacts of said storage and disposal, as well as the impacts of building the onsite facilities.

This EA notes that the onsite storage/disposal facilities SRS was planning to use (as described in the SRS WM EIS) were not built due to budget cuts and other factors. However, this EA does not consider the impacts of offsite disposal, using as a rationale that the private-sector companies that accept the waste for treatment are contractually responsible for its ultimate disposal. The National Environmental Policy Act requires agencies to consider the potential environmental impacts of their decisions. Signing a contract for disposition of DOE wastes does not absolve the federal government of the need to consider the potential environmental impacts of whatever the contractor does with that waste.

The CAP strongly objects to the lack of thorough evaluation of the storage/disposal options, as several of the waste treatment facilities are located in the immediate vicinity of the Oak Ridge Reservation. Conceivably, the Oak Ridge community could end up "holding the bag" if a commercial vendor doesn't fulfill its contract requirements or if DOE can't get rid of residue from material processed in the TSCA incinerator. Even if DOE is not legally responsible for post-treatment management of this waste, the impacts of post-treatment management are the indirect impacts of the federal action to ship these wastes for treatment, so DOE must evaluate what would and could happen with this waste; i.e., DOE must assess the impacts of the disposal of the SRS mixed wastes.

Historically, plutonium has been only an insignificant portion of Oak Ridge Reservation waste streams, thus the CAP is reluctant to endorse a waste-treatment scenario that would introduce it in quantity to local treatment facilities. In addition, waste equity issues should be part of this evaluation, as the Oak Ridge Reservation historically received wastes as the original location of a disposal compact for the eastern U.S. and continues to receive wastes for incineration from other sites within the DOE complex. This EA evaluates the incident-free dose for transportation, yet the dose to local residents from treatment activities is not considered.

Considering the number and significance of factors that remain in question, the EA should be expanded into an EIS to consider the multiple environmental impacts of the decision to transport SRS mixed waste for offsite treatment and disposal.

Specific Comments

The transportation accident analyses are based on a hypothetical plutonium-239 waste inventory, which was assumed to maximize estimated impacts. Are the various Oak Ridge treatment facilities capable of handling plutonium and licensed to do so? The EA should evaluate only the

Comment L5. Page 3 of 4.

wastes that are likely to be transported to each destination, based on the capabilities and licenses of the treatment facilities.

The EA needs to be more specific about what commercial waste operators in Oak Ridge are under consideration and where they are located. The descriptions given are a little cryptic.

The following comments refer to information presented in Table 3.5. Inaccurate information presented in this table causes the results of subsequent analyses to be incorrect.

- The general reader is unable to understand the material dispersion categories without a RADTRAN manual; clarification should be made.
- A better description of the waste is needed in order to properly evaluate the classifications given in the table. The classification of sludge as "immobile," i.e., an aerosol fraction of only 1E-6 might be questioned but is more than balanced by calling cases 2 and 3 a "small powder," i.e., an aerosol fraction of 0.1. Both categories (immobile and small powder) have a respirable fraction in RADTRAN of 0.05, which could be low (nonconservative).
- The EA quotes the same value for accident rates (unreferenced in this table) for rural, suburban, and urban areas; this indicates lack of sophistication for this important parameter. Also, the units are wrong for this parameter; the accident rate should be accidents per kilometer (see pages 23 and 27).
- The values given for truck accident rates are somewhat high for rural interstates and somewhat low for urban interstates. Since the urban fraction is low for the analyses of interest, the overall effect for these two may be slightly conservative. However, the high suburban fraction for the Oak Ridge route may make the overall rate nonconservative in that case.
- The actual accident rate will vary strongly with road type, and no matter where the waste is processed in the Oak Ridge region; there will be traffic in Roane County on two-lane or multi-lane undivided roads. Rural, two-lane roads typically have an accident rate about four times the rural interstate value. The rate for multi-lane undivided rural roads runs about eight times the rural interstate value. Certainly for the Roane County portion of the route, the number of truck accidents is underestimated.
- The average rail accident rate varies much less with population density than with track type. The number of accidents in yards is four times higher than mainline and the former is probably more characteristic of the Oak Ridge Reservation track. In addition, the 11 miles of track under DOE ownership at East Tennessee Technology Park (and leased to the Community Reuse Organization of East Tennessee) is known to be in substandard condition. For transportation in the Oak Ridge area, the number of rail accidents is likely underestimated.

Despite the inaccuracies associated with the accident rates, the incident-free dose is significantly more important than the accident dose. The accidents are more important regarding their direct impact on rates of injury, disability, and death.

Comment L5. Page 4 of 4.

Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, South Carolina 29802

FEB 16 2001

Mr. Norman A. Mulvenon, Chair
Oak Ridge Reservation Local Oversight Committee, Inc.
Citizen's Advisory Panel
136 S. Illinois Avenue, Suite 208
Oak Ridge, TN 37830

Dear Mr. Mulvenon:

SUBJECT: Response to Comments on Draft Environmental Assessment (EA) for the Proposed Offsite Transportation of Certain Low-Level Radioactive Waste (LLW) and Mixed Low-Level Radioactive Waste (MLLW) from the Savannah River Site (SRS) for Treatment and Disposal at Commercial and Government Facilities

Thank you for your letter of October 12, 2000, with the comments from the Citizen's Advisory Panel (CAP) on the Draft Transportation EA (DOE/EA-1308). I appreciate your interest and time in providing these comments to the Department of Energy (DOE) Savannah River Operations Office (SR). The responses to these comments are provided in the following paragraphs:

Comment 1: The CAP is primarily concerned that the proposed action is not in keeping with the Records of Decision for the SRS Waste Management (WM) Environmental Impact Statement (EIS) and the DOE WM Programmatic EIS. The choice of offsite transportation and disposal of SRS low-level and mixed wastes represent a new decision with numerous potential environmental impacts that have not been adequately addressed in this EA, the scope of which is limited to the transportation decision only. The CAP strongly urges DOE to revise the SRS WM EIS rather than attempting to take a new direction justified only under such a limited EA.

Response 1: As stated in the EA, if the proposed action were selected, an amended ROD would have to be issued by DOE for the SRWMEIS. The decision in the ROD would be to further implement the Moderate Treatment Configuration Alternative through the offsite transportation of certain LLW and MLLW for treatment and/or final disposal at commercial and Government facilities. This decision would be based on the thorough environmental impact analysis contained in the EA, SRS WM EIS and WM Programmatic EIS.

Comment 2: The EA must be revised to assess the impacts of the disposal of the SRS mixed wastes.

Response 2: DOE agrees the impacts associated with disposal of MLLW or LLW must be analyzed prior to selecting disposal locations. The impacts associated with disposal at government facilities have been thoroughly evaluated in the SRS WM EIS and the WM Programmatic EIS. However, the proposed action described in this EA is the transportation of five waste forms of LLW and MLLW from SRS to offsite commercial and Government facilities. Decisions pertaining to treatment and disposal of LLW and MLLW will be documented through a Record of Decision to SRS WM EIS as described in Response 1.

Comment L5 Response. Page 1 of 5.

Comment 3: The dose to local residents from treatment activities is not considered.

Response 3: The impacts of treatment and disposal operations at Government sites are evaluated in DOE/EIS-200-F, Programmatic EIS for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Waste. This EA did not assess local impacts associated with the ongoing operation of an already-licensed offsite vendor facility proposed to receive DOE waste for treatment or disposal. DOE's proposed waste load associated with this ongoing operation will be a small part of that facility's throughput. The facility would operate well within its established standards and the vendor's part of this proposal is of low potential for significant impacts. DOE's procedures for ensuring that the operation of commercial facilities treating or disposing of DOE waste are protective of human health and the environment are described in DOE Manual 435.1-1, which implements DOE Order 435.1, Radioactive Waste Management.

Comment 4: Are the various Oak Ridge treatment facilities capable of handling plutonium and licensed to do so? The EA should only evaluate the wastes that are likely to be transported to each destination, based on the capabilities and licenses of the treatment facilities.

Response 4: The transportation analysis in this EA is intended to portray risks that are equal to or greater than those which would result from the proposed action. DOE could not ship waste to commercial facilities that would either exceed their licensed capabilities or not be encompassed by their waste acceptance criteria.

Comment 5: The EA needs to be more specific about what commercial waste operators in Oak Ridge are under consideration and where they are located.

Response 5: Table 2-1 of the EA has been revised to reflect the updated list of commercial waste operators being considered and their location.

Comment 6: The EA should be clarified for the general reader regarding the material dispersion categories.

Response 6: Table 3-5 has been modified to replace numeric values for Material Dispersion Categories with descriptive titles.

Comment 7: The EA needs to include a better description of the wastes in order to properly evaluate the classifications given in Table 1-1.

Response 7: Examples of each waste form and their origin are provided in Table 1-1. The five general waste forms were defined to provide a basis for the bounding accident analyses included in the EA. As stated in the EA, these waste forms are hypothetical worst case assumptions used as a basis for the RADTRAN modeling scenarios. There are presently no known LLW or MLLW forms onsite that would approach the 99 nCi/g limit that would be shipped offsite.

Comment 8: The accident rates for rural, suburban, and urban areas in the EA are the same value, indicating a lack of sophistication for this important parameter.

Response 8: In the interest of portraying impacts equal to or greater than those that DOE expects, conservative values for accident rates involving long haul semi trucks and railroads were selected. Due to the uncertainty involved in the exact route to be chosen, more realistic (i.e. less conservative) accident rates were not utilized. A uniform truck accident rate based on National Transportation Safety Board data of 1.4 per million vehicle kilometers was used (i.e., the highest value for accident rates), and is reported in Table 3-5 of the EA. In February 2000, Sandia National Laboratories (SNL) issued a report (available at http://ttd.sandia.gov/nrc/docs.htm#Modal_I) that examined risks associated with the transportation of spent fuel from commercial reactor sites to possible interim storage sites and permanent geological repositories (SNL 2000). As part of this study, truck and train accident statistics were gathered. Although the RADTRAN code is designed to accept distinct accident rates for rural, suburban, and urban areas, "such detailed data are not usually available and more generalized accident rates must be used. (SNL 2000)." The report also states that interstate highway accident rates are of primary interest because of Department of Transportation regulations for transport of radioactive material (SNL 2000). The SNL report cited results from three studies, among others, that included urban and non-urban accident rates. These results are summarized in the table below. The accident rates for urban and non-urban areas are shown to be generally comparable. As can be seen from the referenced values, the transportation accident rates utilized in the EA are conservative (i.e., 1.4E-6).

Truck Accident Rates (Accidents per Million Vehicle-Kilometers) [based on Table 3.6 of (SNL 2000)]

Source	Period	Urban Rate	Non-Urban Rate	Comments
California Highway Department Study (SNL 1982)	1980	0.8	1.1	truck/trailers on freeways
	1981	0.7	1.0	total accidents
Bureau of Motor Carrier Safety Data (ANL 1994)	1984	0.20	0.28	interstate highways
ANL Longitudinal Review Data (ANL 1999)	1986-88	0.36	0.20	interstate highway

References:

ANL (Argonne National Laboratory), 1994 {Authors: C. Saricks and T.K. Kvitek}. *Longitudinal Review of State-Level Accident Statistics for Carriers of Interstate Freight*, ANL/ESD/TM-68, Argonne, IL.

ANL (Argonne National Laboratory), 1999 {Authors: C.L. Saricks and M.M. Tompkins}. *State-Level Accident Statistics of Surface Freight Transportation, A Reexamination*, ANL/ESD/TM-150, Argonne, IL.

Comment L5 Response. Page 3 of 5.

SNL (Sandia National Laboratories), 1982 {Authors: R.N. Smith and E.L. Wilmot}. *Truck Accident and Fatality Rates Calculated from California Highway Accident Statistics for 1980 and 1981*, SAND82-7066, Albuquerque, NM.

SNL (Sandia National Laboratories), 2000. *Reexamination of Spent Fuel Shipment Risk Estimates*, {Prepared for U.S. Nuclear Regulatory Commission}, NUREG/CR-6672 or SAND2000-0234 (Vols.1, 2), Albuquerque, NM.

Comment 9: The accident rate should be cited as accidents per kilometer.

Response 9: The EA has been changed to reflect this correction.

Comment 10: The high suburban fraction (i.e., 32.5%) of the Oak Ridge route may make the overall accident rate nonconservative for that scenario.

Response 10: The accident rate used in the EA is conservative and allows a meaningful comparison of the alternatives. Please see the response to Comment 7 of this letter for a discussion of the accident rates used in the EA.

Comment 11: The number of truck accidents is underestimated for the Roane County portion of the route.

Response 11: To create a bounding scenario for each destination, the RADTRAN scenarios analyzed sending all of the waste to each of the six destinations. This bounding scenario was based on DOT statistics for accident rates. The only waste that would be transported to facilities in the Oak Ridge area would meet the waste acceptance criteria of those operations (and would be less than 10 percent of the waste evaluated in the EA). Therefore the number of truck accidents for the Roane County portion of the route would be an overestimate, rather than an underestimate.

Comment 12: The number of rail accidents is underestimated for the Oak Ridge area.

Response 12: Based on the assumptions used in the bounding scenario analyzed in this EA (i.e., all of the waste is shipped to each of the six destinations by either truck or rail), the number of rail accidents for the Roane County portion of the route would be an overestimate, rather than an underestimate. In addition, a very small portion of the rail shipments would be sent to the Oak Ridge area.

Again, I want to thank you and your agency for your interest and comments on SRS activities. Enclosed is a copy of the final EA and Finding of No Significant Impact (FONSI). If you or any of the commentors wish to receive further information concerning either this project or

about DOE-SR's NEPA process, please contact me at P. O. Box A, Aiken, SC 29802, telephone (803) 725-1523 or e-mail: drew.grainger@srs.gov.

Sincerely,

for Andrew R. Grainger
NEPA Compliance Officer
Evaluation and Performance Division

VH-01-005

2 Enclosures:
(1) Final DOE/EA-1308
(2) FONSI

Comment L5 Response. Page 5 of 5.

GARY E. JOHNSON
GOVERNOR

State of New Mexico
ENVIRONMENT DEPARTMENT
Office of Budget & Finance
Harold Runnels Building
1190 St. Francis Drive, P.O. Box 26110
Santa Fe, New Mexico 87502-6110
Telephone (505) 827-0188
Fax (505) 827-0310
www.nmenv.state.nm.us

PETER MAGGIORE
SECRETARY

PAUL R. RITZMA
DEPUTY SECRETARY

October 17, 2000

Andrew R. Grainger
NEPA Compliance Officer
Evaluation and Performance Division
Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, South Carolina 29802

Dear Mr. Grainger:

RE: DRAFT ENVIRONMENTAL ASSESSMENT FOR THE OFFSITE TRANSPORTATION OF CERTAIN LOW-LEVEL AND MIXED RADIOACTIVE WASTE FROM THE SAVANNAH RIVER SITE FOR TREATMENT AND DISPOSAL AT COMMERCIAL AND GOVERNMENT FACILITIES (DOE/EA-1308)

This transmits New Mexico Environment Department (NMED) staff comments concerning the above-referenced Draft Environmental Assessment (DEA).

The transportation in New Mexico of Low-level radioactive waste (LLW) and mixed low-level radioactive waste (MLLW) falls under the jurisdiction of the State's Department of Public Safety. The DEA identifies transportation of LLW to Eunice, New Mexico, for treatment, storage and/or disposal at Waste Control Specialists (WCS). The NMED's Hazardous Waste Bureau is concerned that it does not have an application nor has it been officially contacted by representatives of WCS for a RCRA Treatment, Storage, or Disposal Permit. Any application for a LLW disposal permit would have to go through the Radiation Licensing Program in the Field Services Division. The RCRA Permit must be issued before construction begins.

