



{In Archive} Fw: NEPA for German Fuel

Maxcine Maxted to: Isaraka

Cc: Drew Grainger

11/14/2014 08:14 AM

Archive: This message is being viewed in an archive.

I got this late yesterday.

Thanks,

Maxcine Maxted

(803) 208-0506 pager 20767

----- Forwarded by Maxcine Maxted/DOE/Srs on 11/14/2014 08:14 AM -----

From: Herbert Crapse/DOE/Srs
To: Jean Ridley/DOE/Srs@Srs, Maxcine Maxted/DOE/Srs@SRS,
Date: 11/13/2014 02:25 PM
Subject: Fw: NEPA for German Fuel

As requested. I have reviewed their input for accuracy and find it acceptable to forward to you.

Bert Crapse
Senior Solid Waste Program Manager
DOE Savannah River
803-208-7403

----- Forwarded by Herbert Crapse/DOE/Srs on 11/13/2014 02:23 PM -----

From: Lee Fox/SRNS/Srs
To: Herbert Crapse/DOE/Srs,
Date: 10/28/2014 02:57 PM
Subject: Re: Fw: NEPA for German Fuel

John Harley provided most of the numbers, I marked up the sheets in blue. If you have questions, I will keep the originals.



Att 1.pdf



Att 2.pdf

F. Lee Fox
Deputy Director - Solid Waste & F Area Operations
Savannah River Nuclear Solutions, LLC
Office 803-208-0778
Mobile 803-295-7047

Herbert Crapse

As discussed. Bert Crapse Senior Solid Waste P...

10/28/2014 09:55:00 AM

From: Herbert Crapse/DOE/Srs
To: Lee Fox/SRNS/Srs@Srs,
Date: 10/28/2014 09:55 AM
Subject: Fw: NEPA for German Fuel

As discussed.

Bert Crapse
Senior Solid Waste Program Manager
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----- Forwarded by Herbert Crapse/DOE/Srs on 10/28/2014 09:54 AM -----

From: Maxcine Maxted/DOE/Srs
To: Herbert Crapse/DOE/Srs@Srs,
Cc: Drew Grainger/DOE/Srs@srs
Date: 09/28/2014 02:03 PM
Subject: NEPA for German Fuel

Bert-

Can you confirm and update the information in this section of the NEPA on waste generation? If possible we need it by Thursday to get back to the NEPA contractor

1.1.1.1 ***Waste Generation***

Table 3-10 summarizes generation rates at SRS through fiscal year 2010 **[UPDATE SOUGHT FROM DOE FOR THE NUMBERS]** for low-level radioactive waste (LLW), hazardous waste, and nonhazardous solid waste and construction and demolition debris. Hazardous waste is disposed off-site, nonhazardous solid waste and construction and demolition debris are disposed on-site, and LLW may be disposed of on- or off-site. Generation rates for HLW, liquid LLW, and liquid sanitary waste are not included in Table 3-10, but are discussed in following subsections. Annual volumes of liquid wastes solidified at the Z-Area Saltstone Facility are, however, included in Table 3-10 because the solidified liquids are all disposed of on-site as LLW. Table 3-11, Table 3-12, and Table 3-13 **[UPDATE SOUGHT FROM DOE FOR THE NUMBERS]**, respectively, provide summaries of current and planned treatment, storage, and disposal facilities at SRS for the wastes addressed in this EA.

**Predecisional Review Draft EA for the Acceptance and Disposition of Used Nuclear Fuel
Containing U.S.-Origin Highly Enriched Uranium from the Federal Republic of Germany**

Predecisional Review Draft

9/28/2014

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Table 3-10. Waste Generation Rates at the Savannah River Site (cubic meters) [DOE UPDATE/CONFIRMATION REQUESTED FOR ALL TABLE DATA]

Waste Type	Savannah River Site – Total	FY 2010	L-Area Complex		H-Canyon in H-Area	HB-Line in H-Area		DWPF in S-Area		Z-Area Saltst
	5-Year Average		5-Year Average	FY2010	5-Year Average	5-Year Average	FY2010	5-Year Average	FY2010	5-Year Average
LLW	13,000	7,700	TBD	TBD	650	8730	130	250	190	TBD
Hazardous	84	12	TBD	TBD	0	0	0	0	0	N/A
Nonhazardous solid waste ^a	2,400	2,600	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
C&D debris ^b	83,000	130,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source: SRNS 2012a.

C&D = construction and demolition; DWPF = Defense Waste Processing Facility; FY = fiscal year; LLW = low-level radioactive waste

^a Sanitary waste is provided for all of the Savannah River Site (information by individual area is not available). Waste sent to the Rivers Regional Landfill (TRL) is measured by weight with volume estimated at 1 metric ton per cubic meter (1,690 pounds per cubic meter)

^b C&D landfill waste volume is based on truck volumes received. About 36 percent of the reported waste mass/estimated volume

facility and not disposed of in the C&D landfill. Waste generation does not include waste-like materials recovered through salvage and operations, or materials recovered through construction services.

Note: To convert cubic meters to cubic feet, multiply by 35.314.

