ENCLOSURE

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-325 AND 50-324/LICENSE NOS. DPR-71 AND DPR-62
WITHDRAWAL OF REQUEST FOR LICENSE AMENDMENT
REACTOR COOLANT SYSTEM SPECIFIC ACTIVITY

0VA-0105, REVISION 5
MAIN STEAM LINE BREAK ANALYSIS
CONTROL ROOM DOSE ANALYSIS TO SUPPORT POWER UPRATE

CALC NO.: OVA-0105, Rev.5
CALC TYPE: EXCALC
SYSTEM: 8220

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Page 1 of 19 Pages
(Plus Attach. A - AB)

# SCIENTECH-NUS
# ENGINEERING CALCULATION

CLIENT/PROJECT CP&L - BNP CALC. NO. CP&L-CED-M-01 REV. 5

TITLE MAIN STEAM LINE BREAK ANALYSIS
CONTROL ROOM DOSE ANALYSIS TO SUPPORT POWER UPRATE

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## Purpose

The purpose of this calculation is to reanalyze the Brunswick Nuclear Plant (BNP) control room (CR) radiological thyroid dose following a main steam line break (MSLB). This analysis was performed to replace the existing "hand" calculations performed in light of the power uprate effort. The radiological consequences of the MSLB scenario will be assessed using the SCIENTECH-NUS "AXIDENT" computer code to calculate the CR operator thyroid dose following a design basis MSLB accident. The whole body and Beta dose contributions from the iodides and noble gases are also calculated by the AXIDENT code, however, these values are not presented since they are negligible compared to the regulatory limits. This calculation will be the calculation of record for the Control Room dose after a MSLB, reflecting BNP's power uprate.

Revision 2 assessed the impact on operability with the CR filter unit in a degraded condition.

Revision 3 was prepared to utilize the latest reactor coolant release rates as calculated by GE and to perform the analysis using a uniform cloud and gaussian puff release. The degraded charcoal efficiencies used in Rev. 2 were not used in Rev. 3.

Revision 4 was prepared to determine the dose to the Control Room operators with the Control Building Emergency Air Filtration Unit (CBEAF) in the Chlorine Isolation Mode (shut-down). This revision is being done to support the Improved Technical Specifications reflecting power uprate. Revision 4 also incorporates the third party review comments on Revision 3.

Revision 5 was performed to assess the impact on the 30-day CR operator thyroid dose considering CR flow variations without recirculation.

## Summary

The results of the various cases are contained throughout section 5.0.

| SUPERSEDED BY REV. _____ | QUALITY CLASS | DISTRIBUTION | VERIFICATION METHOD |
|---|---|---|---|
| | ■ SAFETY-RELATED | ■ PROJECT | ■ REVIEW |
| SUPPLEMENTED BY CALC. NO.: ___ | □ NON-SR | ■ DCC | □ ALT. ANALYSIS |
| | □ OTHER___ | □ OTHER___ | |

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ATTACHMENTS

Attachments A - I Not Used

| | |
|---|---|
| Attachment J - MSLB, Uniform Cloud w/ 4μCi per gm, 11 pages | Rev. 4 |
| Attachment K - MSLB, Gaussian Cloud w/ 4μCi per gm, 25 pages | Rev. 4 |
| Attachment L - MSLB, Uniform Cloud w/ 3μCi per gm, 11 pages | Rev. 4 |
| Attachment M - MSLB, Uniform Cloud w/ 2μCi per gm, 11 pages | Rev. 4 |
| Attachment N - ICRP 30 DCF Conversion, Uniform Cloud w/ 4μCi per gm, 1 page | Rev. 4 |
| Attachment O - ICRP 30 DCF Conversion, Gaussian Cloud w/ 4μCi per gm, 2 pages | Rev. 4 |
| Attachment P - ICRP 30 DCF Conversion, Uniform Cloud w/ 3μCi per gm, 1 page | Rev. 4 |
| Attachment Q - ICRP 30 DCF Conversion, Uniform Cloud w/ 2μCi per gm, 1 page | Rev. 4 |
| Attachment R - Comparison of Diffusion Models, 1 page | Rev. 5 |
| Attachment S - MSLB During Chlorine Isolation Mode, 4 μCi/g, 5 pages | Rev. 4 |
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| Attachment V - ICRP 30 DCF, MSLB During Chlorine Isolation Mode, 1 pages | Rev. 4 |
| Attachment W - Case 1 (1800 cfm filtered, 136 cfm unfiltered), 6 pages | Rev. 5 |
| Attachment X - Case 2 (2000 cfm filtered, 136 cfm unfiltered), 6 pages | Rev. 5 |
| Attachment Y - Case 3 (2200 cfm filtered, 136 cfm unfiltered), 6 pages | Rev. 5 |
| Attachment Z - Case 4 (1800 cfm filtered, 3000 cfm unfiltered), 6 pages | Rev. 5 |
| Attachment AA - Case 5 (2000 cfm filtered, 3000 cfm unfiltered), 6 pages | Rev. 5 |
| Attachment AB - Case 6 (2200 cfm filtered, 3000 cfm unfiltered), 6 pages | Rev. 5 |

## 1.0 OBJECTIVE

The purpose of this calculation is to reanalyze the Brunswick Nuclear Plant (BNP) control room (CR) radiological thyroid dose following a main steam line break (MSLB). This analysis was performed to replace the existing "hand" calculations performed in light of the power uprate effort. The radiological consequences of the MSLB scenario will be assessed using the SCIENTECH-NUS "AXIDENT" computer code to calculate the CR operator thyroid dose following a design basis MSLB accident. The whole body and Beta dose contributions from the iodides and noble gases are also calculated by the AXIDENT code, however, these values are not presented since they are negligible compared to the regulatory limits. This calculation will be the calculation of record for the Control Room dose after a MSLB, reflecting BNP's power uprate.

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Revision 5 was performed to assess the impact on the 30-day CR operator thyroid dose considering CR flow variations without recirculation.

## 2.0 METHOD OF ANALYSIS

### General

The consequences of a design basis MSLB accident to the Control Room operators will be assessed using the SCIENTECH- NUS "AXIDENT" computer code which is a transient control room and off-site dose analysis code. The program will be executed on a Dell Optiplex GXMT 5133 computer running a Windows95 operating system as currently assigned to Carl Snyder (Matrix Leasing - 210158).

Section 2.1 identifies the changes in the CR model used to assess the radiological consequences of a MSLB concurrent with the system being in the Chlorine Isolation Mode.

### Source Term Model/Release Path Model

The general accident analysis assumptions and methodology will be based on the guidance provided

in the Standard Review Plan and Regulatory Guides. This methodology replaces the scenario described in the existing UE&C Control Room MSLB dose calculation which was subsequently revised by CP&L (See Reference 3.1). The new methodology is based on the general guidance provided in SRP 15.6.4, SRP 2.3.4, and Reg Guide 1.5 (Safety Guide 5) (References 3.8, 3.9, 3.11). The methodology and inputs are as follows:

- The calculated radiological consequences of a MSLB accident is conservatively assessed by assuming that the Reactor Coolant released during the line break forms a cloud that migrates towards the CR at a rate of 1 meter per second (the wind speed of 1 meter per second is the general regulatory assumption used in design basis accident analyses, see for example Safety Guide 5). This approach conservatively neglects any holdup affect as a result of the presence of the Turbine Building enclosure and conservatively neglects the removal affect provided by the Turbine Building Exhaust filter units ("white elephants"). This approach also neglects the buoyancy of the steam cloud and conservatively assumes that the cloud stays at ground level and that the centerline of the cloud passes by the CR intake. The size of the cloud was determined in CP&L calculation 0VA-0107 (Reference 3.10, Information provided via telephone communication between D. Studley and P. Dorosko). The determination of the cloud size neglected the absorption of the air into the steam cloud which is conservative since it results in a smaller more concentrated cloud.

- It is assumed that all of the iodines in the released reactor coolant liquid are carried to the cloud. This approach is also conservative since some of the iodine will remain with the water. The regulatory guidance for similar accidents (i.e., SRP 15.6.2 - Small Lines Carrying Primary Coolant Outside Containment) allows credit for a portion of the iodines (equivalent to the unflashed fraction) to stay with the water. For information, the guidance from SRP 15.6.2 (Reference 3.11) is as follows:

  > "The fraction of the iodine assumed to become airborne and available for release to the atmosphere, without credit for plateout, is equal to the fraction of the coolant flashing into steam in the depressurization process. The flash fraction is determined by assuming the discharge to be a constant enthalpy process."

- As stated in SRP Section 15.6.4, two iodine concentrations are normally analyzed. These two iodine concentrations correlate to the technical specification values associated with (1) the maximum equilibrium value permitted for continued full power operations and (2) the maximum value permitted corresponding to an assumed preaccident iodine spike. For BNP these values are currently at 0.2 μCi/g I-131 Dose Equivalent and 4.0 μCi/g I-131 Dose Equivalent, respectively. The equilibrium case is not analyzed since its dose consequences are 20 times lower, while the acceptance limits are only 10 times lower than the preaccident spike case. The iodine spike is conservatively assumed to occur during Hot Standby which results in the largest liquid release. This analysis will also assess parametrically the impact

of reducing the preaccident iodine spike limit. Per a conversation with T. Devore of BNP, the allowable specific activity (i.e., Technical Specification) is based on a dose equivalency of I-131 as calculated using ICRP-2.

- With regards to the analysis of the cloud dispersion and the distribution of the activity within the cloud, this analysis will determine the calculated radiological consequences of a MSLB by (1) assuming that the activity is uniformly mixed throughout the cloud and by (2) assuming that the concentration is distributed in accordance with a Gaussian distribution as is recommended in SRP 2.3.4 through reference to Reg Guide 1.78 (Reference 3.13). Once the analysis demonstrates that the two approaches are equivalent, the subsequent parametric studies will be performed using the uniform distribution assumption. The guidance provided in SRP 2.3.4 is as follows:

  > " Most accidental releases can be considered as continuous releases (i.e., on the order of several minutes or more). However, some releases such as from steam line breaks or of hazardous chemicals may be considered as instantaneous (puffs). The general Gaussian diffusion model for continuous releases is used to evaluate releases on the order of several minutes or more. For puff releases, instantaneous point source Gaussian diffusion equations are used with a correction for initial source volume."

- The iodine distribution at the time of the accident is a function of water chemistry and will be analyzed using the same distribution as provided by GE in the recent power uprate analyses (see Reference 3.1).

- The whole body and Beta dose contributions from the iodides and noble gases are calculated by the AXIDENT code, however, these values are not presented since they are negligible as compared to the 5 rem and 30 rem limit, respectively.

- For the uniform cloud approach, the analysis does not credit any atmospheric dispersion above and beyond the initial cloud dispersion by the generation of a cloud.

- For the Reg. Guide 1.78 Gaussian distribution approach, the analysis calculates a diffusion of the cloud as it moves from turbine building to the Control Room. The analysis was performed using a distance of 130 ft from the Turbine Building to the Control Room. A Pasquill Type F stability category was assumed (the worst stability category at most sites).

Except for the recently measured Control Room filter unit flow parameters, the Control Room parameters will be based on the LOCA dose analysis model presented in Reference 3.2. The LOCA model as opposed to the UE&C model uses a slightly higher unfiltered inleakage rate and also uses a lower filter efficiency for the organic iodides (90% as opposed to 95%). Both changes are conservative. On the other hand, the CR filter unit mode of operation will be assumed to start at approximately 5 seconds after the accident as opposed to the 10 minute delay that was used in

Reference 3.1 (the reference calculation was done to support an operability assessment for which the redundancy of the CR filter system initiation was no longer available, this condition has since been resolved, based on conversation with T. Devore).

Modeling Approach for AXIDENT Code

The MSLB source term, as discussed above, is treated as a constant flow of air with a uniform radionuclide concentration being drawn into the control room as the cloud passes the CR followed by a continuous flow of clean air at the same flow rate. The simplified (i.e., uniform cloud) CR source term model simulates a cloud of radioactive air with a uniform concentration of radionuclides, generated by a MSLB, passing over the control room air intake. The AXIDENT source term model is adjusted to provide the above constant air inflow into the CR. The containment is represented as a very large volume (100 times the fission products released and 100 times the cloud volume) with a radionuclide concentration equal to that of the cloud. The volume and source was increased by this factor to ensure that the concentration in the "primary containment" volume in the model stays relatively constant during the release (i.e., the reduction of radionuclide concentration in the cloud will be negligible over the cloud passage period). The radionuclide concentration leaving the containment and entering the CR is then maintained in the AXIDENT code by specifying a X/Q of 1.0.

For the cloud model, the release rate from the "primary containment" of the AXIDENT code will be calculated based on the cloud volume and a X/Q of 1.0. In addition, the primary release rate is divided by the cloud volume adjustment factor of 100. Since the X/Q is being set to 1.0, this means that all of the activity leaving the "primary" will enter the CR. A cloud with constant concentration leaks with a flow rate of 1.0 $m^3$/sec. Since the AXIDENT code multiplies this flow rate by the control room flow rate, the concentration in the cloud is maintained to the control room intake. Additional variations of CR flows are provided in Section 5.5.

For the Gaussian cloud distribution model, the X/Q as a function of time will be calculated using the equations in Reg. Guide 1.78. This Gaussian distribution will be represented by a step function of time increments on the order of 4 seconds. The code input for the X/Q will be based on the percentage of the uniform concentration as a function of time. The integral of X/Q with respect to time is the same for the Gaussian distribution and the uniform distribution.

CR Dose Model

The CR is modeled as one volume with instantaneous air mixing, filtered air inflow, unfiltered infiltration, filtered recirculation, and CR exhaust flow. Dose mitigating factors outside of the CR, such as containment spray and filtration as well as secondary containment considerations are not considered in this MSLB simulation. The X/Q of 1.0 means that the concentration of radionuclides is not diminished as they are transferred from the containment (cloud) to the CR intake. Radioactive decay is applied only to the air in the CR. The filtration of CR air including recirculated air is

modeled in the AXIDENT code. The purging of the CR after the radioactive cloud has passed is simulated by perfect mixing of all air entering the CR and release of the mixed air from the CR at the same rate the air is entering the CR. Operator exposure is based on the dose conversion factors and a constant breathing rate of 3.47E-4 $m^3$/sec (Ref. 3.5).

For the additional variations in CR flow (Section 5.5), the CR model will not consider recirculation.

Effect of Measured Flows

An analysis will be performed using the recently measured Control Room parameters on the calculated dose from a MSLB. These flows were provided as part of the problem statement by CP&L and represent the current operating status. The original design base case flows were 3126 cfm of unfiltered infiltration, 900 cfm filtered recirculation, and 1100 cfm filtered intake. For this reanalysis, the measured conditions are for a total unfiltered flow of 3000 cfm with a filtered intake flow of 1500 cfm and a recirculation flow of 500 cfm.

The additional CR flow rate variations (Section 5.5) will use a filtered flow rate of 2000 ± 10% cfm and an unfiltered flow rate of either 136 cfm or 3000 cfm. The 136 cfm is derived from adding the current 126 cfm ductwork inleakage to the SRP 6.4 10 cfm to account for the opening and closing doors. Therefore, a total of six cases will be run (filtered flow rates of 1800, 2000, and 2200 cfm with unfiltered flow rates of 136 or 3000 cfm. The additional CR flow variations thyroid doses will be calculated using an iodine concentration of 3 μCi/g I-131 eq.

Dose Conversion Factors

The "AXIDENT" Code uses the conservative Dose Conversion Factors (DCFs) that were in effect and used for the design basis 10CFR100 type reactor siting analyses (i.e., TID 14844 and ICRP Publication 2). This analysis will use the ICRP 30 Inhalation DCFs which are generally accepted by the NRC and have been used for a number of design basis accident analyses, including H. B. Robinson's CR Dose Analyses (the ICRP 30 DCFs are the default values in the NRC CR dose analysis program). The use of ICRP 2 as the method of limiting the quantity of activity in the coolant and the use of ICRP 30 as the DCF in the dose calculations does not represent a conflict because the I131 dose equivalency of the TS establishes the allowable initial iodine concentrations and is not related to the the consequence of the activity.

The various DCF's are as follows:

| | "AXIDENT"(ICRP 2) | ICRP 30 |
|---|---|---|
| I-131 | 1.48E+06 | 1.1E+06 |
| I-132 | 5.35E+04 | 6.3E+03 |
| I-133 | 4.00E+05 | 1.8E+05 |
| I-134 | 2.50E+04 | 1.1E+03 |
| I-135 | 1.24E+05 | 3.1E+04 |

### 2.1 Methodology Used to Assess the Consequences of a MSLB during Chlorine Isolation Mode

The following system model will be utilized to determine the consequences of a MSLB should it occur while the CR is in the Chlorine Isolation Mode:

- Since the intakes are isolated in this mode, the model is based on **no** filtered intake flow.
- Since the filter unit does not operate in this mode, the model is based on **no** filtered recirculation flow.

As a result, the model will consist of the CR volume with an intake of 3,000 cfm due to unfiltered inleakage along with the corresponding exfiltration of 3,000 cfm..

## 3.0 REFERENCES

3.1 Carolina Power and Light Company, 0VA-0009, "BNP Control Room Integrated Dose Analysis for MSLB Outside Secondary Containment," Rev. 1, dated November 18, 1996.

3.2 HALLIBURTON NUS Calculation, 5T73-M-04, "Impact of Standby Gas Treatment Flows on LOCA Accident Analyses," Rev. 0, dated 4/14/93

3.3 HALLIBURTON NUS "AXIDENT, A Digital Computer Dose Calculation Model," Version 2, Mod 4, dated 2/18/92

3.4 TID- 14844, "Calculation of Distance Factors for Power and Test Reactors Sites," 1962.

3.5 ICRP Publication 2, "Report of Committee II, Permissible Dose for Internal Radiation," 1959.

3.6 SCIENTECH/NUS AXIDENT Code Verification File

3.7 ICRP Publication 30, "Limits for Intakes of Radionuclides by Workers," 1979.

3.8 NUREG-0800, Standard Review Plan, Section 2.3.4, "Short-term Dispersion Estimates for Accidental Atmospheric Releases," Rev. 1, July 1981.

3.9 NUREG-0800, Standard Review Plan, Section 15.6.4, "Radiological Consequences of Main Steam Line Failure Outside Containment (BWR)," Rev. 2, July 1982.

3.10 CP&L Calculation, 0VA-0107, "Determination of Steam Cloud for MSLB Dose Calculation," Rev. 0

3.11 Safety Guide 5, "Assumptions used for Evaluating the Potential Radiological Consequences of a Steam Line Break Accidents for Boiling Water Reactors," 3/10/71.

3.12 NUREG-0800, Standard Review Plan, Section 15.6.2, "Radiological Consequences of the Failure of Small Lines Carrying Primary Coolant Outside Containment," Rev.2 July 1981.

3.13 Regulatory Guide 1.78, "Assumptions for Evaluating the Habitability of a Nuclear Power Plant Control Room During a Postulated Hazardous Chemical Release," 6/1/74.

## 4.0 ASSUMPTIONS AND INPUTS

### 4.1 Verification of AXIDENT Code and Input Files

The AXIDENT program, used to perform the dose analyses, will be executed on a Dell Optiplex GXMT 5133 computer running a Windows95 operating system as currently assigned to Carl Snyder (Matrix Leasing - 210158). Satisfactory operation of the AXIDENT code on this computer has been confirmed by revalidation of the code as documented in Reference 3.6. There have been no hardware or software changes since this revalidation and therefore the verification/baseline is still valid.

The quantity of steam and liquid released during the MSLB was provided by Mr. Pete Dorosko via a phone conversation with Mr. Dave Studley of SCIENTECH. Total reactor coolant released = 47,050 lbs. of which 9450 lbs is in the form of 98% quality steam and 37,600 lbs is in the form of liquid (See Ref. 3.10).

## 5.0 ANALYSIS

As discussed in the approach, the MSLB analysis is being performed following the approach used in the hand calculations performed in Reference 3.1 with the changes discussed previously in this calculation.

Section 5.4 was added in Revision 4 to assess the radiological consequences of a MSLB concurrent with the system being in the Chlorine Isolation Mode.

From Reference 3.2, the CR input parameters and general inputs are summarized as follows:

- Iodine Fractions

Assumed that the distribution is the same as the LOCA analysis. There is no impact on the results due to the distribution since the efficiency is the same for all forms of iodines.

= 4% Organic
91% Elemental
5% Particulate

- X/Qs = 1.0 for the uniform cloud, see the applicable subsection of Section 5.1 for Gaussian

- Occupancy Factors - Used 1.0 instead of the following factors usually used for the entire time since very little dose from later times

  0-1 day = 1.0
  1-4 days = 0.6
  4-30 days = 0.4

- Control Room Volume = 298,650 $ft^3$

- Control Rm Emerg. Zone Volume = 298,650 $ft^3$

- Unfiltered inleakage = 3000 cfm
  (Note - value used in LOCA analysis is 3126 cfm)

- Filtered Recirculation = 500 cfm
  (Note - value used in LOCA analysis is 900 cfm)

- Control Room Filtered intake flow = 1500 cfm
  (Note - value used in LOCA analysis is 1100 cfm)

The above CR filter unit parameters result in a dose 4.9% higher than was calculated with the LOCA values used in Revision 2 of this calculation. Use of these "measured flows" is hence conservative.

- Control Room Filter Efficiency = 90% Elem., 90% Part., 90% Org.

The CR filter efficiency for this analysis is being reduced to 90% for all forms of iodine to allow for a future reduction in the Technical Specification acceptance limit. The use of a value below the current TS limit is conservative.

- The Control Room non-removal rate is calculated as follows:

$$Non\text{-}removal = \frac{1500(0.10)+3000}{(4500)} = 0.700$$

- The CR cleanup rate following isolation is calculated as follows:

$$Cleanup = \frac{500(0.90)}{(298{,}650)(60)} = 2.51E\text{-}5 \text{ sec}^{-1} *$$

* Checker comment, input used 2.51E-5 $sec^{-1}$, Negligible effect HW D. Chu

## 5.1 MSLB Analysis

Uniform Cloud Analysis

The total fluid released from the MSLB is 47,050 lbs. Of this total, 9450 lbs is steam and 37,600 lbs is liquid. The steam is composed of 2 percent liquid (9450 *0.02 = 189). Therefore, the total liquid release is 37,600 + 189 = 37,789 lbs (1.714E7 g). The cloud formed by the initial steam and the liquid that flashes to steam has a diameter of 108.15 ft. At a wind speed of 1 m/s (3.281 ft/s), the cloud passes over the control room intake in (108.15 ft)/(3.281 ft/s) = 33 seconds. Assuming the cloud is a sphere, the volume is $(4/3)\pi r^3 = (4/3)\pi(108.15/2)^3 = 6.623E5$ ft$^3$ (1.875E4 m$^3$).

As discussed in the methodology, both the cloud size and the source terms are increased by a factor of 100 so that the concentration in the AXIDENT node that represents the cloud stays relatively constant during the release (i.e., the reduction of radionuclide concentration in the cloud will be negligible over the cloud passage period).

The "primary" release rate (referring to the code terminology for the release from the node that represents the steam cloud) is:

$$(1.0 \text{ m}^3/\text{sec})/((1.875E6 \text{ m}^3)(60 \text{ sec/min})) = 5.333E\text{-}7 \text{ sec}^{-1}$$

In Revision 4 of this calculation the release rate was revised to remove an overly conservative approach that was applied in previous revisions. The release rate was previously based on the cloud volume and the control room intake flow. That approach resulted in the introduction of activity to the control room at a rate of over two times the actual rate that will be experienced.

The reactor coolant has an iodine concentration of 4.0 µCi/g I-131 Dose Equivalent (DE). The iodine isotope distribution provided is based on the recent power uprate analysis (Ref. 3.1). The quantity of each isotope is based on the I-131 equivalency using ICRP 2 DCFs. First the distribution is normalized. The normalized distribution is then multiplied by the ICRP 2 DCFs to yield a "normalized" dose.

| Isotope | Iodine Distribution | Normalized Distribution (Ci) | ICRP 2 DCF (rem/Ci) | Normalized Dose (rem) |
|---|---|---|---|---|
| I-131 | 3.1950 | 2.139E-2 | 1.48E6 | 3.166E4 |
| I-132 | 31.079 | 2.080E-1 | 5.35E4 | 1.113E4 |
| I-133 | 21.887 | 1.465E-1 | 4.00E5 | 5.860E4 |
| I-134 | 61.280 | 4.102E-1 | 2.50E4 | 1.026E4 |
| I-135 | 31.955 | 2.139E-1 | 1.24E5 | 2.652E4 |
| | | | Total | 1.382E5 |

An ICRP 2 dose is then calculated for the amount of release.

(4.0 μCi/g I-131 eq.)(1.714E7 g) = 68.56 Ci, where 1.714E7 g = 37,789 lbs

(68.56 Ci)(1.48E6 rem/Ci) = 1.0147E8 rem

The ICRP 2 dose is divided by the total "normalized" dose to provide a multiplier.

(1.0147E8 rem)/(1.382E5 rem) = 734.23

This multiplier is applied to the normalized isotope distribution to generate the ICRP 2 isotope distribution. The ICRP 2 distribution is then increased by a factor of 100 to maintain a constant concentration in the "primary" containment. The distribution is also increased by a factor of 4 to compensate for the 75% auto plateout performed by the AXIDENT code.

| Isotope | Normalized Distribution (Ci) | ICRP 2 Distribution (Ci) | AXIDENT Distribution (Ci) |
|---|---|---|---|
| I-131 | 2.139E-2 | 15.705 | 6282 |
| I-132 | 2.080E-1 | 152.720 | 61088 |
| I-133 | 1.465E-1 | 107.565 | 43026 |
| I-134 | 4.102E-1 | 301.181 | 120472 |
| I-135 | 2.139E-1 | 157.052 | 62821 |

The resulting 30 day control room operator thyroid dose for the uniform cloud scenario was calculated to be 16.0 rem. (See Attachments J,N)

Gaussian Analysis

As stated previously, a Gaussian cloud distribution model was developed based on the equations in RG 1.78. The Gaussian diffusion equation is:

$$\frac{X}{Q_l} = \left( 7.87(\sigma_{x,y}^2 + \sigma_l^2)(\sigma_z^2 + \sigma_l^2)^{\frac{1}{2}} \right)^{-1} \exp\left[ -\frac{1}{2}\left( \frac{x^2}{\sigma_x^2 + \sigma_l^2} + \frac{y^2}{\sigma_y^2 + \sigma_l^2} + \frac{z^2}{\sigma_z^2 + \sigma_l^2} \right) \right]$$

where:

$X/Q_l$ is the unit concentration at coordinates x, y, z from the center of the puff

$\sigma_x$, $\sigma_y$, $\sigma_z$ are the standard deviations of the isotope concentration in the horizontal alongwind, horizontal crosswind, and vertical crosswind directions, respectively (assume $\sigma_x = \sigma_y$)

$\sigma_l$ is the inital standard deviation of the puff

$$\sigma_l = \left[ \frac{Q_l}{7.87 X_o} \right]^{1/3}$$

where $Q_l$ is the puff release quantity in curies and $X_o$ is the initial curie concentration

x, y, z are the distances from the puff center in the horizontal alongwind, horizontal crosswind, and vertical crosswind directions, respectively

$x = D - ut$ where D is the source-receptor distance, u is the windspeed, and t is the time after release

For the BNP MSLB model:

$\sigma_x = \sigma_y = 1.6$ m and $\sigma_z = 0$ m

The standard deviation values were determined by extrapolation of the Pasquill Type F curves in Figures 1 and 2 of RG 1.78. The Pasquill Type F stability category was assumed since this represents the worst case stability category at most sites.

