



January 25, 2002

Morris Operation  
General Electric Company  
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Administrator, Region III  
US Nuclear Regulatory Commission  
801 Warrenville Road  
Lisle, IL 60532-4351

- REF: 1. SNM-2500
- 2. Docket 72-1

Dear Mr. Dyer:

In compliance with 10CFR72.44(d)(3) and SNM-2500 license condition 8.2.1, this report documents our estimate of quantities of principal radionuclides released to the environment by GE Morris Operations in 2001. This report also provides an estimate of the maximum potential dose to the public resulting from GE Morris Operations effluents.

The only measurable particulate airborne radionuclide emitted by GE Morris Operation in 2001 was Cs-137 evaluated by measurement of stack monitor filters. Gaseous radionuclides evaluated are H-3 and Kr-85. The quantity of tritium released is evaluated by calculation using basin water evaporative losses while the amount of Kr-85 released is estimated conservatively using historical analytical results.

COMPLY (the EPA software program) was used to calculate the committed dose equivalent which results from the release of these radionuclides. The quantities released and the resultant maximum potential committed dose equivalent are shown in the following table.

NUCLIDE	AMOUNT RELEASED (Ci)	STACK CONCENTRATION (uCi/ml)	CEDE (mrem)
H-3	3.00E-2	1.60E-10	See Total Below
Kr-85	1.0	5.35E-9	See Total Below
Cs-137	1.07E-7	5.74E-15	<u>See Total Below</u>
Total Effective Dose Equivalent			<b>4.30E-07 mrem/year (COMPLY)</b>

There are no liquid effluents from the site. Therefore there were no measurable quantities of radionuclides released. However, trace quantities of tritium were found in the surface water, and on site wells.

The maximum potential committed dose equivalent to the public that could occur from surface water was found to be 2.55 E-3 mrem - based on a person consuming water all year from the South Lagoon (55.42 pCi/L H-3).



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The maximum potential committed dose equivalent to the public that could occur from groundwater was found to be **2.98 E-3 mrem** - based on a person consuming water all year from the DM-5 well (64.75 pCi/L H-3).

Direct radiation measurement at the GE Morris Operation owner control boundary continues using TLD and direct measurement techniques. Theoretically the maximum potential committed dose equivalent to the public that could occur from direct radiation measurement was found to be **0.85 mrem** assuming that the maximum time a member of the general public resides at the GEMO owner control boundary fence line is 24 hours per year.

The maximum potential radiation dose commitment to the public resulting from effluent releases is the sum from airborne, surface water, groundwater, and direct radiation resulting from 2001 GE Morris Operation activities is **8.55E-1 mrem/year**.

Sincerely

RK Wright  
Radiation Safety Officer

cc: US Nuclear Regulatory Commission  
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