Following are a number of observations related to air quality. The DEA does not provide sufficient information to determine the potential air quality impacts of the proposed action. The potential impacts from the spill of hazardous materials in mixed low-level waste are not addressed. The document uses the phrase "source term" without defining it. Also, it is unclear why SRS is unable to meet South Carolina requirements for disposal.

40 CFR Part 61, Subpart H is the National Emission Standards for Emissions of Radionuclides Other than Radon from Department of Energy Facilities. The DEA should address these standards and discuss how the proposed action would or would not comply with them. If a standard is not applicable to an action, the DEA should discuss why it is not and which

Comment L6. Page 1 of 2.

standards may be applicable. The aforementioned applicable transportation related standards should be addressed and referenced in the DEA.

10 CFR 1021.301 and 40 CFR 1502.8 require that NEPA documents be written in plain language. The Department of Energy's *Environmental Assessment Checklist* (August 1994) includes this guidance. The DEA, however, is replete with technical terminology; the public would have a very difficult time understanding the environmental impacts of the proposal by reviewing this document. We strongly recommend that the language be clarified; it is unclear to us what the air quality impacts would be from the proposal.

We appreciate the opportunity to comment on this document. Please let us know if you have any questions on the above.

Sincerely,

Gedi Cibas, Ph.D.
Environmental Impact Review Coordinator

NMED File No. 1402ER

Comment L6. Page 2 of 2.

Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, South Carolina 29802

FEB 16 2001

Dr. Gedi Cibas, Environmental Impact Review Coordinator
State of New Mexico Environmental Department
1190 St. Francis Drive, P. O. Box 26110
Santa Fe, NM 87502-6110

Dear Dr. Cibas:

SUBJECT: Response to Comments on Draft Environmental Assessment (EA) for the Proposed Offsite Transportation of Certain Low-level Radioactive Waste (LLW) and Mixed Low-level Radioactive Waste (MLLW) from the Savannah River Site (SRS) for Treatment and Disposal at Commercial and Government Facilities

Thank you for your letter of October 17, 2000, with your agency's comments on the Draft Transportation EA (DOE/EA-1308). I appreciate your interest and time in providing these comments to the Department of Energy (DOE) Savannah River Operations Office (SR). The responses to these comments are provided in the following paragraphs:

Comment 1: The transportation in New Mexico of LLW and MLLW falls under the jurisdiction of the State's Department of Public Safety. The DEA identifies transportation of LLW to Eunice, New Mexico, for treatment, storage and/or disposal at Waste Control Specialists (WCS). The New Mexico Environmental Department Hazardous Waste Bureau is concerned that it does not have an application, nor has it been officially contacted by representatives of WCS, for a RCRA Treatment, Storage, or Disposal Permit. Any application for a LLW disposal permit would have to go through the Radiation Licensing Program in the Field Services Division. The RCRA Permit must be issued before construction begins.

Response 1: Eunice, New Mexico, was used as the endpoint destination for the RADTRAN modeling, since it was the closest municipality to the WCS facility, located in Andrews County, Texas. DOE has no intention to ship LLW or MLLW to Eunice, New Mexico. The EA has been revised to clarify this matter.

Comment 2: The DEA does not provide sufficient information to determine the potential air quality impacts of the proposed action.

Response 2: The only air quality impacts associated with the proposed action would result from the release of respirable radioactive particulates and subsequent inhalation by individuals downwind of an accident, either directly or after resuspension. These impacts were addressed through the RADTRAN modeling.

Comment 3: The potential impacts from the spill of hazardous materials in MLLW are not addressed.

Response 3: The hazardous materials in the MLLW that would be shipped to WCS under the proposed action would be solids that could not be released through a spill. The impacts of transportation of any mixed waste that would be shipped to Oak Ridge, Hanford Site, or an adjacent commercial facility are evaluated in DOE/EIS-200-F, Programmatic EIS for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Waste.

Comment L6 Response. Page 1 of 3.

Comment 4: The document uses the phrase "source term" without defining it.

Response 4: The EA has been modified to replace the use of source term with the more descriptive phrase "case". The various "cases" under discussion are defined in the EA text.

Comment 5: It is unclear in the EA why SRS is unable to meet South Carolina requirements for disposal.

Response 5: SRS does not have a naturally occurring confining clay layer of sufficient thickness to meet South Carolina requirements for a RCRA disposal unit as defined in South Carolina Hazardous Waste Management Regulations R.61-104.IV.C.1.a. This information has been added to the EA for clarification.

Comment 6: 40 CFR Part 61, Subpart H is the National Emission Standards for Emissions of Radionuclides Other than Radon from Department of Energy Facilities. The DEA should address these standards and discuss how the proposed action would or would not comply with them. If a standard is not applicable to an action, the DEA should discuss why it is not and which standards may be applicable.

Response 6: The proposed action described in this EA is limited to the transportation of five waste forms of LLW and MLLW from SRS to offsite commercial and Government facilities. The impacts associated with either waste generation activities at SRS and the treatment and disposal operations at the endpoint facilities are not treated in this EA. The emissions from DOE facilities have been addressed in DOE/EIS-0217, Savannah River Site Waste Management and DOE/EIS-200-F, Programmatic EIS for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Waste. The emissions from commercial facilities are addressed and evaluated through their licensing and permitting processes.

Comment 7: The aforementioned applicable transportation related standards should be addressed and referenced in the DEA.

Response 7: There are no transportation-related standards for the emissions of radionuclides in 40 CFR 61 Subpart H.

Comment 8: 10 CFR 1021.301 and 40 CFR 1502.8 require that NEPA documents be written in plain language. The Department of Energy's Environmental Assessment Checklist (August 1994) includes this guidance. The DEA, however, is replete with technical terminology; the public would have a very difficult time understanding the environmental impacts of the proposal by reviewing this document.

Response 8: A written presentation of analyses, such as are provided in this EA, often requires the use of technical terminology to adequately describe the modeling or results of the impact evaluations. NEPA documents are written to be used by both technical professionals and the nonprofessional stakeholder or member of the general public. This EA is written in plain language, avoiding jargon as recommended by DOE's Environmental Assessment Checklist, but also includes the use of the appropriate technical terminology. This is necessary to properly describe the analyses and results from a technical perspective. However, the bottom line results have been summarized in plain language (e.g., no latent cancer fatalities are expected from the proposed action; based on statistics up to nine non-fatal accidents could occur and no fatal accidents are expected). DOE-SR wants to make every effort to have NEPA documents that the nonprofessional stakeholder/general public can understand. Therefore, a glossary of technical terms has been included in the EA to provide clarification of this necessary terminology presented in the EA.

Comment 9: It is strongly recommended that the language in the EA be clarified, as currently stated, it is unclear as to what the air quality impacts would result from the proposed action.

Response 9: As stated on page 18 of the EA, the only air quality impacts associated with the proposed action would result from the release of respirable radioactive particulates and subsequent inhalation by individuals downwind of the accident, either directly or after resuspension. These impacts were addressed through the RADTRAN modeling.

Again, I want to thank you and your agency for the interest and comments on SRS activities. Enclosed is a copy of the final EA and Finding of No Significant Impact (FONSI). If you or any of the commentors wish to receive further information concerning either this project, or about DOE-SR's NEPA process, please contact me at P. O. Box A, Aiken, SC 29802, telephone (803) 725-1523, or e-mail: drew.grainger@srs.gov.

Sincerely,

for Andrew R. Grainger
NEPA Compliance Officer
Evaluation and Performance Division

EPD:SAD:lgs

VH-01-004

2 Enclosures:
(1) Final DOE/EA-1308
(2) FONSI

Comment L6 Response. Page 3 of 3.

KENNY C. GUINN
Governor

STATE OF NEVADA

ROBERT R. LOUX
Executive Director

OCT 2 3 REC'D

OFFICE OF THE GOVERNOR
AGENCY FOR NUCLEAR PROJECTS
1802 N. Carson Street, Suite 252
Carson City, Nevada 89701
Telephone: (775) 687-3744 • Fax: (775) 687-5277
E-mail: nwpo@govmail.state.nv.us
October 18, 2000

Mr. Andrew R Grainger
NEPA Compliance Office
Evaluation and Performance Division
Department of Energy
Savannah River Operations office
P.O. Box A
Aiken, South Carolina 29802

RE: State of Nevada Comments -- Draft Environmental Assessment (EA) for the Offsite Transportation of Certain Low-Level and Mixed Radioactive Waste from the Savannah River Site for Treatment and Disposal at Commercial and Government Facilities (DOE/EA-1308)

Dear Mr. Grainger

The State of Nevada appreciates the opportunity to comment on the above referenced Draft Environmental Assessment (EA). The EA assess the potential environmental impacts of shipping approximately 4.8 million cubic feet (136,000 cubic meters) of low level radioactive waste (LLW) and mixed low level radioactive waste (MLLW) from DOE's Savannah River Site (SRS) to one or more offsite commercial and/or government sites for treatment and disposal. According to the EA, DOE is proposing this action because treatment and disposal capabilities for these wastes do not exist at SRS and/or it would be more beneficial for DOE to dispose of these wastes at another location.

General Comments:

It is most disturbing that, as part of the Proposed Action, the EA assumes that LLW and MLLW would be transported by rail to Las Vegas, where it would be transferred from rail cars to trucks for the rest of the trip to the Nevada Test Site (NTS). The State of Nevada, Clark County, the City of Las Vegas, the City of North Las Vegas, the City of Henderson, and Boulder City are all on record strongly opposing shipments of LLW through the Clark County/Las Vegas metropolitan area. This is one of the most heavily urbanized area in the country and is characterized by significant traffic congestion and high population densities. The Las Vegas area is also especially vulnerable to severe impact to its tourism-

L-68

Comment L7. Page 1 of 4.

based economy in the event of accidents or incidents involving radioactive materials. (Over 20 million tourists visit Las Vegas each year.)

Over the past 3 years, the State of Nevada has worked closely with NTS officials to identify alternative highway routes for LLW to NTS that avoid the Las Vegas Valley. NTS, in turn, has worked successfully with other DOE waste generator sites to require that these alternative routes be used. The State strongly objects to and will actively oppose any proposal that would require the intermodal transfer of LLW and MLLW in Las Vegas or elsewhere in Nevada.

The fact that this matter has, again, arisen in the context of an EA produced by a potential NTS waste generator site is renewed evidence of the need for a complex-wide understanding of and policy for transportation requirements that will apply to the disposal of any LLW and MLLW at the NTS.

Specific Comments:

The State of Nevada's review of the referenced EA suggests that DOE should not issue a Finding of No Significant Impact (FONSI) for the proposed actions as currently defined. In fact, we strongly suggest that DOE withdraw the EA as written. In addition, if DOE officials believe the proposed actions are indeed necessary, then we contend that a new [Programmatic] EA and/or an Environmental Impact Statement (EIS) be prepared.

DOE officials have suggested that treatment and disposal operations for LLW and MLLW at government facilities other than at SRS are beyond the scope of the EA. It is further stated that government facilities, where treatment and disposal might occur, are separately covered though appropriate National Environmental Policy Act (NEPA) documentation (EA page 6). However, no evidence is offered to support these statements. It must be recognized that DOE is legally obligated to identify a range of actions, alternatives, and impacts to be considered for every major federal action affecting the quality of the human and natural environment. The EA simply does not meet this basic legal requirement.

We note that NEPA compliance for expanded disposal actions at the Nevada Test Site (NTS) and the Hanford Site are <u>not</u> specifically addressed in the document. We believe acceptance of new LLW streams at the Hanford site will require completion of a new Site-Wide EIS. As for the NTS, additional NEPA documentation would be required for any transportation alternatives involving rail services. (Rail access to NTS is non-existent and, while DOE has attempted to "study" the intermodal [rail -to - truck] shipping concept, no formal NEPA documentation has been processed to date).

In reference to MLLW, an evaluation of potential complex-wide treatment alternatives -- approved under the Federal Facilities Compliance Act -- is missing from the document. The document should contain a regulatory assessment of potential treatment alternatives currently available through

Comment L7. Page 2 of 4.

Federal Facility Compliance Act (FFCA) approved Site Treatment Plans that were negotiated between the States and DOE. As for MLLW disposal, DOE's Nevada Operations office (DOE/NV) has yet to acquire a Resource Conservation and Recovery Act (RCRA) Part B permit to operate a MLLW disposal facility on the NTS. (We do acknowledge, however, that DOE/NV is developing a permit application for the development of such a facility.)

Given the complexities associated with assessing alternatives for treatment and disposal of the referenced LLW and MLLW streams at SRS, Nevada officials strongly suggest that DOE initiate a broad based NEPA scoping process (as per CEQ 40 CFR . 1508.25). The public scoping requirements prescribed under NEPA should be followed to fully identify the range of actions, alternatives, and impacts for the treatment and disposal of the referenced waste streams. Because DOE failed to initiate a scoping process for disposition of the referenced waste streams, SRS officials were unable to identify a path forward for the treatment and disposition of the wastes identified in the EA. This is simply not acceptable.

DOE must specifically define and assess the treatment alternatives for LLW and MLLW that would be conducted in the DOE complex [including the Savannah River Site] and/or at a commercial facility. Specifically, the identification and selection of potential onsite and offsite treatment and disposal alternatives is a DOE complex-wide responsibility that must be coordinated at the DOE headquarters level. The decision to select a given treatment alternative or disposal option at a given DOE site or at a commercial facility is not a responsibility that can be delegated to a "vendor" -- as indicated in the EA. While vendors may be responsible for certain federal, state, and local licenses and permits (i.e., for "managing" radioactive waste streams), they cannot be authorized ownership and control of DOE wastes. We contend that cradle to grave management of defense waste is a federal responsibility. This is particularly critical when final disposal of those wastes occur at a federal site like the NTS.

If DOE does decide to relinquish ownership and control of a given waste stream to a commercial vendor for treatment, then the given waste stream may well be deemed ineligible for disposal at a DOE facility. The State of Nevada would protest acceptance of a defense LLW at the NTS for disposal if the waste were in the sole control and ownership of a private vendor. And if the waste were mixed, we would refuse acceptance. We believe the State of Washington may well take the same position.

Throughout the EA, continual references are made to Beatty, Nevada as the destination for LLW and MLLW from SRS. Beatty is not on the Nevada Test Site. While there was a commercial LLW disposal facility located at Beatty, that site is closed, and under no circumstances would the State of Nevada allow any further disposal of LLW at Beatty. (Beatty is a State of Nevada owned and controlled facility.) The referenced EA appears to suggest that Beatty is an active LLW disposal site for both LLW and MLLW. This is simply not the case. Beatty has been closed to LLW disposal since 1992.

Comment L7. Page 3 of 4.

The assumption that waste can be shipped via rail to Las Vegas, Nevada, offloaded, and then trucked to NTS is faulty. This assumption underlies all of the transportation analyses reported in the EA. Under existing understandings between the State of Nevada and DOE, no intermodal transfer of LLW or MLLW is contemplated in Las Vegas or elsewhere in Nevada, and all shipments of LLW and MLLW destined for disposal at NTS must be shipped on highway routes that avoid the Las Vegas Valley.

Again, the State's review of the referenced EA suggests that a FONSI should not be issued. If DOE officials believe the proposed actions defined in the EA are indeed necessary and must be pursued, we strongly believe that a new "Programmatic" EA and/or an Environmental Impact Statement (EIS) be prepared .

If you have any questions please feel free to contact me or the State of Nevada regulators at the Nevada Division of Environmental Protection - Paul Liebendorfer, Karen Beckley, or John Walker at (775 687-4670 ex 3039, 3033, or 3027 respectively) .