D = 130 ft = 39.624 m

u = 1 m/s (conservative windspeed described above)

$Q_l$ = 15.705 Ci (I-131)

The initial concentration ($X_o$) is based on the volume of release (6.623E5 $ft^3$ = 1.875E4 $m^3$)

$$X_o = \frac{15.705\ Ci}{1.875E4\ m^3} = 8.376E\text{-}4\ Ci/m^3$$

Therefore,

$$\sigma_I = \left[\frac{15.705}{(7.87)(8.376E\text{-}4)}\right]^{\frac{1}{3}} = 13.35m$$

$$\frac{X}{Q_I} = \left(7.87(1.6^2+13.35^2)(0^2+13.35^2)^{\frac{1}{2}}\right)^{-1} \exp\left[-\frac{1}{2}\left(\frac{39.624^2-(2)(39.624)t+t^2}{1.6^2+13.35^2} + \frac{0^2}{1.6^2+13.35^2} + \frac{0^2}{0^2+13.35^2}\right)\right]$$

$$\frac{X}{Q_I} = (5.26E\text{-}5)\exp\left[\left(-\frac{1}{2}\right)\left(\frac{1570.06-79.25t+t^2}{180.78}\right)\right]$$

The above equation is the Gaussian diffusion model for BNP. Since $X/Q_I$ is independent of concentration (units are $m^{-3}$), the same $X/Q_I$'s apply to each iodine isotope. Therefore solving the equation with respect to time generates a $X/Q_I$ distribution which is applicable to all iodine isotopes. For AXIDENT code input, twenty-two time steps were used to model the above equation. This step function is plotted against the Gaussian curve and the uniform distribution applied in the previous case. As can be seen in Attachment R, the area under the uniform distribution closely approximates the area under the Gaussian distribution. This is verified by the results of the Gaussian distribution run which yielded a control room operator thyroid dose of 16.2 rem vs. the uniform distribution result of 16.0 rem. (See Attachments K,O)

Parametric Analysis

Because of the close approximation of the Gaussian distribution by the uniform distribution, the two other cases (3.0 µCi/g and 2.0 µCi/g I-131 eq. concentrations) will be modeled using the uniform distribution. For both cases the only changes required are to the iodine concentrations.

For 3.0 µCi/g I-131 equivalent an ICRP 2 dose is calculated for the amount of release.

(3.0 µCi/g I-131 eq.)(1.714E7 g) = 51.42 Ci

(51.42 Ci)(1.48E6 rem/Ci) = 7.610E7 rem

The ICRP 2 dose is divided by the total "normalized" dose to provide a multiplier.

(7.610E7 rem)/(1.382E5 rem) = 550.67

This multiplier is applied to the normalized isotope distribution to generate the ICRP 2 isotope distribution. The ICRP 2 distribution is increased by a factor of 100 to maintain a constant concentration in the cloud as it passes over the control room intake. The ICRP 2 distribution is also increased by a factor of 4 to account for the 75% auto plateout performed by the AXIDENT code.

| Isotope | Normalized Distribution (Ci) | ICRP 2 Distribution (Ci) | AXIDENT Distribution (Ci) |
|---|---|---|---|
| I-131 | 2.139E-2 | 11.779 | 4712 |
| I-132 | 2.080E-1 | 114.539 | 45816 |
| I-133 | 1.465E-1 | 80.673 | 32269 |
| I-134 | 4.102E-1 | 225.885 | 90354 |
| I-135 | 2.139E-1 | 117.788 | 47115 |

The resulting 30 day control room operator thyroid dose was calculated to be 12.0 rem. (See Attachments L,P)

For 2.0 μCi/g I-131 equivalent an ICRP 2 dose is calculated for the amount of release.

(2.0 μCi/g I-131 eq.)(1.714E7 g) = 34.28 Ci

(34.28 Ci)(1.48E6 rem/Ci) = 5.0734E7 rem

The ICRP 2 dose is divided by the total "normalized" dose to provide a multiplier.

(5.0734E7 rem)/(1.382E5 rem) = 367.11

This multiplier is applied to the normalized isotope distribution to generate the ICRP 2 isotope distribution. The ICRP 2 distribution is increased by a factor of 100 to maintain a constant concentration in the cloud as it passes over the control room intake. The ICRP 2 distribution is also increased by a factor of 4 to account for the 75% auto plateout performed by the AXIDENT code.

| Isotope | Normalized Distribution (Ci) | ICRP 2 Distribution (Ci) | AXIDENT Distribution (Ci) |
|---|---|---|---|
| I-131 | 2.139E-2 | 7.853 | 3141 |
| I-132 | 2.080E-1 | 76.359 | 30544 |
| I-133 | 1.465E-1 | 53.782 | 21513 |

| | | | |
|---|---|---|---|
| I-134 | 4.102E-1 | 150.589 | 60235 |
| I-135 | 2.139E-1 | 78.525 | 31410 |

The resulting 30 day CR operator thyroid dose was calculated to be 8.0 rem. (See Attach. M,Q)

### 5.2 Impact of Increased Measured Flows

In the previous revisions to this calculation, the affect on the CR dose was assessed using the original MSLB accident model flows (LOCA Calc.) along with recent field measured flows. This assessment was not maintained in this revision since it uses a different release path model. With the measured flows, the CR thyroid dose increased by 4.9 %. Refer to the previous revision for details.

### 5.3 Impact of Degraded CR Filter Unit

In Revision 2 of this calculation, an operability assessment was performed to determine the effect on the CR room operator dose that would occur with a degraded CR Filter Unit performance. The revision was requested to determine the increase in dose for the following scenarios (these scenarios were performed to support the concern that the CR filter unit does not have an electric heater):

- With the flows in the degraded condition as stated in Section 5.0 above, determine the CR thyroid dose consequence following an MSLB with no credit for any iodine removal by the CR filter unit (elemental, particulate, and organic).

- With the flows in the degraded condition as stated in Section 5.0 above, determine the CR dose consequence following an MSLB with partial credit iodine removal by the CR filter unit (90% elemental, 90% particulate, and 30% organic).

The details of the operability assessment were removed from Revision 3 since subsequent testing of the charcoal in the CR filter units demonstrated the ability to meet its design basis without the electric heater. Refer to Revision 2 for details.

### 5.4 Radiological Consequences of a MSLB with CR in the Chlorine Isolation Mode

The following input parameters change with the CR system in the Chlorine Isolation Mode:

- Unfiltered inleakage - Maintained at 3000 cfm
- Filtered Recirculation - Changed from 500 cfm to 0 cfm
- Control Room Filtered intake flow - Changed from 1500 cfm to 0 cfm

- Control Room Filter Efficiency - No longer applicable
- Control Room non-removal rate - 1.0 since there is no filtration
- CR cleanup rate following isolation - N/A since there is no filtration
- Leakrate from steam cloud to CR =

$$(1.0\ m^3/sec)/((1.875E6\ m^3)(60\ sec/min)) = 5.333E\text{-}7\ sec^{-1}$$

The resulting 30 day control room operator thyroid dose was calculated to be 24.7 rem at a specific activity of 4 μCi/g and 18.5 rem with a specific activity of 3.0 μCi/g. (See Attachments S, T ,U, and V). Based on a comparison of the radiological consequences of a MSLB while in the "Chlorine mode" against the "LOCA mode", the calculation shows an increase of 56%.

## 5.5 Control Room Flow Variations Without Recirculation

Additional variations in CR flow rates without recirculation were analyzed to determine the effect on the 30-day CR operator thyroid dose. The additional CR flow rate variations will use a filtered flow rate of 2000 ± 10% cfm and an unfiltered flow rate of either 136 cfm or 3000 cfm. The 136 cfm is derived from adding the current 126 cfm ductwork inleakage to the SRP 6.4 10 cfm to account for the opening and closing doors.

A total of six cases will be run (filtered flow rates of 1800, 2000, and 2200 cfm with unfiltered flow rates of 136 or 3000 cfm. Since there is no recirculation the CR cleanup rate required for code input will equal 0.0 as opposed to 2.51E-5 $sec^{-1}$ as stated in Section 5.0.

The CR non-removal factor and calculated dose for each case are as follows:

Case 1 (1800 cfm filtered flow + 136 cfm unfiltered flow)

CR non-removal factor = ((1800 cfm)(0.1) + 136 cfm)/(1800 + 136 cfm) = 0.1632

The calculated dose for Case 1 is 2.94 rem. (See Attachment W)

Case 2 (2000 cfm filtered flow + 136 cfm unfiltered flow)

CR non-removal factor = ((2000 cfm)(0.1) + 136 cfm)/(2000 + 136 cfm) = 0.1573

The calculated dose for Case 2 is 2.86 rem. (See Attachment X)

Case 3 (2200 cfm filtered flow + 136 cfm unfiltered flow)

CR non-removal rate = ((2200 cfm)(0.1) + 136 cfm)/(2200 + 136 cfm) = 0.1524

The calculated dose for Case 3 is 2.79 rem. (See Attachment Y)

Case 4 (1800 cfm filtered flow + 3000 cfm unfiltered flow)

CR non-removal rate = ((1800 cfm)(0.1) + 3000 cfm)/(1800 + 3000 cfm) = 0.6625

The calculated dose for Case 4 is 12.5 rem. (See Attachment Z)

Case 5 (2000 cfm filtered flow + 3000 cfm unfiltered flow)

CR non-removal rate = ((2000 cfm)(0.1) + 3000 cfm)/(2000 + 3000 cfm) = 0.64

The calculated dose for Case 5 is 12.1 rem. (See Attachment AA)

Case 6 (2200 cfm filtered flow + 3000 cfm unfiltered flow)

CR non-removal rate = ((2200 cfm)(0.1) + 3000 cfm)/(2200 + 3000 cfm) = 0.6192

The calculated dose for Case 6 is 11.7 rem. (See Attachment AB)

Cases 1 through 6 were run with the revised Technical Specification pre-accident iodine spike concentration of 3.0 uCi/g I-131 dose equivalent. There is still no need to run the equilibrium case since its dose consequences are 15 times lower, while the acceptance limits are only 10 times lower than the pre-accident spike case.

## 6.0 Summary

The calculated radiological consequences of the BNP MSLB at various pre-accident iodine spike activities are as follows:

| Iodine Concentration (μCi/g I-131 eq.) | CR Operator Thyroid Dose (rem) | Analysis Model |
|---|---|---|
| 4.0 | 16.0 | Uniform Cloud |
| 4.0 | 16.2 | Gaussian Puff |
| 3.0 | 12.0 | Uniform Cloud |
| 2.0 | 8.0 | Uniform Cloud |

In the Chlorine Isolation Mode, the results are as follows:

| Iodine Concentration (μCi/g I-131 eq.) | CR Operator Thyroid Dose (rem) | Analysis Model |
|---|---|---|
| 4.0 | 24.7 | Uniform Cloud |
| 3.0 | 18.5 | Uniform Cloud |

The additional CR flow variations thyroid doses are as follows:

| CR Flow Case | Thyroid Dose (rem) |
|---|---|
| Case 1 (1800 cfm filtered flow + 136 cfm unfiltered flow) | 2.94 |
| Case 2 (2000 cfm filtered flow + 136 cfm unfiltered flow) | 2.86 |
| Case 3 (2200 cfm filtered flow + 136 cfm unfiltered flow) | 2.79 |
| Case 4 (1800 cfm filtered flow + 3000 cfm unfiltered flow) | 12.5 |
| Case 5 (2000 cfm filtered flow + 3000 cfm unfiltered flow) | 12.1 |
| Case 6 (2200 cfm filtered flow + 3000 cfm unfiltered flow) | 11.7 |

```
AXIDENT VER 2 MOD 4
PRODUCTION DATE 02/18/92
BEGIN EXECUTION DATE:  07/23/1997
BEGIN EXECUTION TIME:  16:23:36.23



 1 MSLB 4.0uCi/g, 4500 cfm
 2 8 2 1.0 1.0
 3 -2350 2.6E6 2.9865E5 2.9865E5
 4 0.0 0.0 0.0 1.0 6.6234E7 1.0 1.0
 5 5 33.0 1.8E3 7.2E3 2.88E4 8.64E4 3.456E5 2.592E6
 6 2*5.333E-7 6*0.0
 7 8*1.0
 8 8*0.0
 9 8*4500
10 8*1.0
11 8*1.0
12 8*0.0
13 8*0.0
14 8*0.0
15 8*0.0
16 8*0.0
17 8*0.0
18 0.0 7*2.54E-5
19 0.0 7*2.54E-5
20 0.0 7*2.54E-5
21 1.0 1.0 1.0 0.700 0.700 0.700
22 1.0 1.0 1.0
23 6282 61088 43026 120472 62821 0.0 0.0 0.0
24 8*0.0
```

1

MSLB 4.0uCi/g, 4500 cfm

INITIAL CONTAINMENT INVENTORY

| ISOTOPE | ACTIVITY (CURIES) |
|---|---|
| I-131 | 6.282E+03 |
| I-132 | 6.109E+04 |
| I-133 | 4.303E+04 |
| I-134 | 1.205E+05 |
| I-135 | 6.282E+04 |
| XE-131M | 0.000E+00 |
| XE-133M | 0.000E+00 |
| XE-133 | 0.000E+00 |
| XE-135M | 0.000E+00 |
| XE-135 | 0.000E+00 |
| XE-138 | 0.000E+00 |
| KR-83M | 0.000E+00 |
| KR-85M | 0.000E+00 |
| KR-85 | 0.000E+00 |
| KR-87 | 0.000E+00 |
| KR-88 | 0.000E+00 |

1 MSLB 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .001 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .000 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .000 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .000 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.43E+03 | 0.00E+00 | 3.81E-03 | 5.66E-03 | 6.69E-07 | 1.96E+00 | 3.53E-04 | 1.73E-04 | 8.60E-04 | 9.90E-09 | 7.59E-08 |
| I-132 | 1.39E+04 | 0.00E+00 | 3.70E-02 | 5.50E-02 | 6.51E-06 | 6.88E-01 | 2.22E-02 | 3.82E-03 | 3.02E-04 | 5.25E-07 | 1.68E-06 |
| I-133 | 9.79E+03 | 0.00E+00 | 2.61E-02 | 3.88E-02 | 4.59E-06 | 3.62E+00 | 3.11E-03 | 2.54E-03 | 1.59E-03 | 1.07E-07 | 1.12E-06 |
| I-134 | 2.74E+04 | 0.00E+00 | 7.30E-02 | 1.08E-01 | 1.28E-05 | 6.34E-01 | 3.54E-02 | 7.64E-03 | 2.78E-04 | 1.11E-06 | 3.36E-06 |
| I-135 | 1.43E+04 | 0.00E+00 | 3.81E-02 | 5.66E-02 | 6.69E-06 | 1.64E+00 | 1.69E-02 | 2.70E-03 | 7.20E-04 | 3.13E-07 | 1.19E-06 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.85E+01 | 0.00E+00 | 2.09E-04 | 3.11E-04 | 3.68E-08 | 1.08E-01 | 1.94E-05 | 9.49E-06 | 4.72E-05 | 5.44E-10 | 4.17E-09 |
| I-132 | 7.63E+02 | 0.00E+00 | 2.04E-03 | 3.02E-03 | 3.58E-07 | 3.78E-02 | 1.22E-03 | 2.10E-04 | 1.66E-05 | 2.89E-08 | 9.21E-08 |
| I-133 | 5.38E+02 | 0.00E+00 | 1.43E-03 | 2.13E-03 | 2.52E-07 | 1.99E-01 | 1.71E-04 | 1.40E-04 | 8.74E-05 | 5.90E-09 | 6.13E-08 |
| I-134 | 1.50E+03 | 0.00E+00 | 4.01E-03 | 5.96E-03 | 7.05E-07 | 3.48E-02 | 1.95E-03 | 4.20E-04 | 1.53E-05 | 6.10E-08 | 1.84E-07 |
| I-135 | 7.85E+02 | 0.00E+00 | 2.09E-03 | 3.11E-03 | 3.68E-07 | 9.01E-02 | 9.31E-04 | 1.48E-04 | 3.96E-05 | 1.72E-08 | 6.52E-08 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.28E+01 | 0.00E+00 | 1.68E-04 | 2.49E-04 | 2.94E-08 | 8.60E-02 | 1.55E-05 | 7.59E-06 | 3.78E-05 | 4.35E-10 | 3.33E-09 |
| I-132 | 6.11E+02 | 0.00E+00 | 1.63E-03 | 2.42E-03 | 2.86E-07 | 3.02E-02 | 9.77E-04 | 1.68E-04 | 1.33E-05 | 2.31E-08 | 7.37E-08 |
| I-133 | 4.30E+02 | 0.00E+00 | 1.15E-03 | 1.70E-03 | 2.02E-07 | 1.59E-01 | 1.37E-04 | 1.12E-04 | 7.00E-05 | 4.72E-09 | 4.90E-08 |
| I-134 | 1.20E+03 | 0.00E+00 | 3.21E-03 | 4.77E-03 | 5.64E-07 | 2.79E-02 | 1.56E-03 | 3.36E-04 | 1.22E-05 | 4.88E-08 | 1.48E-07 |
| I-135 | 6.28E+02 | 0.00E+00 | 1.67E-03 | 2.49E-03 | 2.94E-07 | 7.21E-02 | 7.45E-04 | 1.19E-04 | 3.17E-05 | 1.38E-08 | 5.21E-08 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 9.39E+00 | 8.58E-02 | 1.85E-02 | 4.12E-03 | 2.27E-06 | 8.14E-06 |

1 MSLB 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .009 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.43E+03 | 0.00E+00 | 2.13E-02 | 3.72E-02 | 4.40E-06 | 1.10E+01 | 1.98E-03 | 9.67E-04 | 3.65E-02 | 4.20E-07 | 3.22E-06 |
| I-132 | 1.39E+04 | 0.00E+00 | 2.07E-01 | 3.61E-01 | 4.27E-05 | 3.85E+00 | 1.24E-01 | 2.13E-02 | 1.28E-02 | 2.23E-05 | 7.11E-05 |
| I-133 | 9.79E+03 | 0.00E+00 | 1.46E-01 | 2.55E-01 | 3.01E-05 | 2.03E+01 | 1.74E-02 | 1.42E-02 | 6.75E-02 | 4.56E-06 | 4.73E-05 |
| I-134 | 2.72E+04 | 0.00E+00 | 4.08E-01 | 7.09E-01 | 8.38E-05 | 3.54E+00 | 1.98E-01 | 4.26E-02 | 1.18E-02 | 4.69E-05 | 1.42E-04 |
| I-135 | 1.43E+04 | 0.00E+00 | 2.13E-01 | 3.72E-01 | 4.40E-05 | 9.18E+00 | 9.49E-02 | 1.51E-02 | 3.06E-02 | 1.33E-05 | 5.03E-05 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.85E+01 | 0.00E+00 | 1.17E-03 | 2.05E-03 | 2.42E-07 | 6.02E-01 | 1.09E-04 | 5.31E-05 | 2.01E-03 | 2.31E-08 | 1.77E-07 |
| I-132 | 7.61E+02 | 0.00E+00 | 1.14E-02 | 1.98E-02 | 2.35E-06 | 2.11E-01 | 6.83E-03 | 1.17E-03 | 7.04E-04 | 1.22E-06 | 3.90E-06 |
| I-133 | 5.38E+02 | 0.00E+00 | 8.03E-03 | 1.40E-02 | 1.66E-06 | 1.11E+00 | 9.58E-04 | 7.81E-04 | 3.71E-03 | 2.50E-07 | 2.60E-06 |
| I-134 | 1.49E+03 | 0.00E+00 | 2.24E-02 | 3.89E-02 | 4.60E-06 | 1.94E-01 | 1.09E-02 | 2.34E-03 | 6.46E-04 | 2.58E-06 | 7.80E-06 |
| I-135 | 7.85E+02 | 0.00E+00 | 1.17E-02 | 2.04E-02 | 2.42E-06 | 5.04E-01 | 5.21E-03 | 8.30E-04 | 1.68E-03 | 7.31E-07 | 2.76E-06 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.28E+01 | 0.00E+00 | 9.38E-04 | 1.64E-03 | 1.93E-07 | 4.82E-01 | 8.70E-05 | 4.25E-05 | 1.60E-03 | 1.85E-08 | 1.47E-07 |
| I-132 | 6.09E+02 | 0.00E+00 | 9.11E-03 | 1.59E-02 | 1.88E-06 | 1.69E-01 | 5.46E-03 | 9.38E-04 | 5.63E-04 | 9.79E-07 | 3.12E-06 |
| I-133 | 4.30E+02 | 0.00E+00 | 6.42E-03 | 1.12E-02 | 1.32E-06 | 8.92E-01 | 7.66E-04 | 6.25E-04 | 2.97E-03 | 2.00E-07 | 2.08E-06 |
| I-134 | 1.20E+03 | 0.00E+00 | 1.79E-02 | 3.11E-02 | 3.68E-06 | 1.55E-01 | 8.68E-03 | 1.87E-03 | 5.17E-04 | 2.06E-06 | 6.24E-06 |
| I-135 | 6.28E+02 | 0.00E+00 | 9.38E-03 | 1.63E-02 | 1.93E-06 | 4.03E-01 | 4.17E-03 | 6.64E-04 | 1.34E-03 | 5.84E-07 | 2.21E-06 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 5.25E+01 | 4.79E-01 | 1.04E-01 | 1.75E-01 | 9.61E-05 | 3.45E-04 |

1 MSLB 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .500 HOURS: X/Q(SITE)= .10E+01 SEC/M3 | PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.43E+03 | 0.00E-00 | 0.00E+00 | 2.28E-02 | 2.70E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.16E+00 | 3.63E-05 | 2.79E-04 |
| I-132 | 1.20E+04 | 0.00E+00 | 0.00E+00 | 1.91E-01 | 2.26E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.04E+00 | 1.80E-03 | 5.75E-03 |
| I-133 | 9.63E+03 | 0.00E+00 | 0.00E+00 | 1.54E-01 | 1.82E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.80E+00 | 3.92E-04 | 4.07E-03 |
| I-134 | 1.84E+04 | 0.00E+00 | 0.00E+00 | 2.94E-01 | 3.47E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.54E-01 | 3.40E-03 | 1.03E-02 |
| I-135 | 1.36E+04 | 0.00E+00 | 0.00E+00 | 2.17E-01 | 2.56E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.58E+00 | 1.12E-03 | 4.25E-03 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.84E+01 | 0.00E+00 | 0.00E+00 | 1.25E-03 | 1.48E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.73E-01 | 2.00E-06 | 1.53E-05 |
| I-132 | 6.57E+02 | 0.00E+00 | 0.00E+00 | 1.05E-02 | 1.24E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.69E-02 | 9.89E-05 | 3.16E-04 |
| I-133 | 5.29E+02 | 0.00E+00 | 0.00E+00 | 8.45E-03 | 9.99E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.19E-01 | 2.15E-05 | 2.24E-04 |
| I-134 | 1.01E+03 | 0.00E+00 | 0.00E+00 | 1.61E-02 | 1.91E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.69E-02 | 1.87E-04 | 5.66E-04 |
| I-135 | 7.46E+02 | 0.00E+00 | 0.00E+00 | 1.19E-02 | 1.41E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.42E-01 | 6.18E-05 | 2.34E-04 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.27E+01 | 0.00E+00 | 0.00E+00 | 1.00E-03 | 1.18E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.39E-01 | 1.60E-06 | 1.22E-05 |
| I-132 | 5.25E+02 | 0.00E+00 | 0.00E+00 | 8.40E-03 | 9.93E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.55E-02 | 7.92E-05 | 2.53E-04 |
| I-133 | 4.23E+02 | 0.00E+00 | 0.00E+00 | 6.76E-03 | 8.00E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.55E-01 | 1.72E-05 | 1.79E-04 |
| I-134 | 8.08E+02 | 0.00E+00 | 0.00E+00 | 1.29E-02 | 1.53E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.75E-02 | 1.50E-04 | 4.53E-04 |
| I-135 | 5.97E+02 | 0.00E+00 | 0.00E+00 | 9.53E-03 | 1.13E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.14E-01 | 4.94E-05 | 1.87E-04 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.48E+01 | 7.43E-03 | 2.71E-02 |

1 MSLB 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT 2.000 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.42E+03 | 0.00E+00 | 0.00E+00 | 5.09E-03 | 6.02E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.87E+00 | 4.46E-05 | 3.42E-04 |
| I-132 | 7.61E+03 | 0.00E+00 | 0.00E+00 | 2.73E-02 | 3.23E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.97E-01 | 1.73E-03 | 5.54E-03 |
| I-133 | 9.16E+03 | 0.00E+00 | 0.00E+00 | 3.29E-02 | 3.89E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.95E+00 | 4.69E-04 | 4.87E-03 |
| I-134 | 5.54E+03 | 0.00E+00 | 0.00E+00 | 1.99E-02 | 2.35E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.63E-01 | 2.25E-03 | 6.80E-03 |
| I-135 | 1.16E+04 | 0.00E+00 | 0.00E+00 | 4.17E-02 | 4.93E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.92E+00 | 1.27E-03 | 4.81E-03 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.80E+01 | 0.00E+00 | 0.00E+00 | 2.80E-04 | 3.31E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.13E-01 | 2.45E-06 | 1.88E-05 |
| I-132 | 4.18E+02 | 0.00E+00 | 0.00E+00 | 1.50E-03 | 1.77E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.48E-02 | 9.53E-05 | 3.04E-04 |
| I-133 | 5.03E+02 | 0.00E+00 | 0.00E+00 | 1.81E-03 | 2.14E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.82E-01 | 2.58E-05 | 2.68E-04 |
| I-134 | 3.05E+02 | 0.00E+00 | 0.00E+00 | 1.09E-03 | 1.29E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.09E-02 | 1.23E-04 | 3.73E-04 |
| I-135 | 6.39E+02 | 0.00E+00 | 0.00E+00 | 2.29E-03 | 2.71E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.60E-01 | 6.98E-05 | 2.64E-04 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.24E+01 | 0.00E+00 | 0.00E+00 | 2.24E-04 | 2.65E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.70E-01 | 1.96E-06 | 1.50E-05 |
| I-132 | 3.34E+02 | 0.00E+00 | 0.00E+00 | 1.20E-03 | 1.42E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.38E-02 | 7.62E-05 | 2.43E-04 |
| I-133 | 4.03E+02 | 0.00E+00 | 0.00E+00 | 1.45E-03 | 1.71E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.05E-01 | 2.06E-05 | 2.14E-04 |
| I-134 | 2.44E+02 | 0.00E+00 | 0.00E+00 | 8.74E-04 | 1.03E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.48E-02 | 9.87E-05 | 2.99E-04 |
| I-135 | 5.11E+02 | 0.00E+00 | 0.00E+00 | 1.83E-03 | 2.17E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.28E-01 | 5.58E-05 | 2.11E-04 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.68E+01 | 6.33E-03 | 2.46E-02 |

1 MSLB 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT 8.000 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.39E+03 | 0.00E+00 | 0.00E+00 | 1.27E-05 | 1.50E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.11E+00 | 1.28E-05 | 9.81E-05 |
| I-132 | 1.25E+03 | 0.00E+00 | 0.00E+00 | 1.14E-05 | 1.35E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.66E-01 | 2.89E-04 | 9.23E-04 |
| I-133 | 7.52E+03 | 0.00E+00 | 0.00E+00 | 6.87E-05 | 8.12E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.89E+00 | 1.27E-04 | 1.32E-03 |
| I-134 | 4.58E+01 | 0.00E+00 | 0.00E+00 | 4.19E-07 | 4.95E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.09E-02 | 1.63E-04 | 4.94E-04 |
| I-135 | 6.25E+03 | 0.00E+00 | 0.00E+00 | 5.72E-05 | 6.76E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.94E-01 | 3.02E-04 | 1.14E-03 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.63E+01 | 0.00E+00 | 0.00E+00 | 6.97E-07 | 8.25E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.11E-02 | 7.03E-07 | 5.39E-06 |
| I-132 | 6.85E+01 | 0.00E+00 | 0.00E+00 | 6.26E-07 | 7.41E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.14E-03 | 1.59E-05 | 5.07E-05 |
| I-133 | 4.13E+02 | 0.00E+00 | 0.00E+00 | 3.77E-06 | 4.46E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.04E-01 | 6.99E-06 | 7.26E-05 |
| I-134 | 2.52E+00 | 0.00E+00 | 0.00E+00 | 2.30E-08 | 2.72E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.25E-03 | 8.97E-06 | 2.71E-05 |
| I-135 | 3.44E+02 | 0.00E+00 | 0.00E+00 | 3.14E-06 | 3.71E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.82E-02 | 1.66E-05 | 6.28E-05 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.10E+01 | 0.00E+00 | 0.00E+00 | 5.58E-07 | 6.60E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.89E-02 | 5.62E-07 | 4.31E-06 |
| I-132 | 5.48E+01 | 0.00E+00 | 0.00E+00 | 5.01E-07 | 5.93E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.31E-03 | 1.27E-05 | 4.06E-05 |
| I-133 | 3.30E+02 | 0.00E+00 | 0.00E+00 | 3.02E-06 | 3.57E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.29E-02 | 5.59E-06 | 5.81E-05 |
| I-134 | 2.01E+00 | 0.00E+00 | 0.00E+00 | 1.84E-08 | 2.18E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.80E-03 | 7.17E-06 | 2.17E-05 |
| I-135 | 2.75E+02 | 0.00E+00 | 0.00E+00 | 2.51E-06 | 2.97E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.05E-02 | 1.33E-05 | 5.03E-05 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.28E+00 | 9.83E-04 | 4.37E-03 |