	Capacity	Status	Waste Type			
			High-Level Radioactive	LLW	Mixed LLW	Hazardous
Treatment Facility						
Defense Waste Processing Facility	275 canisters per year nominal ^a	Operating	X			
Tank Farm Evaporators	2H-Evaporator: 810,000 liters per week ^b ; 2F and 3H-Evaporators: 2.1 million liters per week total	Operating		X		
Salt Waste Processing Facility	34 million liters per year, maximum rate	Planned for 2018	X			
Interim processing of salt waste	15 liters per minute	Operating	X			
F- and H-Areas Effluent Treatment Project	590 million liters per year	Operating		X	X	
Savannah River Technology Center Ion Exchange Treatment Probe	11,200 cubic meters per year	Operating			X	
Z-Area Saltstone Facility	28,400 cubic meters per year	Operating		X		
Central Sanitary Wastewater Treatment Facility	1.5 billion liters per year	Operating				

Source: DOE 1999; SRNS 2012a; SRR 2014a, 2014b; WSRC 2006a, 2007a, 2007b.

^a For sludge waste processing.

^b Expected average annual rate of treatment of the Defense Waste Processing Facility recycle. The 2H-Evaporator only treats the Facility recycle. All evaporators are assumed to operate at 50 percent utility.

^c The interim processing facility, which will ultimately be replaced by the Salt Waste Processing Facility, processes salt waste from radioactive waste tanks to separate the higher activity fraction of the waste (to be sent to the Defense Waste Processing Facility for vitrification) and the lower activity fraction of the waste (to be sent to the Z-Area Saltstone Facility for disposal).

Note: There are no dedicated treatment facilities for transuranic and mixed transuranic wastes. To convert cubic meters to cubic feet, multiply by 35.314; to convert liters to gallons, multiply by 0.26417.

Table 3-11. Waste Treatment Capabilities at the Savannah River Site

Facility Name	Capacity	Status	Waste Type				
			High-Level Radioactive	Transuranic	Mixed Transuranic	Low-Level Radioactive	Mix Low Rad
Storage Facility							
High-Level Liquid Radioactive Waste Tank Farms	8.7 million liters ^a	Operating	X				
Glass Waste Storage Buildings	4,590 canisters in two existing buildings	Operating	X				
Failed Equipment Storage Vaults (Defense Waste Processing Facility)	2 exist, space allocated for 12 more vaults	Operating	X				
Transuranic Waste Storage Pads ^b	13,200 cubic meters	Operating		X	X		
Solvent Storage Tanks at the Consolidated Incinerator Facility, S33-S36 ^c	105,000 liters per tank ^d	Operating				X	
<p>Source: DOE 1999b; DOE 2012a; SRR 2014a, 2014b; WSRC 2007a.</p> <p>^a Operational working capacity remaining in the F- and H-Area tank farms that does not include six tanks in F-Area that have been closed or space in other tanks that may not be viable for storage or is maintained for safety reasons. Currently, 37 million gallons (140 million liters) of high-level radioactive waste are stored in 45 underground storage tanks.</p> <p>^b TRU Pad 26-E is permitted to accept hazardous waste and mixed low-level radioactive waste for storage and has a maximum capacity of 296 cubic meters</p> <p>^c These tanks were originally to be used for solvent storage; however, they have been subsequently used to store other waste streams.</p> <p>^d Operating capacity.</p> <p>Note: There are no dedicated low-level radioactive waste storage facilities. To convert cubic meters to cubic feet, multiply by 35.315; to convert liters to gallons, multiply by 0.26417.</p>							

Facility Name	Capacity	Status
Disposal Facility		
Intermediate-Level Low-Level Radioactive Waste Vaults ^a	5,300 cubic meters per vault	Operating
Low-Activity Low-Level Radioactive Waste Vaults ^a	30,500 cubic meters per vault	Limited Operations
Low-level radioactive waste disposal facility slit trenches ^a	182,000 cubic meters	Operating
Low-level radioactive waste disposal facility engineered trenches ^a	70,800 cubic meters	Operating
Z-Area Saltstone Facility Vaults	Current circular disposal vaults each hold about 11 million liters of grouted waste; future circular disposal vaults will each hold about 114 million liters of grouted waste.	Operating
Three Rivers Regional Landfill ^b	4.2 million cubic meters per year (permitted)	Operating
Construction and demolition debris landfill	2.47 million cubic yards total permitted capacity	Operating
288-F industrial solid waste landfill for ash from the A-Area power generating facility	105,776 cubic meters	Operating
488-4D industrial solid waste landfill for ash from the D-Area power generating facility	94,091 cubic meters	Operating
Source: DOE 1999b; DOE 2012a; SRNS 2012a; SRR 2013; WSRC 2007a.		
^a As of February 2012, the estimated unused disposal capacity remaining is approximately 22,000 cubic meters for the Low Activity Low-Level Radioactive Waste Vaults, 23,000 cubic meters for the slit trenches, and 14,000 cubic meters for the engineered trenches. The Low Activity Low-Level Radioactive Waste Vaults are used for waste staging; the Intermediate-Level Low-Level Radioactive Waste Vaults are used for disposal of waste containing larger pieces of waste having surface radiation levels exceeding 200 millirem per hour.		
^b The Three Rivers Regional Landfill is permitted to annually receive up to 500,000 metric tons of compacted solid waste. At a density of 100 pounds per cubic yard, approximately 4.2 million cubic meters of pre-compacted waste can be annually disposed of at the landfill.		
Note: Only low-level radioactive waste and nonhazardous waste are disposed of at SRS. To convert cubic meters to cubic feet, multiply by 35.3147; liters to cubic meters, multiply by 0.26417.		

*Thanks,
Maxcine Maxted*

(803) 208-0506 pager 20767