Sincerely

Robert R. Loux
Executive Director

JBW/RRL
cc: Victoria Soberinsky, Governors Office
Heather Elliott, State Clearinghouse
Allen Biaggi, NDEP
Mike McKinnon, NDEP/LV
Stan Marshall, Health Division
Oscar B. Goodman, Mayor City of Las Vegas
Ann Beauchesne, NGA
Max Power, State of Washington
Kathleen Trever, State of Idaho
Greg Lewis, State of New Mexico
John Owsley, State of Tennessee
David Wilson, State of South Carolina
Dr. Carolyn Huntoon, EM1
Cathy Carlson, DOE/NV
Carl Gertz, DOE/NV

Comment L7. Page 4 of 4.

Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, South Carolina 29802

FEB 16 2001

Mr. Robert R. Loux, Executive Director
Office of the Governor
Agency for Nuclear Projects
1802 North Carson Street, Suite 252
Carson City, NV 89710

Dear Mr. Loux:

SUBJECT: Response to Comments on Draft Environmental Assessment (EA) for the Proposed Offsite Transportation of Certain Low-Level Radioactive Waste (LLW) and Mixed Low-Level Radioactive Waste (MLLW) from the Savannah River Site (SRS) for Treatment and Disposal at Commercial and Government Facilities

Thank you for your letter of October 18, 2000, with your agency's comments on the Draft Transportation EA (DOE/EA-1308). I appreciate your interest and time in providing these comments to the Department of Energy (DOE) Savannah River Operations Office (SR). The responses to these comments are provided in the following paragraphs:

Comment 1: The State of Nevada, Clark County, the City of Las Vegas, the City of North Las Vegas, the City of Henderson, and Boulder City are all on record strongly opposing shipments of LLW through the Clark County/Las Vegas metropolitan area.

Response 1: DOE would transport waste from SRS for disposal at Nevada Test Site (NTS) using trucks via routes currently used by other LLW generators. These routes would avoid both the Las Vegas Valley and Hoover Dam.

Comment 2: The State of Nevada strongly objects to and will actively oppose any proposal that would require the intermodal transfer of LLW and MLLW in Las Vegas or elsewhere in Nevada.

Response 2: DOE is not proposing to establish an intermodal transfer station for LLW and MLLW shipments from SRS to NTS. The EA has been revised to clarify this point.

Comment 3: The fact that this matter has, again, arisen in the context of an EA produced by a potential NTS waste generator site is renewed evidence of the need for a complex-wide understanding of and policy for transportation requirements that will apply to the disposal of any LLW and MLLW at the NTS.

Response 3: With input from interested stakeholders, DOE is in the process of developing Transportation Protocol documents that will provide departmental policy concerning

Comment L7 Response. Page 1 of 5.

transportation activities. These protocols do not change current agreements between DOE and States and tribes regarding the routing of DOE shipments.

Comment 4: If DOE believes that an intermodal transfer facility needs to be built in Nevada, the State of Nevada contends that a new Programmatic EA and/or and EIS be prepared.

Response 4: DOE is not proposing to establish an intermodal transfer station for LLW and MLLW shipments from SRS to NTS. The EA has been revised to clarify this point.

Comment 5: DOE officials have suggested that treatment and disposal operations for LLW and MLLW at government facilities other than at SRS are beyond the scope of the EA. It is further stated that government facilities, where treatment and disposal might occur, are separately covered through appropriate NEPA documentation. However, no evidence is offered to support these statements.

Response 5: The impacts of treatment and disposal operations at Government sites are evaluated in DOE/EIS-200-F, Programmatic EIS for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Waste. The requested reference has been added to the EA.

Comment 6: The acceptance of new LLW streams at Hanford Site will require completion of a new Site-wide EIS.

Response 6: The Hanford Site Solid (Radioactive and Hazardous) Waste Program Environmental Impact Statement is being prepared, in part, to address the treatment and disposal of LLW and MLLW at Hanford. In addition, receipt of offsite waste must be planned through Hanford's waste forecasting system (Solid Waste Integrated Forecast Technical Reports).

Comment 7: Rail access to NTS is non-existent and, while DOE has attempted to "study" the intermodal (rail-to-truck) shipping concept, no formal NEPA documentation has been processed to date. Additional NEPA documentation would be required for any transportation alternative involving rail access to NTS.

Response 7: DOE is not proposing to establish an intermodal transfer station for LLW and MLLW shipments from SRS to NTS. The EA has been revised to clarify this point.

Comment 8: In reference to MLLW, an evaluation of potential complex-wide treatment alternatives, approved under the Federal Facilities Compliance Act, is missing from the EA.

Response 8: The scope of this EA is to evaluate the transportation risk associated with the shipment of LLW and MLLW to various sites. The evaluation of treatment alternatives completed in accordance with the Federal Facilities Compliance Act of 1992 has been incorporated into DOE/EIS-0217, Savannah River Site Waste Management and

DOE/EIS-200-F, Programmatic EIS for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Waste.

Comment 9: Given the complexities associated with assessing alternatives for treatment and disposal of the referenced LLW and MLLW streams at SRS, Nevada officials strongly suggest that DOE initiate a broad-based NEPA scoping process. Because DOE failed to initiate a scoping process for disposition of the referenced waste streams, SRS officials were unable to identify a path forward for the treatment and disposal of wastes identified in the EA. This is simply not acceptable.

Response 9: DOE understands this concern and the following describes how a more complete assessment has been performed, including a broad-based NEPA scoping process. The proposed action described in this EA is transportation of five waste forms of LLW and MLLW from SRS to offsite commercial and Government facilities. The impacts associated with treatment and disposal operations at SRS, and other DOE or commercial facilities are not covered in this EA. The impacts at the vendor facilities due to the proposed action is of low potential for significant impacts since these facilities would continue to operate within their existing licensed capabilities and established waste acceptance criteria. The impacts associated with treatment and disposal are analyzed in other NEPA documents such as DOE/EIS-0217, SRS WM EIS, and DOE/EIS-0200-F, Programmatic EIS for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Waste. A detailed scoping process was performed for DOE/EIS-0200-F, Programmatic EIS. Decisions pertaining to the selection of treatment and disposal locations are documented through Records of Decisions. Based on the results of the Transportation Impact Analysis and these other NEPA documents, DOE will publish additional treatment and disposal decisions relating to SRS LLW and MLLW.

Comment 10: The decision to select a given treatment alternative or disposal option at a given DOE site or at a commercial facility is not a responsibility that can be delegated to a "vendor", as indicated in the EA. While vendors may be responsible for certain federal, state, and local licenses and permits, they cannot be authorized ownership and control of DOE wastes. The State of Nevada contends that cradle to grave management of defense wastes is a federal responsibility. This is particularly critical when final disposal of those wastes occur at a federal site like NTS.

Response 10: SRS has cradle to grave responsibility for its wastes. SRS does not relinquish ownership for treatment or the responsibility for disposal. DOE's procedures for ensuring that the operation of commercial facilities treating or disposing of DOE waste are protective of human health and the environment are described in DOE Manual 435.1-1, which implements DOE Order 435.1, Radioactive Waste Management.

Comment 11: If DOE does decide to relinquish ownership and control of a given waste stream to a commercial vendor for treatment, then the given waste stream may well be deemed ineligible for disposal at a DOE facility. The State of Nevada would protest

acceptance of a defense LLW at the NTS for disposal if the waste were in the sole control and ownership of a private vendor. And if the waste were mixed, the State of Nevada would refuse acceptance. The State of Nevada believes that the State of Washington may well take the same position.

Response 11: DOE-SR does not relinquish ownership or control for treatment or the responsibility for disposal. DOE's procedures for ensuring that the operation of commercial facilities treating or disposing of DOE waste are protective of human health and the environment are described in DOE Manual 435.1-1, which implements DOE Order 435.1, Radioactive Waste Management. DOE shall audit the commercial facility and track waste shipped for treatment, treatment activities, and disposition of treated waste and residuals to ensure adequate controls and operations are occurring pertaining to DOE wastes. Batch processing of DOE waste shall be performed to the extent practicable, dependent upon treatment technology, to ensure segregation of DOE waste from other waste generators. Furthermore, only approved and certified waste streams shall be shipped to NTS for disposal. A detailed review and approval of generating, characterization, packaging, and control of each waste stream including treatment activities are part of DOE-Nevada certification process. Nevada regulators are invited to participate in such activities of SRS waste streams planned for disposal at NTS.

Comment 12: Throughout the EA, continual references are made to Beatty, Nevada as the destination for LLW and MLLW from SRS. Beatty is not on the NTS. While there was a commercial LLW disposal facility located at Beatty, that site is closed, and under no circumstances would the State of Nevada allow any further disposal of LLW at Beatty (Beatty is a State of Nevada owned and controlled facility). The referenced EA appears to suggest that Beatty is an active LLW disposal site for both LLW and MLLW. This is simply not the case. Beatty has been closed to LLW disposal since 1992.

Response 12: The EA is evaluating the potential impacts of transportation of waste material from SRS to NTS, among other facilities in different States. Beatty is not a possible site for disposal of SRS waste. Beatty was merely chosen as the road segment endpoint in the transportation analysis. However, the analyses and text in the EA have been modified to reflect Mercury as the endpoint.

Comment 13: The assumption that waste can be shipped via rail to Las Vegas, Nevada, offloaded, and then trucked to NTS is faulty. This assumption underlies all of the transportation analyses reported in the EA. Under existing understandings between the State of Nevada and DOE, no intermodal transfer of LLW or MLLW is contemplated in Las Vegas or elsewhere in Nevada, and all shipments of LLW and MLLW destined for disposal at NTS must be shipped on highways routes that avoid the Las Vegas Valley.

Response 13: DOE would transport waste from SRS for disposal at NTS using trucks via routes DOE and the State of Nevada have agreed upon. These routes would avoid both the Las Vegas Valley and Hoover Dam. DOE is not proposing to establish an intermodal transfer

station for LLW and MLLW shipments from SRS to NTS. The EA has been revised to clarify this point.

Comment 14: Again, the State's review of the referenced EA suggests that a FONSI should not be issued. If DOE officials believe the proposed actions defined in the EA are indeed necessary and must be pursued, we strongly believe that a new "Programmatic" EA and/or an Environmental Impact Statement (EIS) be prepared.

Response 14: Please see response to comment 9.

Again, I want to thank you and your agency for your interest and comments on SRS activities. Enclosed is a copy of the final EA and Finding of No Significant Impact (FONSI). If you or any of the commentors wish to receive further information concerning either this project or about DOE-SR's NEPA process, please contact me at P. O. Box A, Aiken, SC 29802, telephone (803) 725-1523 or e-mail: drew.grainger@srs.gov.

Sincerely,

Andrew R. Grainger
NEPA Compliance Officer
Evaluation and Performance Division

EPD:SAD:lgs

VH-01-009

2 Enclosures:
(1) Final DOE/EA-1308
(2) FONSI

Comment L7 Response. Page 5 of 5.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
P.O. Box 47600 • Olympia, Washington 98504-7600
(360) 407-6000 • TDD Only (Hearing Impaired) (360) 407-6006

OCT 30 REC'D

October 18, 2000

Mr. Andrew Grainger,
SR NEPA Compliance Officer
Engineering and Analysis Division
Savannah River Operations Office
773-42A. Room 212
Aiken, SC 29808

Dear Mr. Grainger:

Thank you for the opportunity to comment on the environmental assessment (EA) for the Offsite Treatment of Certain Low Level and Mixed Radioactive Waste from the Savannah River Site for treatment and Disposal at Commercial and Government Facilities (DOE/EA-1308). We reviewed the EA and have the following comments.

This EA assumes the Waste Management-Programmatic Environmental Impact Statement for Managing Treatment, Storage, and Disposal (TSD) of Radioactive and Hazardous Waste, DOE/EIS-200-F (WM-PEIS)(DOE 1997a) addresses USDOE TSD facility impacts from waste management activities and as a result does not address those impacts. Washington Department of Ecology has previously commented on deficiencies in the WM-PEIS with respect to Hanford Site waste management activities. Because those deficiencies have not been addressed, the impact analysis included in this EA is inadequate.

In order for the EA to be complete, proper impact analysis of waste management activities at Hanford TSD activities must be included. For Hanford facilities the assessment must also include, at a minimum, an analysis of the impact of additional low level (LLW) or mixed waste (MW) on Hanford Site Project Management Plans developed to satisfy Milestone-91 of the Hanford Site Federal Facility Agreement and Consent Order.

It is not clear in the EA if additional waste designation is anticipated by Savannah River to address waste regulations for designation and waste acceptance at off-site TSD activities. Because Hanford facilities are subject to Washington State Dangerous Waste Regulations (Washington Administrative Code 173-303) and Hanford Permitting conditions, Savannah River MW must meet Washington requirements.

Comment L8. Page 1 of 2.

Emergency Preparedness Planning to mitigate risks associated with potential transportation accidents is not described or analyzed. Mitigative steps, if any are anticipated, should be included and analyzed.

The information on types of wastes, volumes and isotopic content is helpful. The EA does not however discuss which, or which portions, of these streams would go to which facilities for treatment and disposal. Therefore, it is impossible to assess the impacts on the operation or life expectancy of Hanford and Richland facilities that are intended to treat and dispose of Hanford wastes. We expect that these impacts will be assessed in the Hanford Solid Waste EIS before any decisions are made to ship wastes to Hanford or Richland.

If you have any questions, please contact Mr. Steve Moore with our Nuclear Waste Program at (509) 736-3023.

Sincerely,

Rebecca J. Inman

Rebecca J. Inman
Environmental Coordination Section

EA #00-6427

cc: Steve Moore, Kennewick

Comment L8. Page 1 of 2.

Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, South Carolina 29802

FEB 16 2001

Ms. Rebecca J. Inman
Environmental Coordination Section
State of Washington Department of Ecology
P. O. Box 47600
Olympia, WA 98504-7600

Dear Ms. Inman:

SUBJECT: Response to Comments on Draft Environmental Assessment (EA) for the Proposed Offsite Transportation of Certain Low-Level Radioactive Waste (LLW) and Mixed Low-Level Radioactive Waste (MLLW) from the Savannah River Site (SRS) for Treatment and Disposal at Commercial and Government Facilities

Thank you for your letter of October 18, 2000, with your agency's comments on the Draft Transportation EA (DOE/EA-1308). I appreciate your interest and time in providing these comments to the Department of Energy (DOE) Savannah River Operations Office (SR). The responses to these comments are provided in the following paragraphs:

Comment 1: The EA assumes the Waste Management Programmatic Environmental Impact Statement for Managing Treatment, Storage, and Disposal (TSD) of Radioactive and Hazardous Waste, DOE/EIS-0200-F (WM-PEIS) (DOE 1997a) addresses USDOE TSD facility impacts from waste management activities and as a result does not address those impacts. In order for the EA to be complete, proper impact analyses of waste management activities at Hanford TSD activities must be included. For Hanford facilities the assessment must also include, at a minimum, an analysis of the impact of additional LLW or MLLW on Hanford Site Project Management Plans developed to satisfy Milestone-91 of the Hanford Site Federal Facility Agreement and Consent Order.

Response 1: The Hanford Site Solid (Radioactive and Hazardous) Waste Program Environmental Impact Statement is being prepared, in part, to address the treatment and disposal of LLW and MLLW at Hanford. In addition, receipt of off-site waste must be planned through Hanford's waste forecasting system (Solid Waste Integrated Forecast Technical Reports).

Comment 2: It is not clear in the EA if additional waste designation is anticipated by Savannah River to address waste regulations for destination and waste acceptance at off-site TSD activities. Because Hanford facilities are subject to Washington State Dangerous Waste Regulations (Washington Administrative Code 171-303) and Hanford Permitting conditions, Savannah River MLLW must meet Washington requirements.