1 MSLB 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT 24.000 HOURS: X/Q(SITE)= .10E+01 SEC/M3 | PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.31E+03 | 0.00E+00 | 0.00E+00 | 1.45E-12 | 1.71E-16 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.78E-03 | 3.20E-08 | 2.45E-07 |
| I-132 | 1.01E+01 | 0.00E+00 | 0.00E+00 | 1.11E-14 | 1.31E-18 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.95E-05 | 1.21E-07 | 3.86E-07 |
| I-133 | 4.43E+03 | 0.00E+00 | 0.00E+00 | 4.90E-12 | 5.79E-16 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.95E-03 | 2.66E-07 | 2.77E-06 |
| I-134 | 1.28E-04 | 0.00E+00 | 0.00E+00 | 1.42E-19 | 1.67E-23 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.62E-07 | 3.44E-09 | 1.04E-08 |
| I-135 | 1.20E+03 | 0.00E+00 | 0.00E+00 | 1.32E-12 | 1.56E-16 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.53E-04 | 4.15E-07 | 1.57E-06 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.20E+01 | 0.00E+00 | 0.00E+00 | 7.96E-14 | 9.41E-18 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.53E-04 | 1.76E-09 | 1.35E-08 |
| I-132 | 5.52E-01 | 0.00E+00 | 0.00E+00 | 6.10E-16 | 7.22E-20 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.82E-06 | 6.64E-09 | 2.12E-08 |
| I-133 | 2.44E+02 | 0.00E+00 | 0.00E+00 | 2.69E-13 | 3.18E-17 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.17E-04 | 1.46E-08 | 1.52E-07 |
| I-134 | 7.04E-06 | 0.00E+00 | 0.00E+00 | 7.78E-21 | 9.20E-25 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.74E-08 | 1.89E-10 | 5.71E-10 |
| I-135 | 6.58E+01 | 0.00E+00 | 0.00E+00 | 7.27E-14 | 8.60E-18 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.23E-05 | 2.28E-08 | 8.62E-08 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 5.76E+01 | 0.00E+00 | 0.00E+00 | 6.37E-14 | 7.53E-18 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.22E-04 | 1.41E-09 | 1.08E-08 |
| I-132 | 4.42E-01 | 0.00E+00 | 0.00E+00 | 4.88E-16 | 5.77E-20 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.05E-06 | 5.31E-09 | 1.70E-08 |
| I-133 | 1.95E+02 | 0.00E+00 | 0.00E+00 | 2.15E-13 | 2.55E-17 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.73E-04 | 1.17E-08 | 1.22E-07 |
| I-134 | 5.63E-06 | 0.00E+00 | 0.00E+00 | 6.23E-21 | 7.36E-25 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.79E-08 | 1.51E-10 | 4.57E-10 |
| I-135 | 5.26E+01 | 0.00E+00 | 0.00E+00 | 5.82E-14 | 6.88E-18 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.19E-05 | 1.82E-08 | 6.89E-08 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.51E-03 | 9.20E-07 | 5.47E-06 |

1 MSLB 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT 96.000 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.01E+03 | 0.00E+00 | 0.00E+00 | 8.32E-44 | 9.84E-48 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.17E-10 | 3.65E-15 | 2.80E-14 |
| I-132 | 3.80E-09 | 0.00E+00 | 0.00E+00 | 3.13E-55 | 3.70E-59 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.77E-14 | 1.18E-16 | 3.76E-16 |
| I-133 | 4.11E+02 | 0.00E+00 | 0.00E+00 | 3.38E-44 | 4.00E-48 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.81E-10 | 1.90E-14 | 1.97E-13 |
| I-134 | 1.31E-29 | 0.00E+00 | 0.00E+00 | 1.08E-75 | 1.27E-79 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.91E-19 | 1.16E-21 | 3.52E-21 |
| I-135 | 7.04E-01 | 0.00E+00 | 0.00E+00 | 5.78E-47 | 6.84E-51 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.21E-11 | 9.60E-15 | 3.63E-14 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 5.56E+01 | 0.00E+00 | 0.00E+00 | 4.57E-45 | 5.41E-49 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.74E-11 | 2.01E-16 | 1.54E-15 |
| I-132 | 2.09E-10 | 0.00E+00 | 0.00E+00 | 1.72E-56 | 2.03E-60 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.72E-15 | 6.47E-18 | 2.06E-17 |
| I-133 | 2.26E+01 | 0.00E+00 | 0.00E+00 | 1.86E-45 | 2.20E-49 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.55E-11 | 1.04E-15 | 1.08E-14 |
| I-134 | 7.20E-31 | 0.00E+00 | 0.00E+00 | 5.92E-77 | 7.00E-81 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.60E-20 | 6.38E-23 | 1.93E-22 |
| I-135 | 3.87E-02 | 0.00E+00 | 0.00E+00 | 3.18E-48 | 3.76E-52 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.21E-12 | 5.27E-16 | 2.00E-15 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 4.45E+01 | 0.00E+00 | 0.00E+00 | 3.66E-45 | 4.32E-49 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.39E-11 | 1.60E-16 | 1.23E-15 |
| I-132 | 1.67E-10 | 0.00E+00 | 0.00E+00 | 1.37E-56 | 1.62E-60 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.98E-15 | 5.17E-18 | 1.65E-17 |
| I-133 | 1.81E+01 | 0.00E+00 | 0.00E+00 | 1.49E-45 | 1.76E-49 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.24E-11 | 8.35E-16 | 8.67E-15 |
| I-134 | 5.76E-31 | 0.00E+00 | 0.00E+00 | 4.73E-77 | 5.60E-81 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.28E-20 | 5.11E-23 | 1.55E-22 |
| I-135 | 3.09E-02 | 0.00E+00 | 0.00E+00 | 2.54E-48 | 3.01E-52 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.69E-13 | 4.22E-16 | 1.60E-15 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.82E-10 | 3.56E-14 | 2.88E-13 |

1 MSLB 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT 720.000 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.08E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.82E-41 | 2.10E-46 | 1.61E-45 |
| I-132 | 8.37E-91 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.90E-54 | 3.31E-57 | 1.06E-56 |
| I-133 | 4.66E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.94E-42 | 1.31E-46 | 1.36E-45 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.22E-75 | 8.83E-78 | 2.67E-77 |
| I-135 | 7.04E-29 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.64E-46 | 4.19E-49 | 1.59E-48 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 5.92E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.00E-42 | 1.15E-47 | 8.83E-47 |
| I-132 | 4.60E-92 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.05E-55 | 1.82E-58 | 5.81E-58 |
| I-133 | 2.56E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.07E-43 | 7.20E-48 | 7.48E-47 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.22E-76 | 4.85E-79 | 1.47E-78 |
| I-135 | 3.87E-30 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.30E-47 | 2.30E-50 | 8.72E-50 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 4.74E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.00E-43 | 9.21E-48 | 7.06E-47 |
| I-132 | 3.68E-92 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.37E-56 | 1.46E-58 | 4.65E-58 |
| I-133 | 2.05E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.54E-44 | 5.76E-48 | 5.98E-47 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.74E-77 | 3.88E-79 | 1.17E-78 |
| I-135 | 3.10E-30 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.24E-47 | 1.84E-50 | 6.98E-50 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.21E-41 | 3.75E-46 | 3.26E-45 |

| | | | | | | |
|---|---|---|---|---|---|---|
| TOTAL DOSES 0-30 DAYS | 6.19E+01 | 5.65E-01 | 1.22E-01 | 3.60E+01 | 1.48E-02 | 5.64E-02 |

1

MSLB 4.0uCi/g, 4500 cfm

| ISOTOPE | ACTIVITY RELEASED (CURIES) | | | | | |
|---|---|---|---|---|---|---|
| | 2. HRS | 8. HRS | 24. HRS | 96. HRS | 720. HRS | |
| ELEMENTAL | | | | | | |
| I-131 | 2.52E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.52E-02 |
| I-132 | 2.44E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.44E-01 |
| I-133 | 1.72E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.72E-01 |
| I-134 | 4.81E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.81E-01 |
| I-135 | 2.51E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.51E-01 |
| PARTICULATE | | | | | | |
| I-131 | 1.38E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.38E-03 |
| I-132 | 1.34E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.34E-02 |
| I-133 | 9.46E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.46E-03 |
| I-134 | 2.64E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.64E-02 |
| I-135 | 1.38E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.38E-02 |
| ORGANIC | | | | | | |
| I-131 | 1.11E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.11E-03 |
| I-132 | 1.07E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.07E-02 |
| I-133 | 7.57E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.57E-03 |
| I-134 | 2.11E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.11E-02 |
| I-135 | 1.11E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.11E-02 |
| NOBLE GASES | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

END EXECUTION DATE: 07/23/1997
END EXECUTION TIME: 16:23:36.67

```
AXIDENT VER 2 MOD 4
PRODUCTION DATE 02/18/92
BEGIN EXECUTION DATE:  07/24/1997
BEGIN EXECUTION TIME:  14:48:33.42



 1 MSLB GAUSSIAN 4.0uCi/g, 4500 cfm
 2 22 2 1.0 1.0
 3 -2350 2.6E6 2.9865E5 2.9865E5
 4 0.0 0.0 0.0 1.0 6.6234E7 1.0 1.0
 5 4 8 12 16 20 24 28 32 36 40 43 47 51 55 59 63 67 71 75 79 81 2.592E6
 6 21*5.333E-7 0.0
 7 22*1.0
 8 22*0.0
 9 22*4500
10 22*1.0
11 0.0128 0.0295 0.0621 0.1195 0.2107 0.3400 0.5022 0.6789 0.8400 0.9513
12 0.9865 0.9559 0.8487 0.6897 0.5131 0.3493 0.2177 0.1242 0.0648 0.0310
13 0.0136 0.0
14 22*0.0
15 22*0.0
16 22*0.0
17 22*0.0
18 22*0.0
19 22*0.0
20 0.0 21*2.54E-5
21 0.0 21*2.54E-5
22 0.0 21*2.54E-5
23 1.0 1.0 1.0 0.700 0.700 0.700
24 1.0 1.0 1.0
25 6282 61088 43026 120472 62821 0.0 0.0 0.0
26 8*0.0
```

1

MSLB GAUSSIAN 4.0uCi/g, 4500 cfm

INITIAL CONTAINMENT INVENTORY

| ISOTOPE | ACTIVITY (CURIES) |
|---|---|
| I-131 | 6.282E+03 |
| I-132 | 6.109E+04 |
| I-133 | 4.303E+04 |
| I-134 | 1.205E+05 |
| I-135 | 6.282E+04 |
| XE-131M | 0.000E+00 |
| XE-133M | 0.000E+00 |
| XE-133 | 0.000E+00 |
| XE-135M | 0.000E+00 |
| XE-135 | 0.000E+00 |
| XE-138 | 0.000E+00 |
| KR-83M | 0.000E+00 |
| KR-85M | 0.000E+00 |
| KR-85 | 0.000E+00 |
| KR-87 | 0.000E+00 |
| KR-88 | 0.000E+00 |

1 MSLB GAUSSIAN 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .001 HOURS: X/Q(SITE)= .10E+01 SEC/M3 | PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .13E-01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .000 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .000 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .000 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.43E+03 | 0.00E+00 | 3.05E-03 | 5.80E-05 | 6.86E-09 | 1.57E+00 | 2.83E-04 | 1.38E-04 | 7.04E-06 | 8.11E-11 | 3.21E-10 |
| I-132 | 1.39E+04 | 0.00E+00 | 2.96E-02 | 5.64E-04 | 6.67E-08 | 5.50E-01 | 1.78E-02 | 3.05E-03 | 2.48E-06 | 4.30E-09 | 1.37E-08 |
| I-133 | 9.79E+03 | 0.00E+00 | 2.09E-02 | 3.97E-04 | 4.70E-08 | 2.90E+00 | 2.49E-03 | 2.03E-03 | 1.30E-05 | 8.80E-10 | 9.14E-09 |
| I-134 | 2.74E+04 | 0.00E+00 | 5.84E-02 | 1.11E-03 | 1.31E-07 | 5.07E-01 | 2.83E-02 | 6.12E-03 | 2.28E-06 | 9.09E-09 | 2.75E-08 |
| I-135 | 1.43E+04 | 0.00E+00 | 3.05E-02 | 5.80E-04 | 6.86E-08 | 1.31E+00 | 1.36E-02 | 2.16E-03 | 5.90E-06 | 2.57E-09 | 9.72E-09 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.85E+01 | 0.00E+00 | 1.68E-04 | 3.19E-06 | 3.77E-10 | 8.60E-02 | 1.55E-05 | 7.59E-06 | 3.87E-07 | 4.45E-12 | 3.41E-11 |
| I-132 | 7.63E+02 | 0.00E+00 | 1.63E-03 | 3.10E-05 | 3.66E-09 | 3.02E-02 | 9.77E-04 | 1.68E-04 | 1.36E-07 | 2.36E-10 | 7.55E-10 |
| I-133 | 5.38E+02 | 0.00E+00 | 1.15E-03 | 2.18E-05 | 2.58E-09 | 1.59E-01 | 1.37E-04 | 1.12E-04 | 7.16E-07 | 4.83E-11 | 5.02E-10 |
| I-134 | 1.50E+03 | 0.00E+00 | 3.21E-03 | 6.10E-05 | 7.22E-09 | 2.79E-02 | 1.56E-03 | 3.36E-04 | 1.25E-07 | 5.00E-10 | 1.51E-09 |
| I-135 | 7.85E+02 | 0.00E+00 | 1.68E-03 | 3.19E-05 | 3.77E-09 | 7.21E-02 | 7.45E-04 | 1.19E-04 | 3.24E-07 | 1.41E-10 | 5.34E-10 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.28E+01 | 0.00E+00 | 1.34E-04 | 2.55E-06 | 3.01E-10 | 6.88E-02 | 1.24E-05 | 6.07E-06 | 3.10E-07 | 3.56E-12 | 2.73E-11 |
| I-132 | 6.11E+02 | 0.00E+00 | 1.30E-03 | 2.48E-05 | 2.93E-09 | 2.42E-02 | 7.82E-04 | 1.34E-04 | 1.09E-07 | 1.89E-10 | 6.04E-10 |
| I-133 | 4.30E+02 | 0.00E+00 | 9.18E-04 | 1.75E-05 | 2.06E-09 | 1.27E-01 | 1.09E-04 | 8.93E-05 | 5.73E-07 | 3.87E-11 | 4.02E-10 |
| I-134 | 1.20E+03 | 0.00E+00 | 2.57E-03 | 4.88E-05 | 5.77E-09 | 2.23E-02 | 1.25E-03 | 2.69E-04 | 1.00E-07 | 4.00E-10 | 1.21E-09 |
| I-135 | 6.28E+02 | 0.00E+00 | 1.34E-03 | 2.55E-05 | 3.01E-09 | 5.77E-02 | 5.96E-04 | 9.49E-05 | 2.59E-07 | 1.13E-10 | 4.27E-10 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 7.51E+00 | 6.86E-02 | 1.48E-02 | 3.38E-05 | 1.86E-08 | 6.67E-08 |

1 MSLB GAUSSIAN 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .002 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .30E-01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.43E+03 | 0.00E+00 | 3.05E-03 | 1.92E-04 | 2.26E-08 | 1.57E+00 | 2.83E-04 | 1.38E-04 | 3.03E-05 | 3.49E-10 | 2.67E-09 |
| I-132 | 1.39E+04 | 0.00E+00 | 2.96E-02 | 1.86E-03 | 2.20E-07 | 5.50E-01 | 1.78E-02 | 3.05E-03 | 1.06E-05 | 1.85E-08 | 5.91E-08 |
| I-133 | 9.79E+03 | 0.00E+00 | 2.09E-02 | 1.31E-03 | 1.55E-07 | 2.90E+00 | 2.49E-03 | 2.03E-03 | 5.61E-05 | 3.79E-09 | 3.93E-08 |
| I-134 | 2.74E+04 | 0.00E+00 | 5.84E-02 | 3.67E-03 | 4.34E-07 | 5.07E-01 | 2.83E-02 | 6.11E-03 | 9.80E-06 | 3.91E-08 | 1.18E-07 |
| I-135 | 1.43E+04 | 0.00E+00 | 3.05E-02 | 1.92E-03 | 2.26E-07 | 1.31E+00 | 1.36E-02 | 2.16E-03 | 2.54E-05 | 1.10E-08 | 4.18E-08 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.85E+01 | 0.00E+00 | 1.68E-04 | 1.05E-05 | 1.24E-09 | 8.60E-02 | 1.55E-05 | 7.59E-06 | 1.67E-06 | 1.92E-11 | 1.47E-10 |
| I-132 | 7.63E+02 | 0.00E+00 | 1.63E-03 | 1.02E-04 | 1.21E-08 | 3.02E-02 | 9.77E-04 | 1.68E-04 | 5.85E-07 | 1.02E-09 | 3.25E-09 |
| I-133 | 5.38E+02 | 0.00E+00 | 1.15E-03 | 7.21E-05 | 8.52E-09 | 1.59E-01 | 1.37E-04 | 1.12E-04 | 3.08E-06 | 2.08E-10 | 2.16E-09 |
| I-134 | 1.50E+03 | 0.00E+00 | 3.21E-03 | 2.01E-04 | 2.38E-08 | 2.78E-02 | 1.56E-03 | 3.36E-04 | 5.39E-07 | 2.15E-09 | 6.50E-09 |
| I-135 | 7.85E+02 | 0.00E+00 | 1.67E-03 | 1.05E-04 | 1.24E-08 | 7.21E-02 | 7.45E-04 | 1.19E-04 | 1.40E-06 | 6.07E-10 | 2.30E-09 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.28E+01 | 0.00E+00 | 1.34E-04 | 8.42E-06 | 9.96E-10 | 6.88E-02 | 1.24E-05 | 6.07E-06 | 1.33E-06 | 1.53E-11 | 1.18E-10 |
| I-132 | 6.10E+02 | 0.00E+00 | 1.30E-03 | 8.18E-05 | 9.68E-09 | 2.42E-02 | 7.81E-04 | 1.34E-04 | 4.68E-07 | 8.14E-10 | 2.60E-09 |
| I-133 | 4.30E+02 | 0.00E+00 | 9.18E-04 | 5.77E-05 | 6.82E-09 | 1.27E-01 | 1.09E-04 | 8.93E-05 | 2.47E-06 | 1.66E-10 | 1.73E-09 |
| I-134 | 1.20E+03 | 0.00E+00 | 2.57E-03 | 1.61E-04 | 1.91E-08 | 2.23E-02 | 1.24E-03 | 2.69E-04 | 4.31E-07 | 1.72E-09 | 5.20E-09 |
| I-135 | 6.28E+02 | 0.00E+00 | 1.34E-03 | 8.42E-05 | 9.95E-09 | 5.77E-02 | 5.96E-04 | 9.49E-05 | 1.12E-06 | 4.86E-10 | 1.84E-09 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 7.51E+00 | 6.86E-02 | 1.48E-02 | 1.45E-04 | 8.00E-08 | 2.87E-07 |

1 MSLB GAUSSIAN 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .003 HOURS: X/Q(SITE)= .10E+01 SEC/M3 | PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .62E-01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.43E+03 | 0.00E+00 | 3.05E-03 | 4.73E-04 | 5.59E-08 | 1.57E+00 | 2.83E-04 | 1.38E-04 | 8.07E-05 | 9.29E-10 | 7.12E-09 |
| I-132 | 1.39E+04 | 0.00E+00 | 2.96E-02 | 4.59E-03 | 5.43E-07 | 5.50E-01 | 1.78E-02 | 3.05E-03 | 2.83E-05 | 4.93E-08 | 1.57E-07 |
| I-133 | 9.79E+03 | 0.00E+00 | 2.09E-02 | 3.24E-03 | 3.83E-07 | 2.90E+00 | 2.49E-03 | 2.03E-03 | 1.49E-04 | 1.01E-08 | 1.05E-07 |
| I-134 | 2.73E+04 | 0.00E+00 | 5.83E-02 | 9.04E-03 | 1.07E-06 | 5.06E-01 | 2.83E-02 | 6.10E-03 | 2.61E-05 | 1.04E-07 | 3.15E-07 |
| I-135 | 1.43E+04 | 0.00E+00 | 3.05E-02 | 4.72E-03 | 5.59E-07 | 1.31E+00 | 1.36E-02 | 2.16E-03 | 6.76E-05 | 2.94E-08 | 1.11E-07 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.85E+01 | 0.00E+00 | 1.68E-04 | 2.60E-05 | 3.07E-09 | 8.60E-02 | 1.55E-05 | 7.59E-06 | 4.43E-06 | 5.10E-11 | 3.91E-10 |
| I-132 | 7.63E+02 | 0.00E+00 | 1.63E-03 | 2.52E-04 | 2.98E-08 | 3.02E-02 | 9.77E-04 | 1.68E-04 | 1.56E-06 | 2.71E-09 | 8.64E-09 |
| I-133 | 5.38E+02 | 0.00E+00 | 1.15E-03 | 1.78E-04 | 2.10E-08 | 1.59E-01 | 1.37E-04 | 1.12E-04 | 8.20E-06 | 5.54E-10 | 5.75E-09 |
| I-134 | 1.50E+03 | 0.00E+00 | 3.21E-03 | 4.97E-04 | 5.87E-08 | 2.78E-02 | 1.55E-03 | 3.35E-04 | 1.43E-06 | 5.71E-09 | 1.73E-08 |
| I-135 | 7.85E+02 | 0.00E+00 | 1.67E-03 | 2.60E-04 | 3.07E-08 | 7.21E-02 | 7.45E-04 | 1.19E-04 | 3.71E-06 | 1.62E-09 | 6.11E-09 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.28E+01 | 0.00E+00 | 1.34E-04 | 2.08E-05 | 2.46E-09 | 6.88E-02 | 1.24E-05 | 6.07E-06 | 3.55E-06 | 4.08E-11 | 3.13E-10 |
| I-132 | 6.10E+02 | 0.00E+00 | 1.30E-03 | 2.02E-04 | 2.39E-08 | 2.42E-02 | 7.81E-04 | 1.34E-04 | 1.25E-06 | 2.17E-09 | 6.91E-09 |
| I-133 | 4.30E+02 | 0.00E+00 | 9.18E-04 | 1.42E-04 | 1.68E-08 | 1.27E-01 | 1.09E-04 | 8.93E-05 | 6.56E-06 | 4.43E-10 | 4.60E-09 |
| I-134 | 1.20E+03 | 0.00E+00 | 2.56E-03 | 3.97E-04 | 4.70E-08 | 2.22E-02 | 1.24E-03 | 2.68E-04 | 1.15E-06 | 4.57E-09 | 1.38E-08 |
| I-135 | 6.28E+02 | 0.00E+00 | 1.34E-03 | 2.08E-04 | 2.46E-08 | 5.76E-02 | 5.96E-04 | 9.49E-05 | 2.97E-06 | 1.29E-09 | 4.89E-09 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 7.51E+00 | 6.85E-02 | 1.48E-02 | 3.87E-04 | 2.13E-07 | 7.64E-07 |

1 MSLB GAUSSIAN 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .004 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .12E+00 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.43E+03 | 0.00E+00 | 3.05E-03 | 1.01E-03 | 1.20E-07 | 1.57E+00 | 2.83E-04 | 1.38E-04 | 1.80E-04 | 2.08E-09 | 1.59E-08 |
| I-132 | 1.39E+04 | 0.00E+00 | 2.96E-02 | 9.84E-03 | 1.16E-06 | 5.50E-01 | 1.78E-02 | 3.05E-03 | 6.34E-05 | 1.10E-07 | 3.52E-07 |
| I-133 | 9.79E+03 | 0.00E+00 | 2.09E-02 | 6.94E-03 | 8.21E-07 | 2.90E+00 | 2.49E-03 | 2.03E-03 | 3.34E-04 | 2.25E-08 | 2.34E-07 |
| I-134 | 2.73E+04 | 0.00E+00 | 5.83E-02 | 1.94E-02 | 2.29E-06 | 5.06E-01 | 2.83E-02 | 6.10E-03 | 5.83E-05 | 2.32E-07 | 7.03E-07 |
| I-135 | 1.43E+04 | 0.00E+00 | 3.05E-02 | 1.01E-02 | 1.20E-06 | 1.31E+00 | 1.36E-02 | 2.16E-03 | 1.51E-04 | 6.58E-08 | 2.49E-07 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.85E+01 | 0.00E+00 | 1.68E-04 | 5.57E-05 | 6.58E-09 | 8.60E-02 | 1.55E-05 | 7.59E-06 | 9.92E-06 | 1.14E-10 | 8.75E-10 |
| I-132 | 7.63E+02 | 0.00E+00 | 1.63E-03 | 5.41E-04 | 6.39E-08 | 3.02E-02 | 9.76E-04 | 1.68E-04 | 3.48E-06 | 6.05E-09 | 1.93E-08 |
| I-133 | 5.38E+02 | 0.00E+00 | 1.15E-03 | 3.81E-04 | 4.51E-08 | 1.59E-01 | 1.37E-04 | 1.12E-04 | 1.84E-05 | 1.24E-09 | 1.29E-08 |
| I-134 | 1.50E+03 | 0.00E+00 | 3.20E-03 | 1.06E-03 | 1.26E-07 | 2.78E-02 | 1.55E-03 | 3.35E-04 | 3.20E-06 | 1.28E-08 | 3.86E-08 |
| I-135 | 7.85E+02 | 0.00E+00 | 1.67E-03 | 5.57E-04 | 6.58E-08 | 7.20E-02 | 7.45E-04 | 1.19E-04 | 8.31E-06 | 3.61E-09 | 1.37E-08 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.28E+01 | 0.00E+00 | 1.34E-04 | 4.45E-05 | 5.27E-09 | 6.88E-02 | 1.24E-05 | 6.07E-06 | 7.93E-06 | 9.13E-11 | 7.00E-10 |
| I-132 | 6.10E+02 | 0.00E+00 | 1.30E-03 | 4.33E-04 | 5.12E-08 | 2.42E-02 | 7.81E-04 | 1.34E-04 | 2.79E-06 | 4.84E-09 | 1.55E-08 |
| I-133 | 4.30E+02 | 0.00E+00 | 9.18E-04 | 3.05E-04 | 3.61E-08 | 1.27E-01 | 1.09E-04 | 8.93E-05 | 1.47E-05 | 9.91E-10 | 1.03E-08 |
| I-134 | 1.20E+03 | 0.00E+00 | 2.56E-03 | 8.51E-04 | 1.01E-07 | 2.22E-02 | 1.24E-03 | 2.68E-04 | 2.56E-06 | 1.02E-08 | 3.09E-08 |
| I-135 | 6.28E+02 | 0.00E+00 | 1.34E-03 | 4.45E-04 | 5.27E-08 | 5.76E-02 | 5.96E-04 | 9.49E-05 | 6.64E-06 | 2.89E-09 | 1.09E-08 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 7.51E+00 | 6.85E-02 | 1.48E-02 | 8.65E-04 | 4.76E-07 | 1.71E-06 |

