

QA:NA

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cc:  
Subject: Add'l Input for 4/30/07 SEIS Air Quality

YS 8/27/07 Not Privileged

LSN: Not Relevant - Privileged  
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Apparently we missed a small piece of the air quality information. Attached file contains additional information for the ramp up and ramp down periods of operation for the SEIS Air Quality deliverable. Here is the year-by-year breakdown for the 70k MTHM case.



SEIS input by operating year 4-30-07.doc

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### Total Annual YMP Operations Fossil Fuel Consumption Based on 70K MTHM Emplaced Waste

Year	Percentage of full repository operations	Diesel fuel annual consumption	Gasoline and ethanol annual consumption	Basis
2016	Ramp up from 0 – 37.5% of totals	Straight line ramp from 0 to 37.5% for year = $0.5[0.375(5330880 \text{ gal})] =$ <b>999,540 gal.</b>	$0.5[0.375(224445 \text{ gal})] =$ <b>42,083 gal.</b>	BOP and infrastructure accounts for ~25% of the load. The nuclear facilities can be estimated to required an additional 12.5% each. Support facilities will come on line in 2016 and staffing and training will occur throughout 2016 in preparation for operations.
2017	Ramp up from 37.5% to 62.5%	$0.375(5330880) + 0.5[(0.625 - 0.375)(5330880)] =$ <b>2,665,440 gal</b>	$0.375(224445) + 0.5[(0.625 - 0.375)(224445)] =$ <b>112,223 gal</b>	IHF, CRCF, and WHF start operations in 2017, with IHF being preceding the others by a few months.
2018	62.5%	$0.625(5330880) =$ <b>3,331,800 gal</b>	$0.625(224445) =$ <b>140,278 gal</b>	
2019	Ramp up to 75%	$3331800 + 0.5(0.75 - 0.625)(5330880) =$ <b>3,664,980 gal</b>	$140278 + 0.5(0.75 - 0.625)(224445) =$ <b>154,306 gal</b>	RF starts operations
2020	Ramp up to 87.5%	$3664980 + 0.5(0.875 - 0.75)(5330880) =$ <b>3,998,160 gal</b>	$154306 + 0.5(0.875 - 0.75)(224445) =$ <b>168,334 gal</b>	CRCF 2 starts operations
2021	87.5%	$0.875(5330880) =$ <b>4,664,520 gal</b>	$0.875(224445) =$ <b>196,389 gal</b>	
2022	Ramp up to 100%	$4664520 + 0.5(1.0 - 0.875)(5330880) =$ <b>4,997,700 gal</b>	$196389 + 0.5(1.0 - 0.875)(224445) =$ <b>210,417 gal</b>	CRCF 3 starts operations

May 2007

## Total Annual YMP Operations Fossil Fuel Consumption Based on 70K MTHM Emplaced Waste

Year	Percentage of full repository operations	Diesel fuel annual consumption	Gasoline and ethanol annual consumption	Basis
2023 – 2038	100%	5,330,880 gal	224,445 gal	
2039 - 2040	87.5%	0.875(5330880) = 4,664,520 gal	0.875(224445) = 196,389 gal	IHF ceases operation
2041 - 2044	75%	0.75(5330880) = 3,998,160 gal	0.75(224445) = 168,334 gal	CRCF 1 ceases operation
2045	62.5%	0.625(5330880) = 3,331,800 gal	0.625(224445) = 140,278 gal	CRCF 2 ceases operation
2046 - 2047	50%	0.5(5330880) = 2,665,440 gal	0.5(224445) = 112,223 gal	RF ceases operation
2048 - 2058	37.5%	0.375(5330880) = 1,999,080 gal	0.375(224445) = 84,167 gal	WHF in cold standby
2059	25%	0.25(5330880) = 1,332,720 gal	0.25(224445) = 56,111 gal	CRCF 3 ceases operations; emplacement activities continue
2060	Ramp down to 15%	1332720 – 0.5(0.25- 0.15)(5330880) = 1,066,176 gal	56111 – 0.5(0.25- 0.15)(224445) = 44,889 gal	Many support facilities are shut down; emplacement continues
2061 - 2066	15%	0.15(5330880) = 799,632 gal	0.15(224445) = 33,668 gal	Emplacement operations
2067 -	5%	0.05(5330880) = 266,544 gal	0.05(224445) = 11,222 gal	Monitoring only, ventilation fans must continue to run