Comment L8 Response. Page 1 of 3.

Response 2: All waste shipped to Hanford must be shipped in accordance with Hanford's existing waste acceptance criteria. These waste acceptance criteria take permitting conditions into account.

Comment 3: Emergency Preparedness Planning to mitigate risks associated with potential transportation accidents is not described or analyzed. Mitigative steps, if any are anticipated, should be included and analyzed.

Response 3: A section entitled "Emergency Planning and Response" has been added to the Transportation Impacts portion of the EA.

Comment 4: The information on types of wastes, volumes and isotopic content is helpful. The EA does not however discuss which, or which portions, of these streams would go to which facilities for treatment and disposal. Therefore, it is impossible to assess the impacts on the operation or life expectancy of Hanford and Richland facilities that are intended to treat and dispose of Hanford wastes. We expect that these impacts will be assessed in the Hanford Solid Waste EIS before any decisions are made to ship wastes to Hanford or Richland.

Response 4: The Hanford Site Solid (Radioactive and Hazardous) Waste Program Environmental Impact Statement is being prepared, in part, to address the treatment and disposal of LLW and MLLW at Hanford. In addition, receipt of offsite waste must be planned through Hanford's waste forecasting system (Solid Waste Integrated Forecast Technical Reports).

To further respond to Comments 1 and 4, the following information describes how a more complete assessment has been performed. The proposed action described in this EA is transportation of five waste forms of LLW and MLLW from SRS to offsite commercial and Government facilities. The impacts associated with treatment and disposal operations at SRS, other DOE or commercial facilities are not covered in this EA. The impacts at the vendor facilities due to the proposed action is of low potential for significant impacts since these facilities would continue to operate within their existing licensed capabilities and established waste acceptance criteria. The impacts associated with treatment and disposal are analyzed in other NEPA documents such as DOE/EIS-0217, SRS WM EIS, and DOE/EIS-0200-F, Programmatic EIS for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Waste. Decisions pertaining to the selection of treatment and disposal locations will be documented through Records of Decisions. Based on the results of the Transportation Impact Analysis and these other NEPA documents, DOE will publish additional treatment and disposal decisions relating to SRS LLW and MLLW. DOE's procedures for ensuring that the operation of commercial facilities treating or disposing of DOE waste are protective of human health and the environment are described in DOE Manual 435.1-1, which implements DOE Order 435.1, Radioactive Waste Management. These references have been added to the EA.

Again, I want to thank you and your agency for your interest and comments on SRS activities. Enclosed is a copy of the final EA and Finding of No Significant Impact (FONSI). If you or any of the commentors wish to receive further information concerning either this project or about DOE-SR's NEPA process, please contact me at P. O. Box A, Aiken, SC 29802, telephone at (803) 725-1523 or e-mail: drew.grainger@srs.gov.

Sincerely,

Andrew R. Grainger
NEPA Compliance Officer
Evaluation and Performance Division

VH-01-006

2 Enclosures:
(1) Final DOE/EA-1308
(2) FONSI

Comment L8 Response. Page 3 of 3.

OCT 25 REC'D
DOE

STATE OF TEXAS
OFFICE OF THE GOVERNOR

GEORGE W. BUSH
GOVERNOR

Thursday, October 19, 2000

Andrew R. Grainger
Department of Energy - Savannah River Oper. Office
P.O. Box A
Aiken, SC 29802

RE: TX-R-20000920-0002-50

EA FOR TRANSPORT OF LOW-LEVEL/MIXED RADIOACTIVE WASTE

Dear Mr. Grainger:

Your application for assistance referenced above has been reciewed. The comments received are summarized below and are attached.

The only comment came from Eat Texas Council of Governments, stating that transport by rail provides the least risk to the population, therefore, ETCOG hopes that all attemps will be made to utilize rail rather than road transport to limit exposure to radiation. Aside from unforeseen accidents, DOE expects no impacts to human health associated with the transport of these materials. No other substantive comments were received.

We appreciate the opportunity to review your proposal. Please let me know if we can be of further assistance.

Sincerely,

Denise S. Francis/MHR

Denise S. Francis, State Single Point of Contact
DSF/mhr

cc: U. S. Department of Energy

POST OFFICE BOX 12428 AUSTIN, TEXAS 78711 (512) 463-2000 (VOICE)/(512) 475-3165 (TDD)

Comment L9. Page 1 of 6.

east texas council of governments

3800 STONE ROAD
KILGORE, TEXAS 75662 • 903/984-8641 • FAX 903/983-1440

SERVING A FOURTEEN-COUNTY REGION

OCT 25 REC'D
DOE

October 5, 2000

Denise S. Francis, State Single Point of Contact
Governor's Office of Budget and Planning
P.O. Box 12428
Austin, Texas 78711

RECEIVED
OCT 9 2000
GOVERNOR'S BUDGET OFFICE

RE: SAI # TX-R-20000920-0002-50-06

Dear Ms. Francis:

The East Texas Council of Governments (ETCOG) has received a copy of the U.S. Department of Energy's (DOE) environmental assessment for the transport of Low-Level/Mixed Radioactive Waste from the Savannah River Site in South Carolina through East Texas to Eunice, New Mexico for treatment and disposal. It appears that transport by rail provides the least risk to the population, therefore, we hope that all attempts will be made to utilize rail rather than road transport to limit exposure to radiation.

Aside from unforeseen accidents, DOE expects no impacts to human health associated with the transport of these materials. Strict compliance with all environmental and safety regulations pertaining to the transport of radioactive waste is requested by ETCOG.

Sincerely,

Glynn J. Knight
Executive Director

GJK/MWS/gk

CC: City Commissioner Rex Whitten, City of Kilgore

ANDERSON • CAMP • CHEROKEE • GREGG • HARRISON • HENDERSON • MARION • PANOLA • RAINS • RUSK • SMITH • UPSHUR • VAN ZANDT • WOOD

Comment L9. Page 2 of 6.

STATE OF TEXAS
OFFICE OF THE GOVERNOR

GEORGE W. BUSH
GOVERNOR

OCT 25 REC'D
DOE

October 23, 2000

Mr. Andrew R. Grainger
Department of Energy-Savannah River Oper. Office
P.O. Box A
Aiken, SC 29802

RE: TX-R-20000920-0002-50

Dear Mr. Grainger:

Enclosed are comments from the Permian Basin Regional Planning Commission, that arrived after I sent you the review letter on the above referenced project. I would appreciate ensuring their inclusion with the other documents on this project.

Sincerely,

Denise S. Francis/MHR

Denise S. Francis
State Single Point of Contact

DSF/mhr

Enclosure

POST OFFICE BOX 12428 AUSTIN, TEXAS 78711 (512) 463-2000 (VOICE)/(512) 475-3165 (TDD)

Comment L9. Page 3 of 6.

OCT 25 REC'D
DOE

RECEIVED
SEP 22 2000
PERMIAN BASIN REGIONAL PLANNING COMMISSION

Texas Review and Comment System

Review Notification

Applicant/Origination Agency: Department of Energy - Savannah River Oper. Office
Contact Name: Andrew R. Grainger
Contact Phone: 800/881-7292
Email: nepa@srs.gov

Project Name: EA FOR TRANSPORT OF LOW-LEVEL/MIXED RADIOACTIVE WASTE

RECEIVED
OCT 20 2000
GOVERNOR'S BUDGET OFFICE

Funding Agency: DOE
SAI/EIS#: TX-R-20000920-0002-50
Date Received: 9/20/2000
Date Comments Due BPO: 10/18/2000

Review Participants

Agencies

Department of Public Safety
Ms. Marlene Eckert
TRACS Coordinator
P.O. Box 4087
Austin, Texas

Texas Natural Resource Conservation Commission
Ms. Mary Lively
Office of Policy & Regulatory Dev. MC205
P. O. Box 13087
Austin, Texas

Cogs

Ark-Tex Council of Governments
Ms. Sharon Morris
Executive Assistant
P.O. Box 5307
Texarkana, TX 75505

North Central Texas Council of Governments
Ms. Lucille Johnson
TRACS Coordinator
P.O. Box 5888
Arlington, TX 76005-5888

West Central Texas Council of Governments
Mr. Jim Compton
Director, Administration
P.O. Box 3195
Abilene, TX 79604

East Texas Council of Governments
Ms. Linda Morton
TRACS Coordinator
3800 Stone Road
Kilgore, TX 75662

Permian Basin Regional Planning Commission
Mr. Jerry Tschauner
Regional Services Director
P.O. Box 6391
Midland, TX 79711

Special Notes/Comments:

Summary of application provided by SPOC. Reviewers should contact applicant directly to receive a full copy for review.

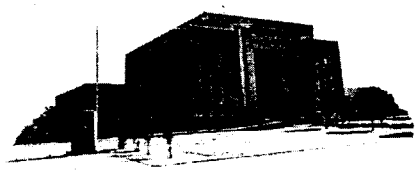
No Comment
* SEE ATTACHED LETTER

PERMIAN BASIN REGIONAL PC — Review Agency
J. Tschauner — Signature

Return Comments to:

Denise S. Francis, State Single Point of Contact
Governor's Office of Budget & Planning
P.O. Box 12428
Austin, TX 78711
(512) 305-9415

Comment L9. Page 4 of 6.



OCT 2 5 REC'D
DOE

WARD COUNTY JUDGE
SAM G. MASSEY
WARD COUNTY COURTHOUSE
MONAHANS, TEXAS 79756
915/943-3209
Fax: 915/943-6054

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OCT 0 9 2000
PERMIAN BASIN REGIONAL PLANNING COMMISSION

October 6, 2000

Permian Basin Regional Planning Commission
Ernie Crawford
P.O. Box 60660
Midland, TX 79711-0660

Dear Ernie,

I received your memorandum and draft of the environmental assessment concerning disposal of and transportation through Ward County of low-level and mixed radioactive waste. I believe the people of Ward County are very concerned about the safety of such transportation. If such dangerous materials must come through our county, I hope the "powers that be" will make every effort to insure their safe transportation, no matter how expensive it is to the transporter. All the "corner cutting" and financial savings in the world are not worth one human life.

I am well aware of the Texas New Mexico Railroad. It crosses my ranch near the Ward/Winkler County line. I have seen train cars wrecked more than once in the past several years. I have seen range fires set by sparks flying from malfunctioning train car wheels more than once.

I would hope that safety modifications will be put in place before any hazardous material is trusted to this or any other transporter.

Respectfully,

Sam G. Massey

Comment L9. Page 5 of 6.

SEP 25 RECD

Texas Review and Comment System

Review Notification

Applicant/Origination Agency: Department of Energy - Savannah River Oper. Office
Contact Name: Andrew R. Grainger
Contact Phone: 800/881-7292
Email: nepa@srs.gov

Project Name: EA FOR TRANSPORT OF LOW-LEVEL/MIXED RADIOACTIVE WASTE

Funding Agency: DOE
SAI/EIS#: TX-R-20000920-0002-50
Date Received: 9/20/2000
Date Comments Due BPO: 10/18/2000

Review Participants

Agencies

Department of Public Safety
Ms. Marlene Eckert
TRACS Coordinator
P.O. Box 4087
Austin, Texas

Texas Natural Resource Conservation Commission
Ms. Mary Lively
Office of Policy & Regulatory Dev. MC205
P. O. Box 13087
Austin, Texas

Cogs

Ark-Tex Council of Governments
Ms. Sharon Morris
Executive Assistant
P.O. Box 5307
Texarkana, TX 75505

North Central Texas Council of Governments
Ms. Lucille Johnson
TRACS Coordinator
P.O. Box 5888
Arlington, TX 76005-5888

West Central Texas Council of Governments
Mr. Jim Compton
Director, Administration
P.O. Box 3195
Abilene, TX 79604

East Texas Council of Governments
Ms. Linda Morton
TRACS Coordinator
3800 Stone Road
Kilgore, TX 75662

Permian Basin Regional Planning Commission
Mr. Jerry Tschauner
Regional Services Director
P.O. Box 6391
Midland, TX 79711

Special Notes/Comments:

Summary of application provided by SPOC. Reviewers should contact applicant directly to receive a full copy for review.

☐ **No Comment**

Review Agency **Signature**

Return Comments to:

Denise S. Francis, State Single Point of Contact
Governor's Office of Budget & Planning
P.O. Box 12428
Austin, TX 78711
(512) 305-9415

Comment L9. Page 6 of 6.

Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, South Carolina 29802

FEB 16 2001

Ms. Denise S. Francis, State Single Point of Contact
State of Texas, Office of the Governor
P. O. Box 12428
Austin, TX 78711

Dear Ms. Francis:

SUBJECT: Response to Comments on the Draft Environmental Assessment (EA) for the Proposed Offsite Transportation of Certain Low-level Radioactive Waste (LLW) and Mixed Low-level Radioactive Waste (MLLW) from the Savannah River Site (SRS) for Treatment and Disposal at Commercial and Government Facilities

Thank you for your letters of October 19 and 23, 2000, with the comments from your constituents on the Draft Transportation EA (DOE/EA-1308). I appreciate your interest and time in providing these comments to the Department of Energy (DOE) Savannah River Operations Office (SR). The responses to these comments are provided in the following paragraphs:

Comment 1: It appears that transport by rail provides the least risk to the population, therefore, we hope that all attempts will be made to utilize rail rather than road transport to limit exposure to radiation. (East Texas Council of Governments [ETCOG])

Response 1: DOE acknowledges the lower public risk associated with rail transportation for most cases analyzed in the draft EA. Furthermore, DOE is committed to operating its LLW and MLLW management activities in compliance with applicable regulations. In order to maintain compliance with these regulations, certain waste forms, because of the size and make-up, must be shipped in specific packaging/containers and transported via either truck or rail. These regulations were developed by the Department of Transportation (DOT) to ensure that these wastes would be transported in a manner that would protect the public from harm. DOE would select the most appropriate mode of transportation, including minimizing public risk, for the waste forms to be shipped consistent with the DOT regulations.

Comment 2: Strict compliance with all environmental and safety regulations pertaining to the transport of radioactive waste is requested by the ETCOG.

Response 2: DOE is committed to the continued safe transportation of its radioactive waste. DOE policy is to carry out these operations in compliance with all applicable Federal, State and local laws and regulations, as well as all DOE Orders. All shipments made under the proposed action described in this EA would be conducted in compliance with these laws, regulations and Orders.

Comment 3: I received your memorandum and draft of the EA concerning disposal of and transportation through Ward County of LLW and MLLW. I believe the people of Ward

Comment L9 Response. Page 1 of 2.

County are very concerned about the safety of such transportation. If such dangerous materials must come through our county, I hope that the "powers that be" will make every effort to insure their safe transportation, no matter how expensive it is to the transporter. All the "corner cutting" and financial savings in the world are not worth one human life. I am aware of the Texas New Mexico Railroad. It crosses my ranch near the Ward/Winkler County line. I have seen train cars wrecked more than once in the past several years. I have seen range fires set by sparks flying from malfunctioning train car wheels more than once. I would hope that safety modifications will be put in place before any hazardous material is trusted to this or any other transporter. (Sam G. Massey, Ward County Judge)

Response 3: Protecting human health and the environment are important goals of DOE's waste management activities. DOE would conduct the proposed action described in this EA in such a manner as to minimize adverse environmental impacts in addition to balancing each shipment with the potential environmental risks, safety consequences, public concerns, mission needs, and costs.

Again, I want to thank you and your agency for the interest and comments on SRS activities. Enclosed is a copy of the final EA and Finding of No Significant Impact (FONSI). If you or any of the commentors wish to receive further information concerning either this project or about DOE-SR's NEPA process, please contact me at P. O. Box A, Aiken, SC 29802, telephone (803) 725-1523 or e-mail: drew.grainger@srs.gov.