1 MSLB GAUSSIAN 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .006 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .21E+00 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.43E+03 | 0.00E+00 | 3.05E-03 | 1.97E-03 | 2.33E-07 | 1.57E+00 | 2.83E-04 | 1.38E-04 | 3.62E-04 | 4.17E-09 | 3.19E-08 |
| I-132 | 1.39E+04 | 0.00E+00 | 2.96E-02 | 1.91E-02 | 2.26E-06 | 5.50E-01 | 1.78E-02 | 3.05E-03 | 1.27E-04 | 2.21E-07 | 7.05E-07 |
| I-133 | 9.79E+03 | 0.00E+00 | 2.09E-02 | 1.35E-02 | 1.59E-06 | 2.90E+00 | 2.49E-03 | 2.03E-03 | 6.70E-04 | 4.52E-08 | 4.70E-07 |
| I-134 | 2.73E+04 | 0.00E+00 | 5.82E-02 | 3.75E-02 | 4.44E-06 | 5.05E-01 | 2.82E-02 | 6.09E-03 | 1.17E-04 | 4.66E-07 | 1.41E-06 |
| I-135 | 1.43E+04 | 0.00E+00 | 3.05E-02 | 1.97E-02 | 2.32E-06 | 1.31E+00 | 1.36E-02 | 2.16E-03 | 3.03E-04 | 1.32E-07 | 4.99E-07 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.85E+01 | 0.00E+00 | 1.68E-04 | 1.08E-04 | 1.28E-08 | 8.60E-02 | 1.55E-05 | 7.59E-06 | 1.99E-05 | 2.29E-10 | 1.75E-09 |
| I-132 | 7.62E+02 | 0.00E+00 | 1.63E-03 | 1.05E-03 | 1.24E-07 | 3.02E-02 | 9.76E-04 | 1.68E-04 | 6.98E-06 | 1.21E-08 | 3.87E-08 |
| I-133 | 5.38E+02 | 0.00E+00 | 1.15E-03 | 7.40E-04 | 8.75E-08 | 1.59E-01 | 1.37E-04 | 1.12E-04 | 3.68E-05 | 2.48E-09 | 2.58E-08 |
| I-134 | 1.50E+03 | 0.00E+00 | 3.20E-03 | 2.06E-03 | 2.44E-07 | 2.78E-02 | 1.55E-03 | 3.35E-04 | 6.42E-06 | 2.56E-08 | 7.74E-08 |
| I-135 | 7.85E+02 | 0.00E+00 | 1.67E-03 | 1.08E-03 | 1.28E-07 | 7.20E-02 | 7.45E-04 | 1.19E-04 | 1.67E-05 | 7.25E-09 | 2.74E-08 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.28E+01 | 0.00E+00 | 1.34E-04 | 8.64E-05 | 1.02E-08 | 6.88E-02 | 1.24E-05 | 6.07E-06 | 1.59E-05 | 1.83E-10 | 1.40E-09 |
| I-132 | 6.10E+02 | 0.00E+00 | 1.30E-03 | 8.39E-04 | 9.92E-08 | 2.42E-02 | 7.81E-04 | 1.34E-04 | 5.58E-06 | 9.71E-09 | 3.10E-08 |
| I-133 | 4.30E+02 | 0.00E+00 | 9.18E-04 | 5.92E-04 | 7.00E-08 | 1.27E-01 | 1.09E-04 | 8.93E-05 | 2.94E-05 | 1.99E-09 | 2.06E-08 |
| I-134 | 1.20E+03 | 0.00E+00 | 2.56E-03 | 1.65E-03 | 1.95E-07 | 2.22E-02 | 1.24E-03 | 2.68E-04 | 5.13E-06 | 2.05E-08 | 6.19E-08 |
| I-135 | 6.28E+02 | 0.00E+00 | 1.34E-03 | 8.64E-04 | 1.02E-07 | 5.76E-02 | 5.96E-04 | 9.49E-05 | 1.33E-05 | 5.80E-09 | 2.19E-08 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 7.50E+00 | 6.85E-02 | 1.48E-02 | 1.73E-03 | 9.54E-07 | 3.42E-06 |

1 MSLB GAUSSIAN 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .007 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .34E+00 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.43E+03 | 0.00E+00 | 3.05E-03 | 3.50E-03 | 4.14E-07 | 1.57E+00 | 2.83E-04 | 1.38E-04 | 6.65E-04 | 7.65E-09 | 5.86E-08 |
| I-132 | 1.39E+04 | 0.00E+00 | 2.96E-02 | 3.40E-02 | 4.02E-06 | 5.49E-01 | 1.78E-02 | 3.05E-03 | 2.33E-04 | 4.05E-07 | 1.29E-06 |
| I-133 | 9.79E+03 | 0.00E+00 | 2.09E-02 | 2.40E-02 | 2.84E-06 | 2.90E+00 | 2.49E-03 | 2.03E-03 | 1.23E-03 | 8.30E-08 | 8.62E-07 |
| I-134 | 2.73E+04 | 0.00E+00 | 5.82E-02 | 6.69E-02 | 7.91E-06 | 5.05E-01 | 2.82E-02 | 6.09E-03 | 2.14E-04 | 8.54E-07 | 2.58E-06 |
| I-135 | 1.43E+04 | 0.00E+00 | 3.05E-02 | 3.50E-02 | 4.14E-06 | 1.31E+00 | 1.36E-02 | 2.16E-03 | 5.56E-04 | 2.42E-07 | 9.16E-07 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.85E+01 | 0.00E+00 | 1.68E-04 | 1.93E-04 | 2.28E-08 | 8.60E-02 | 1.55E-05 | 7.59E-06 | 3.65E-05 | 4.20E-10 | 3.22E-09 |
| I-132 | 7.62E+02 | 0.00E+00 | 1.63E-03 | 1.87E-03 | 2.21E-07 | 3.02E-02 | 9.76E-04 | 1.68E-04 | 1.28E-05 | 2.23E-08 | 7.11E-08 |
| I-133 | 5.38E+02 | 0.00E+00 | 1.15E-03 | 1.32E-03 | 1.56E-07 | 1.59E-01 | 1.37E-04 | 1.12E-04 | 6.76E-05 | 4.56E-09 | 4.74E-08 |
| I-134 | 1.50E+03 | 0.00E+00 | 3.20E-03 | 3.67E-03 | 4.34E-07 | 2.77E-02 | 1.55E-03 | 3.35E-04 | 1.18E-05 | 4.69E-08 | 1.42E-07 |
| I-135 | 7.85E+02 | 0.00E+00 | 1.67E-03 | 1.92E-03 | 2.28E-07 | 7.20E-02 | 7.45E-04 | 1.19E-04 | 3.06E-05 | 1.33E-08 | 5.03E-08 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.28E+01 | 0.00E+00 | 1.34E-04 | 1.54E-04 | 1.82E-08 | 6.88E-02 | 1.24E-05 | 6.07E-06 | 2.92E-05 | 3.36E-10 | 2.58E-09 |
| I-132 | 6.10E+02 | 0.00E+00 | 1.30E-03 | 1.50E-03 | 1.77E-07 | 2.41E-02 | 7.80E-04 | 1.34E-04 | 1.02E-05 | 1.78E-08 | 5.69E-08 |
| I-133 | 4.30E+02 | 0.00E+00 | 9.18E-04 | 1.05E-03 | 1.25E-07 | 1.27E-01 | 1.09E-04 | 8.93E-05 | 5.41E-05 | 3.65E-09 | 3.79E-08 |
| I-134 | 1.20E+03 | 0.00E+00 | 2.56E-03 | 2.94E-03 | 3.47E-07 | 2.22E-02 | 1.24E-03 | 2.68E-04 | 9.42E-06 | 3.75E-08 | 1.14E-07 |
| I-135 | 6.28E+02 | 0.00E+00 | 1.34E-03 | 1.54E-03 | 1.82E-07 | 5.76E-02 | 5.96E-04 | 9.49E-05 | 2.45E-05 | 1.06E-08 | 4.03E-08 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 7.50E+00 | 6.84E-02 | 1.48E-02 | 3.18E-03 | 1.75E-06 | 6.28E-06 |

1 MSLB GAUSSIAN 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .008 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .50E+00 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.43E+03 | 0.00E+00 | 3.05E-03 | 5.78E-03 | 6.83E-07 | 1.57E+00 | 2.83E-04 | 1.38E-04 | 1.13E-03 | 1.30E-08 | 9.94E-08 |
| I-132 | 1.39E+04 | 0.00E+00 | 2.96E-02 | 5.60E-02 | 6.63E-06 | 5.49E-01 | 1.77E-02 | 3.05E-03 | 3.95E-04 | 6.87E-07 | 2.19E-06 |
| I-133 | 9.79E+03 | 0.00E+00 | 2.09E-02 | 3.95E-02 | 4.68E-06 | 2.90E+00 | 2.49E-03 | 2.03E-03 | 2.09E-03 | 1.41E-07 | 1.46E-06 |
| I-134 | 2.72E+04 | 0.00E+00 | 5.81E-02 | 1.10E-01 | 1.30E-05 | 5.04E-01 | 2.82E-02 | 6.08E-03 | 3.63E-04 | 1.45E-06 | 4.38E-06 |
| I-135 | 1.43E+04 | 0.00E+00 | 3.05E-02 | 5.77E-02 | 6.82E-06 | 1.31E+00 | 1.35E-02 | 2.16E-03 | 9.44E-04 | 4.11E-07 | 1.55E-06 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.85E+01 | 0.00E+00 | 1.68E-04 | 3.17E-04 | 3.75E-08 | 8.60E-02 | 1.55E-05 | 7.59E-06 | 6.19E-05 | 7.13E-10 | 5.46E-09 |
| I-132 | 7.62E+02 | 0.00E+00 | 1.63E-03 | 3.08E-03 | 3.64E-07 | 3.02E-02 | 9.75E-04 | 1.67E-04 | 2.17E-05 | 3.78E-08 | 1.21E-07 |
| I-133 | 5.38E+02 | 0.00E+00 | 1.15E-03 | 2.17E-03 | 2.57E-07 | 1.59E-01 | 1.37E-04 | 1.12E-04 | 1.15E-04 | 7.73E-09 | 8.03E-08 |
| I-134 | 1.50E+03 | 0.00E+00 | 3.19E-03 | 6.05E-03 | 7.15E-07 | 2.77E-02 | 1.55E-03 | 3.34E-04 | 1.99E-05 | 7.95E-08 | 2.41E-07 |
| I-135 | 7.85E+02 | 0.00E+00 | 1.67E-03 | 3.17E-03 | 3.75E-07 | 7.20E-02 | 7.44E-04 | 1.19E-04 | 5.19E-05 | 2.26E-08 | 8.54E-08 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.28E+01 | 0.00E+00 | 1.34E-04 | 2.54E-04 | 3.00E-08 | 6.88E-02 | 1.24E-05 | 6.07E-06 | 4.95E-05 | 5.70E-10 | 4.37E-09 |
| I-132 | 6.09E+02 | 0.00E+00 | 1.30E-03 | 2.46E-03 | 2.91E-07 | 2.41E-02 | 7.80E-04 | 1.34E-04 | 1.74E-05 | 3.02E-08 | 9.65E-08 |
| I-133 | 4.30E+02 | 0.00E+00 | 9.18E-04 | 1.74E-03 | 2.06E-07 | 1.27E-01 | 1.09E-04 | 8.93E-05 | 9.17E-05 | 6.19E-09 | 6.43E-08 |
| I-134 | 1.20E+03 | 0.00E+00 | 2.56E-03 | 4.84E-03 | 5.72E-07 | 2.22E-02 | 1.24E-03 | 2.67E-04 | 1.60E-05 | 6.36E-08 | 1.92E-07 |
| I-135 | 6.28E+02 | 0.00E+00 | 1.34E-03 | 2.54E-03 | 3.00E-07 | 5.76E-02 | 5.96E-04 | 9.49E-05 | 4.15E-05 | 1.81E-08 | 6.83E-08 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 7.50E+00 | 6.84E-02 | 1.48E-02 | 5.40E-03 | 2.97E-06 | 1.06E-05 |

1 MSLB GAUSSIAN 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .009 HOURS: X/Q(SITE)= .10E+01 SEC/M3 | PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .68E+00 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.43E+03 | 0.00E+00 | 3.05E-03 | 8.84E-03 | 1.05E-06 | 1.57E+00 | 2.83E-04 | 1.38E-04 | 1.78E-03 | 2.04E-08 | 1.57E-07 |
| I-132 | 1.39E+04 | 0.00E+00 | 2.96E-02 | 8.58E-02 | 1.01E-05 | 5.49E-01 | 1.77E-02 | 3.05E-03 | 6.23E-04 | 1.08E-06 | 3.46E-06 |
| I-133 | 9.79E+03 | 0.00E+00 | 2.09E-02 | 6.06E-02 | 7.16E-06 | 2.90E+00 | 2.49E-03 | 2.03E-03 | 3.29E-03 | 2.22E-07 | 2.30E-06 |
| I-134 | 2.72E+04 | 0.00E+00 | 5.81E-02 | 1.68E-01 | 1.99E-05 | 5.04E-01 | 2.82E-02 | 6.08E-03 | 5.71E-04 | 2.28E-06 | 6.89E-06 |
| I-135 | 1.43E+04 | 0.00E+00 | 3.05E-02 | 8.84E-02 | 1.04E-05 | 1.31E+00 | 1.35E-02 | 2.16E-03 | 1.49E-03 | 6.47E-07 | 2.45E-06 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.85E+01 | 0.00E+00 | 1.68E-04 | 4.86E-04 | 5.75E-08 | 8.60E-02 | 1.55E-05 | 7.59E-06 | 9.76E-05 | 1.12E-09 | 8.61E-09 |
| I-132 | 7.62E+02 | 0.00E+00 | 1.62E-03 | 4.71E-03 | 5.57E-07 | 3.02E-02 | 9.75E-04 | 1.67E-04 | 3.42E-05 | 5.95E-08 | 1.90E-07 |
| I-133 | 5.38E+02 | 0.00E+00 | 1.15E-03 | 3.33E-03 | 3.93E-07 | 1.59E-01 | 1.37E-04 | 1.12E-04 | 1.81E-04 | 1.22E-08 | 1.27E-07 |
| I-134 | 1.50E+03 | 0.00E+00 | 3.19E-03 | 9.25E-03 | 1.09E-06 | 2.77E-02 | 1.55E-03 | 3.34E-04 | 3.14E-05 | 1.25E-07 | 3.79E-07 |
| I-135 | 7.85E+02 | 0.00E+00 | 1.67E-03 | 4.86E-03 | 5.74E-07 | 7.20E-02 | 7.44E-04 | 1.19E-04 | 8.17E-05 | 3.55E-08 | 1.34E-07 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.28E+01 | 0.00E+00 | 1.34E-04 | 3.89E-04 | 4.60E-08 | 6.88E-02 | 1.24E-05 | 6.07E-06 | 7.81E-05 | 8.98E-10 | 6.89E-09 |
| I-132 | 6.09E+02 | 0.00E+00 | 1.30E-03 | 3.77E-03 | 4.46E-07 | 2.41E-02 | 7.80E-04 | 1.34E-04 | 2.74E-05 | 4.76E-08 | 1.52E-07 |
| I-133 | 4.30E+02 | 0.00E+00 | 9.18E-04 | 2.66E-03 | 3.15E-07 | 1.27E-01 | 1.09E-04 | 8.93E-05 | 1.44E-04 | 9.75E-09 | 1.01E-07 |
| I-134 | 1.20E+03 | 0.00E+00 | 2.55E-03 | 7.40E-03 | 8.75E-07 | 2.21E-02 | 1.24E-03 | 2.67E-04 | 2.51E-05 | 1.00E-07 | 3.03E-07 |
| I-135 | 6.28E+02 | 0.00E+00 | 1.34E-03 | 3.88E-03 | 4.59E-07 | 5.76E-02 | 5.95E-04 | 9.48E-05 | 6.53E-05 | 2.84E-08 | 1.08E-07 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 7.50E+00 | 6.84E-02 | 1.48E-02 | 8.51E-03 | 4.67E-06 | 1.68E-05 |

1 MSLB GAUSSIAN 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .010 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .84E+00 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.43E+03 | 0.00E+00 | 3.05E-03 | 1.26E-02 | 1.49E-06 | 1.57E+00 | 2.83E-04 | 1.38E-04 | 2.61E-03 | 3.00E-08 | 2.30E-07 |
| I-132 | 1.39E+04 | 0.00E+00 | 2.96E-02 | 1.23E-01 | 1.45E-05 | 5.49E-01 | 1.77E-02 | 3.05E-03 | 9.15E-04 | 1.59E-06 | 5.08E-06 |
| I-133 | 9.78E+03 | 0.00E+00 | 2.09E-02 | 8.65E-02 | 1.02E-05 | 2.90E+00 | 2.49E-03 | 2.03E-03 | 4.83E-03 | 3.26E-07 | 3.38E-06 |
| I-134 | 2.72E+04 | 0.00E+00 | 5.80E-02 | 2.40E-01 | 2.84E-05 | 5.03E-01 | 2.81E-02 | 6.07E-03 | 8.39E-04 | 3.34E-06 | 1.01E-05 |
| I-135 | 1.43E+04 | 0.00E+00 | 3.05E-02 | 1.26E-01 | 1.49E-05 | 1.31E+00 | 1.35E-02 | 2.16E-03 | 2.18E-03 | 9.50E-07 | 3.60E-06 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.85E+01 | 0.00E+00 | 1.68E-04 | 6.94E-04 | 8.21E-08 | 8.60E-02 | 1.55E-05 | 7.59E-06 | 1.43E-04 | 1.65E-09 | 1.26E-08 |
| I-132 | 7.61E+02 | 0.00E+00 | 1.62E-03 | 6.73E-03 | 7.96E-07 | 3.02E-02 | 9.75E-04 | 1.67E-04 | 5.03E-05 | 8.74E-08 | 2.79E-07 |
| I-133 | 5.38E+02 | 0.00E+00 | 1.15E-03 | 4.76E-03 | 5.62E-07 | 1.59E-01 | 1.37E-04 | 1.12E-04 | 2.65E-04 | 1.79E-08 | 1.86E-07 |
| I-134 | 1.49E+03 | 0.00E+00 | 3.19E-03 | 1.32E-02 | 1.56E-06 | 2.77E-02 | 1.55E-03 | 3.34E-04 | 4.61E-05 | 1.84E-07 | 5.56E-07 |
| I-135 | 7.84E+02 | 0.00E+00 | 1.67E-03 | 6.94E-03 | 8.20E-07 | 7.20E-02 | 7.44E-04 | 1.19E-04 | 1.20E-04 | 5.22E-08 | 1.98E-07 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.28E+01 | 0.00E+00 | 1.34E-04 | 5.56E-04 | 6.57E-08 | 6.88E-02 | 1.24E-05 | 6.07E-06 | 1.15E-04 | 1.32E-09 | 1.01E-08 |
| I-132 | 6.09E+02 | 0.00E+00 | 1.30E-03 | 5.39E-03 | 6.37E-07 | 2.41E-02 | 7.80E-04 | 1.34E-04 | 4.02E-05 | 6.99E-08 | 2.23E-07 |
| I-133 | 4.30E+02 | 0.00E+00 | 9.18E-04 | 3.80E-03 | 4.50E-07 | 1.27E-01 | 1.09E-04 | 8.93E-05 | 2.12E-04 | 1.43E-08 | 1.49E-07 |
| I-134 | 1.20E+03 | 0.00E+00 | 2.55E-03 | 1.06E-02 | 1.25E-06 | 2.21E-02 | 1.24E-03 | 2.67E-04 | 3.69E-05 | 1.47E-07 | 4.45E-07 |
| I-135 | 6.28E+02 | 0.00E+00 | 1.34E-03 | 5.55E-03 | 6.56E-07 | 5.76E-02 | 5.95E-04 | 9.48E-05 | 9.60E-05 | 4.18E-08 | 1.58E-07 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 7.50E+00 | 6.83E-02 | 1.48E-02 | 1.25E-02 | 6.86E-06 | 2.46E-05 |

1 MSLB GAUSSIAN 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .011 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .95E+00 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.43E+03 | 0.00E+00 | 3.05E-03 | 1.69E-02 | 2.00E-06 | 1.57E+00 | 2.83E-04 | 1.38E-04 | 3.59E-03 | 4.13E-08 | 3.17E-07 |
| I-132 | 1.39E+04 | 0.00E+00 | 2.96E-02 | 1.64E-01 | 1.94E-05 | 5.49E-01 | 1.77E-02 | 3.04E-03 | 1.26E-03 | 2.19E-06 | 6.99E-06 |
| I-133 | 9.78E+03 | 0.00E+00 | 2.09E-02 | 1.16E-01 | 1.37E-05 | 2.90E+00 | 2.49E-03 | 2.03E-03 | 6.65E-03 | 4.49E-07 | 4.66E-06 |
| I-134 | 2.72E+04 | 0.00E+00 | 5.80E-02 | 3.22E-01 | 3.81E-05 | 5.03E-01 | 2.81E-02 | 6.07E-03 | 1.15E-03 | 4.60E-06 | 1.39E-05 |
| I-135 | 1.43E+04 | 0.00E+00 | 3.05E-02 | 1.69E-01 | 2.00E-05 | 1.31E+00 | 1.35E-02 | 2.16E-03 | 3.01E-03 | 1.31E-06 | 4.95E-06 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.85E+01 | 0.00E+00 | 1.67E-04 | 9.30E-04 | 1.10E-07 | 8.60E-02 | 1.55E-05 | 7.59E-06 | 1.97E-04 | 2.27E-09 | 1.74E-08 |
| I-132 | 7.61E+02 | 0.00E+00 | 1.62E-03 | 9.02E-03 | 1.07E-06 | 3.01E-02 | 9.74E-04 | 1.67E-04 | 6.92E-05 | 1.20E-07 | 3.84E-07 |
| I-133 | 5.38E+02 | 0.00E+00 | 1.15E-03 | 6.37E-03 | 7.53E-07 | 1.59E-01 | 1.37E-04 | 1.12E-04 | 3.65E-04 | 2.46E-08 | 2.56E-07 |
| I-134 | 1.49E+03 | 0.00E+00 | 3.19E-03 | 1.77E-02 | 2.09E-06 | 2.76E-02 | 1.54E-03 | 3.33E-04 | 6.34E-05 | 2.53E-07 | 7.65E-07 |
| I-135 | 7.84E+02 | 0.00E+00 | 1.67E-03 | 9.29E-03 | 1.10E-06 | 7.20E-02 | 7.44E-04 | 1.19E-04 | 1.65E-04 | 7.19E-08 | 2.72E-07 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.28E+01 | 0.00E+00 | 1.34E-04 | 7.44E-04 | 8.80E-08 | 6.88E-02 | 1.24E-05 | 6.07E-06 | 1.58E-04 | 1.82E-09 | 1.39E-08 |
| I-132 | 6.09E+02 | 0.00E+00 | 1.30E-03 | 7.21E-03 | 8.53E-07 | 2.41E-02 | 7.79E-04 | 1.34E-04 | 5.53E-05 | 9.62E-08 | 3.07E-07 |
| I-133 | 4.30E+02 | 0.00E+00 | 9.17E-04 | 5.10E-03 | 6.03E-07 | 1.27E-01 | 1.09E-04 | 8.93E-05 | 2.92E-04 | 1.97E-08 | 2.05E-07 |
| I-134 | 1.19E+03 | 0.00E+00 | 2.55E-03 | 1.41E-02 | 1.67E-06 | 2.21E-02 | 1.24E-03 | 2.67E-04 | 5.07E-05 | 2.02E-07 | 6.12E-07 |
| I-135 | 6.27E+02 | 0.00E+00 | 1.34E-03 | 7.44E-03 | 8.79E-07 | 5.76E-02 | 5.95E-04 | 9.48E-05 | 1.32E-04 | 5.75E-08 | 2.18E-07 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 7.50E+00 | 6.83E-02 | 1.48E-02 | 1.72E-02 | 9.44E-06 | 3.39E-05 |

1 MSLB GAUSSIAN 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .012 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .99E+00 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.43E+03 | 0.00E+00 | 2.29E-03 | 2.03E-02 | 2.40E-06 | 1.17E+00 | 2.12E-04 | 1.04E-04 | 3.39E-03 | 3.90E-08 | 2.99E-07 |
| I-132 | 1.38E+04 | 0.00E+00 | 2.22E-02 | 1.96E-01 | 2.32E-05 | 4.11E-01 | 1.33E-02 | 2.28E-03 | 1.19E-03 | 2.06E-06 | 6.59E-06 |
| I-133 | 9.78E+03 | 0.00E+00 | 1.57E-02 | 1.39E-01 | 1.64E-05 | 2.17E+00 | 1.87E-03 | 1.52E-03 | 6.27E-03 | 4.23E-07 | 4.40E-06 |
| I-134 | 2.71E+04 | 0.00E+00 | 4.34E-02 | 3.85E-01 | 4.55E-05 | 3.77E-01 | 2.11E-02 | 4.55E-03 | 1.09E-03 | 4.34E-06 | 1.31E-05 |
| I-135 | 1.43E+04 | 0.00E+00 | 2.28E-02 | 2.02E-01 | 2.39E-05 | 9.83E-01 | 1.02E-02 | 1.62E-03 | 2.84E-03 | 1.23E-06 | 4.67E-06 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.85E+01 | 0.00E+00 | 1.26E-04 | 1.11E-03 | 1.32E-07 | 6.45E-02 | 1.17E-05 | 5.69E-06 | 1.86E-04 | 2.14E-09 | 1.64E-08 |
| I-132 | 7.61E+02 | 0.00E+00 | 1.22E-03 | 1.08E-02 | 1.28E-06 | 2.26E-02 | 7.30E-04 | 1.25E-04 | 6.52E-05 | 1.13E-07 | 3.62E-07 |
| I-133 | 5.38E+02 | 0.00E+00 | 8.60E-04 | 7.63E-03 | 9.02E-07 | 1.19E-01 | 1.03E-04 | 8.37E-05 | 3.45E-04 | 2.33E-08 | 2.42E-07 |
| I-134 | 1.49E+03 | 0.00E+00 | 2.39E-03 | 2.12E-02 | 2.50E-06 | 2.07E-02 | 1.16E-03 | 2.50E-04 | 5.98E-05 | 2.38E-07 | 7.21E-07 |
| I-135 | 7.84E+02 | 0.00E+00 | 1.25E-03 | 1.11E-02 | 1.32E-06 | 5.40E-02 | 5.58E-04 | 8.89E-05 | 1.56E-04 | 6.78E-08 | 2.57E-07 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.28E+01 | 0.00E+00 | 1.00E-04 | 8.91E-04 | 1.05E-07 | 5.16E-02 | 9.32E-06 | 4.55E-06 | 1.49E-04 | 1.71E-09 | 1.31E-08 |
| I-132 | 6.09E+02 | 0.00E+00 | 9.74E-04 | 8.63E-03 | 1.02E-06 | 1.81E-02 | 5.84E-04 | 1.00E-04 | 5.22E-05 | 9.07E-08 | 2.90E-07 |
| I-133 | 4.30E+02 | 0.00E+00 | 6.88E-04 | 6.10E-03 | 7.21E-07 | 9.55E-02 | 8.21E-05 | 6.69E-05 | 2.76E-04 | 1.86E-08 | 1.93E-07 |
| I-134 | 1.19E+03 | 0.00E+00 | 1.91E-03 | 1.69E-02 | 2.00E-06 | 1.66E-02 | 9.26E-04 | 2.00E-04 | 4.78E-05 | 1.91E-07 | 5.77E-07 |
| I-135 | 6.27E+02 | 0.00E+00 | 1.00E-03 | 8.90E-03 | 1.05E-06 | 4.32E-02 | 4.46E-04 | 7.11E-05 | 1.25E-04 | 5.43E-08 | 2.05E-07 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 5.62E+00 | 5.12E-02 | 1.11E-02 | 1.62E-02 | 8.90E-06 | 3.20E-05 |

