

**From:** <dggreen01@mchsi.com>  
**To:** <tcj@nrc.gov>  
**Date:** 4/20/04 1:30PM  
**Subject:** Requested Consequence Calculation Information for LES RAI ISA-34

Tim,

I have attached a file with requested consequence calculation information (i.e, room volumes, room volumetric flow and HVAC exhaust flow rates) for the National Enrichment Facility. This information has been determined to be non-proprietary. If you have any questions, please do not hesitate to contact Rod Krich or myself.

Dan Green.

**CC:** <rod.krich@exeloncorp.com>

Area Volumes, and Exhaust Flow Rates Used as Inputs to the NEF Consequence Calculation			
Areas	Volume (m <sup>3</sup> )	HVAC Flow Rate (cfm) <sup>(a)</sup>	Leak Rate (cfm) <sup>(b)</sup>
UF6 Handling Area 1 & 2	23,747	90,564	11,500
UF6 Handling Area 3 & 4, and 5 & 6	47,494	180,239(Total)	9,100
(1) UF6 Handling Area	23,747	90,564	N/A
Cascade Halls 1 & 2	111,535	160,821	4,500
Cascade Halls 3 & 4 and 5 & 6	223,070	321,642	3,950
(1) Cascade Hall and Process Service Corridor	61,383	160,821	N/A
Process Service Corridor	16,767	160,821 (Used combined flow of one Cascade Hall and Process Service Corridor)	N/A
Process Service Corridor (Vacuum Pump Blockage Release Sequences)	16,767	38,024 (Ground Floor HVAC)	N/A
Blending & Liquid Sampling Area	14,737	33,976	33,976
			N/A
TSB Solid Waste Collection Room	1,500	38,100 (Total TSB flow)	N/A
Chemistry Laboratory	1,394	38,100 (Total TSB flow)	N/A
Cylinder Preparation	5,690	38,100 (Total TSB flow)	N/A
Decontamination Workshop	2,030	38,100 (Total TSB flow)	N/A
Mass Spectrometry Laboratory	850	38,100 (Total TSB flow)	N/A
Ventilated Room (TSB)	1,266	38,100 (Total TSB flow)	N/A
			N/A
Cylinder Receipt and Dispatch Building (CRDB)	143,764	288,000	N/A
			N/A
Centrifuge Post Mortem Facility and Centrifuge Test Facility	16,100	16,100	N/A
Centrifuge Test Facility	610	10,000	N/A

Notes: a) HVAC flow to outside of building, in the Economizer Mode (i.e., full flow out area / building).

b) Limitation of leakage out of the building such that the consequence of an accident of concern remains a consequence category "low" per 10CFR70.61 criteria. HVAC is not operating. The proposed March 2000 AEGLs were used in the existing consequence calculation. A revision of the consequence calculation is in progress incorporating the Final (Published) January 2004 AEGLs.

c) For the internal building area air conditions the consequence calculation used Standard Temperatures and Pressures (STP).

d) Room volumetric flow equal to the economizer mode was only for public exposure calculations. For worker exposures no room volumetric flow was credited.