Sincerely,

for Andrew R. Grainger
NEPA Compliance Officer
Evaluation and Performance Division

VH-01-0026

2 Enclosures:
(1) Final DOE/EA-1308
(2) FONSI

Comment L9 Response. Page 2 of 2.

CITY OF
OAK RIDGE

OCT 30 REC'D

POST OFFICE BOX 1 • OAK RIDGE, TENNESSEE 37831-0001

October 20, 2000

Andrew R. Grainger
NEPA Compliance Officer
Evaluation and Performance Division
Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, South Carolina 29802

VIA FACSIMILE

RE: Draft Environmental Assessment (EA) for the Offsite Transportation of Certain Low-Level and Mixed Radioactive Waste from the Savannah Site for Treatment and Disposal at Commercial and Government Facilities (DOE/EA-1308)

Dear Mr. Grainger:

Thank you for the opportunity to review the above-referenced Environmental Assessment. Due to time constraints, the City's Environmental Quality Advisory Board has not had time to submit formal comments; however, comments from several of the Board members are incorporated into the comments below.

1. As stated in the EA, the DOE now proposes to use off-site commercial and government facilities for treatment and disposal of wastes from the Savannah River Site (SRS), some of which were previously designated for treatment and disposal at the SRS. Since the proposed action appears to be a significant departure from the preferred alternatives as described in the SRWMEIS and WMPEIS, additional NEPA review appears to be warranted to further analyze the potential impacts on receiver sites such as Oak Ridge. Some of the reasons listed for canceling treatment and disposal at SRS, e.g. funding limitations and DOE's inability to meet South Carolina's waste disposal requirements, should be correctable.

2. Since Oak Ridge facilities are now considered among those facilities proposed to process SRS waste, it is extremely important that information and potential impacts regarding these facilities be accurate. Table 2-1 labeled "*Listing of the offsite waste processing centers and the grouped destinations evaluated in this EA*" contains erroneous information. For example, M4 Environmental is no longer a viable option; Nuclear Fuel Services does not have a commercial facility in Oak Ridge, and the TSCA Incinerator—listed as the Oak Ridge Gaseous Diffusion Plant—is *not* a commercial facility.

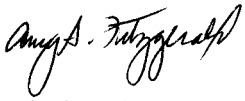
3. The transportation accident analyses are based on a hypothetical plutonium-239 waste inventory, which was assumed to maximize estimated impacts. Oak Ridge treatment facilities are not capable of handling plutonium; the accident assessment should be more thorough, and should evaluate only the wastes that actually could be transported to/treated at each destination.

Comment L10. Page 1 of 2.

4. The DOE appears to be disclaiming any responsibility for the disposition of waste after it's delivered to a commercial facility. Thus, the EA needs to evaluate the impacts of post-treatment management as indirect impacts of the federal action to ship these wastes to sites like Oak Ridge, *even if DOE may not be legally responsible for post-treatment management of this waste*. Concerns exist about the accumulation and disposition of the waste if a commercial vendor doesn't fulfill its contract requirements, or if DOE/SRS can't dispose of residue from material processed in the TSCA incinerator. It is also unclear whether existing treatment facilities will have to build additional structures and/or storage areas to handle the SRS waste.

Feel free to contact me at (865) 425-3554 should you have any questions regarding these comments.

Sincerely,



Amy S. Fitzgerald, Ph.D.
Special Assistant to the City Manager

cc: Paul Boyer, City Manager
Ellen Smith, Environmental Quality Advisory Board
Rod Nelson, DOE/ORO
Earl Leming, Tennessee Dept. of Environment and Conservation
Susan Gawarecki, Oak Ridge Reservation Local Oversight Committee

Comment L10. Page 2 of 2.

Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, South Carolina 29802

FEB 16 2001

Dr. Amy S. Fitzgerald
Special Assistant to the City Manager
City of Oak Ridge
P. O. Box 1
Oak Ridge, TN 37831-0001

Dear Dr. Fitzgerald:

SUBJECT: Response to Comments on Draft Environmental Assessment (EA) for the Proposed Offsite Transportation of Certain Low-level Radioactive Waste (LLW) and Mixed Low-level Radioactive Waste (MLLW) from the Savannah River Site (SRS) for Treatment and Disposal at Commercial and Government Facilities

Thank you for your letter of October 20, 2000, with the City of Oak Ridge Environmental Quality Advisory Board's comments on the Draft Transportation EA (DOE/EA-1308). I appreciate your interest and time in providing these comments to the Department of Energy (DOE) Savannah River Operations Office (SR). The responses to these comments are provided in the following paragraphs:

Comment 1: The EA needs to be expanded to further analyze the potential impacts on receiver sites such as Oak Ridge.

Response 1: DOE understands this concern and provides the following information describing how a more complete assessment has been performed. The proposed action described in this EA is the transportation of five waste forms of LLW and MLLW from SRS to offsite commercial and Government facilities. The impacts associated with treatment and disposal operations at SRS and other DOE or commercial facilities are not covered in this EA. The impacts at the vendor facilities due to the proposed action is of low potential for significant impacts since these facilities would continue to operate within their existing licensed capabilities and established waste acceptance criteria. The impacts associated with treatment and disposal are evaluated in other NEPA documents such as DOE/EIS-0217, SRS WM EIS, and DOE/EIS-0200-F, Programmatic EIS for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Waste. Decisions pertaining to the selection of treatment and disposal locations will be documented through Records of Decisions. Based on the results of the transportation impact analysis and these other NEPA documents, DOE will publish additional treatment and disposal decisions relating to SRS LLW and MLLW. DOE's procedures for ensuring that the operation of commercial facilities treating or disposing of DOE waste are protective of human health and the environment are described in DOE Manual 435.1-1, which implements DOE Order 435.1, Radioactive Waste Management. These references have been added to the EA.

Comment L10 Response. Page 1 of 3.

Comment 2: Some of the reasons listed for canceling treatment and disposal at SRS, e.g., funding limitations and DOE's inability to meet South Carolina's waste disposal requirements, should be correctable.

Response 2: DOE's inability to meet South Carolina's waste disposal requirements is the primary problem, and it is not correctable. SRS does not have a naturally occurring confining clay layer of sufficient thickness to meet South Carolina requirements for a RCRA disposal unit as defined in South Carolina Hazardous Waste Management Regulations R.61-104.IV.C.1.a. This information has been added to the EA for clarification.

Comment 3: Since Oak Ridge facilities are now considered among those facilities proposed to process SRS waste, it is extremely important that information and potential impacts regarding these facilities be accurate. Table 2-1 labeled "Listing of the offsite waste processing centers and the grouped destinations evaluated in this EA" contains erroneous information. M4 Environmental is no longer a viable option: Nuclear Fuel Services does not have a commercial facility in Oak Ridge, and the TSCA incinerator – listed as the Oak Ridge Gaseous Diffusion Plant – is *not* a commercial plant.

Response 3: Table 2-1 of the EA has been revised to reflect these corrections.

Comment 4: The transportation accident analyses are based on a hypothetical Plutonium-239 waste inventory, which was assumed to maximize estimated impacts. Oak Ridge treatment facilities are not capable of handling plutonium. The accident assessment should be more thorough, and should evaluate only the wastes that actually could be transported to/treated at each destination.

Response 4: The transportation analysis in this EA was intended to represent a bounding risk scenario. DOE could not ship waste to Government or commercial facilities for either treatment or disposal that would either exceed their licensed capabilities or not be encompassed by their waste acceptance criteria.

Comment 5: The DOE appears to be disclaiming any responsibility for the disposition of waste after it's delivered to a commercial facility. Thus, the EA needs to evaluate the impacts of post-treatment management as indirect impacts of the federal action to ship these wastes to sites like Oak Ridge, even if DOE may not be legally responsible for post-treatment management of this waste. Concerns exist about the accumulation and disposition of the waste if a commercial vendor doesn't fulfill its contract requirements, or if DOE/SRS can't dispose of residue from material processed in the TSCA incinerator. It is also unclear whether existing treatment facilities will have to build additional structures and/or storage areas to handle the SRS waste.

Response 5: DOE-SR has cradle to grave responsibility for its wastes and does not relinquish ownership for treatment or the responsibility for disposal. Residuals not meeting the disposal facility Waste Acceptance Criteria would be returned to SRS for storage pending the

development of a disposition plan. SRS has no plans for long term offsite storage of its wastes, so additional structures or storage is not anticipated.

Again, I want to thank you and your agency for your interest and comments on SRS activities. Enclosed is a copy of the final EA and Finding of No Significant Impact (FONSI). If you or any of the commentors wish to receive further information concerning either this project or about DOE-SR's NEPA process, please contact me at P. O. Box A, Aiken, SC 29802, telephone (803) 725-1523, or e-mail: drew.grainger@srs.gov.

Sincerely,

for Andrew R. Grainger
NEPA Compliance Officer
Evaluation and Performance Division

VH-01-0025

2 Enclosures:
(1) Final DOE/EA-1308
(2) FONSI

Comment L10 Response. Page 3 of 3.

OCT 2 3 REC'D

October 20, 2000

Andrew K. Grainger
NEPA Compliance Officer
Evaluation and Performance Division
Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, South Carolina 29802

Topic: Clark County Comments on the Draft Environmental Assessment for the Offsite Transportation of Certain Low-Level and Mixed Radioactive Waste from the Savannah River Site for Treatment and Disposal at Commercial and Government Facilities (DOE/EA-1308)

Dear Sir:

This letter contains Clark County's final comments on the Draft Environmental Assessment for the Offsite Transportation of Certain Low-Level and Mixed Radioactive Waste from the Savannah River Site for Treatment and Disposal at Commercial and Government Facilities (DOE/EA-1308). Clark County has an important stake in the safe transportation of these wastes. Most of the LLW transported from DOE facilities has been transported through Clark County en route to the Nevada Test Site (NTS). Based on our review of the report, Clark County believes the report suffers from several important deficiencies.

The report is deficient because it fails to describe the route taken from the Savannah River Site (SRS) to the NTS. The transportation route selection has caused considerable controversy in DOE's policymaking organizations and is of critical concern to Clark County. The EA is insufficient until it describes the routes used to transport the waste. Although the carrier transporting the waste often has the discretion to select the route used, the DOE retains ownership of the waste and is ultimately responsible for safely transporting the waste. The EA should specify the routes used to transport the waste. These routes have been identified by the HIGHWAY and INTERLINE programs and should be depicted in maps that are included in the EA. If the waste being transported traverses Clark County, the EA should describe how the DOE will mitigate the emergency management and inspection impacts this waste transportation program will have on the Clark County.

The problem of route selection is especially troubling because the routes listed in the EA terminate at Beatty, Nevada. **The Beatty, Nevada storage facility has been closed for six years.** If the DOE meant to assess the impacts of transporting waste to the NTS, then the termination point used in the HIGHWAY and INTERLINE analysis should have been Mercury, Nevada. Mercury (unlike several major cities in Nevada) exists in the HIGHWAY database and is the proper termination point. The

Comment L11. Page 1 of 3.

EA's failure to properly identify the correct termination point of the proposed action invalidates the radiological risk assessment and accident assessment contained in the report. The EA is insufficient due to its failure to properly identify a terminating point for the shipments.

The EA does not properly describe the proposed action (Page 6). It does not describe the duration of the program, nor does the EA provide an estimate of the number of shipments. Without this information, it is impossible to accurately estimate the impacts of the proposed action. Clark County appreciates that program duration is affected by budgetary constraints, however, some forecasted cleanup schedule should have been provided.

The proposed action in the EA is inadequately developed. It is impossible to determine much specific information from the description contained in the EA. For example, "The shipping vendor (either rail or truck) would be would be responsible for providing the modes of transportation, equipment, security and health and safety requirements to ship the waste from SRS. The shipping containers would be provided by either DOE or the vendor" (Page 6). These comments make clear the ambiguity of the proposed action. Mode selections have not been made. Route selections have not been made. The type of container in which the waste will be shipped has not been identified. It seems clear that the DOE has only the intention to ship low level waste from SRS to the NTS rather than an actual program.

The EA makes this vividly clear by failing to provide specific dollar costs in its discussion of alternatives. The only dollar storage cost presented in the report is for storage of LLW at SRS. The EA does not compare the waste storage costs to the shipping costs. Therefore, it is impossible to determine what the optimal mode choice might be. The EA also fails to describe what the disposal costs at each of the alternative sites are. Nor does it assess all of the reasonable alternatives. One obvious alternative has been overlooked. The EA should have assessed the costs associated with shipping some of the waste offsite (enough to meet TSCA and RCRA requirements) while leaving the remainder of the waste at that location. The EA is inadequate because it does not present sufficient evidence that the proposed action is necessary.

Section 3 of the EA purports to be an assessment of the transportation impacts of the shipping campaign. Because the route, mode, duration, container, type of shipper, and number of shipments are not specified, it is difficult to accept the assertion that transportation impacts are adequately addressed by the EA. However, even when examined on an "as is" basis, the EA is inadequate. Most notably, the EA fails to specify what is a significant impact. Therefore, the EA makes it impossible to identify a significant impact. Section 3 contains a list of abstract risk numbers that are completely unrelated to a standard. As such, they are devoid of meaning.

This EA continues longstanding DOE habit of measuring impacts and not relating those measurements back to some standard. This practice renders DOE's transportation risk assessments meaningless to the lay public and unintelligible to informed observers. In this case, the EA does not make clear whether or not there is a standard that is violated by one route or another. The EA is inadequate on this basis.

The EA also fails to recognize important and widely accepted impacts that should have been examined. The impacts of the proposed action on the traffic of the routes on which the waste may be transported should have been studied. In Clark County, likely routes have extremely high volumes of traffic. The marginal effect of these shipments could affect congestion on the routes. However, because the EA failed to specify routes and failed to provide any indication of how quickly SRS proposes to ship the waste, there is no way to assess impacts on route congestion.

The EA does not examine impacts on public safety response capability caused by this program. The EA implies that responding to a likely accident is simple because the materials are not very dangerous. If this is the case, it calls into question the entire proposed action. Either the materials are dangerous, in which case, steps must be taken to provide an adequate emergency response capability,

Comment L11. Page 2 of 3.

or the materials are not dangerous and the money spent to transport and dispose them is wasted.

The EA is inadequate because it fails to compare the disposal alternatives. The information presented in the EA is inadequate to make an informed decision. The EA should have presented its findings in the form of a Leopold Matrix which summarizes various impact measures and the compares them to the alternative programmatic options.

In summary, the DOE should instantly rescind this EA to avoid further public embarrassment. **The disposal facility proposed as a destination in the EA HAS BEEN CLOSED FOR SIX YEARS.** The EA fails to provide rudimentary information needed to assess the proposed impacts. The information provided by the EA is not applied to any credible standard. Not all of the necessary information is provided by the EA. Not all of the most commonly studied impacts have been assessed by this EA. The absence of essential information makes it clear that the DOE/SRS has an intention but not a program for waste disposal.

Sincerely,

Fred Dilger
Transportation Planner

Comment L11. Page 3 of 3.

Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, South Carolina 29802

FEB 16 2001

Mr. Fred Dilger, Transportation Planner
Clark County Comprehensive Planning
Nuclear Waste Division
500 S. Grand Central Parkway
P.O. Box 551751
Las Vegas, NV 89155-1751

Dear Mr. Dilger:

SUBJECT: Response to Comments on Draft Environmental Assessment (EA) for the Proposed Offsite Transportation of Certain Low-Level Radioactive Waste (LLW) and Mixed Low-Level Radioactive Waste (MLLW) from the Savannah River Site (SRS) for Treatment and Disposal at Commercial and Government Facilities

Thank you for your e-mail dated October 20, 2000, with your agency's comments on the Draft Transportation EA (DOE/EA-1308). I appreciate your interest and time in providing these comments to the Department of Energy (DOE) Savannah River Operations Office (SR). The responses to these comments are provided in the following paragraphs:

Comment 1: The report is deficient because it fails to describe the route taken from the SRS to the Nevada Test Site (NTS). The EA is insufficient until it describes the routes used to transport the waste. The EA should specify the routes used to transport the waste and depict these routes on maps included in the EA.