1 MSLB GAUSSIAN 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .013 HOURS: X/Q(SITE)= .10E+01 SEC/M3 | PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .96E+00 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.43E+03 | 0.00E+00 | 3.05E-03 | 2.46E-02 | 2.91E-06 | 1.57E+00 | 2.83E-04 | 1.38E-04 | 5.45E-03 | 6.27E-08 | 4.81E-07 |
| I-132 | 1.38E+04 | 0.00E+00 | 2.95E-02 | 2.38E-01 | 2.82E-05 | 5.48E-01 | 1.77E-02 | 3.04E-03 | 1.91E-03 | 3.32E-06 | 1.06E-05 |
| I-133 | 9.78E+03 | 0.00E+00 | 2.09E-02 | 1.68E-01 | 1.99E-05 | 2.90E+00 | 2.49E-03 | 2.03E-03 | 1.01E-02 | 6.80E-07 | 7.07E-06 |
| I-134 | 2.71E+04 | 0.00E+00 | 5.79E-02 | 4.66E-01 | 5.52E-05 | 5.02E-01 | 2.81E-02 | 6.06E-03 | 1.75E-03 | 6.97E-06 | 2.11E-05 |
| I-135 | 1.43E+04 | 0.00E+00 | 3.04E-02 | 2.45E-01 | 2.90E-05 | 1.31E+00 | 1.35E-02 | 2.16E-03 | 4.56E-03 | 1.98E-06 | 7.50E-06 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.85E+01 | 0.00E+00 | 1.67E-04 | 1.35E-03 | 1.60E-07 | 8.60E-02 | 1.55E-05 | 7.59E-06 | 2.99E-04 | 3.45E-09 | 2.64E-08 |
| I-132 | 7.61E+02 | 0.00E+00 | 1.62E-03 | 1.31E-02 | 1.55E-06 | 3.01E-02 | 9.74E-04 | 1.67E-04 | 1.05E-04 | 1.82E-07 | 5.82E-07 |
| I-133 | 5.38E+02 | 0.00E+00 | 1.15E-03 | 9.25E-03 | 1.09E-06 | 1.59E-01 | 1.37E-04 | 1.12E-04 | 5.54E-04 | 3.74E-08 | 3.88E-07 |
| I-134 | 1.49E+03 | 0.00E+00 | 3.18E-03 | 2.56E-02 | 3.03E-06 | 2.76E-02 | 1.54E-03 | 3.33E-04 | 9.60E-05 | 3.83E-07 | 1.16E-06 |
| I-135 | 7.84E+02 | 0.00E+00 | 1.67E-03 | 1.35E-02 | 1.59E-06 | 7.20E-02 | 7.44E-04 | 1.19E-04 | 2.50E-04 | 1.09E-07 | 4.12E-07 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.28E+01 | 0.00E+00 | 1.34E-04 | 1.08E-03 | 1.28E-07 | 6.88E-02 | 1.24E-05 | 6.07E-06 | 2.39E-04 | 2.76E-09 | 2.11E-08 |
| I-132 | 6.08E+02 | 0.00E+00 | 1.30E-03 | 1.05E-02 | 1.24E-06 | 2.41E-02 | 7.79E-04 | 1.34E-04 | 8.39E-05 | 1.46E-07 | 4.65E-07 |
| I-133 | 4.30E+02 | 0.00E+00 | 9.17E-04 | 7.40E-03 | 8.75E-07 | 1.27E-01 | 1.09E-04 | 8.93E-05 | 4.43E-04 | 2.99E-08 | 3.11E-07 |
| I-134 | 1.19E+03 | 0.00E+00 | 2.54E-03 | 2.05E-02 | 2.42E-06 | 2.21E-02 | 1.23E-03 | 2.66E-04 | 7.68E-05 | 3.06E-07 | 9.26E-07 |
| I-135 | 6.27E+02 | 0.00E+00 | 1.34E-03 | 1.08E-02 | 1.28E-06 | 5.76E-02 | 5.95E-04 | 9.48E-05 | 2.00E-04 | 8.72E-08 | 3.30E-07 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 7.50E+00 | 6.82E-02 | 1.48E-02 | 2.61E-02 | 1.43E-05 | 5.13E-05 |

1 MSLB GAUSSIAN 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT. 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .014 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .85E+00 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.43E+03 | 0.00E+00 | 3.05E-03 | 2.84E-02 | 3.36E-06 | 1.57E+00 | 2.83E-04 | 1.38E-04 | 6.43E-03 | 7.41E-08 | 5.68E-07 |
| I-132 | 1.38E+04 | 0.00E+00 | 2.95E-02 | 2.75E-01 | 3.25E-05 | 5.48E-01 | 1.77E-02 | 3.04E-03 | 2.25E-03 | 3.92E-06 | 1.25E-05 |
| I-133 | 9.78E+03 | 0.00E+00 | 2.09E-02 | 1.94E-01 | 2.30E-05 | 2.90E+00 | 2.49E-03 | 2.03E-03 | 1.19E-02 | 8.03E-07 | 8.34E-06 |
| I-134 | 2.71E+04 | 0.00E+00 | 5.78E-02 | 5.38E-01 | 6.37E-05 | 5.02E-01 | 2.80E-02 | 6.05E-03 | 2.06E-03 | 8.22E-06 | 2.49E-05 |
| I-135 | 1.43E+04 | 0.00E+00 | 3.04E-02 | 2.84E-01 | 3.35E-05 | 1.31E+00 | 1.35E-02 | 2.16E-03 | 5.38E-03 | 2.34E-06 | 8.86E-06 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.85E+01 | 0.00E+00 | 1.67E-04 | 1.56E-03 | 1.84E-07 | 3.60E-02 | 1.55E-05 | 7.59E-06 | 3.54E-04 | 4.07E-09 | 3.12E-08 |
| I-132 | 7.60E+02 | 0.00E+00 | 1.62E-03 | 1.51E-02 | 1.79E-06 | 3.01E-02 | 9.73E-04 | 1.67E-04 | 1.24E-04 | 2.15E-07 | 6.87E-07 |
| I-133 | 5.38E+02 | 0.00E+00 | 1.15E-03 | 1.07E-02 | 1.26E-06 | 1.59E-01 | 1.37E-04 | 1.12E-04 | 6.54E-04 | 4.41E-08 | 4.59E-07 |
| I-134 | 1.49E+03 | 0.00E+00 | 3.18E-03 | 2.96E-02 | 3.50E-06 | 2.76E-02 | 1.54E-03 | 3.33E-04 | 1.13E-04 | 4.52E-07 | 1.37E-06 |
| I-135 | 7.84E+02 | 0.00E+00 | 1.67E-03 | 1.56E-02 | 1.84E-06 | 7.20E-02 | 7.44E-04 | 1.18E-04 | 2.96E-04 | 1.29E-07 | 4.87E-07 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.28E+01 | 0.00E+00 | 1.34E-04 | 1.25E-03 | 1.48E-07 | 6.88E-02 | 1.24E-05 | 6.07E-06 | 2.83E-04 | 3.26E-09 | 2.50E-08 |
| I-132 | 6.08E+02 | 0.00E+00 | 1.30E-03 | 1.21E-02 | 1.43E-06 | 2.41E-02 | 7.79E-04 | 1.34E-04 | 9.90E-05 | 1.72E-07 | 5.50E-07 |
| I-133 | 4.30E+02 | 0.00E+00 | 9.17E-04 | 8.55E-03 | 1.01E-06 | 1.27E-01 | 1.09E-04 | 8.93E-05 | 5.23E-04 | 3.53E-08 | 3.67E-07 |
| I-134 | 1.19E+03 | 0.00E+00 | 2.54E-03 | 2.37E-02 | 2.80E-06 | 2.21E-02 | 1.23E-03 | 2.66E-04 | 9.06E-05 | 3.61E-07 | 1.09E-06 |
| I-135 | 6.27E+02 | 0.00E+00 | 1.34E-03 | 1.25E-02 | 1.47E-06 | 5.76E-02 | 5.95E-04 | 9.48E-05 | 2.37E-04 | 1.03E-07 | 3.90E-07 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 7.50E+00 | 6.82E-02 | 1.47E-02 | 3.08E-02 | 1.69E-05 | 6.06E-05 |

1 MSLB GAUSSIAN 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .015 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .69E+00 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.43E+03 | 0.00E+00 | 3.05E-03 | 3.15E-02 | 3.72E-06 | 1.57E+00 | 2.83E-04 | 1.38E-04 | 7.2[illegible]E-03 | 8.37E-08 | 6.42E-07 |
| I-132 | 1.38E+04 | 0.00E+00 | 2.95E-02 | 3.05E-01 | 3.60E-05 | 5.48E-01 | 1.77E-02 | 3.04E-03 | 2.55[illegible]-03 | 4.43E-06 | 1.41E-05 |
| I-133 | 9.78E+03 | 0.00E+00 | 2.09E-02 | 2.16E-01 | 2.55E-05 | 2.90E+00 | 2.49E-03 | 2.03E-03 | 1.35E-02 | 9.08E-07 | 9.43E-06 |
| I-134 | 2.71E+04 | 0.00E+00 | 5.78E-02 | 5.97E-01 | 7.05E-05 | 5.01E-01 | 2.80E-02 | 6.05E-03 | 2.33E-03 | 9.28E-06 | 2.81E-05 |
| I-135 | 1.43E+04 | 0.00E+00 | 3.04E-02 | 3.14E-01 | 3.72E-05 | 1.31E+00 | 1.35E-02 | 2.16E-03 | 6.08E-03 | 2.65E-06 | 1.00E-05 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.85E+01 | 0.00E+00 | 1.67E-04 | 1.73E-03 | 2.05E-07 | 8.60E-02 | 1.55E-05 | 7.59E-06 | 4.00E-04 | 4.60E-09 | 3.53E-08 |
| I-132 | 7.60E+02 | 0.00E+00 | 1.62E-03 | 1.67E-02 | 1.98E-06 | 3.01E-02 | 9.73E-04 | 1.67E-04 | 1.40E-04 | 2.43E-07 | 7.76E-07 |
| I-133 | 5.38E+02 | 0.00E+00 | 1.15E-03 | 1.18E-02 | 1.40E-06 | 1.59E-01 | 1.37E-04 | 1.12E-04 | 7.39E-04 | 4.99E-08 | 5.18E-07 |
| I-134 | 1.49E+03 | 0.00E+00 | 3.17E-03 | 3.28E-02 | 3.88E-06 | 2.75E-02 | 1.54E-03 | 3.32E-04 | 1.28E-04 | 5.10E-07 | 1.54E-06 |
| I-135 | 7.84E+02 | 0.00E+00 | 1.67E-03 | 1.73E-02 | 2.04E-06 | 7.20E-02 | 7.44E-04 | 1.18E-04 | 3.34E-04 | 1.45E-07 | 5.50E-07 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.28E+01 | 0.00E+00 | 1.34E-04 | 1.38E-03 | 1.64E-07 | 6.88E-02 | 1.24E-05 | 6.07E-06 | 3.20E-04 | 3.68E-09 | 2.82E-08 |
| I-132 | 6.08E+02 | 0.00E+00 | 1.30E-03 | 1.34E-02 | 1.58E-06 | 2.41E-02 | 7.78E-04 | 1.34E-04 | 1.12E-04 | 1.95E-07 | 6.21E-07 |
| I-133 | 4.30E+02 | 0.00E+00 | 9.17E-04 | 9.48E-03 | 1.12E-06 | 1.27E-01 | 1.09E-04 | 8.92E-05 | 5.92E-04 | 3.99E-08 | 4.15E-07 |
| I-134 | 1.19[illegible]+03 | 0.00E+00 | 2.54E-03 | 2.62E-02 | 3.10E-06 | 2.20E-02 | 1.23E-03 | 2.66E-04 | 1.02E-04 | 4.08E-07 | 1.23E-06 |
| I-135 | 6.27E+02 | 0.00E+00 | 1.34E-03 | 1.38E-02 | 1.63E-06 | 5.76E-02 | 5.95E-04 | 9.48E-05 | 2.67E-04 | 1.16E-07 | 4.40E-07 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 7.50E+00 | 6.82E-02 | 1.47E-02 | 3.48E-02 | 1.91E-05 | 6.85E-05 |

1 MSLB GAUSSIAN 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .016 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .51E+00 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.43E+03 | 0.00E+00 | 3.05E-03 | 3.38E-02 | 3.99E-06 | 1.57E+00 | 2.83E-04 | 1.38E-04 | 7.93E-03 | 9.12E-08 | 6.99E-07 |
| I-132 | 1.38E+04 | 0.00E+00 | 2.95E-02 | 3.27E-01 | 3.87E-05 | 5.48E-01 | 1.77E-02 | 3.04E-03 | 2.77E-03 | 4.82E-06 | 1.54E-05 |
| I-133 | 9.78E+03 | 0.00E+00 | 2.09E-02 | 2.31E-01 | 2.73E-05 | 2.90E+00 | 2.49E-03 | 2.03E-03 | 1.47E-02 | 9.90E-07 | 1.03E-05 |
| I-134 | 2.70E+04 | 0.00E+00 | 5.77E-02 | 6.39E-01 | 7.56E-05 | 5.01E-01 | 2.80E-02 | 6.04E-03 | 2.54E-03 | 1.01E-05 | 3.06E-05 |
| I-135 | 1.43E+04 | 0.00E+00 | 3.04E-02 | 3.37E-01 | 3.99E-05 | 1.31E+00 | 1.35E-02 | 2.16E-03 | 6.63E-03 | 2.89E-06 | 1.09E-05 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.85E+01 | 0.00E+00 | 1.67E-04 | 1.86E-03 | 2.19E-07 | 8.60E-02 | 1.55E-05 | 7.59E-06 | 4.36E-04 | 5.01E-09 | 3.84E-08 |
| I-132 | 7.60E+02 | 0.00E+00 | 1.62E-03 | 1.80E-02 | 2.12E-06 | 3.01E-02 | 9.73E-04 | 1.67E-04 | 1.52E-04 | 2.65E-07 | 8.46E-07 |
| I-133 | 5.38E+02 | 0.00E+00 | 1.15E-03 | 1.27E-02 | 1.50E-06 | 1.59E-01 | 1.37E-04 | 1.12E-04 | 8.06E-04 | 5.44E-08 | 3.65E-07 |
| I-134 | 1.49E+03 | 0.00E+00 | 3.17E-03 | 3.51E-02 | 4.15E-06 | 2.75E-02 | 1.54E-03 | 3.32E-04 | 1.39E-04 | 5.55E-07 | 1.68E-06 |
| I-135 | 7.84E+02 | 0.00E+00 | 1.67E-03 | 1.85E-02 | 2.19E-06 | 7.20E-02 | 7.44E-04 | 1.18E-04 | 3.64E-04 | 1.59E-07 | 6.00E-07 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.28E+01 | 0.00E+00 | 1.34E-04 | 1.48E-03 | 1.76E-07 | 6.88E-02 | 1.24E-05 | 6.07E-06 | 3.48E-04 | 4.01E-09 | 3.07E-08 |
| I-132 | 6.08E+02 | 0.00E+00 | 1.30E-03 | 1.44E-02 | 1.70E-06 | 2.41E-02 | 7.78E-04 | 1.34E-04 | 1.22E-04 | 2.12E-07 | 6.77E-07 |
| I-133 | 4.30E+02 | 0.00E+00 | 9.17E-04 | 1.02E-02 | 1.20E-06 | 1.27E-01 | 1.09E-04 | 8.92E-05 | 6.45E-04 | 4.35E-08 | 4.52E-07 |
| I-134 | 1.19E+03 | 0.00E+00 | 2.54E-03 | 2.81E-02 | 3.32E-06 | 2.20E-02 | 1.23E-03 | 2.66E-04 | 1.11E-04 | 4.44E-07 | 1.34E-06 |
| I-135 | 6.27E+02 | 0.00E+00 | 1.34E-03 | 1.48E-02 | 1.75E-06 | 5.76E-02 | 5.95E-04 | 9.48E-05 | 2.91E-04 | 1.27E-07 | 4.80E-07 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 7.49E+00 | 6.81E-02 | 1.47E-02 | 3.79E-02 | 2.08E-05 | 7.46E-05 |

1 MSLB GAUSSIAN 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .018 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .35E+00 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.43E+03 | 0.00E+00 | 3.05E-03 | 3.53E-02 | 4.18E-06 | 1.57E+00 | 2.83E-04 | 1.38E-04 | 8.39E-03 | 9.66E-08 | 7.40E-07 |
| I-132 | 1.38E+04 | 0.00E+00 | 2.95E-02 | 3.42E-01 | 4.04E-05 | 5.48E-01 | 1.77E-02 | 3.04E-03 | 2.94E-03 | 5.10E-06 | 1.63E-05 |
| I-133 | 9.78E+03 | 0.00E+00 | 2.09E-02 | 2.42E-01 | 2.86E-05 | 2.90E+00 | 2.49E-03 | 2.03E-03 | 1.55E-02 | 1.05E-06 | 1.09E-05 |
| I-134 | 2.70E+04 | 0.00E+00 | 5.77E-02 | 6.68E-01 | 7.90E-05 | 5.00E-01 | 2.80E-02 | 6.04E-03 | 2.68E-03 | 1.07E-05 | 3.24E-05 |
| I-135 | 1.43E+04 | 0.00E+00 | 3.04E-02 | 3.53E-01 | 4.17E-05 | 1.31E+00 | 1.35E-02 | 2.16E-03 | 7.02E-03 | 3.05E-06 | 1.16E-05 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.85E+01 | 0.00E+00 | 1.67E-04 | 1.94E-03 | 2.29E-07 | 8.60E-02 | 1.55E-05 | 7.59E-06 | 4.61E-04 | 5.31E-09 | 4.07E-08 |
| I-132 | 7.60E+02 | 0.00E+00 | 1.62E-03 | 1.88E-02 | 2.22E-06 | 3.01E-02 | 9.72E-04 | 1.67E-04 | 1.61E-04 | 2.80E-07 | 8.95E-07 |
| I-133 | 5.37E+02 | 0.00E+00 | 1.15E-03 | 1.33E-02 | 1.57E-06 | 1.59E-01 | 1.37E-04 | 1.12E-04 | 8.53E-04 | 5.76E-08 | 5.98E-07 |
| I-134 | 1.48E+03 | 0.00E+00 | 3.17E-03 | 3.67E-02 | 4.34E-06 | 2.75E-02 | 1.54E-03 | 3.32E-04 | 1.47E-04 | 5.88E-07 | 1.78E-06 |
| I-135 | 7.84E+02 | 0.00E+00 | 1.67E-03 | 1.94E-02 | 2.29E-06 | 7.19E-02 | 7.44E-04 | 1.18E-04 | 3.86E-04 | 1.68E-07 | 6.35E-07 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.28E+01 | 0.00E+00 | 1.34E-04 | 1.55E-03 | 1.84E-07 | 6.88E-02 | 1.24E-05 | 6.07E-06 | 3.69E-04 | 4.25E-09 | 3.25E-08 |
| I-132 | 6.08E+02 | 0.00E+00 | 1.30E-03 | 1.50E-02 | 1.78E-06 | 2.41E-02 | 7.78E-04 | 1.34E-04 | 1.29E-04 | 2.24E-07 | 7.16E-07 |
| I-133 | 4.30E+02 | 0.00E+00 | 9.17E-04 | 1.06E-02 | 1.26E-06 | 1.27E-01 | 1.09E-04 | 8.92E-05 | 6.83E-04 | 4.61E-08 | 4.78E-07 |
| I-134 | 1.19E+03 | 0.00E+00 | 2.54E-03 | 2.94E-02 | 3.47E-06 | 2.20E-02 | 1.23E-03 | 2.65E-04 | 1.18E-04 | 4.70E-07 | 1.42E-06 |
| I-135 | 6.27E+02 | 0.00E+00 | 1.34E-03 | 1.55E-02 | 1.83E-06 | 5.76E-02 | 5.95E-04 | 9.48E-05 | 3.09E-04 | 1.34E-07 | 5.08E-07 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 7.49E+00 | 6.81E-02 | 1.47E-02 | 4.02E-02 | 2.20E-05 | 7.89E-05 |

1 MSLB GAUSSIAN 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .019 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .22E+00 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.43E+03 | 0.00E+00 | 3.05E-03 | 3.63E-02 | 4.29E-06 | 1.57E+00 | 2.83E-04 | 1.38E-04 | 8.69E-03 | 1.00E-07 | 7.67E-07 |
| I-132 | 1.38E+04 | 0.00E+00 | 2.95E-02 | 3.51E-01 | 4.15E-05 | 5.47E-01 | 1.77E-02 | 3.04E-03 | 3.04E-03 | 5.29E-06 | 1.69E-05 |
| I-133 | 9.78E+03 | 0.00E+00 | 2.09E-02 | 2.48E-01 | 2.94E-05 | 2.90E+00 | 2.49E-03 | 2.03E-03 | 1.61E-02 | 1.09E-06 | 1.13E-05 |
| I-134 | 2.70E+04 | 0.00E+00 | 5.76E-02 | 6.85E-01 | 8.10E-05 | 5.00E-01 | 2.79E-02 | 6.03E-03 | 2.78E-03 | 1.11E-05 | 3.35E-05 |
| I-135 | 1.43E+04 | 0.00E+00 | 3.04E-02 | 3.62E-01 | 4.28E-05 | 1.31E+00 | 1.35E-02 | 2.16E-03 | 7.27E-03 | 3.16E-06 | 1.20E-05 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.85E+01 | 0.00E+00 | 1.67E-04 | 1.99E-03 | 2.36E-07 | 8.60E-02 | 1.55E-05 | 7.59E-06 | 4.78E-04 | 5.50E-09 | 4.22E-08 |
| I-132 | 7.59E+02 | 0.00E+00 | 1.62E-03 | 1.93E-02 | 2.28E-06 | 3.01E-02 | 9.72E-04 | 1.67E-04 | 1.67E-04 | 2.90E-07 | 9.27E-07 |
| I-133 | 5.37E+02 | 0.00E+00 | 1.15E-03 | 1.36E-02 | 1.61E-06 | 1.59E-01 | 1.37E-04 | 1.12E-04 | 8.84E-04 | 5.96E-08 | 6.20E-07 |
| I-134 | 1.48E+03 | 0.00E+00 | 3.17E-03 | 3.77E-02 | 4.45E-06 | 2.75E-02 | 1.53E-03 | 3.31E-04 | 1.53E-04 | 6.08E-07 | 1.84E-06 |
| I-135 | 7.84E+02 | 0.00E+00 | 1.67E-03 | 1.99E-02 | 2.35E-06 | 7.19E-02 | 7.44E-04 | 1.18E-04 | 4.00E-04 | 1.74E-07 | 6.58E-07 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.28E+01 | 0.00E+00 | 1.34E-04 | 1.59E-03 | 1.89E-07 | 6.88E-02 | 1.24E-05 | 6.07E-06 | 3.82E-04 | 4.40E-09 | 3.37E-08 |
| I-132 | 6.07E+02 | 0.00E+00 | 1.30E-03 | 1.54E-02 | 1.82E-06 | 2.41E-02 | 7.78E-04 | 1.34E-04 | 1.34E-04 | 2.32E-07 | 7.42E-07 |
| I-133 | 4.30E+02 | 0.00E+00 | 9.17E-04 | 1.09E-02 | 1.29E-06 | 1.27E-01 | 1.09E-04 | 8.92E-05 | 7.07E-04 | 4.77E-08 | 4.96E-07 |
| I-134 | 1.19E+03 | 0.00E+00 | 2.53E-03 | 3.01E-02 | 3.56E-06 | 2.20E-02 | 1.23E-03 | 2.65E-04 | 1.22E-04 | 4.87E-07 | 1.47E-06 |
| I-135 | 6.27E+02 | 0.00E+00 | 1.34E-03 | 1.59E-02 | 1.88E-06 | 5.76E-02 | 5.95E-04 | 9.48E-05 | 3.20E-04 | 1.39E-07 | 5.26E-07 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 7.49E+00 | 6.81E-02 | 1.47E-02 | 4.16E-02 | 2.28E-05 | 8.17E-05 |

1 MSLB GAUSSIAN 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .020 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .12E+00 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.43E+03 | 0.00E+00 | 3.05E-03 | 3.68E-02 | 4.35E-06 | 1.57E+00 | 2.83E-04 | 1.38E-04 | 8.87E-03 | 1.02E-07 | 7.83E-07 |
| I-132 | 1.38E+04 | 0.00E+00 | 2.95E-02 | 3.56E-01 | 4.21E-05 | 5.47E-01 | 1.77E-02 | 3.04E-03 | 3.10E-03 | 5.39E-06 | 1.72E-05 |
| I-133 | 9.78E+03 | 0.00E+00 | 2.09E-02 | 2.52E-01 | 2.98E-05 | 2.90E+00 | 2.49E-03 | 2.03E-03 | 1.64E-02 | 1.11E-06 | 1.15E-05 |
| I-134 | 2.70E+04 | 0.00E+00 | 5.76E-02 | 6.95E-01 | 8.21E-05 | 4.99E-01 | 2.79E-02 | 6.03E-03 | 2.83E-03 | 1.13E-05 | 3.42E-05 |
| I-135 | 1.43E+04 | 0.00E+00 | 3.04E-02 | 3.67E-01 | 4.34E-05 | 1.31E+00 | 1.35E-02 | 2.16E-03 | 7.42E-03 | 3.23E-06 | 1.22E-05 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.85E+01 | 0.00E+00 | 1.67E-04 | 2.02E-03 | 2.39E-07 | 8.60E-02 | 1.55E-05 | 7.59E-06 | 4.88E-04 | 5.61E-09 | 4.30E-08 |
| I-132 | 7.59E+02 | 0.00E+00 | 1.62E-03 | 1.95E-02 | 2.31E-06 | 3.01E-02 | 9.72E-04 | 1.67E-04 | 1.70E-04 | 2.96E-07 | 9.46E-07 |
| I-133 | 5.37E+02 | 0.00E+00 | 1.15E-03 | 1.38E-02 | 1.64E-06 | 1.59E-01 | 1.37E-04 | 1.12E-04 | 9.02E-04 | 6.09E-08 | 6.32E-07 |
| I-134 | 1.48E+03 | 0.00E+00 | 3.16E-03 | 3.82E-02 | 4.51E-06 | 2.74E-02 | 1.53E-03 | 3.31E-04 | 1.56E-04 | 6.20E-07 | 1.88E-06 |
| I-135 | 7.84E+02 | 0.00E+00 | 1.67E-03 | 2.02E-02 | 2.39E-06 | 7.19E-02 | 7.44E-04 | 1.18E-04 | 4.08E-04 | 1.77E-07 | 6.71E-07 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.28E+01 | 0.00E+00 | 1.34E-04 | 1.62E-03 | 1.91E-07 | 6.88E-02 | 1.24E-05 | 6.07E-06 | 3.90E-04 | 4.49E-09 | 3.44E-08 |
| I-132 | 6.07E+02 | 0.00E+00 | 1.30E-03 | 1.56E-02 | 1.85E-06 | 2.41E-02 | 7.77E-04 | 1.33E-04 | 1.36E-04 | 2.37E-07 | 7.57E-07 |
| I-133 | 4.30E+02 | 0.00E+00 | 9.17E-04 | 1.11E-02 | 1.31E-06 | 1.27E-01 | 1.09E-04 | 8.92E-05 | 7.22E-04 | 4.87E-08 | 5.06E-07 |
| I-134 | 1.19E+03 | 0.00E+00 | 2.53E-03 | 3.05E-02 | 3.61E-06 | 2.20E-02 | 1.23E-03 | 2.65E-04 | 1.24E-04 | 4.96E-07 | 1.50E-06 |
| I-135 | 6.27E+02 | 0.00E+00 | 1.34E-03 | 1.61E-02 | 1.91E-06 | 5.75E-02 | 5.95E-04 | 9.47E-05 | 3.26E-04 | 1.42E-07 | 5.37E-07 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 7.49E+00 | 6.80E-02 | 1.47E-02 | 4.25E-02 | 2.32E-05 | 8.34E-05 |

