

REPORT R-3908

DEACTIVATION OF

RADIFLO MARK IV-5, S/N 5005

JULY 30, 1984

8410230520 840921 NMS LIC30 20-21359-01 PDR

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SUBJECT: DEACTIVATION OF RADIFLO MARK IV-5, S/N 5005

REFERENCE: NRC License 20-21359-01, GEO Reliability Services.

DATE: July 30, 1984

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Deactivation of the referent equipment was accomplished on July 18th and 19th, 1921, by IsoVac Engineering, Inc. following the IsoVac Procedure R-3520-B, attached.

- 1. Starting Curie Content: 9.7 curies
- 2. Measuring Instrument: Texas Nuclear Model 2650 S/N B4515M
- 3. Air Flow At Exhaust: 1500 cfm
- Maximum external radiation around Radiflo[®] before release of Kr-85 ± 0.1 mr/hr at 6 inch distance and 2 ft. height.
- Storage pressure doubled to decrease concentration to 1/2.
- 6. Maximum ground level concentration: $\langle 3 \times 10^{-7} \text{ uci/cc.} \rangle$
- 7. Venting over a 24 hour period.
- Post deactivation survey showed < 0.03 mr/hr throughout entire Radiflo[®] room.

In summary, the Radiflo[®] system was deactivated as much as is possible in the field. Experience has shown that even though the external radiation measurements are less than twice background, there is still a Kr-85 content absorbed on organic coatings within the lead shielded hot zones which can only be removed by totally cutting open and cleaning the insides. Due to these residuals, the Radiflo[®] can never be used for other than its original design and licensed purpose.

It is suggested that report R-3520-B be read carefully for disposition, recommendations and caution in future control of this system.