Response 1: The conceptual routes used in the impact analyses in this EA were established in a manner consistent with current guidelines, regulations, and practices, but may not be the actual routes that would be used in the future. The exact route ultimately chosen for individual waste shipments would depend on many factors and will be similar but probably not identical to the routes used in the EA. In some instances, the actual routes taken will be defined in the DOE contract with the shipping vendor. In other instances, the routes would be determined by the shipping vendor, so long as these routes are in compliance with the law. However, it should be noted that DOE would be transporting the subject waste to NTS using trucks via the routes previously agreed to between DOE and the State of Nevada, which avoid both the Las Vegas Valley and Hoover Dam.

Comment 2: If the waste being transported traverses Clark County, the EA should describe how the DOE will mitigate the emergency management and inspection impacts this waste transportation will have in the Clark County.

Response 2: A section entitled Emergency Planning and Response has been added to the Transportation Impacts portion of the EA. To assist State, tribal, and local agencies, DOE has developed planning and training materials, through the Transportation Emergency Preparedness Program (TEPP), to help provide the incremental skills necessary for response to incidents involving DOE radioactive material shipments. The planning materials, training schedules, and additional TEPP information can be accessed through the DOE Office of Transportation and Emergency Management web site, www.em.doe.gov/otem. In addition, regional DOE TEPP Coordinators have been appointed to provide assistance to State, tribal, and local agencies in preparing for DOE transportation activities (e.g., assist in using the TEPP planning products, coordinate delivery of DOE training, provide technical assistance, resolve emergency preparedness issues, etc.).

Comment 3: The problem of route selection is especially troubling because the routes listed in the EA terminate at Beatty, Nevada. The Beatty Nevada storage facility has been closed for six years. If the DOE meant to assess the impacts of transporting waste to the NTS, then the termination point used in the HIGHWAY and INTERLINE analysis should have been Mercury, Nevada. Mercury (unlike several major cities in Nevada) exists in the HIGHWAY database and is the proper termination point. The EA's failure to properly identify the correct termination point of the proposed action invalidates the radiological risk assessment and accident assessment contained in the report. The EA is insufficient due to the failure to properly identify a terminating point for the shipments.

Response 3: The EA is evaluating the potential impacts of transportation of waste material from SRS to NTS, among other facilities in different states. Beatty is not a possible site for disposal of SRS waste. Beatty was merely chosen as the road segment endpoint in the transportation analysis. However, the analyses and text in the EA have been revised to use Mercury as the destination for the shipments to NTS.

Comment 4: The EA does not properly describe the proposed action. The EA does not describe the duration of the program, nor does it provide an estimate of the number of shipments.

Response 4: Based on a ten-year site-wide radioactive waste forecast, generation of the specific waste streams and volumes are not known at this time. However, the duration of the shipping campaigns would be greater than the generation time frame (i.e., longer than ten years). SRS National Environmental Policy Act (NEPA) documents are reviewed every five years for compliance with the proposed action described in an EA or an Environmental Impact Statement (EIS). If the waste volumes used in the EA were exceeded, a new NEPA analysis would be required. The total number of shipments is provided in Table 3.2.

Comment 5: The proposed action in the EA is inadequately developed. Mode selections (rail or truck) have not been made. Route selections have not been made. The type of container in which the waste will be shipped has not been identified. It seems clear that the DOE has only the intention to ship LLW from SRS to the NTS rather than an actual program.

Response 5: The SRS program exists; however, the specific waste streams and volumes that would dictate mode and route are not known at this time. The shipping container will comply with applicable Department of Transportation regulations.

Comment 6: The EA does not compare the waste storage costs to the shipping costs.

Response 6: The average waste storage costs are provided in section 2.2.1 of the EA; shipping costs will vary depending on where and when the waste is shipped. A comparison was not made because continued storage would not replace the need to ultimately treat and dispose of the waste, it would only postpone it, incurring additional storage costs while allowing treatment and disposal costs to escalate with inflation.

Comment 7: The EA also fails to describe what the disposal costs are at each of the alternative sites.

Response 7: Disposal costs will vary depending on where and when the waste is shipped. A comparison was not made between continued storage and shipping the waste for treatment and disposal because continued storage would not replace the need to ultimately treat and dispose of the waste. It would only postpone it, incurring additional storage costs while allowing treatment and disposal costs to escalate with inflation.

Comment 8: The EA is inadequate because it does not present sufficient evidence that the proposed action is necessary.

Response 8: DOE's need to take the action described in the EA is discussed in Section 1.2 of the EA. Continued storage at the Savannah River Site would not be consistent with the SRS Site Treatment Plan developed under the Federal Facility Compliance Act and approved by the South Carolina Department of Environmental Control and the Environmental Protection Agency. The purpose of an Environmental Assessment is to provide sufficient evidence and analysis to determine whether to prepare an EIS or a Finding of No Significant Impact (FONSI), not to demonstrate the need for a proposed action.

Comment 9: Because the route, mode, duration, container, type of shipper, and number of shipments are not specified, it is difficult to accept the assertion that transportation impacts are adequately addressed in the EA.

Response 9: The various parameters used to determine the transportation impacts were bounding (i.e., all of the waste was hypothetically shipped to each of the destinations in the modeling analyses), and therefore would encompass the actual parameters used to ship the subject waste forms. However, DOE policy is to carry out its operations in compliance with all applicable Federal, State and local laws and regulations, as well as all DOE Orders. All shipments made under the proposed action described in this EA will be conducted in compliance with these laws, regulations and Orders.

Comment 10: Most notably, the EA fails to specify what is a significant impact. Therefore, the EA makes it impossible to identify a significant impact. Section 3 contains a list of abstract risk numbers that are completely unrelated to a standard. As such, they are devoid of meaning.

Response 10: The significant impact or standard that was used to assess the level of impact was the number of human fatalities or excess latent cancer fatalities that would result from implementation of the proposed action. Based on the analyses in the EA, there were none.

Comment 11: The impacts of the proposed action on the traffic of the routes on which the waste may be transported should have been studied. In Clark County, likely routes have extremely high volumes of traffic. The marginal effect of these shipments could affect congestion on the routes. However, because the EA failed to specify routes and failed to provide any indication of how quickly SRS proposes to ship the waste, there is no way to assess impacts on route congestion.

Response 11: To create a bounding scenario for each destination, the RADTRAN scenarios in this EA analyzed sending all of the waste to each of the six destinations. In reality, since not all of the waste would be shipped to NTS, the transportation impacts of the Clark County portion of the route would currently be an overestimate. In addition, since DOE would be transporting the subject waste to the NTS via the previously agreed to routes, which avoid the high volume traffic areas around the Las Vegas Valley area, transportation impacts in Clark County would be minimal.

Comment 12: The EA does not examine impacts on public safety response capability caused by this program. The EA implies that responding to a likely accident is simple because the materials are not very dangerous. If this is the case, it calls into question the entire proposed action. Either the materials are dangerous, in which case, steps must be taken to provide an adequate emergency response capability, or the materials are not dangerous and the money spent to transport and dispose them is wasted.

Response 12: A section entitled Emergency Planning and Response has been added to the Transportation Impacts portion of the EA.

Comment 13: The EA is inadequate because it fails to compare the disposal alternatives. The information presented in the EA is inadequate to make an informed decision. The EA should

have presented its findings in the form of a Leopold Matrix which summarizes various impact measures and then compares them to the alternative programmatic options.

Response 13: The proposed action described in this EA is the transportation of five waste forms of LLW and MLLW from SRS to offsite commercial and Government facilities. The impacts associated with either waste generation activities at SRS and the treatment and disposal operations at the endpoint facilities are not treated in this EA. However, the impacts of treatment and disposal operations at the endpoint facilities on or adjacent to the Government sites are evaluated in DOE/EIS-0200-F, Programmatic EIS for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Waste. The operations at the commercial facilities are ongoing activities and environmental impacts of their operations are not evaluated in this EA. DOE could not ship waste to commercial facilities that would either exceed their licensed capabilities or not be encompassed by their waste acceptance criteria. Because of the small number of alternatives evaluated in this EA, SRS chose not to include a Leopold Matrix to compare them.

Again, I want to thank you and your agency for the interest and comments on SRS activities. Enclosed is a copy of the final EA and FONSI. If you or any of the commentors wish to receive further information concerning either this project or about DOE-SR's NEPA process, please contact me at P. O. Box A, Aiken, SC 29802, telephone (803) 725-1523 or e-mail: drew.grainger@srs.gov.

Sincerely,

for Andrew R. Grainger
NEPA Compliance Officer
Evaluation and Performance Division

VH-01-008

2 Enclosures:
(1) Final DOE/EA-1308
(2) FONSI

Comment L11 Response. Page 4 of 4.

OCT 31 REC'D

North Carolina
Department of Administration

James B. Hunt, Jr., Governor

Katie G. Dorsett, Secretary

October 23, 2000

Mr. Andrew Grainger
Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, SC 29802

Dear Mr. Grainger:

Re: SCH File # 01-E-0000-0167; Environmental Assessment (DRAFT) - Offsite Transportation of Certain Low-Level and Mixed Radioactive Waste from the Savannah River Site for Treatment and Disposal at Commercial and Government Facilities

The above referenced project has been reviewed through the State Clearinghouse Intergovernmental Review Process. Attached to this letter are comments made by agencies reviewing this document.

Should you have any questions, please do not hesitate to call me at (919) 807-2425.

Sincerely,

Chrys Baggett

Ms. Chrys Baggett
Environmental Policy Act Coordinator

Attachments

116 West Jones Street Raleigh, North Carolina 27603-8003 Telephone 919-807-2425

Comment L12. Page 1 of 6.

NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW

STATE NUMBER: 01-E-0000-0167 **H13**
DATE RECEIVED: 09/20/2000
AGENCY RESPONSE: 10/16/2000
REVIEW CLOSED: 10/20/2000

MS RENEE GLEDHILL-EARLEY
CLEARINGHOUSE COORD
DEPT OF CUL RESOURCES
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RALEIGH NC

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DEPT OF CUL RESOURCES
DEPT OF TRANSPORTATION

ltr/jesw 9/28/00
NC GB 10/4/00

PROJECT INFORMATION
APPLICANT: Department of Energy
TYPE: National Environmental Policy Act
ERD: Environmental Assessment multi
DESC: (DRAFT) - Offsite Transportation of Certain Low-Level and Mixed Radioactive Waste from the Savannah River Site for Treatment and Disposal at Commercial and Government Facilities

The attached project has been submitted to the N. C. State Clearinghouse for intergovernmental review. Please review and submit your response by the above indicated date. If additional review time is needed, please contact this office at (919)807-2425.

AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED:

☒ NO COMMENT

☐ COMMENTS ATTACHED

SIGNED BY: Renee Gledhill-Earley

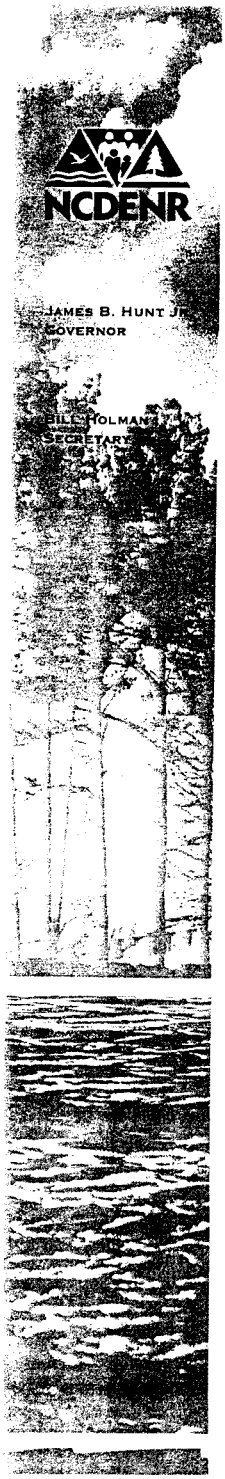
DATE: 10/5/00

RECEIVED
OCT 1 1 2000
N.C. STATE CLEARINGHOUSE

OCT - 3 2000

SEP 2 5 2000

Comment L12. Page 2 of 6.



NORTH CAROLINA DEPARTMENT OF
ENVIRONMENT AND NATURAL RESOURCES

MEMORANDUM

TO: Chrys Baggett
State Clearinghouse

FROM: Melba McGee
Environmental Review Coordinator

RE: EA For Offsite Transportation of Radioactive Waste from the Savannah River Site 01-0167

DATE: October 23, 2000

The Department of Environment and Natural Resources has reviewed the environmental assessment for the proposed project.

We ask that you continue to work with our agencies to thoroughly answer their concerns in the final document and that every effort be made to avoid and minimize environmental impacts.

Thank you for the opportunity to respond.

Attachments

1601 MAIL SERVICE CENTER, RALEIGH, NORTH CAROLINA 27699-1601
PHONE 919-733-4984 FAX 919-715-3060 WWW.ENR.STATE.NC.US/ENR/

Comment L12. Page 3 of 6.

North Carolina Wildlife Resources Commission

Charles R. Fullwood, Executive Director

MEMORANDUM

TO: Melba McGee, Environmental Coordinator
Office of Legislative and Intergovernmental Affairs

FROM: Danielle R. Pender, Piedmont Habitat Coordinator
Habitat Conservation Program

DATE: 9 October 2000

SUBJECT: Environmental Assessment for Offsite Transportation of Radioactive Waste from the Savannah River Site, U.S. Department of Energy, DENR Project No. 01E-0167

Biologists with the North Carolina Wildlife Resources Commission have reviewed the subject Environmental Assessment. Our comments are provided in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), North Carolina Environmental Policy Act (G.S. 113A-1 through 113A-10; 1 NCAC 25), and North Carolina General Statutes (G.S. 113-131 et seq.).

The U.S. Department of Energy, Savannah River Site proposes to transport, by rail or truck, forms of low-level and mixed radioactive waste to commercial and government facilities for treatment and disposal. There are eleven potential offsite-processing locations for treatment and disposal. Although there are no North Carolina facilities proposed, the routing to Oak Ridge, Tennessee will be through western North Carolina. The proposed annual estimates for radioactive waste shipment are from 5,664 to 12,744 cubic meters.

Information provided is insufficient to make definitive recommendations or conclusions on this project, since the project's potential environmental impacts to fish, wildlife, and their habitat were not addressed in the Environmental Assessment. To provide a meaningful review

Mailing Address: Division of Inland Fisheries • 1721 Mail Service Center • Raleigh, NC 27699-1721
Telephone: (919) 733-3633 ext. 281 • Fax: (919) 715-7643

Comment L12. Page 4 of 6.

of the proposed project, we request that applicants provide information in the environmental document that addresses the following concerns.

1. Include descriptions of fish and wildlife resources within the project area, and a listing of federally or state designated threatened, endangered, or special concern species. A listing of designated species can be developed through consultation with: The Natural Heritage Program, NC Division of Parks and Recreation, 1615 Mail Service Center, Raleigh NC 27699, PH: (919) 733-4181.

2. Include descriptions of measures proposed to prevent accidental spills, and actions proposed to avoid or reduce impacts to fish, wildlife, and their habitat in the event of an accident.

Thank you for the opportunity to provide input during the planning stages for this project. If we can provide further assistance, please contact our office at (919) 528-9886.

Comment L12. Page 5 of 6.