1 MSLB GAUSSIAN 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .021 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .65E-01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.43E+03 | 0.00E+00 | 3.05E-03 | 3.70E-02 | 4.38E-06 | 1.57E+00 | 2.83E-04 | 1.38E-04 | 8.97E-03 | 1.03E-07 | 7.91E-07 |
| I-132 | 1.38E+04 | 0.00E+00 | 2.95E-02 | 3.58E-01 | 4.23E-05 | 5.47E-01 | 1.77E-02 | 3.04E-03 | 3.13E-03 | 5.45E-06 | 1.74E-05 |
| I-133 | 9.78E+03 | 0.00E+00 | 2.09E-02 | 2.54E-01 | 3.00E-05 | 2.90E+00 | 2.49E-03 | 2.03E-03 | 1.66E-02 | 1.12E-06 | 1.16E-05 |
| I-134 | 2.70E+04 | 0.00E+00 | 5.75E-02 | 6.99E-01 | 8.26E-05 | 4.99E-01 | 2.79E-02 | 6.02E-03 | 2.86E-03 | 1.14E-05 | 3.45E-05 |
| I-135 | 1.43E+04 | 0.00E+00 | 3.04E-02 | 3.70E-01 | 4.37E-05 | 1.31E+00 | 1.35E-02 | 2.16E-03 | 7.50E-03 | 3.26E-06 | 1.23E-05 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.85E+01 | 0.00E+00 | 1.67E-04 | 2.04E-03 | 2.41E-07 | 8.60E-02 | 1.55E-05 | 7.59E-06 | 4.93E-04 | 5.67E-09 | 4.35E-08 |
| I-132 | 7.59E+02 | 0.00E+00 | 1.62E-03 | 1.97E-02 | 2.33E-06 | 3.01E-02 | 9.71E-04 | 1.67E-04 | 1.72E-04 | 2.99E-07 | 9.56E-07 |
| I-133 | 5.37E+02 | 0.00E+00 | 1.15E-03 | 1.39E-02 | 1.65E-06 | 1.59E-01 | 7.37E-04 | 1.12E-04 | 9.12E-04 | 6.15E-08 | 6.39E-07 |
| I-134 | 1.48E+03 | 0.00E+00 | 3.16E-03 | 3.84E-02 | 4.54E-06 | 2.74E-02 | 1.53E-03 | 3.31E-04 | 1.57E-04 | 6.26E-07 | 1.89E-06 |
| I-135 | 7.84E+02 | 0.00E+00 | 1.67E-03 | 2.03E-02 | 2.40E-06 | 7.19E-02 | 7.43E-04 | 1.18E-04 | 4.12E-04 | 1.79E-07 | 6.78E-07 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.28E+01 | 0.00E+00 | 1.34E-04 | 1.63E-03 | 1.93E-07 | 6.88E-02 | 1.24E-05 | 6.07E-06 | 3.94E-04 | 4.54E-09 | 3.48E-08 |
| I-132 | 6.07E+02 | 0.00E+00 | 1.30E-03 | 1.57E-02 | 1.86E-06 | 2.40E-02 | 7.77E-04 | 1.33E-04 | 1.38E-04 | 2.39E-07 | 7.64E-07 |
| I-133 | 4.30E+02 | 0.00E+00 | 9.17E-04 | 1.11E-02 | 1.32E-06 | 1.27E-01 | 1.09E-04 | 8.92E-05 | 7.29E-04 | 4.92E-08 | 5.11E-07 |
| I-134 | 1.18E+03 | 0.00E+00 | 2.53E-03 | 3.07E-02 | 3.63E-06 | 2.19E-02 | 1.23E-03 | 2.65E-04 | 1.26E-04 | 5.01E-07 | 1.52E-06 |
| I-135 | 6.27E+02 | 0.00E+00 | 1.34E-03 | 1.62E-02 | 1.92E-06 | 5.75E-02 | 5.95E-04 | 9.47E-05 | 3.30E-04 | 1.43E-07 | 5.43E-07 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 7.49E+00 | 6.80E-02 | 1.47E-02 | 4.29E-02 | 2.34E-05 | 8.42E-05 |

1 MSLB GAUSSIAN 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .022 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .31E-01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.43E+03 | 0.00E+00 | 3.05E-03 | 3.71E-02 | 4.39E-06 | 1.57E+00 | 2.83E-04 | 1.38E-04 | 9.01E-03 | 1.04E-07 | 7.95E-07 |
| I-132 | 1.38E+04 | 0.00E+00 | 2.95E-02 | 3.59E-01 | 4.24E-05 | 5.47E-01 | 1.77E-02 | 3.03E-03 | 3.15E-03 | 5.47E-06 | 1.75E-05 |
| I-133 | 9.78E+03 | 0.00E+00 | 2.09E-02 | 2.54E-01 | 3.01E-05 | 2.90E+00 | 2.49E-03 | 2.03E-03 | 1.67E-02 | 1.12E-06 | 1.17E-05 |
| I-134 | 2.69E+04 | 0.00E+00 | 5.75E-02 | 7.00E-01 | 8.28E-05 | 4.99E-01 | 2.79E-02 | 6.01E-03 | 2.87E-03 | 1.14E-05 | 3.46E-05 |
| I-135 | 1.43E+04 | 0.00E+00 | 3.04E-02 | 3.71E-01 | 4.38E-05 | 1.31E+00 | 1.35E-02 | 2.15E-03 | 7.53E-03 | 3.28E-06 | 1.24E-05 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.85E+01 | 0.00E+00 | 1.67E-04 | 2.04E-03 | 2.41E-07 | 8.60E-02 | 1.55E-05 | 7.59E-06 | 4.95E-04 | 5.70E-09 | 4.37E-08 |
| I-132 | 7.59E+02 | 0.00E+00 | 1.62E-03 | 1.97E-02 | 2.33E-06 | 3.00E-02 | 9.71E-04 | 1.67E-04 | 1.73E-04 | 3.01E-07 | 9.60E-07 |
| I-133 | 5.37E+02 | 0.00E+00 | 1.15E-03 | 1.40E-02 | 1.65E-06 | 1.59E-01 | 1.37E-04 | 1.12E-04 | 9.16E-04 | 6.18E-08 | 6.42E-07 |
| I-134 | 1.48E+03 | 0.00E+00 | 3.16E-03 | 3.85E-02 | 4.55E-06 | 2.74E-02 | 1.53E-03 | 3.30E-04 | 1.58E-04 | 6.29E-07 | 1.90E-06 |
| I-135 | 7.83E+02 | 0.00E+00 | 1.67E-03 | 2.04E-02 | 2.41E-06 | 7.19E-02 | 7.43E-04 | 1.18E-04 | 4.14E-04 | 1.80E-07 | 6.81E-07 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.28E+01 | 0.00E+00 | 1.34E-04 | 1.63E-03 | 1.93E-07 | 6.88E-02 | 1.24E-05 | 6.07E-06 | 3.96E-04 | 4.56E-09 | 3.49E-08 |
| I-132 | 6.07E+02 | 0.00E+00 | 1.29E-03 | 1.58E-02 | 1.87E-06 | 2.40E-02 | 7.77E-04 | 1.33E-04 | 1.38E-04 | 2.41E-07 | 7.68E-07 |
| I-133 | 4.30E+02 | 0.00E+00 | 9.17E-04 | 1.12E-02 | 1.32E-06 | 1.27E-01 | 1.09E-04 | 8.92E-05 | 7.33E-04 | 4.94E-08 | 5.14E-07 |
| I-134 | 1.18E+03 | 0.00E+00 | 2.53E-03 | 3.08E-02 | 3.64E-06 | 2.19E-02 | 1.22E-03 | 2.64E-04 | 1.26E-04 | 5.03E-07 | 1.52E-06 |
| I-135 | 6.27E+02 | 0.00E+00 | 1.34E-03 | 1.63E-02 | 1.93E-06 | 5.75E-02 | 5.95E-04 | 9.47E-05 | 3.31E-04 | 1.44E-07 | 5.45E-07 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 7.49E+00 | 6.79E-02 | 1.47E-02 | 4.31E-02 | 2.35E-05 | 8.46E-05 |

1 MSLB GAUSSIAN 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .023 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .14E-01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.43E+03 | 0.00E+00 | 1.52E-03 | 3.72E-02 | 4.39E-06 | 7.83E-01 | 1.41E-04 | 6.91E-05 | 4.51E-03 | 5.19E-08 | 3.98E-07 |
| I-132 | 1.38E+04 | 0.00E+00 | 1.47E-02 | 3.59E-01 | 4.24E-05 | 2.73E-01 | 8.83E-03 | 1.52E-03 | 1.58E-03 | 2.74E-06 | 8.74E-06 |
| I-133 | 9.78E+03 | 0.00E+00 | 1.04E-02 | 2.54E-01 | 3.01E-05 | 1.45E+00 | 1.24E-03 | 1.01E-03 | 8.35E-03 | 5.63E-07 | 5.85E-06 |
| I-134 | 2.69E+04 | 0.00E+00 | 2.87E-02 | 7.00E-01 | 8.28E-05 | 2.49E-01 | 1.39E-02 | 3.01E-03 | 1.44E-03 | 5.72E-06 | 1.73E-05 |
| I-135 | 1.43E+04 | 0.00E+00 | 1.52E-02 | 3.71E-01 | 4.38E-05 | 6.54E-01 | 6.76E-03 | 1.08E-03 | 3.77E-03 | 1.64E-06 | 6.21E-06 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.85E+01 | 0.00E+00 | 8.37E-05 | 2.04E-03 | 2.41E-07 | 4.30E-02 | 7.77E-06 | 3.79E-06 | 2.48E-04 | 2.85E-09 | 2.19E-08 |
| I-132 | 7.58E+02 | 0.00E+00 | 8.09E-04 | 1.97E-02 | 2.33E-06 | 1.50E-02 | 4.85E-04 | 8.34E-05 | 8.66E-05 | 1.51E-07 | 4.80E-07 |
| I-133 | 5.37E+02 | 0.00E+00 | 5.73E-04 | 1.40E-02 | 1.65E-06 | 7.96E-02 | 6.84E-05 | 5.58E-05 | 4.59E-04 | 3.09E-08 | 3.21E-07 |
| I-134 | 1.48E+03 | 0.00E+00 | 1.58E-03 | 3.85E-02 | 4.55E-06 | 1.37E-02 | 7.65E-04 | 1.65E-04 | 7.89E-05 | 3.15E-07 | 9.52E-07 |
| I-135 | 7.83E+02 | 0.00E+00 | 8.36E-04 | 2.04E-02 | 2.41E-06 | 3.60E-02 | 3.72E-04 | 5.92E-05 | 2.07E-04 | 9.02E-08 | 3.41E-07 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.28E+01 | 0.00E+00 | 6.70E-05 | 1.63E-03 | 1.93E-07 | 3.44E-02 | 6.21E-06 | 3.04E-06 | 1.98E-04 | 2.28E-09 | 1.75E-08 |
| I-132 | 6.07E+02 | 0.00E+00 | 6.47E-04 | 1.58E-02 | 1.87E-06 | 1.20E-02 | 3.88E-04 | 6.67E-05 | 6.93E-05 | 1.20E-07 | 3.84E-07 |
| I-133 | 4.30E+02 | 0.00E+00 | 4.59E-04 | 1.12E-02 | 1.32E-06 | 6.36E-02 | 5.47E-05 | 4.46E-05 | 3.67E-04 | 2.48E-08 | 2.57E-07 |
| I-134 | 1.18E+03 | 0.00E+00 | 1.26E-03 | 3.08E-02 | 3.64E-06 | 1.10E-02 | 6.12E-04 | 1.32E-04 | 6.31E-05 | 2.52E-07 | 7.61E-07 |
| I-135 | 6.27E+02 | 0.00E+00 | 6.68E-04 | 1.63E-02 | 1.93E-06 | 2.88E-02 | 2.97E-04 | 4.74E-05 | 1.66E-04 | 7.21E-08 | 2.73E-07 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 3.74E+00 | 3.40E-02 | 7.34E-03 | 2.16E-02 | 1.18E-05 | 4.23E-05 |

1 MSLB GAUSSIAN 4.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT 720.000 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .00E+00 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.08E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.13E+00 | 9.36E-05 | 7.17E-04 |
| I-132 | 8.37E-91 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.19E+00 | 3.80E-03 | 1.21E-02 |
| I-133 | 4.66E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.46E+01 | 9.86E-04 | 1.02E-02 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.44E+00 | 5.74E-03 | 1.74E-02 |
| I-135 | 7.04E-29 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.18E+00 | 2.69E-03 | 1.02E-02 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 5.92E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.47E-01 | 5.14E-06 | 3.94E-05 |
| I-132 | 4.60E-92 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.20E-01 | 2.09E-04 | 6.67E-04 |
| I-133 | 2.56E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.03E-01 | 5.42E-05 | 5.63E-04 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.91E-02 | 3.15E-04 | 9.55E-04 |
| I-135 | 3.87E-30 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.40E-01 | 1.48E-04 | 5.59E-04 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 4.74E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.57E-01 | 4.11E-06 | 3.15E-05 |
| I-132 | 3.68E-92 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.61E-02 | 1.67E-04 | 5.34E-04 |
| I-133 | 2.05E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.42E-01 | 4.33E-05 | 4.50E-04 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.33E-02 | 2.52E-04 | 7.64E-04 |
| I-135 | 3.10E-30 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.72E-01 | 1.18E-04 | 4.47E-04 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | --- | --- | --- | --- | --- | --- |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.58E+01 | 1.46E-02 | 5.56E-02 |

| | | | | | | |
|---|---|---|---|---|---|---|
| TOTAL DOSES 0-30 DAYS | 1.52E+02 | 1.38E+00 | 2.99E-01 | 3.62E+01 | 1.49E-02 | 5.65E-02 |

1

MSLB GAUSSIAN 4.0uCi/g, 4500 cfm

| ISOTOPE | ACTIVITY RELEASED (CURIES) | | |
|---|---|---|---|
| | 0. HRS | 720. HRS | |
| ELEMENTAL | | | |
| I-131 | 6.17E-02 | 0.00E+00 | 6.17E-02 |
| I-132 | 5.98E-01 | 0.00E+00 | 5.98E-01 |
| I-133 | 4.23E-01 | 0.00E+00 | 4.23E-01 |
| I-134 | 1.17E+00 | 0.00E+00 | 1.17E+00 |
| I-135 | 6.17E-01 | 0.00E+00 | 6.17E-01 |
| PARTICULATE | | | |
| I-131 | 3.39E-03 | 0.00E+00 | 3.39E-03 |
| I-132 | 3.29E-02 | 0.00E+00 | 3.29E-02 |
| I-133 | 2.32E-02 | 0.00E+00 | 2.32E-02 |
| I-134 | 6.45E-02 | 0.00E+00 | 6.45E-02 |
| I-135 | 3.39E-02 | 0.00E+00 | 3.39E-02 |
| ORGANIC | | | |
| I-131 | 2.71E-03 | 0.00E+00 | 2.71E-03 |
| I-132 | 2.63E-02 | 0.00E+00 | 2.63E-02 |
| I-133 | 1.86E-02 | 0.00E+00 | 1.86E-02 |
| I-134 | 5.16E-02 | 0.00E+00 | 5.16E-02 |
| I-135 | 2.71E-02 | 0.00E+00 | 2.71E-02 |
| NOBLE GASES | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

END EXECUTION DATE: 07/24/1997
END EXECUTION TIME: 14:48:34.58

```
AXIDENT VER 2 MOD 4
PRODUCTION DATE 02/18/92
BEGIN EXECUTION DATE:  07/24/1997
BEGIN EXECUTION TIME:  15:29:48.15



 1 MSLB 3.0uCi/g, 4500 cfm
 2 8 2 1.0 1.0
 3 -2350 2.6E6 2.9865E5 2.9865E5
 4 0.0 0.0 0.0 1.0 6.6234E7 1.0 1.0
 5 5 33.0 1.8E3 7.2E3 2.88E4 8.64E4 3.456E5 2.592E6
 6 2*5.333E-7 6*0.0
 7 8*1.0
 8 8*0.0
 9 8*4500
10 8*1.0
11 8*1.0
12 8*0.0
13 8*0.0
14 8*0.0
15 8*0.0
16 8*0.0
17 8*0.0
18 0.0 7*2.54E-5
19 0.0 7*2.54E-5
20 0.0 7*2.54E-5
21 1.0 1.0 1.0 0.700 0.700 0.700
22 1.0 1.0 1.0
23 4712 45816 32269 90354 47115 0.0 0.0 0.0
24 8*0.0
```

1

MSLB 3.0uCi/g, 4500 cfm

INITIAL CONTAINMENT INVENTORY

| ISOTOPE | ACTIVITY (CURIES) |
|---|---|
| I-131 | 4.712E+03 |
| I-132 | 4.582E+04 |
| I-133 | 3.227E+04 |
| I-134 | 9.035E+04 |
| I-135 | 4.712E+04 |
| XE-131M | 0.000E+00 |
| XE-133M | 0.000E+00 |
| XE-133 | 0.000E+00 |
| XE-135M | 0.000E+00 |
| XE-135 | 0.000E+00 |
| XE-138 | 0.000E+00 |
| KR-83M | 0.000E+00 |
| KR-85M | 0.000E+00 |
| KR-85 | 0.000E+00 |
| KR-87 | 0.000E+00 |
| KR-88 | 0.000E+00 |

1 MSLB 3.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .001 HOURS: X/Q(SITE)= .10E+01 SEC/M3 | PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .000 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .000 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .000 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.07E+03 | 0.00E+00 | 2.86E-03 | 4.25E-03 | 5.02E-07 | 1.47E+00 | 2.65E-04 | 1.30E-04 | 6.45E-04 | 7.42E-09 | 5.69E-08 |
| I-132 | 1.04E+04 | 0.00E+00 | 2.78E-02 | 4.13E-02 | 4.88E-06 | 5.16E-01 | 1.67E-02 | 2.86E-03 | 2.27E-04 | 3.94E-07 | 1.26E-06 |
| I-133 | 7.34E+03 | 0.00E+00 | 1.96E-02 | 2.91E-02 | 3.44E-06 | 2.72E+00 | 2.33E-03 | 1.90E-03 | 1.19E-03 | 8.05E-08 | 8.37E-07 |
| I-134 | 2.05E+04 | 0.00E+00 | 5.48E-02 | 8.13E-02 | 9.62E-06 | 4.75E-01 | 2.66E-02 | 5.73E-03 | 2.09E-04 | 8.32E-07 | 2.52E-06 |
| I-135 | 1.07E+04 | 0.00E+00 | 2.86E-02 | 4.25E-02 | 5.02E-06 | 1.23E+00 | 1.27E-02 | 2.02E-03 | 5.40E-04 | 2.35E-07 | 8.89E-07 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 5.89E+01 | 0.00E+00 | 1.57E-04 | 2.33E-04 | 2.76E-08 | 8.07E-02 | 1.46E-05 | 7.12E-06 | 3.54E-05 | 4.08E-10 | 3.13E-09 |
| I-132 | 5.72E+02 | 0.00E+00 | 1.53E-03 | 2.27E-03 | 2.68E-07 | 2.83E-02 | 9.16E-04 | 1.57E-04 | 1.25E-05 | 2.16E-08 | 6.91E-08 |
| I-133 | 4.03E+02 | 0.00E+00 | 1.08E-03 | 1.60E-03 | 1.89E-07 | 1.49E-01 | 1.28E-04 | 1.05E-04 | 6.56E-05 | 4.43E-09 | 4.60E-08 |
| I-134 | 1.13E+03 | 0.00E+00 | 3.01E-03 | 4.47E-03 | 5.28E-07 | 2.61E-02 | 1.46E-03 | 3.15E-04 | 1.15E-05 | 4.57E-08 | 1.38E-07 |
| I-135 | 5.89E+02 | 0.00E+00 | 1.57E-03 | 2.33E-03 | 2.76E-07 | 6.76E-02 | 6.98E-04 | 1.11E-04 | 2.97E-05 | 1.29E-08 | 4.89E-08 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 4.71E+01 | 0.00E+00 | 1.26E-04 | 1.87E-04 | 2.21E-08 | 6.45E-02 | 1.17E-05 | 5.69E-06 | 2.83E-05 | 3.26E-10 | 2.50E-09 |
| I-132 | 4.58E+02 | 0.00E+00 | 1.22E-03 | 1.81E-03 | 2.15E-07 | 2.27E-02 | 7.33E-04 | 1.26E-04 | 9.96E-06 | 1.73E-08 | 5.53E-08 |
| I-133 | 3.23E+02 | 0.00E+00 | 8.60E-04 | 1.28E-03 | 1.51E-07 | 1.19E-01 | 1.03E-04 | 8.37E-05 | 5.25E-05 | 3.54E-09 | 3.68E-08 |
| I-134 | 9.03E+02 | 0.00E+00 | 2.41E-03 | 3.58E-03 | 4.23E-07 | 2.09E-02 | 1.17E-03 | 2.52E-04 | 9.17E-06 | 3.66E-08 | 1.11E-07 |
| I-135 | 4.71E+02 | 0.00E+00 | 1.26E-03 | 1.87E-03 | 2.21E-07 | 5.41E-02 | 5.59E-04 | 8.90E-05 | 2.37E-05 | 1.03E-08 | 3.91E-08 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 7.04E+00 | 6.43E-02 | 1.39E-02 | 3.09E-03 | 1.70E-06 | 6.11E-06 |

1 MSLB 3.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .009 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.07E+03 | 0.00E+00 | 1.60E-02 | 2.79E-02 | 3.30E-06 | 8.22E+00 | 1.48E-03 | 7.25E-04 | 2.74E-02 | 3.15E-07 | 2.41E-06 |
| I-132 | 1.04E+04 | 0.00E+00 | 1.55E-01 | 2.71E-01 | 3.20E-05 | 2.88E+00 | 9.32E-02 | 1.60E-02 | 9.60E-03 | 1.67E-05 | 5.33E-05 |
| I-133 | 7.34E+03 | 0.00E+00 | 1.10E-01 | 1.91E-01 | 2.26E-05 | 1.52E+01 | 1.31E-02 | 1.07E-02 | 5.07E-02 | 3.42E-06 | 3.55E-05 |
| I-134 | 2.04E+04 | 0.00E+00 | 3.06E-01 | 5.31E-01 | 6.28E-05 | 2.65E+00 | 1.48E-01 | 3.20E-02 | 8.82E-03 | 3.52E-05 | 1.06E-04 |
| I-135 | 1.07E+04 | 0.00E+00 | 1.60E-01 | 2.79E-01 | 3.30E-05 | 6.88E+00 | 7.11E-02 | 1.13E-02 | 2.29E-02 | 9.97E-06 | 3.77E-05 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 5.89E+01 | 0.00E+00 | 8.79E-04 | 1.53E-03 | 1.81E-07 | 4.52E-01 | 8.16E-05 | 3.98E-05 | 1.50E-03 | 1.73E-08 | 1.33E-07 |
| I-132 | 5.71E+02 | 0.00E+00 | 8.54E-03 | 1.49E-02 | 1.76E-06 | 1.59E-01 | 5.12E-03 | 8.80E-04 | 5.28E-04 | 9.17E-07 | 2.93E-06 |
| I-133 | 4.03E+02 | 0.00E+00 | 6.02E-03 | 1.05E-02 | 1.24E-06 | 8.36E-01 | 7.18E-04 | 5.86E-04 | 2.78E-03 | 1.88E-07 | 1.95E-06 |
| I-134 | 1.12E+03 | 0.00E+00 | 1.68E-02 | 2.92E-02 | 3.45E-06 | 1.46E-01 | 8.14E-03 | 1.76E-03 | 4.85E-04 | 1.93E-06 | 5.85E-06 |
| I-135 | 5.88E+02 | 0.00E+00 | 8.79E-03 | 1.53E-02 | 1.81E-06 | 3.78E-01 | 3.91E-03 | 6.23E-04 | 1.26E-03 | 5.48E-07 | 2.07E-06 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 4.71E+01 | 0.00E+00 | 7.04E-04 | 1.23E-03 | 1.45E-07 | 3.61E-01 | 6.53E-05 | 3.19E-05 | 1.20E-03 | 1.38E-08 | 1.06E-07 |
| I-132 | 4.57E+02 | 0.00E+00 | 6.83E-03 | 1.19E-02 | 1.41E-06 | 1.27E-01 | 4.10E-03 | 7.04E-04 | 4.22E-04 | 7.34E-07 | 2.34E-06 |
| I-133 | 3.23E+02 | 0.00E+00 | 4.82E-03 | 8.40E-03 | 9.93E-07 | 6.69E-01 | 5.75E-04 | 4.69E-04 | 2.23E-03 | 1.50E-07 | 1.56E-06 |
| I-134 | 8.97E+02 | 0.00E+00 | 1.34E-02 | 2.34E-02 | 2.76E-06 | 1.17E-01 | 6.51E-03 | 1.41E-03 | 3.88E-04 | 1.55E-06 | 4.68E-06 |
| I-135 | 4.71E+02 | 0.00E+00 | 7.03E-03 | 1.23E-02 | 1.45E-06 | 3.03E-01 | 3.13E-03 | 4.98E-04 | 1.01E-03 | 4.38E-07 | 1.66E-06 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 3.94E+01 | 3.59E-01 | 7.77E-02 | 1.31E-01 | 7.21E-05 | 2.59E-04 |

1 MSLB 3.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .500 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.07E+03 | 0.00E+00 | 0.00E+00 | 1.71E-02 | 2.02E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.37E+00 | 2.73E-05 | 2.09E-04 |
| I-132 | 8.97E+03 | 0.00E+00 | 0.00E+00 | 1.43E-01 | 1.69E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.77E-01 | 1.35E-03 | 4.31E-03 |
| I-133 | 7.22E+03 | 0.00E+00 | 0.00E+00 | 1.15E-01 | 1.36E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.35E+00 | 2.94E-04 | 3.05E-03 |
| I-134 | 1.38E+04 | 0.00E+00 | 0.00E+00 | 2.20E-01 | 2.60E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.40E-01 | 2.55E-03 | 7.72E-03 |
| I-135 | 1.02E+04 | 0.00E+00 | 0.00E+00 | 1.63E-01 | 1.92E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.94E+00 | 8.43E-04 | 3.19E-03 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 5.88E+01 | 0.00E+00 | 0.00E+00 | 9.39E-04 | 1.11E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.30E-01 | 1.50E-06 | 1.15E-05 |
| I-132 | 4.93E+02 | 0.00E+00 | 0.00E+00 | 7.87E-03 | 9.31E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.27E-02 | 7.42E-05 | 2.37E-04 |
| I-133 | 3.97E+02 | 0.00E+00 | 0.00E+00 | 6.34E-03 | 7.50E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.39E-01 | 1.61E-05 | 1.68E-04 |
| I-134 | 7.57E+02 | 0.00E+00 | 0.00E+00 | 1.21E-02 | 1.43E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.52E-02 | 1.40E-04 | 4.24E-04 |
| I-135 | 5.59E+02 | 0.00E+00 | 0.00E+00 | 8.94E-03 | 1.06E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.06E-01 | 4.63E-05 | 1.75E-04 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 4.70E+01 | 0.00E+00 | 0.00E+00 | 7.52E-04 | 8.89E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.04E-01 | 1.20E-06 | 9.18E-06 |
| I-132 | 3.94E+02 | 0.00E+00 | 0.00E+00 | 6.30E-03 | 7.45E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.41E-02 | 5.94E-05 | 1.90E-04 |
| I-133 | 3.17E+02 | 0.00E+00 | 0.00E+00 | 5.07E-03 | 6.00E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.91E-01 | 1.29E-05 | 1.34E-04 |
| I-134 | 6.06E+02 | 0.00E+00 | 0.00E+00 | 9.68E-03 | 1.14E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.81E-02 | 1.12E-04 | 3.40E-04 |
| I-135 | 4.47E+02 | 0.00E+00 | 0.00E+00 | 7.15E-03 | 8.45E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.52E-02 | 3.71E-05 | 1.40E-04 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.11E+01 | 5.57E-03 | 2.03E-02 |

1 MSLB 3.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT 2.000 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.06E+03 | 0.00E+00 | 0.00E+00 | 3.82E-03 | 4.52E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.91E+00 | 3.34E-05 | 2.56E-04 |
| I-132 | 5.71E+03 | 0.00E+00 | 0.00E+00 | 2.05E-02 | 2.42E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.48E-01 | 1.30E-03 | 4.15E-03 |
| I-133 | 6.87E+03 | 0.00E+00 | 0.00E+00 | 2.47E-02 | 2.92E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.21E+00 | 3.52E-04 | 3.65E-03 |
| I-134 | 4.16E+03 | 0.00E+00 | 0.00E+00 | 1.49E-02 | 1.76E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.22E-01 | 1.68E-03 | 5.10E-03 |
| I-135 | 8.72E+03 | 0.00E+00 | 0.00E+00 | 3.13E-02 | 3.70E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.19E+00 | 9.53E-04 | 3.60E-03 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 5.85E+01 | 0.00E+00 | 0.00E+00 | 2.10E-04 | 2.48E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.60E-01 | 1.84E-06 | 1.41E-05 |
| I-132 | 3.13E+02 | 0.00E+00 | 0.00E+00 | 1.13E-03 | 1.33E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.11E-02 | 7.15E-05 | 2.28E-04 |
| I-133 | 3.78E+02 | 0.00E+00 | 0.00E+00 | 1.36E-03 | 1.60E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.86E-01 | 1.93E-05 | 2.01E-04 |
| I-134 | 2.28E+02 | 0.00E+00 | 0.00E+00 | 8.20E-04 | 9.69E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.32E-02 | 9.25E-05 | 2.80E-04 |
| I-135 | 4.79E+02 | 0.00E+00 | 0.00E+00 | 1.72E-03 | 2.03E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.20E-01 | 5.23E-05 | 1.98E-04 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 4.68E+01 | 0.00E+00 | 0.00E+00 | 1.68E-04 | 1.99E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.28E-01 | 1.47E-06 | 1.13E-05 |
| I-132 | 2.51E+02 | 0.00E+00 | 0.00E+00 | 9.00E-04 | 1.06E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.29E-02 | 5.72E-05 | 1.83E-04 |
| I-133 | 3.02E+02 | 0.00E+00 | 0.00E+00 | 1.08E-03 | 1.28E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.29E-01 | 1.55E-05 | 1.61E-04 |
| I-134 | 1.83E+02 | 0.00E+00 | 0.00E+00 | 6.56E-04 | 7.75E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.86E-02 | 7.40E-05 | 2.24E-04 |
| I-135 | 3.83E+02 | 0.00E+00 | 0.00E+00 | 1.38E-03 | 1.63E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.62E-02 | 4.19E-05 | 1.58E-04 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.26E+01 | 4.75E-03 | 1.84E-02 |

MSLB 3.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT 8.000 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.04E+03 | 0.00E+00 | 0.00E+00 | 9.52E-06 | 1.13E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.34E-01 | 9.60E-06 | 7.36E-05 |
| I-132 | 9.36E+02 | 0.00E+00 | 0.00E+00 | 8.55E-06 | 1.01E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.25E-01 | 2.17E-04 | 6.92E-04 |
| I-133 | 5.64E+03 | 0.00E+00 | 0.00E+00 | 5.15E-05 | 6.09E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.41E+00 | 9.54E-05 | 9.91E-04 |
| I-134 | 3.44E+01 | 0.00E+00 | 0.00E+00 | 3.14E-07 | 3.71E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.07E-02 | 1.22E-04 | 3.70E-04 |
| I-135 | 4.69E+03 | 0.00E+00 | 0.00E+00 | 4.29E-05 | 5.07E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.21E-01 | 2.27E-04 | 8.57E-04 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 5.72E+01 | 0.00E+00 | 0.00E+00 | 5.23E-07 | 6.19E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.58E-02 | 5.27E-07 | 4.04E-06 |
| I-132 | 5.14E+01 | 0.00E+00 | 0.00E+00 | 4.70E-07 | 5.56E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.85E-03 | 1.19E-05 | 3.80E-05 |
| I-133 | 3.10E+02 | 0.00E+00 | 0.00E+00 | 2.83E-06 | 3.35E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.77E-02 | 5.24E-06 | 5.45E-05 |
| I-134 | 1.89E+00 | 0.00E+00 | 0.00E+00 | 1.73E-08 | 2.04E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.69E-03 | 6.72E-06 | 2.03E-05 |
| I-135 | 2.58E+02 | 0.00E+00 | 0.00E+00 | 2.36E-06 | 2.78E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.86E-02 | 1.25E-05 | 4.71E-05 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 4.58E+01 | 0.00E+00 | 0.00E+00 | 4.18E-07 | 4.95E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.66E-02 | 4.22E-07 | 3.23E-06 |
| I-132 | 4.11E+01 | 0.00E+00 | 0.00E+00 | 3.76E-07 | 4.44E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.48E-03 | 9.53E-06 | 3.04E-05 |
| I-133 | 2.48E+02 | 0.00E+00 | 0.00E+00 | 2.26E-06 | 2.68E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.22E-02 | 4.19E-06 | 4.36E-05 |
| I-134 | 1.51E+00 | 0.00E+00 | 0.00E+00 | 1.38E-08 | 1.63E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.35E-03 | 5.38E-06 | 1.63E-05 |
| I-135 | 2.06E+02 | 0.00E+00 | 0.00E+00 | 1.88E-06 | 2.23E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.29E-02 | 9.96E-06 | 3.77E-05 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.21E+00 | 7.37E-04 | 3.28E-03 |

1 MSLB 3.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT 24.000 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 9.83E+02 | 0.00E+00 | 0.00E+00 | 1.09E-12 | 1.29E-16 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.08E-03 | 2.40E-08 | 1.84E-07 |
| I-132 | 7.54E+00 | 0.00E+00 | 0.00E+00 | 8.33E-15 | 9.85E-19 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.21E-05 | 9.06E-08 | 2.89E-07 |
| I-133 | 3.32E+03 | 0.00E+00 | 0.00E+00 | 3.67E-12 | 4.34E-16 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.96E-03 | 2.00E-07 | 2.07E-06 |
| I-134 | 9.61E-05 | 0.00E+00 | 0.00E+00 | 1.06E-19 | 1.26E-23 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.46E-07 | 2.58E-09 | 7.80E-09 |
| I-135 | 8.98E+02 | 0.00E+00 | 0.00E+00 | 9.92E-13 | 1.17E-16 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.15E-04 | 3.11E-07 | 1.18E-06 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 5.40E+01 | 0.00E+00 | 0.00E+00 | 5.97E-14 | 7.06E-18 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.14E-04 | 1.32E-09 | 1.01E-08 |
| I-132 | 4.14E-01 | 0.00E+00 | 0.00E+00 | 4.58E-16 | 5.41E-20 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.86E-06 | 4.98E-09 | 1.59E-08 |
| I-133 | 1.83E+02 | 0.00E+00 | 0.00E+00 | 2.02E-13 | 2.39E-17 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.63E-04 | 1.10E-08 | 1.14E-07 |
| I-134 | 5.28E-06 | 0.00E+00 | 0.00E+00 | 5.84E-21 | 6.90E-25 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.55E-08 | 1.42E-10 | 4.28E-10 |
| I-135 | 4.93E+01 | 0.00E+00 | 0.00E+00 | 5.45E-14 | 6.45E-18 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.93E-05 | 1.71E-08 | 6.46E-08 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 4.32E+01 | 0.00E+00 | 0.00E+00 | 4.78E-14 | 5.65E-18 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.16E-05 | 1.05E-09 | 8.08E-09 |
| I-132 | 3.31E-01 | 0.00E+00 | 0.00E+00 | 3.66E-16 | 4.33E-20 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.29E-06 | 3.98E-09 | 1.27E-08 |
| I-133 | 1.46E+02 | 0.00E+00 | 0.00E+00 | 1.61E-13 | 1.91E-17 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.30E-04 | 8.78E-09 | 9.12E-08 |
| I-134 | 4.22E-06 | 0.00E+00 | 0.00E+00 | 4.67E-21 | 5.52E-25 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.84E-08 | 1.13E-10 | 3.43E-10 |
| I-135 | 3.95E+01 | 0.00E+00 | 0.00E+00 | 4.36E-14 | 5.16E-18 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.14E-05 | 1.37E-08 | 5.17E-08 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.38E-03 | 6.90E-07 | 4.10E-06 |

1 MSLB 3.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT 96.000 HOURS: X/Q(SITE)= .10E+01 SEC/M3 | PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 7.60E+02 | 0.00E+00 | 0.00E+00 | 6.24E-44 | 7.38E-48 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.38E-10 | 2.74E-15 | 2.10E-14 |
| I-132 | 2.85E-09 | 0.00E+00 | 0.00E+00 | 2.34E-55 | 2.77E-59 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.08E-14 | 8.83E-17 | 2.82E-16 |
| I-133 | 3.09E+02 | 0.00E+00 | 0.00E+00 | 2.54E-44 | 3.00E-48 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.11E-10 | 1.42E-14 | 1.48E-13 |
| I-134 | 9.83E-30 | 0.00E+00 | 0.00E+00 | 8.07E-76 | 9.55E-80 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.19E-19 | 8.71E-22 | 2.64E-21 |
| I-135 | 5.28E-01 | 0.00E+00 | 0.00E+00 | 4.34E-47 | 5.13E-51 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.65E-11 | 7.20E-15 | 2.72E-14 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 4.17E+01 | 0.00E+00 | 0.00E+00 | 3.43E-45 | 4.05E-49 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.31E-11 | 1.50E-16 | 1.15E-15 |
| I-132 | 1.57E-10 | 0.00E+00 | 0.00E+00 | 1.29E-56 | 1.52E-60 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.79E-15 | 4.85E-18 | 1.55E-17 |
| I-133 | 1.70E+01 | 0.00E+00 | 0.00E+00 | 1.39E-45 | 1.65E-49 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.16E-11 | 7.82E-16 | 8.13E-15 |
| I-134 | 5.40E-31 | 0.00E+00 | 0.00E+00 | 4.44E-77 | 5.25E-81 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.20E-20 | 4.79E-23 | 1.45E-22 |
| I-135 | 2.90E-02 | 0.00E+00 | 0.00E+00 | 2.38E-48 | 2.82E-52 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.09E-13 | 3.95E-16 | 1.50E-15 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 3.34E+01 | 0.00E+00 | 0.00E+00 | 2.74E-45 | 3.24E-49 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.05E-11 | 1.20E-16 | 9.22E-16 |
| I-132 | 1.25E-10 | 0.00E+00 | 0.00E+00 | 1.03E-56 | 1.22E-60 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.23E-15 | 3.88E-18 | 1.24E-17 |
| I-133 | 1.36E+01 | 0.00E+00 | 0.00E+00 | 1.11E-45 | 1.32E-49 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.28E-12 | 6.26E-16 | 6.50E-15 |
| I-134 | 4.32E-31 | 0.00E+00 | 0.00E+00 | 3.55E-77 | 4.20E-81 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.61E-21 | 3.83E-23 | 1.16E-22 |
| I-135 | 2.32E-02 | 0.00E+00 | 0.00E+00 | 1.91E-48 | 2.25E-52 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.27E-13 | 3.16E-16 | 1.20E-15 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.12E-10 | 2.67E-14 | 2.16E-13 |

1 MSLB 3.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT 720.000 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 8.09E+01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.37E-41 | 1.57E-46 | 1.20E-45 |
| I-132 | 6.28E-91 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.43E-54 | 2.48E-57 | 7.93E-57 |
| I-133 | 3.49E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.46E-42 | 9.83E-47 | 1.02E-45 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.66E-75 | 6.62E-78 | 2.00E-77 |
| I-135 | 5.28E-29 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.23E-46 | 3.15E-49 | 1.19E-48 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 4.44E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.50E-43 | 8.64E-48 | 6.62E-47 |
| I-132 | 3.45E-92 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.85E-56 | 1.36E-58 | 4.36E-58 |
| I-133 | 1.92E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.00E-44 | 5.40E-48 | 5.61E-47 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.13E-77 | 3.64E-79 | 1.10E-78 |
| I-135 | 2.90E-30 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.97E-47 | 1.73E-50 | 6.54E-50 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 3.56E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.00E-43 | 6.91E-48 | 5.30E-47 |
| I-132 | 2.76E-92 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.28E-56 | 1.09E-58 | 3.48E-58 |
| I-133 | 1.54E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.40E-44 | 4.32E-48 | 4.49E-47 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.30E-77 | 2.91E-79 | 8.81E-79 |
| I-135 | 2.32E-30 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.18E-47 | 1.38E-50 | 5.23E-50 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.66E-41 | 2.81E-46 | 2.45E-45 |

| | | | | | | |
|---|---|---|---|---|---|---|
| TOTAL DOSES 0-30 DAYS | 4.64E+01 | 4.24E-01 | 9.16E-02 | 2.70E+01 | 1.11E-02 | 4.23E-02 |

1

MSLB 3.0uCi/g, 4500 cfm

| ISOTOPE | ACTIVITY RELEASED (CURIES) | | | | | |
|---|---|---|---|---|---|---|
| | 2. HRS | 8. HRS | 24. HRS | 96. HRS | 720. HRS | |
| ELEMENTAL | | | | | | |
| I-131 | 1.89E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.89E-02 |
| I-132 | 1.83E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.83E-01 |
| I-133 | 1.29E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.29E-01 |
| I-134 | 3.60E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.60E-01 |
| I-135 | 1.89E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.89E-01 |
| PARTICULATE | | | | | | |
| I-131 | 1.04E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.04E-03 |
| I-132 | 1.01E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.01E-02 |
| I-133 | 7.10E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.10E-03 |
| I-134 | 1.98E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.98E-02 |
| I-135 | 1.04E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.04E-02 |
| ORGANIC | | | | | | |
| I-131 | 8.29E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.29E-04 |
| I-132 | 8.05E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.05E-03 |
| I-133 | 5.68E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.68E-03 |
| I-134 | 1.58E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.58E-02 |
| I-135 | 8.29E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.29E-03 |
| NOBLE GASES | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

END EXECUTION DATE: 07/24/1997
END EXECUTION TIME: 15:29:48.53

```
AXIDENT VER 2 MOD 4
PRODUCTION DATE 02/18/92
BEGIN EXECUTION DATE:  07/24/1997
BEGIN EXECUTION TIME:  15:29:34.14


 1 MSLB 2.0uCi/g, 4500 cfm
 2 8 2 1.0 1.0
 3 -2350 2.6E6 2.9865E5 2.9865E5
 4 0.0 0.0 0.0 1.0 6.6234E7 1.0 1.0
 5 5 33.0 1.8E3 7.2E3 2.88E4 8.64E4 3.456E5 2.592E6
 6 2*5.333E-7 6*0.0
 7 8*1.0
 8 8*0.0
 9 8*4500
10 8*1.0
11 8*1.0
12 8*0.0
13 8*0.0
14 8*0.0
15 8*0.0
16 8*0.0
17 8*0.0
18 0.0 7*2.54E-5
19 0.0 7*2.54E-5
20 0.0 7*2.54E-5
21 1.0 1.0 1.0 0.700 0.700 0.700
22 1.0 1.0 1.0
23 3141 30544 21513 60235 31410 0.0 0.0 0.0
24 8*0.0
```

1

MSLB 2.0uCi/g, 4500 cfm

INITIAL CONTAINMENT INVENTORY

| ISOTOPE | ACTIVITY (CURIES) |
|---|---|
| I-131 | 3.141E+03 |
| I-132 | 3.054E+04 |
| I-133 | 2.151E+04 |
| I-134 | 6.024E+04 |
| I-135 | 3.141E+04 |
| XE-131M | 0.000E+00 |
| XE-133M | 0.000E+00 |
| XE-133 | 0.000E+00 |
| XE-135M | 0.000E+00 |
| XE-135 | 0.000E+00 |
| XE-138 | 0.000E+00 |
| KR-83M | 0.000E+00 |
| KR-85M | 0.000E+00 |
| KR-85 | 0.000E+00 |
| KR-87 | 0.000E+00 |
| KR-88 | 0.000E+00 |

1 MSLB 2.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .001 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .000 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .000 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .000 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 7.15E+02 | 0.00E+00 | 1.91E-03 | 2.83E-03 | 3.35E-07 | 9.79E-01 | 1.77E-04 | 8.63E-05 | 4.30E-04 | 4.95E-09 | 3.79E-08 |
| I-132 | 6.95E+03 | 0.00E+00 | 1.85E-02 | 2.75E-02 | 3.25E-06 | 3.44E-01 | 1.11E-02 | 1.91E-03 | 1.51E-04 | 2.63E-07 | 8.38E-07 |
| I-133 | 4.89E+03 | 0.00E+00 | 1.31E-02 | 1.94E-02 | 2.29E-06 | 1.81E+00 | 1.56E-03 | 1.27E-03 | 7.96E-04 | 5.37E-08 | 5.58E-07 |
| I-134 | 1.37E+04 | 0.00E+00 | 3.65E-02 | 5.42E-02 | 6.41E-06 | 3.17E-01 | 1.77E-02 | 3.82E-03 | 1.39E-04 | 5.55E-07 | 1.68E-06 |
| I-135 | 7.14E+03 | 0.00E+00 | 1.91E-02 | 2.83E-02 | 3.35E-06 | 8.20E-01 | 8.47E-03 | 1.35E-03 | 3.60E-04 | 1.57E-07 | 5.93E-07 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 3.93E+01 | 0.00E+00 | 1.05E-04 | 1.56E-04 | 1.84E-08 | 5.38E-02 | 9.71E-06 | 4.74E-06 | 2.36E-05 | 2.72E-10 | 2.08E-09 |
| I-132 | 3.82E+02 | 0.00E+00 | 1.02E-03 | 1.51E-03 | 1.79E-07 | 1.89E-02 | 6.11E-04 | 1.05E-04 | 8.30E-06 | 1.44E-08 | 4.61E-08 |
| I-133 | 2.69E+02 | 0.00E+00 | 7.17E-04 | 1.07E-03 | 1.26E-07 | 9.95E-02 | 8.55E-05 | 6.98E-05 | 4.37E-05 | 2.95E-09 | 3.06E-08 |
| I-134 | 7.52E+02 | 0.00E+00 | 2.01E-03 | 2.98E-03 | 3.52E-07 | 1.74E-02 | 9.73E-04 | 2.10E-04 | 7.65E-06 | 3.05E-08 | 9.22E-08 |
| I-135 | 3.93E+02 | 0.00E+00 | 1.05E-03 | 1.56E-03 | 1.84E-07 | 4.50E-02 | 4.66E-04 | 7.42E-05 | 1.98E-05 | 8.61E-09 | 3.26E-08 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 3.14E+01 | 0.00E+00 | 8.38E-05 | 1.24E-04 | 1.47E-08 | 4.30E-02 | 7.77E-06 | 3.79E-06 | 1.89E-05 | 2.17E-10 | 1.67E-09 |
| I-132 | 3.05E+02 | 0.00E+00 | 8.14E-04 | 1.21E-03 | 1.43E-07 | 1.51E-02 | 4.89E-04 | 8.39E-05 | 6.64E-06 | 1.15E-08 | 3.69E-08 |
| I-133 | 2.15E+02 | 0.00E+00 | 5.74E-04 | 8.52E-04 | 1.01E-07 | 7.96E-02 | 6.84E-05 | 5.58E-05 | 3.50E-05 | 2.36E-09 | 2.45E-08 |
| I-134 | 6.02E+02 | 0.00E+00 | 1.61E-03 | 2.38E-03 | 2.82E-07 | 1.39E-02 | 7.78E-04 | 1.68E-04 | 6.12E-06 | 2.44E-08 | 7.38E-08 |
| I-135 | 3.14E+02 | 0.00E+00 | 8.37E-04 | 1.24E-03 | 1.47E-07 | 3.60E-02 | 3.72E-04 | 5.93E-05 | 1.58E-05 | 6.89E-09 | 2.61E-08 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 4.69E+00 | 4.29E-02 | 9.27E-03 | 2.06E-03 | 1.13E-06 | 4.07E-06 |

1 MSLB 2.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .009 HOURS: X/Q(SITE)= .10E+01 SEC/M3 | PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 7.15E+02 | 0.00E+00 | 1.07E-02 | 1.86E-02 | 2.20E-06 | 5.48E+00 | 9.90E-04 | 4.83E-04 | 1.82E-02 | 2.10E-07 | 1.61E-06 |
| I-132 | 6.93E+03 | 0.00E+00 | 1.04E-01 | 1.80E-01 | 2.13E-05 | 1.92E+00 | 6.22E-02 | 1.07E-02 | 6.40E-03 | 1.11E-05 | 3.55E-05 |
| I-133 | 4.89E+03 | 0.00E+00 | 7.31E-02 | 1.27E-01 | 1.51E-05 | 1.01E+01 | 8.71E-03 | 7.11E-03 | 3.38E-02 | 2.28E-06 | 2.37E-05 |
| I-134 | 1.36E+04 | 0.00E+00 | 2.04E-01 | 3.54E-01 | 4.19E-05 | 1.77E+00 | 9.88E-02 | 2.13E-02 | 5.88E-03 | 2.34E-05 | 7.09E-05 |
| I-135 | 7.14E+03 | 0.00E+00 | 1.07E-01 | 1.86E-01 | 2.20E-05 | 4.59E+00 | 4.74E-02 | 7.55E-03 | 1.53E-02 | 6.65E-06 | 2.52E-05 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 3.93E+01 | 0.00E+00 | 5.86E-04 | 1.02E-03 | 1.21E-07 | 3.01E-01 | 5.44E-05 | 2.66E-05 | 1.00E-03 | 1.15E-08 | 8.85E-08 |
| I-132 | 3.81E+02 | 0.00E+00 | 5.69E-03 | 9.92E-03 | 1.17E-06 | 1.06E-01 | 3.42E-03 | 5.87E-04 | 3.52E-04 | 6.12E-07 | 1.95E-06 |
| I-133 | 2.69E+02 | 0.00E+00 | 4.01E-03 | 7.00E-03 | 8.28E-07 | 5.57E-01 | 4.79E-04 | 3.91E-04 | 1.86E-03 | 1.25E-07 | 1.30E-06 |
| I-134 | 7.47E+02 | 0.00E+00 | 1.12E-02 | 1.95E-02 | 2.30E-06 | 9.71E-02 | 5.43E-03 | 1.17E-03 | 3.23E-04 | 1.29E-06 | 3.90E-06 |
| I-135 | 3.92E+02 | 0.00E+00 | 5.86E-03 | 1.02E-02 | 1.21E-06 | 2.52E-01 | 2.61E-03 | 4.15E-04 | 8.39E-04 | 3.65E-07 | 1.38E-06 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 3.14E+01 | 0.00E+00 | 4.69E-04 | 8.18E-04 | 9.67E-08 | 2.41E-01 | 4.35E-05 | 2.13E-05 | 8.02E-04 | 9.23E-09 | 7.08E-08 |
| I-132 | 3.05E+02 | 0.00E+00 | 4.55E-03 | 7.93E-03 | 9.38E-07 | 8.45E-02 | 2.73E-03 | 4.69E-04 | 2.81E-04 | 4.89E-07 | 1.56E-06 |
| I-133 | 2.15E+02 | 0.00E+00 | 3.21E-03 | 5.60E-03 | 6.62E-07 | 4.46E-01 | 3.83E-04 | 3.12E-04 | 1.48E-03 | 1.00E-07 | 1.04E-06 |
| I-134 | 5.98E+02 | 0.00E+00 | 8.96E-03 | 1.56E-02 | 1.84E-06 | 7.77E-02 | 4.34E-03 | 9.37E-04 | 2.59E-04 | 1.03E-06 | 3.12E-06 |
| I-135 | 3.14E+02 | 0.00E+00 | 4.69E-03 | 8.17E-03 | 9.66E-07 | 2.02E-01 | 2.08E-03 | 3.32E-04 | 6.72E-04 | 2.92E-07 | 1.11E-06 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 2.63E+01 | 2.40E-01 | 5.18E-02 | 8.74E-02 | 4.80E-05 | 1.72E-04 |

1 MSLB 2.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .500 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 7.13E+02 | 0.00E+00 | 0.00E+00 | 1.14E-02 | 1.35E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.58E+00 | 1.82E-05 | 1.39E-04 |
| I-132 | 5.98E+03 | 0.00E+00 | 0.00E+00 | 9.55E-02 | 1.13E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.18E-01 | 9.00E-04 | 2.87E-03 |
| I-133 | 4.81E+03 | 0.00E+00 | 0.00E+00 | 7.69E-02 | 9.10E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.90E+00 | 1.96E-04 | 2.03E-03 |
| I-134 | 9.19E+03 | 0.00E+00 | 0.00E+00 | 1.47E-01 | 1.74E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.27E-01 | 1.70E-03 | 5.15E-03 |
| I-135 | 6.79E+03 | 0.00E+00 | 0.00E+00 | 1.08E-01 | 1.28E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.29E+00 | 5.62E-04 | 2.13E-03 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 3.92E+01 | 0.00E+00 | 0.00E+00 | 6.26E-04 | 7.40E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.67E-02 | 9.98E-07 | 7.65E-06 |
| I-132 | 3.28E+02 | 0.00E+00 | 0.00E+00 | 5.25E-03 | 6.20E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.85E-02 | 4.95E-05 | 1.58E-04 |
| I-133 | 2.65E+02 | 0.00E+00 | 0.00E+00 | 4.23E-03 | 5.00E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.59E-01 | 1.08E-05 | 1.12E-04 |
| I-134 | 5.05E+02 | 0.00E+00 | 0.00E+00 | 8.07E-03 | 9.54E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.35E-02 | 9.35E-05 | 2.83E-04 |
| I-135 | 3.73E+02 | 0.00E+00 | 0.00E+00 | 5.96E-03 | 7.04E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.10E-02 | 3.09E-05 | 1.17E-04 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 3.14E+01 | 0.00E+00 | 0.00E+00 | 5.01E-04 | 5.92E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.94E-02 | 7.99E-07 | 6.12E-06 |
| I-132 | 2.63E+02 | 0.00E+00 | 0.00E+00 | 4.20E-03 | 4.96E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.28E-02 | 3.96E-05 | 1.26E-04 |
| I-133 | 2.12E+02 | 0.00E+00 | 0.00E+00 | 3.38E-03 | 4.00E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.28E-01 | 8.61E-06 | 8.94E-05 |
| I-134 | 4.04E+02 | 0.00E+00 | 0.00E+00 | 6.45E-03 | 7.63E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.88E-02 | 7.48E-05 | 2.26E-04 |
| I-135 | 2.98E+02 | 0.00E+00 | 0.00E+00 | 4.77E-03 | 5.64E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.68E-02 | 2.47E-05 | 9.35E-05 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.38E+00 | 3.71E-03 | 1.35E-02 |