State of North Carolina
Department of Environment
and Natural Resources
Division of Water Quality

James B. Hunt, Jr., Governor
Bill Holman, Secretary
T. Kerr Stevens, Director

October 13, 2000

MEMORANDUM

TO: Melba McGee
Department of Environment and Natural Resources

FROM: Milt Rhodes
Division of Water Quality

SUBJECT: Offsite Transportation of Low Level Radioactive Waste from the Savannah River Site, DENR# 01E-0167, DWQ# 12760

The Division of Water Quality (Division) has reviewed the Draft Environmental Assesment document regarding the Offsite Transportation of Low Level Radioactive Waste from the Savannah River Site and offers the following comments.

This document was reviewed by staff in the Basinwide Planning Unit of the Planning Branch of the Division for consistency with the State Environmental Protection Act. These issues need to be addressed in order to ensure that the multiple surface water supplies of this region are adequately protected.

1. Impacts to surface waters or groundwater from liquid wastes in the event of an accident were not addressed by the Draft Environmental Assessment. Transportation routes by both rail and truck through North Carolina from the Savannah River Site to Oak Ridge, TN will be primarily in the mountain region of the state. Roads and rail lines typically follow streams and rivers in this region and are located in close proximity. Local residents heavily utilize surface waters and a thriving local tourist economy exists based on recreational boating, tubing, swimming and fishing.

2. The transportation routes will likely cross through one or more Water Supply Watersheds, classified as such for the protection of surface water drinking water sources. There are also a number of private drinking water wells in the area.

3. Many mountain streams support naturally reproducing populations of wild trout and possess supplemental classifications as Trout Waters, High Quality Waters and/or Outstanding Resource Waters in order to provide a higher level of protection.

Please provide the Division with an explanation of how the material described in the environmental assessment document will be contained and treated if an accident occurs adjacent to drinking water supplies and the surface waters of western North Carolina.

Thank you for the opportunity to comment. If you have questions regarding these comments, please contact Milt Rhodes at (919) 733-5083 x 366.

TMR: / Low Level Radioactive Waste EA, DENR01E0167

P.O. Box 29535, Raleigh, North Carolina 27626-0535 Telephone 919-733-5083 FAX 919-715-6048
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Comment L12. Page 6 of 6.

Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, South Carolina 29802

FEB 16 2001

Ms. Chrys Baggett, Environmental Policy Act Coordinator
North Carolina Department of Administration
116 West Jones Street
Raleigh, NC 27603-8003

Dear Ms. Baggett:

SUBJECT: Response to Comments on Draft Environmental Assessment (EA) for the Proposed Offsite Transportation of Certain Low-Level Radioactive Waste (LLW) and Mixed Low-Level Radioactive Waste (MLLW) from the Savannah River Site (SRS) for Treatment and Disposal at Commercial and Government Facilities

Thank you for your letters of October 23, 2000, with the comments from your State agency personnel on the Draft Transportation EA (DOE/EA-1308). I appreciate your interest and time in providing these comments to the Department of Energy (DOE) Savannah River Operations Office (SR). The responses to these comments are provided in the following paragraphs:

Comment 1: The North Carolina Department of Environment and Natural Resources asks that DOE continue to work with their agencies to thoroughly answer their concerns in the final document and that every effort be made to avoid and minimize environmental impacts.

Response 1: DOE will address these concerns in the final document. Protecting the environment is an important goal of DOE's waste management activities.

Comment 2: Include in the EA descriptions of fish and wildlife resources within the project area, and a listing of federally or state designated threatened, endangered, or special concern species.

Response 2: The proposed action described in this EA would take place along the transportation routes. The routes used for the impact analyses in this EA were determined between SRS and the six destinations. The routes were established in a manner consistent with current guidelines, regulations, and practices. The routes described may not be the actual routes that would be used. In light of this uncertainty, DOE did not estimate impacts to specific protected species. However, because the transportation routes would be well-established existing roads or railways, no reduction in habitat for protected species would result from the proposed action. Similarly, because the vehicle-miles traveled would be a very small fraction of those that already take place over these routes, the impacts of this proposed action would be a very small fraction of the impacts to protected species that may be occurring now.

Comment 3: Include in the EA descriptions of measures proposed to prevent accidental spills, and actions proposed to avoid or reduce impacts to fish, wildlife, and their habitat in the event of an accident.

Comment L12 Response. Page 1 of 3.

Response 3: The spill prevention measures are built into the packaging characteristics of the shipping containers required by the Department of Transportation (DOT) and DOE regulations. The only spills that would be associated with the proposed action would be the release of materials during a transportation accident scenario. A section entitled Emergency Planning and Response has been added to the Transportation Impacts portion of the EA.

Comment 4: Impacts to surface waters or groundwater from liquid wastes in the event of an accident were not addressed by the Draft EA. Transportation routes by both rail and truck through North Carolina from the Savannah River Site to Oak Ridge, Tennessee will be primarily in the mountain region of the state. Roads and rail lines typically follow streams and rivers in this region and are located in close proximity. Local residents heavily utilize surface waters and a thriving local tourist economy exists based on recreational boating, tubing, swimming and fishing.

Response 4: A section entitled Impacts of Accidental Releases and a section entitled Emergency Planning and Response has been added to the Transportation Impacts portion of the EA. Spill prevention measures are built into the packaging characteristics of the shipping containers required by DOT and DOE regulations. Should a serious accident occur which results in dispersion of radioactive material into a stream or river, the Incident Commander would be responsible to initiate appropriate emergency response actions surrounding the accident area, including downstream and potential recreational activities, to protect the public. The carrier would undertake cleanup activities to minimize environmental impacts and restore the area to its natural habitat. The Federal Government is ultimately responsible for the cleanup after the bond limit of the carrier is exceeded.

Comment 5: The transportation routes will likely cross through one or more Water Supply Watersheds, classified as such for the protection of surface water drinking water sources. There are also a number of private drinking water wells in the area.

Response 5: A section entitled Impacts of Accidental Releases and a section entitled Emergency Planning and Response has been added to the Transportation Impacts portion of the EA. Spill prevention measures are built into the packaging characteristics of the shipping containers as required by DOT and DOE regulations. Should a serious accident occur which results in contamination of drinking water sources, emergency response and cleanup actions would be undertaken to provide safe drinking water to affected parties until the water source is restored. The Federal Government is ultimately responsible for the cleanup after the bond limit of the carrier is exceeded. It should be noted that the majority of all waste planned for offsite shipment by DOE-SR is solid material. Furthermore, DOE shall take actions to minimize the number and volume of liquid radioactive waste shipments.

Comment 6: Many mountain streams support naturally reproducing populations of wild trout and possess supplemental classifications as Trout Waters, High Quality Waters and/or Outstanding Resource Waters in order to provide a higher level of protection.

Response 6: A section entitled Impacts of Accidental Releases has been added to the Transportation Impacts portion of the EA. This analysis determined detrimental effects could be observed in aquatic fish (trout) populations in very small streams, equal to or less than 10 cubic feet per second flow, if a worse case accident were to occur. However, within the scope of the proposed action, there would be only ten shipments of this type (tanker truck carrying liquid LLW). No accidents would be expected to occur within this subset of the overall action. Additionally, the analyzed radioactivity concentration (1.97Ci of Pu-239) is a

bounding analysis concentration. DOE does not have any LLW or MLLW planned for offsite shipment with this level of radioactivity. Furthermore, DOE shall take actions to minimize the number and volume of liquid radioactive waste shipments.

Again, I want to thank you and your agency for your interest and comments on SRS activities. Enclosed is a copy of the final EA and Finding of No Significant Impact (FONSI). If you or any of the commentors wish to receive further information concerning either this project or about DOE-SR's NEPA process, please contact me at P. O. Box A, Aiken, SC 29802, telephone (803) 725-1523, or e-mail: drew.grainger@srs.gov.

Sincerely,

for Andrew R. Grainger
NEPA Compliance Officer
Evaluation and Performance Division

VH-01-007

2 Enclosures:
(1) Final DOE/EA-1308
(2) FONSI

Comment L12 Response. Page 3 of 3.

STATE OF TENNESSEE

DON SUNDQUIST
GOVERNOR

November 7, 2000

NOV 1 3 REC'D

Andrew R. Grainger
NEPA Compliance Officer
Evaluation and Performance Division
DOE Savannah River Operations Office
P.O. Box A
Aiken, SC 29802

RE: Draft Environmental Assessment (EA) for the Offsite transportation of Certain Low-Level and Mixed Radioactive Waste from the Savannah River Site for treatment and disposal at Commercial and Government facilities (DOE/EA-1308)

Dear Mr. Grainger:

I am responding on behalf of the Governor of the State of Tennessee as the lead point of contact for state NEPA reviews concerning the Department of Energy's (DOE) *Draft Environmental Assessment (EA) for the Offsite transportation of Certain Low-Level and Mixed Radioactive Waste from the Savannah River Site for treatment and disposal at Commercial and Government facilities (DOE/EA-1308).* Also enclosed are comments from specific state agencies. Please consider these comments as you would those in this letter.

As set forth in greater detail in the attached comments, we do not believe that the Draft EA is complete. We have concerns raised in the attached letters which we trust will be addressed in a more complete assessment.

If DOE proceeds with this proposal, the State of Tennessee considers DOE fully responsible and liable for the waste while in the State. The Draft states that the shipping vendor would be responsible for "the modes of transportation, equipment, security, and health and safety requirements" and all "licenses, permits and other required documentation." Tennessee will hold DOE ultimately responsible and liable for the safe and secure transportation of the waste through Tennessee. The Draft further states that "DOE relinquishes ownership of the waste at the commercial facilitiy." The State will hold DOE ultimately responsible and liable for the proper treatment and/or disposal of these wastes.

We appreciate this opportunity to comment.

Sincerely,

Justin P. Wilson
Deputy to the Governor for Policy

State Capitol, Nashville, Tennessee 37243-0001
Telephone No. (615) 741-2001

Comment L13. Page 1 of 4.

Encl.

The following state agencies commented on the draft EIS:

The Tennessee Department of Environment and Conservation
The Tennessee Emergency Management Agency

Comment L13. Page 2 of 4.

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

OFFICE CORRESPONDENCE

DATE: October 20, 2000

TO: David Harbin

FROM: Joelle Key

SUBJECT: DOE EA

The following are the Division of Radiological Health's comments on document DOE/EA-1308 the *Draft Environmental Assessment for the Offsite Transportation of Certain Low-Level and Mixed Radioactive Waste From the Savannah River Site for Treatment and Disposal at Commercial and Government Facilities.*

- This EA does not address many of the possible environmental impacts that this proposal presents. The EIS for SRS assessed the environmental impacts for these wastes being treated on site, this in no way covers the possible impacts now that it may be treated off site. The statement is made on page 29 that the operations at commercial facilities do not need to be evaluated because these processes are ongoing. This ignores the fact that this waste could account for a significant increase in the amount of material going through these sites. It is also not clear how these waste streams may differ from those normally processed at these facilities. This issue should be explored in detail.

- Nuclear Fuel Services in Erwin, TN should not be included with the Oak Ridge sites. While Erwin is only about 150 miles from Oak Ridge, the roads to Erwin are much narrower and would pose a greater transportation risk for a truck.

- P 7. Table 2-1—M4 Environmental is no longer in business. They ceased to be a viable business almost two years ago.

- P 7 – It is stated "DOE relinquishes ownership of the waste at the commercial facilities...." This statement is incorrect. The DOE will maintain ownership and liability for its waste while it is being processed at a commercial facility.

- P 12 – Routing conditions are described as "including population densities, distance and time traveled, and fraction of highway and rail travel in urban, suburban and rural population zones...." This is an incomplete assessment of conditions. The general drivability of the roads should be considered i.e. winding mountain roads, roads at higher elevations that may be covered in snow or sleet for a large portion of the year. This is especially of concern when comparing the routes to Oak Ridge, TN versus those available for traveling to Erwin, TN.

Comment L13. Page 3 of 4.

THE STATE OF TENNESSEE
TENNESSEE EMERGENCY MANAGEMENT AGENCY
EMERGENCY OPERATIONS CENTER
MILITARY DEPARTMENT OF TENNESSEE
3041 SIDCO DRIVE, P.O. BOX 41502
NASHVILLE, TENNESSEE 37204-1502
(615) 741-0001

MEMORANDUM

TO: **David Harbin**

FROM: **Elgan H. Usrey**

DATE: **October 27, 2000**

SUBJECT: DOE EA "Offsite Transportation of Certain Low-level and Mixed Radioactive Waste from the Savannah River Site For Treatment and Disposal at Commerical and Government Facilities".

1. **While specific routes have not been designated, based on the origin and destinations most of the waste would pass through Tennessee.**
2. **If the commercial facilities in Tennessee are used to reduce the volume, will the concentration of the reduced product remain less than 99 nCi/g of Pu?**
3. **The destination of the reduced volume waste was not addressed.**
4. **While this is LLW or MLLW it does add to the total volume of radioactive waste transported in and across the state, thus raising the potential for an accident involving radioactive material.**
5. **The use of rail transport and the use of large volume liquid tanks increase the difficulty in dealing with an accident scenario.**

Comment L13. Page 4 of 4.

Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, South Carolina 29802

FEB 16 2001

Mr. Justin P. Wilson, Deputy to the Governor for Policy
State of Tennessee, Office of the Governor
State Capitol
Nashville, TN 37243-0001

Dear Mr. Wilson:

SUBJECT: Response to Comments on the Draft Environmental Assessment (EA) for the Proposed Offsite Transportation of Certain Low-Level Radioactive Waste (LLW) and Mixed Low-Level Radioactive Waste (MLLW) from the Savannah River Site (SRS) for Treatment and Disposal at Commercial and Government Facilities

Thank you for your letter of November 7, 2000, with comments on the Draft Transportation EA (DOE/EA-1308). I appreciate your interest and time in providing these comments to the Department of Energy (DOE) Savannah River Operations Office (SR). The responses to these comments are provided in the following paragraphs:

Comment 1: As set forth in greater detail in the following comments, we do not believe that the Draft EA is complete. We have concerns raised in the attached letters which we trust will be addressed in a more complete assessment.

Response 1: DOE understands this concern and the following describes how a more complete assessment has been performed. The proposed action described in this EA is transportation of five waste forms of LLW and MLLW from SRS to offsite commercial and Government facilities. The impacts associated with treatment and disposal operations at SRS and other DOE or commercial facilities are not covered in this EA. The impacts at the vendor facilities due to the proposed action is of low potential for significant impacts since DOE's proposed waste load associated with this ongoing operation will be a small part of that facility's throughput although these facilities would continue to operate within their existing licensed capabilities and established waste acceptance criteria. The impacts associated with treatment and disposal at Government facilities are analyzed in other NEPA documents such as DOE/EIS-0217, SRS WM EIS, and DOE/EIS-0200-F, Programmatic EIS for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Waste. Decisions pertaining to the selection of treatment and disposal locations are documented through Records of Decisions. Based on the results of the Transportation Impact Analysis and these other NEPA documents, DOE plans to publish additional treatment and disposal decisions relating to SRS LLW and MLLW through an amended Record of Decision.

Comment 2: If DOE proceeds with this proposal, the State of Tennessee considers DOE fully responsible and liable for the waste while in the State. The Draft states that the shipping vendor would be responsible for "the modes of transportation, equipment, security, and health and safety requirements" and all "licenses, permits and other required documentation."

Tennessee will hold DOE ultimately responsible and liable for the safe and secure transportation of the waste through Tennessee. The Draft further states that "DOE relinquishes ownership of the waste at the commercial facility." The State will hold DOE ultimately responsible and liable for the proper treatment and/or disposal of these wastes.

Response 2: DOE-SR has cradle to grave responsibility for its wastes. SRS does not relinquish ownership for treatment or the responsibility for disposal. In the case of transportation accidents, the Federal Government is ultimately responsible for the cleanup after the bond limit of the carrier is exceeded. The EA has been corrected accordingly.

Comment 3: This EA does not address many of the possible environmental impacts that this proposal presents. The EIS for SRS assessed the environmental impacts for these wastes being treated on site. This in no way covers the possible impacts now that it may be treated off site. The statement is made on page 29 that the operations at commercial facilities do not need to be evaluated because these processes are ongoing. This ignores the fact that this waste could amount for a significant increase in the amount of material going through these sites. It is also not clear how these waste streams may differ from those normally processed at these facilities. This issue should be explored in detail.

Response 3: Please see response to Comment 1. This EA did not assess local impacts associated with the ongoing operation of an already-licensed offsite vendor facility proposed to receive DOE waste for treatment or disposal. DOE's proposed waste load associated with this ongoing operation will be a small part of that facility's throughput. The facility would operate well within its established standards and the vendor's part of this proposal is of low potential for significant impacts. DOE will not ship waste to commercial facilities that would either exceed their licensed capabilities or be excluded by their waste acceptance criteria. Therefore, if waste streams are selected for commercial treatment or disposal, the waste streams will not differ from those normally processed at the facility. DOE's procedures for ensuring that the operation of commercial facilities treating or disposing of DOE waste are protective of human health and the environment are described in DOE Manual 435.1-1, which implements DOE Order 435.1, Radioactive Waste Management. These references have been added to the EA.

Comment 4: Nuclear Fuel Services in Erwin, Tennessee should not be included with the Oak Ridge sites. While Erwin is only about 150 miles from Oak Ridge, the roads to Erwin are much narrower and would pose a greater transportation risk for a truck.

Response 4: There are currently no waste forms at SRS that are being proposed for shipment to Erwin, Tennessee, under the proposed action in this EA.

Comment 5: Page 7. Table 2-1 – M4 Environmental is no longer in business. They ceased to be a viable business almost two years ago.

Response 5: Table 2-1 of the EA has been revised to reflect this correction.

Comment 6: Page 7 – It is stated "DOE relinquishes ownership of the waste at the commercial facilities....." This statement is incorrect. The DOE will maintain ownership and liability for its waste while it is being processed at a commercial facility.

Response 6: SRS has cradle to grave responsibility for its wastes. SRS does not relinquish ownership or control of its wastes for treatment or disposal. The EA has been corrected accordingly.

Comment 7: Page 12 – Routing conditions are described as "including population densities, distance and time traveled, and fraction of highway and rail travel in urban, suburban and rural population zones...." This is an incomplete assessment of conditions. The general drivability of the roads should be considered (i.e. winding mountain roads, roads at higher elevations that may be covered in snow or sleet for a large portion of the year). This is especially of concern when comparing the routes to Oak Ridge, Tennessee, versus those available for traveling to Erwin, Tennessee.

Response 7: The conceptual routes used in the impact analyses in this EA were determined between SRS and the six destinations. The routes were determined consistent with current guidelines, regulations, and practices, but may not be the actual routes that would be used in the future. However, these routes would be representative of the possible routes to be used in the transportation program. There are currently no waste forms at SRS that are being proposed for shipment to Erwin, Tennessee, under the proposed action in this EA.

Comment 8: While specific routes have not been designated, based on the origin and destinations most of the waste would pass through Tennessee.

Response 8: The actual routes to be used in this proposed program have not been determined at this time. Some of these routes would go through the State of Tennessee. However, because the analyses used in the EA were bounding scenarios (i.e., all of the waste was shipped to each of the destinations), the number of trips in the analyses were over-estimates for the purposes of the EA.

Comment 9: If the commercial facilities in Tennessee are used to reduce the volume, will the concentration of the reduced product remain less than 99 nCi/g of Pu?

Response 9: The wastes sent to any facility will meet that facility's Waste Acceptance Criteria. The source term used for the risk calculation represents a bounding case, not the normal source term expected during actual shipments. There are currently no wastes in inventory at SRS planned for offsite treatment that approach the hypothetical level of radioactivity of 99 nCi/g. Wastes concentrated through treatment are not expected to exceed 99nCi/g of Pu.

Comment 10: The destination of the reduced volume waste was not addressed.

Response 10: The disposal of residuals will depend on the type of treatment employed. Debris type material, where no volume reduction occurs, would be returned to a DOE disposal facility or sent to Envirocare of Utah based on the radioisotopes and/or hazardous components. Liquids treated by thermal destruction would be disposed of in accordance with the disposal program established by the treatment facility because the residual ash is almost nonexistent and difficult to distinguish from other facility residuals. SRS would retain responsibility for treatment facility disposal as required by DOE Order 435.1, which ensures responsibility and compliant disposal.

Comment 11: While this is LLW and MLLW it does add to the total volume of radioactive waste transported in and across the state, thus raising the potential for an accident involving radioactive waste.

Response 11: That is correct. However, the percent increase of the total volume of radioactive waste transported in and across the State as a result of adding the impacts of the SRS waste would be insignificant (i.e., no additional deaths).

Comment 12: The use of rail transport and the use of large volume liquid tanks increase the difficulty in dealing with an accident scenario.

Response 12: The shipment scenario mentioned was a bounding case assumption for a specific waste form. The waste actually in inventory would suggest that less than five large tanker shipments would be made to ship the waste forms addressed in this EA. Based on the actual generation rate of that waste form, most of those liquids would be shipped in drums rather than a large single-volume container.

Again, I want to thank you and your agency for your interest and comments on SRS activities. Enclosed is a copy of the final EA and Finding of No Significant Impact (FONSI). If you or any of the commentors wish to receive further information concerning either this project or

about DOE-SR's NEPA process, please contact me at P. O. Box A, Aiken, SC 29802, telephone (803) 725-1523 or e-mail: drew.grainger@srs.gov.

Sincerely,

for Andrew R. Grainger
NEPA Compliance Officer
Evaluation and Performance Division

VH-01-012

2 Enclosures:
(1) Final DOE/EA-1308
(2) FONSI

Comment L13 Response. Page 5 of 5.

NOV 30 REC'D

STATE OF SOUTH CAROLINA

State Budget and Control Board

OFFICE OF STATE BUDGET

1122 LADY STREET, 12TH FLOOR
COLUMBIA, SOUTH CAROLINA 29201
(803) 734-2280

LES BOLES
DIRECTOR

November 16, 2000

Mr. Andrew R. Grainger
NEPA Compliance Office
Evaluation & Performance Div.
Savannah River Oper. Office - P.O. Box A
Aiken, South Carolina 29802

Project Name: Draft Environ. Assessment (EA) for the Offsite Transportation of Certain Low-Level & Mixed Radioactive Waste from Savannah River (DOE/EA-1308)

State Application Identifier:EIS-000911-009

The Grant Services Unit, Office of State Budget, has conducted an intergovernmental review of the project referenced above as provided by Presidential Executive Order 12372. All comments received as a result of the review are enclosed for your information.

The State Application Identifier indicated above should be used in any future correspondence with this office. If you have any questions please contact me at (803) 734-0485.

Sincerely,

Angela F. Stoner
Fiscal Manager, Grant Services

Enclosures

Fax (803) 734-0645

Comment L14. Page 1 of 7.

Office of State Budget - Grant Services
South Carolina Project Notification and Review
1122 Lady Street,
12th Floor,
Columbia, SC 29201

State Application Identifier
EIS-000911-009
Suspense Date
10/18/2000

Earl F. Brown, Jr.
S.C. Human Affairs Commission

The Grant Services Unit, Office of State Budget is authorized to operate the South Carolina Project Notification and Review System (SCPNRS). Through the system the appropriate state and local officials are given the opportunity to review, comment, and be involved in efforts to obtain and use federal assistance, and to assess the relationship of proposals to their plans and programs.

Please review the attached information, mindful of the impact it may have on your agency's goals and objectives. Document the results of your review in the space provided. Return your response to us by the suspense date indicated above. Your comments will be reviewed and utilized in making the official state recommendation concerning the project. The recommendation will be forwarded to the cognizant federal agency.

Should you have no comment, please return the form signed and dated.

If you have any questions, call Omeagia Burgess at (803) 734-0494.

RECEIVED
OCT 11 2000
Control Board
OFFICE OF STATE BUDGET

- [x] Project is consistent with our goals and objectives
- [ ] Request a conference to discuss comments.
- [ ] Please discontinue sending projects with this CFDA # to our office for review.
- [ ] Comments on proposed project are as follows:

Signature: _____ Date: 10-10-00
Title: PC Phone: 737-7800

Comment L14. Page 2 of 7.

Office of State Budget - Grant Services
South Carolina Project Notification and Review
1122 Lady Street,
12th Floor,
Columbia, SC 29201

State Application Identifier
EIS-000911-009
Suspense Date
10/18/2000

Larry Boyleston
S.C. Dept. of Agriculture

The Grant Services Unit, Office of State Budget is authorized to operate the South Carolina Project Notification and Review System (SCPNRS). Through the system the appropriate state and local officials are given the opportunity to review, comment, and be involved in efforts to obtain and use federal assistance, and to assess the relationship of proposals to their plans and programs.

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Should you have no comment, please return the form signed and dated.

If you have any questions, call Omeagia Burgess at (803) 734-0494.

RECEIVED
SEP 26 2000
Budget & Control Board
OFFICE OF STATE BUDGET

- [x] Project is consistent with our goals and objectives
- [ ] Request a conference to discuss comments.
- [ ] Please discontinue sending projects with this CFDA # to our office for review.
- [ ] Comments on proposed project are as follows:

Signature: Larry J. Boyleston Date: 9/25/00
Title: Assistant to the Commissioner Phone: 803/734-2193

RECEIVED
SEP 26 2000
Budget & Control Board
OFFICE OF STATE BUDGET

Comment L14. Page 3 of 7.

Office of State Budget - Grant Services
South Carolina Project Notification and Review
1122 Lady Street,
12th Floor,
Columbia, SC 29201

RECEIVED
SEP 21 2000
S. C. DEPARTMENT
ARCHIVES & HISTORY

State Application Identifier
EIS-000911-009
Suspense Date
10/18/2000

Nancy Brock
S.C. Dept. of Archives and History

The Grant Services Unit, Office of State Budget is authorized to operate the South Carolina Project Notification and Review System (SCPNRS). Through the system the appropriate state and local officials are given the opportunity to review, comment, and be involved in efforts to obtain and use federal assistance, and to assess the relationship of proposals to their plans and programs.

Please review the attached information, mindful of the impact it may have on your agency's goals and objectives. Document the results of your review in the space provided. Return your response to us by the suspense date indicated above. Your comments will be reviewed and utilized in making the official state recommendation concerning the project. The recommendation will be forwarded to the cognizant federal agency.

Should you have no comment, please return the form signed and dated.

If you have any questions, call Omeagia Burgess at (803) 734-0494.

RECEIVED
SEP 27 2000
...trol Board
OFFICE OF STATE BUDGET

- [x] Project is consistent with our goals and objectives
- [ ] Request a conference to discuss comments.
- [ ] Please discontinue sending projects with this CFDA # to our office for review.
- [ ] Comments on proposed project are as follows: SRS - Offsite Transportation

Signature: Nancy Brock Date: 9/21/00
Title: Records Compliance Phone: 803/896-6169
Programs Coordinator

Comment L14. Page 4 of 7.

Office of State Budget - Grant Services
South Carolina Project Notification and Review
1122 Lady Street,
12th Floor,
Columbia, SC 29201

State Application Identifier
EIS-000911-009
Suspense Date
10/18/2000

Robert Thomas
State Housing Finance & Development Authority

The Grant Services Unit, Office of State Budget is authorized to operate the South Carolina Project Notification and Review System (SCPNRS). Through the system the appropriate state and local officials are given the opportunity to review, comment, and be involved in efforts to obtain and use federal assistance, and to assess the relationship of proposals to their plans and programs.

Please review the attached information, mindful of the impact it may have on your agency's goals and objectives. Document the results of your review in the space provided. Return your response to us by the suspense date indicated above. Your comments will be reviewed and utilized in making the official state recommendation concerning the project. The recommendation will be forwarded to the cognizant federal agency.

Should you have no comment, please return the form signed and dated.

If you have any questions, call Omeagia Burgess at (803) 734-0494.

RECEIVED
SEP 21 2000
OFFICE OF STATE BUDGET

- [x] Project is consistent with our goals and objectives
- [ ] Request a conference to discuss comments.
- [ ] Please discontinue sending projects with this CFDA # to our office for review.
- [ ] Comments on proposed project are as follows:

Signature: Robert Thomas Date: 9/21/00
Title: Director, Housing Development Phone: 734-2150

Comment L14. Page 5 of 7.

Dugsfeley

RECEIVED
SEP 21 2000
Emergency Preparedness Division
Office of the Adjutant General

Office of State Budget - Grant Services
South Carolina Project Notification and Review
1122 Lady Street,
12th Floor,
Columbia, SC 29201

State Application Identifier
EIS-000911-009
Suspense Date
10/18/2000

Stan M. McKinney
Office of the Adjutant General

The Grant Services Unit, Office of State Budget is authorized to operate the South Carolina Project Notification and Review System (SCPNRS). Through the system the appropriate state and local officials are given the opportunity to review, comment, and be involved in efforts to obtain and use federal assistance, and to assess the relationship of proposals to their plans and programs.

Please review the attached information, mindful of the impact it may have on your agency's goals and objectives. Document the results of your review in the space provided. Return your response to us by the suspense date indicated above. Your comments will be reviewed and utilized in making the official state recommendation concerning the project. The recommendation will be forwarded to the cognizant federal agency.

Should you have no comment, please return the form signed and dated.

RECEIVED
SEP 29 2000
Budget & Control Board
OFFICE OF STATE BUDGET

If you have any questions, call Omeagia Burgess at (803) 734-0494.

[XX] Project is consistent with our goals and objectives

[ ] Request a conference to discuss comments.

[ ] Please discontinue sending projects with this CFDA # to our office for review.

[ ] Comments on proposed project are as follows:

Signature: _____ Date: 09/27/00
Title: Stan M. McKinney, Director, SCEPD Phone: 737-8500

Comment L14. Page 6 of 7.

STATE OF SOUTH CAROLINA

State Budget and Control Board

OFFICE OF STATE BUDGET

1122 LADY STREET, 12TH FLOOR
COLUMBIA, SOUTH CAROLINA 29201
(803) 734-2280

LES BOLES
DIRECTOR

ACKNOWLEDGEMENT

September 21, 2000

Mr. Andrew R. Grainger
NEPA Compliance Office
Evaluation & Performance Div.
Savannah River Oper. Office - P.O. Box A
Aiken, South Carolina 29802

Project Name: Draft Environ. Assessment (EA) for the Offsite Transportation of Certain Low-Level & Mixed Radioactive Waste from Savannah River (DOE/EA-1308)

State Application Identifier:EIS-000911-009
Suspense Date: 11/ 3/2000

Dear Mr. Grainger:

Receipt of the above referenced project is acknowledged. The Grant Services Unit, Office of State Budget, has initiated an intergovernmental review of this project. You will be notified of the results of this review by the suspense date indicated above. South Carolina state agencies are reminded that if additional budget authorization is needed for this project, three copies of the completed GCR-1 form and two copies of the project proposal must be submitted to this office. This action should be initiated immediately, if required. Please include the State Application Identifier number in any correspondence with our office regarding this project. If you have any questions please contact me at 734-0485.

Sincerely,

Angela D. Stoner
Fiscal Manager, Grant Services

Fax (803) 734-0645

Comment L14. Page 7 of 7.

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