1 MSLB 2.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT 2.000 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 7.09E+02 | 0.00E+00 | 0.00E+00 | 2.55E-03 | 3.01E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.94E+00 | 2.23E-05 | 1.71E-04 |
| I-132 | 3.80E+03 | 0.00E+00 | 0.00E+00 | 1.37E-02 | 1.61E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.99E-01 | 8.67E-04 | 2.77E-03 |
| I-133 | 4.58E+03 | 0.00E+00 | 0.00E+00 | 1.64E-02 | 1.94E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.47E+00 | 2.34E-04 | 2.44E-03 |
| I-134 | 2.77E+03 | 0.00E+00 | 0.00E+00 | 9.95E-03 | 1.18E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.82E-01 | 1.12E-03 | 3.40E-03 |
| I-135 | 5.81E+03 | 0.00E+00 | 0.00E+00 | 2.09E-02 | 2.47E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.46E+00 | 6.35E-04 | 2.40E-03 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 3.90E+01 | 0.00E+00 | 0.00E+00 | 1.40E-04 | 1.65E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.06E-01 | 1.22E-06 | 9.39E-06 |
| I-132 | 2.09E+02 | 0.00E+00 | 0.00E+00 | 7.50E-04 | 8.87E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.74E-02 | 4.76E-05 | 1.52E-04 |
| I-133 | 2.52E+02 | 0.00E+00 | 0.00E+00 | 9.03E-04 | 1.07E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.91E-01 | 1.29E-05 | 1.34E-04 |
| I-134 | 1.52E+02 | 0.00E+00 | 0.00E+00 | 5.46E-04 | 6.46E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.55E-02 | 6.17E-05 | 1.87E-04 |
| I-135 | 3.19E+02 | 0.00E+00 | 0.00E+00 | 1.15E-03 | 1.36E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.02E-02 | 3.49E-05 | 1.32E-04 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 3.12E+01 | 0.00E+00 | 0.00E+00 | 1.12E-04 | 1.32E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.51E-02 | 9.80E-07 | 7.51E-06 |
| I-132 | 1.67E+02 | 0.00E+00 | 0.00E+00 | 6.00E-04 | 7.10E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.19E-02 | 3.81E-05 | 1.22E-04 |
| I-133 | 2.01E+02 | 0.00E+00 | 0.00E+00 | 7.23E-04 | 8.55E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.53E-01 | 1.03E-05 | 1.07E-04 |
| I-134 | 1.22E+02 | 0.00E+00 | 0.00E+00 | 4.37E-04 | 5.17E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.24E-02 | 4.94E-05 | 1.49E-04 |
| I-135 | 2.55E+02 | 0.00E+00 | 0.00E+00 | 9.17E-04 | 1.08E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.42E-02 | 2.79E-05 | 1.06E-04 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.41E+00 | 3.17E-03 | 1.23E-02 |

1 MSLB 2.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT 8.000 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 6.94E+02 | 0.00E+00 | 0.00E+00 | 6.35E-06 | 7.50E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.56E-01 | 6.40E-06 | 4.90E-05 |
| I-132 | 6.24E+02 | 0.00E+00 | 0.00E+00 | 5.70E-06 | 6.74E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.32E-02 | 1.45E-04 | 4.62E-04 |
| I-133 | 3.76E+03 | 0.00E+00 | 0.00E+00 | 3.43E-05 | 4.06E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.43E-01 | 6.36E-05 | 6.61E-04 |
| I-134 | 2.29E+01 | 0.00E+00 | 0.00E+00 | 2.09E-07 | 2.48E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.05E-02 | 8.16E-05 | 2.47E-04 |
| I-135 | 3.13E+03 | 0.00E+00 | 0.00E+00 | 2.86E-05 | 3.38E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.47E-01 | 1.51E-04 | 5.72E-04 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 3.82E+01 | 0.00E+00 | 0.00E+00 | 3.49E-07 | 4.12E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.05E-02 | 3.52E-07 | 2.69E-06 |
| I-132 | 3.43E+01 | 0.00E+00 | 0.00E+00 | 3.13E-07 | 3.70E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.57E-03 | 7.94E-06 | 2.54E-05 |
| I-133 | 2.06E+02 | 0.00E+00 | 0.00E+00 | 1.89E-06 | 2.23E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.18E-02 | 3.49E-06 | 3.63E-05 |
| I-134 | 1.26E+00 | 0.00E+00 | 0.00E+00 | 1.15E-08 | 1.36E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.12E-03 | 4.48E-06 | 1.36E-05 |
| I-135 | 1.72E+02 | 0.00E+00 | 0.00E+00 | 1.57E-06 | 1.86E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.91E-02 | 8.30E-06 | 3.14E-05 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 3.05E+01 | 0.00E+00 | 0.00E+00 | 2.79E-07 | 3.30E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.44E-02 | 2.81E-07 | 2.16E-06 |
| I-132 | 2.74E+01 | 0.00E+00 | 0.00E+00 | 2.51E-07 | 2.96E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.66E-03 | 6.35E-06 | 2.03E-05 |
| I-133 | 1.65E+02 | 0.00E+00 | 0.00E+00 | 1.51E-06 | 1.79E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.16E-02 | 2.80E-06 | 2.90E-05 |
| I-134 | 1.01E+00 | 0.00E+00 | 0.00E+00 | 9.21E-09 | 1.09E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.00E-04 | 3.59E-06 | 1.09E-05 |
| I-135 | 1.37E+02 | 0.00E+00 | 0.00E+00 | 1.26E-06 | 1.49E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.53E-02 | 6.64E-06 | 2.51E-05 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.14E+00 | 4.91E-04 | 2.19E-03 |

1 MSLB 2.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT 24.000 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 6.56E+02 | 0.00E+00 | 0.00E+00 | 7.25E-13 | 8.57E-17 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.39E-03 | 1.60E-08 | 1.23E-07 |
| I-132 | 5.03E+00 | 0.00E+00 | 0.00E+00 | 5.55E-15 | 6.57E-19 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.47E-05 | 6.04E-08 | 1.93E-07 |
| I-133 | 2.22E+03 | 0.00E+00 | 0.00E+00 | 2.45E-12 | 2.90E-16 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.97E-03 | 1.33E-07 | 1.38E-06 |
| I-134 | 6.41E-05 | 0.00E+00 | 0.00E+00 | 7.08E-20 | 8.37E-24 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.31E-07 | 1.72E-09 | 5.20E-09 |
| I-135 | 5.99E+02 | 0.00E+00 | 0.00E+00 | 6.62E-13 | 7.82E-17 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.76E-04 | 2.07E-07 | 7.84E-07 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 3.60E+01 | 0.00E+00 | 0.00E+00 | 3.98E-14 | 4.71E-18 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.63E-05 | 8.78E-10 | 6.73E-09 |
| I-132 | 2.76E-01 | 0.00E+00 | 0.00E+00 | 3.05E-16 | 3.61E-20 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.91E-06 | 3.32E-09 | 1.06E-08 |
| I-133 | 1.22E+02 | 0.00E+00 | 0.00E+00 | 1.35E-13 | 1.59E-17 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.08E-04 | 7.32E-09 | 7.60E-08 |
| I-134 | 3.52E-06 | 0.00E+00 | 0.00E+00 | 3.89E-21 | 4.60E-25 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.37E-08 | 9.44E-11 | 2.86E-10 |
| I-135 | 3.29E+01 | 0.00E+00 | 0.00E+00 | 3.63E-14 | 4.30E-18 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.62E-05 | 1.14E-08 | 4.31E-08 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 2.88E+01 | 0.00E+00 | 0.00E+00 | 3.18E-14 | 3.77E-18 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.10E-05 | 7.03E-10 | 5.39E-09 |
| I-132 | 2.21E-01 | 0.00E+00 | 0.00E+00 | 2.44E-16 | 2.89E-20 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.53E-06 | 2.65E-09 | 8.48E-09 |
| I-133 | 9.74E+01 | 0.00E+00 | 0.00E+00 | 1.08E-13 | 1.27E-17 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.67E-05 | 5.85E-09 | 6.08E-08 |
| I-134 | 2.82E-06 | 0.00E+00 | 0.00E+00 | 3.11E-21 | 3.68E-25 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.89E-08 | 7.55E-11 | 2.29E-10 |
| I-135 | 2.63E+01 | 0.00E+00 | 0.00E+00 | 2.91E-14 | 3.44E-18 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.09E-05 | 9.11E-09 | 3.45E-08 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.26E-03 | 4.60E-07 | 2.73E-06 |

1 MSLB 2.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT 96.000 HOURS: X/Q(SITE)= .10E+01 SEC/M3 | PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 5.06E+02 | 0.00E+00 | 0.00E+00 | 4.16E-44 | 4.92E-48 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.59E-10 | 1.82E-15 | 1.40E-14 |
| I-132 | 1.90E-09 | 0.00E+00 | 0.00E+00 | 1.56E-55 | 1.85E-59 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.38E-14 | 5.89E-17 | 1.88E-16 |
| I-133 | 2.06E+02 | 0.00E+00 | 0.00E+00 | 1.69E-44 | 2.00E-48 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.41E-10 | 9.49E-15 | 9.86E-14 |
| I-134 | 6.55E-30 | 0.00E+00 | 0.00E+00 | 5.38E-76 | 6.37E-80 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.46E-19 | 5.81E-22 | 1.76E-21 |
| I-135 | 3.52E-01 | 0.00E+00 | 0.00E+00 | 2.89E-47 | 3.42E-51 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.10E-11 | 4.80E-15 | 1.82E-14 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 2.78E+01 | 0.00E+00 | 0.00E+00 | 2.29E-45 | 2.70E-49 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.71E-12 | 1.00E-16 | 7.59E-16 |
| I-132 | 1.04E-10 | 0.00E+00 | 0.00E+00 | 8.59E-57 | 1.02E-60 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.86E-15 | 3.23E-18 | 1.03E-17 |
| I-133 | 1.13E+01 | 0.00E+00 | 0.00E+00 | 9.29E-46 | 1.10E-49 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.73E-12 | 5.22E-16 | 5.42E-15 |
| I-134 | 3.60E-31 | 0.00E+00 | 0.00E+00 | 2.96E-77 | 3.50E-81 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.01E-21 | 3.19E-23 | 9.66E-23 |
| I-135 | 1.93E-02 | 0.00E+00 | 0.00E+00 | 1.59E-48 | 1.88E-52 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.06E-13 | 2.64E-16 | 9.98E-16 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 2.23E+01 | 0.00E+00 | 0.00E+00 | 1.83E-45 | 2.16E-49 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.97E-12 | 8.02E-17 | 6.15E-16 |
| I-132 | 8.36E-11 | 0.00E+00 | 0.00E+00 | 6.87E-57 | 8.12E-61 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.49E-15 | 2.59E-18 | 8.26E-18 |
| I-133 | 9.04E+00 | 0.00E+00 | 0.00E+00 | 7.43E-46 | 8.79E-50 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.18E-12 | 4.17E-16 | 4.33E-15 |
| I-134 | 2.88E-31 | 0.00E+00 | 0.00E+00 | 2.37E-77 | 2.80E-81 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.41E-21 | 2.55E-23 | 7.73E-23 |
| I-135 | 1.55E-02 | 0.00E+00 | 0.00E+00 | 1.27E-48 | 1.50E-52 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.85E-13 | 2.11E-16 | 7.98E-16 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.41E-10 | 1.78E-14 | 1.44E-13 |

1 MSLB 2.0uCi/g, 4500 cfm

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT 720.000 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=4500.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| PARTICULATE | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |
| ORGANIC | .000 | .000 | .000 | .914E-01 | 1.000 | .700 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 5.39E+01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.10E-42 | 1.05E-46 | 8.03E-46 |
| I-132 | 4.18E-91 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.52E-55 | 1.66E-57 | 5.29E-57 |
| I-133 | 2.33E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.71E-43 | 6.55E-47 | 6.81E-46 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.11E-75 | 4.42E-78 | 1.34E-77 |
| I-135 | 3.52E-29 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.82E-46 | 2.10E-49 | 7.93E-49 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 2.96E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.00E-43 | 5.76E-48 | 4.41E-47 |
| I-132 | 2.30E-92 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.23E-56 | 9.10E-59 | 2.90E-58 |
| I-133 | 1.28E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.34E-44 | 3.60E-48 | 3.74E-47 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.09E-77 | 2.43E-79 | 7.34E-79 |
| I-135 | 1.93E-30 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.65E-47 | 1.15E-50 | 4.36E-50 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 2.37E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.00E-43 | 4.61E-48 | 3.53E-47 |
| I-132 | 1.84E-92 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.19E-56 | 7.28E-59 | 2.32E-58 |
| I-133 | 1.02E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.27E-44 | 2.88E-48 | 2.99E-47 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.87E-77 | 1.94E-79 | 5.87E-79 |
| I-135 | 1.55E-30 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.12E-47 | 9.22E-51 | 3.49E-50 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.11E-41 | 1.87E-46 | 1.63E-45 |

| | | | | | | |
|---|---|---|---|---|---|---|
| TOTAL DOSES 0-30 DAYS | 3.10E+01 | 2.83E-01 | 6.11E-02 | 1.80E+01 | 7.42E-03 | 2.82E-02 |

1

MSLB 2.0uCi/g, 4500 cfm

| ISOTOPE | ACTIVITY RELEASED (CURIES) | | | | | |
|---|---|---|---|---|---|---|
| | 2. HRS | 8. HRS | 24. HRS | 96. HRS | 720. HRS | |
| ELEMENTAL | | | | | | |
| I-131 | 1.26E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.26E-02 |
| I-132 | 1.22E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.22E-01 |
| I-133 | 8.61E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.61E-02 |
| I-134 | 2.40E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.40E-01 |
| I-135 | 1.26E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.26E-01 |
| PARTICULATE | | | | | | |
| I-131 | 6.91E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.91E-04 |
| I-132 | 6.71E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.71E-03 |
| I-133 | 4.73E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.73E-03 |
| I-134 | 1.32E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.32E-02 |
| I-135 | 6.91E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.91E-03 |
| ORGANIC | | | | | | |
| I-131 | 5.53E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.53E-04 |
| I-132 | 5.37E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.37E-03 |
| I-133 | 3.79E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.79E-03 |
| I-134 | 1.06E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.06E-02 |
| I-135 | 5.53E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.53E-03 |
| NOBLE GASES | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

END EXECUTION DATE: 07/24/1997
END EXECUTION TIME: 15:29:34.53

Calc. No. CP&L-CED-M-01, Rev. 4, Attachment N, ICRP 30 DCF Conversion, Uniform Cloud w/4.0 uCi/g

| | 5 sec | 33 sec | 30 min | 2 hrs | 8 hrs | 24 hrs | 4 days | 30 days | Total w/ Axident DCFs | Axident DCF | ICRP 30 DCF | Total w/ ICRP 30 DCFs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Elemental Iodines | | | | | | | | | | | | |
| I-131 | 8.60E-04 | 3.65E-02 | 3.16E+00 | 3.87E+00 | 1.11E+00 | 2.78E-03 | 3.17E-10 | 1.82E-41 | 8.18E+00 | 1.48E+06 | 1.10E+06 | 6.08E+00 |
| I-132 | 3.02E-04 | 1.28E-02 | 1.04E+00 | 9.97E-01 | 1.66E-01 | 6.95E-05 | 6.77E-14 | 1.90E-54 | 2.22E+00 | 5.35E+04 | 6.30E+03 | 2.61E-01 |
| I-133 | 1.59E-03 | 6.75E-02 | 5.80E+00 | 6.95E+00 | 1.89E+00 | 3.95E-03 | 2.81E-10 | 1.94E-42 | 1.47E+01 | 4.00E+05 | 1.80E+05 | 6.62E+00 |
| I-134 | 2.78E-04 | 1.18E-02 | 8.54E-01 | 5.63E-01 | 4.09E-02 | 8.62E-07 | 2.91E-19 | 2.22E-75 | 1.47E+00 | 2.50E+04 | 1.10E+03 | 6.47E-02 |
| I-135 | 7.20E-04 | 3.06E-02 | 2.58E+00 | 2.92E+00 | 6.94E-01 | 9.53E-04 | 2.21E-11 | 9.64E-46 | 6.23E+00 | 1.24E+05 | 3.10E+04 | 1.56E+00 |
| Particulate Iodines | | | | | | | | | | | | |
| I-131 | 4.72E-05 | 2.01E-03 | 1.73E-01 | 2.13E-01 | 6.11E-02 | 1.53E-04 | 1.74E-11 | 1.00E-42 | 4.49E-01 | 1.48E+06 | 1.10E+06 | 3.34E-01 |
| I-132 | 1.66E-05 | 7.04E-04 | 5.69E-02 | 5.48E-02 | 9.14E-03 | 3.82E-06 | 3.72E-15 | 1.05E-55 | 1.22E-01 | 5.35E+04 | 6.30E+03 | 1.43E-02 |
| I-133 | 8.74E-05 | 3.71E-03 | 3.19E-01 | 3.82E-01 | 1.04E-01 | 2.17E-04 | 1.55E-11 | 1.07E-43 | 8.09E-01 | 4.00E+05 | 1.80E+05 | 3.64E-01 |
| I-134 | 1.53E-05 | 6.46E-04 | 4.69E-02 | 3.09E-02 | 2.25E-03 | 4.74E-08 | 1.60E-20 | 1.22E-76 | 8.07E-02 | 2.50E+04 | 1.10E+03 | 3.55E-03 |
| I-135 | 3.96E-05 | 1.68E-03 | 1.42E-01 | 1.60E-01 | 3.82E-02 | 5.23E-05 | 1.21E-12 | 5.30E-47 | 3.42E-01 | 1.24E+05 | 3.10E+04 | 8.55E-02 |
| Organic Iodines | | | | | | | | | | | | |
| I-131 | 3.78E-05 | 1.60E-03 | 1.39E-01 | 1.70E-01 | 4.89E-02 | 1.22E-04 | 1.39E-11 | 8.00E-43 | 3.60E-01 | 1.48E+06 | 1.10E+06 | 2.67E-01 |
| I-132 | 1.33E-05 | 5.63E-04 | 4.55E-02 | 4.38E-02 | 7.31E-03 | 3.05E-06 | 2.98E-15 | 8.37E-56 | 9.72E-02 | 5.35E+04 | 6.30E+03 | 1.14E-02 |
| I-133 | 7.00E-05 | 2.97E-03 | 2.55E-01 | 3.05E-01 | 8.29E-02 | 1.73E-04 | 1.24E-11 | 8.54E-44 | 6.46E-01 | 4.00E+05 | 1.80E+05 | 2.91E-01 |
| I-134 | 1.22E-05 | 5.17E-04 | 3.75E-02 | 2.48E-02 | 1.80E-03 | 3.79E-08 | 1.28E-20 | 9.74E-77 | 6.46E-02 | 2.50E+04 | 1.10E+03 | 2.84E-03 |
| I-135 | 3.17E-05 | 1.34E-03 | 1.14E-01 | 1.28E-01 | 3.05E-02 | 4.19E-05 | 9.69E-13 | 4.24E-47 | 2.74E-01 | 1.24E+05 | 3.10E+04 | 6.85E-02 |
| | | | | | | | | | | | | |
| Total Dose | | | | | | | | | 3.60E+01 | | | 1.60E+01 |
| | | | | | | | | | | | | |
| DCF Dose Reduction Factor | | | | | | | | | | | | 4.45E-01 |

Calc. No. CP&L-CED-M-01, Rev. 4, Attachment O, ICRP 30 DCF Conversion, Gaussian Cloud w/4.0 uCi/g

| | 4 sec | 8 sec | 12 sec | 16 sec | 20 sec | 24 sec | 28 sec | 32 sec | 36 sec | 40 sec | 43 sec | 47 sec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Elemental Iodines | | | | | | | | | | | | |
| I-131 | 7.04E-06 | 3.03E-05 | 8.07E-05 | 1.80E-04 | 3.62E-04 | 6.65E-04 | 1.13E-03 | 1.78E-03 | 2.61E-03 | 3.59E-03 | 3.39E-03 | 5.45E-03 |
| I-132 | 2.48E-06 | 1.06E-05 | 2.83E-05 | 6.34E-05 | 1.27E-04 | 2.33E-04 | 3.95E-04 | 6.23E-04 | 9.15E-04 | 1.26E-03 | 1.19E-03 | 1.91E-03 |
| I-133 | 1.30E-05 | 5.61E-05 | 1.49E-04 | 3.34E-04 | 6.70E-04 | 1.23E-03 | 2.09E-03 | 3.29E-03 | 4.83E-03 | 6.65E-03 | 6.27E-03 | 1.01E-02 |
| I-134 | 2.28E-06 | 9.80E-06 | 2.61E-05 | 5.83E-05 | 1.17E-04 | 2.14E-04 | 3.63E-04 | 5.71E-04 | 8.39E-04 | 1.15E-03 | 1.09E-03 | 1.75E-03 |
| I-135 | 5.90E-06 | 2.54E-05 | 6.76E-05 | 1.51E-04 | 3.03E-04 | 5.56E-04 | 9.44E-04 | 1.49E-03 | 2.18E-03 | 3.01E-03 | 2.84E-03 | 4.56E-03 |
| Particulate Iodines | | | | | | | | | | | | |
| I-131 | 3.87E-07 | 1.67E-06 | 4.43E-06 | 9.92E-06 | 1.99E-05 | 3.65E-05 | 6.19E-05 | 9.76E-05 | 1.43E-04 | 1.97E-04 | 1.86E-04 | 2.99E-04 |
| I-132 | 1.36E-07 | 5.85E-07 | 1.56E-06 | 3.48E-06 | 6.98E-06 | 1.28E-05 | 2.17E-05 | 3.42E-05 | 5.03E-05 | 6.92E-05 | 6.52E-05 | 1.05E-04 |
| I-133 | 7.16E-07 | 3.08E-06 | 8.20E-06 | 1.84E-05 | 3.68E-05 | 6.76E-05 | 1.15E-04 | 1.81E-04 | 2.65E-04 | 3.65E-04 | 3.45E-04 | 5.54E-04 |
| I-134 | 1.25E-07 | 5.39E-07 | 1.43E-06 | 3.20E-06 | 6.42E-06 | 1.18E-05 | 1.99E-05 | 3.14E-05 | 4.61E-05 | 6.34E-05 | 5.98E-05 | 9.60E-05 |
| I-135 | 3.24E-07 | 1.40E-06 | 3.71E-06 | 8.31E-06 | 1.67E-05 | 3.06E-05 | 5.19E-05 | 8.17E-05 | 1.20E-04 | 1.65E-04 | 1.56E-04 | 2.50E-04 |
| Organic Iodines | | | | | | | | | | | | |
| I-131 | 3.10E-07 | 1.33E-06 | 3.55E-06 | 7.93E-06 | 1.59E-05 | 2.92E-05 | 4.95E-05 | 7.81E-05 | 1.15E-04 | 1.58E-04 | 1.49E-04 | 2.39E-04 |
| I-132 | 1.09E-07 | 4.68E-07 | 1.25E-06 | 2.79E-06 | 5.58E-06 | 1.02E-05 | 1.74E-05 | 2.74E-05 | 4.02E-05 | 5.53E-05 | 5.22E-05 | 8.39E-05 |
| I-133 | 5.73E-07 | 2.47E-06 | 6.56E-06 | 1.47E-05 | 2.94E-05 | 5.41E-05 | 9.17E-05 | 1.44E-04 | 2.12E-04 | 2.92E-04 | 2.76E-04 | 4.43E-04 |
| I-134 | 1.00E-07 | 4.31E-07 | 1.15E-06 | 2.56E-06 | 5.13E-06 | 9.42E-06 | 1.60E-05 | 2.51E-05 | 3.69E-05 | 5.07E-05 | 4.78E-05 | 7.68E-05 |
| I-135 | 2.59E-07 | 1.12E-06 | 2.97E-06 | 6.64E-06 | 1.33E-05 | 2.45E-05 | 4.15E-05 | 6.53E-05 | 9.60E-05 | 1.32E-04 | 1.25E-04 | 2.00E-04 |
| | | | | | | | | | | | | |
| Total Dose | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| DCF Dose Reduction Factor | | | | | | | | | | | | |

Calc. No. CP&L-CED-M-01, Rev. 4, Attachment O, ICRP 30 DCF Conversion, Gaussian Cloud w/4.0 uCi/g

| 51 sec | 55 sec | 59 sec | 63 sec | 67 sec | 71 sec | 75 sec | 79 sec | 81 sec | 30 days | Total w/ Axident DCFs | Axident DCF | ICRP 30 DCF | Total w/ ICRP 30 DCFs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | |
| 6.43E-03 | 7.27E-03 | 7.93E-03 | 8.39E-03 | 8.69E-03 | 8.87E-03 | 8.97E-03 | 9.01E-03 | 4.51E-03 | 8.13E+00 | 8.22E+00 | 1.48E+06 | 1.10E+06 | 6.11E+00 |
| 2.25E-03 | 2.55E-03 | 2.77E-03 | 2.94E-03 | 3.04E-03 | 3.10E-03 | 3.13E-03 | 3.15E-03 | 1.58E-03 | 2.19E+00 | 2.22E+00 | 5.35E+04 | 6.30E+03 | 2.62E-01 |
| 1.19E-02 | 1.35E-02 | 1.47E-02 | 1.55E-02 | 1.61E-02 | 1.64E-02 | 1.66E-02 | 1.67E-02 | 8.35E-03 | 1.46E+01 | 1.48E+01 | 4.00E+05 | 1.80E+05 | 6.64E+00 |
| 2.06E-03 | 2.33E-03 | 2.54E-03 | 2.68E-03 | 2.78E-03 | 2.83E-03 | 2.86E-03 | 2.87E-03 | 1.44E-03 | 1.44E+00 | 1.47E+00 | 2.50E+04 | 1.10E+03 | 6.46E-02 |
| 5.38E-03 | 6.08E-03 | 6.63E-03 | 7.02E-03 | 7.27E-03 | 7.42E-03 | 7.50E-03 | 7.53E-03 | 3.77E-03 | 6.18E+00 | 6.25E+00 | 1.24E+05 | 3.10E+04 | 1.56E+00 |
| | | | | | | | | | | | | | |
| 3.54E-04 | 4.00E-04 | 4.36E-04 | 4.61E-04 | 4.78E-04 | 4.88E-04 | 4.93E-04 | 4.95E-04 | 2.48E-04 | 4.47E-01 | 4.52E-01 | 1.48E+06 | 1.10E+06 | 3.36E-01 |
| 1.24E-04 | 1.40E-04 | 1.52E-04 | 1.61E-04 | 1.67E-04 | 1.70E-04 | 1.72E-04 | 1.73E-04 | 8.66E-05 | 1.20E-01 | 1.22E-01 | 5.35E+04 | 6.30E+03 | 1.43E-02 |
| 6.54E-04 | 7.39E-04 | 8.06E-04 | 8.53E-04 | 8.84E-04 | 9.02E-04 | 9.12E-04 | 9.16E-04 | 4.59E-04 | 8.03E-01 | 8.12E-01 | 4.00E+05 | 1.80E+05 | 3.65E-01 |
| 1.13E-04 | 1.28E-04 | 1.39E-04 | 1.47E-04 | 1.53E-04 | 1.56E-04 | 1.57E-04 | 1.58E-04 | 7.89E-05 | 7.91E-02 | 8.07E-02 | 2.50E+04 | 1.10E+03 | 3.55E-03 |
| 2.96E-04 | 3.34E-04 | 3.64E-04 | 3.86E-04 | 4.00E-04 | 4.08E-04 | 4.12E-04 | 4.14E-04 | 2.07E-04 | 3.40E-01 | 3.44E-01 | 1.24E+05 | 3.10E+04 | 8.60E-02 |
| | | | | | | | | | | | | | |
| 2.83E-04 | 3.20E-04 | 3.48E-04 | 3.69E-04 | 3.82E-04 | 3.90E-04 | 3.94E-04 | 3.96E-04 | 1.98E-04 | 3.57E-01 | 3.61E-01 | 1.48E+06 | 1.10E+06 | 2.68E-01 |
| 9.90E-05 | 1.12E-04 | 1.22E-04 | 1.29E-04 | 1.34E-04 | 1.36E-04 | 1.38E-04 | 1.38E-04 | 6.93E-05 | 9.61E-02 | 9.75E-02 | 5.35E+04 | 6.30E+03 | 1.15E-02 |
| 5.23E-04 | 5.92E-04 | 6.45E-04 | 6.83E-04 | 7.07E-04 | 7.22E-04 | 7.29E-04 | 7.33E-04 | 3.67E-04 | 6.42E-01 | 6.49E-01 | 4.00E+05 | 1.80E+05 | 2.92E-01 |
| 9.06E-05 | 1.02E-04 | 1.11E-04 | 1.18E-04 | 1.22E-04 | 1.24E-04 | 1.26E-04 | 1.26E-04 | 6.31E-05 | 6.33E-02 | 6.46E-02 | 2.50E+04 | 1.10E+03 | 2.84E-03 |
| 2.37E-04 | 2.67E-04 | 2.91E-04 | 3.09E-04 | 3.20E-04 | 3.26E-04 | 3.30E-04 | 3.31E-04 | 1.66E-04 | 2.72E-01 | 2.75E-01 | 1.24E+05 | 3.10E+04 | 6.88E-02 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | 3.62E+01 | | | 1.61E+01 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | 4.45E-01 |

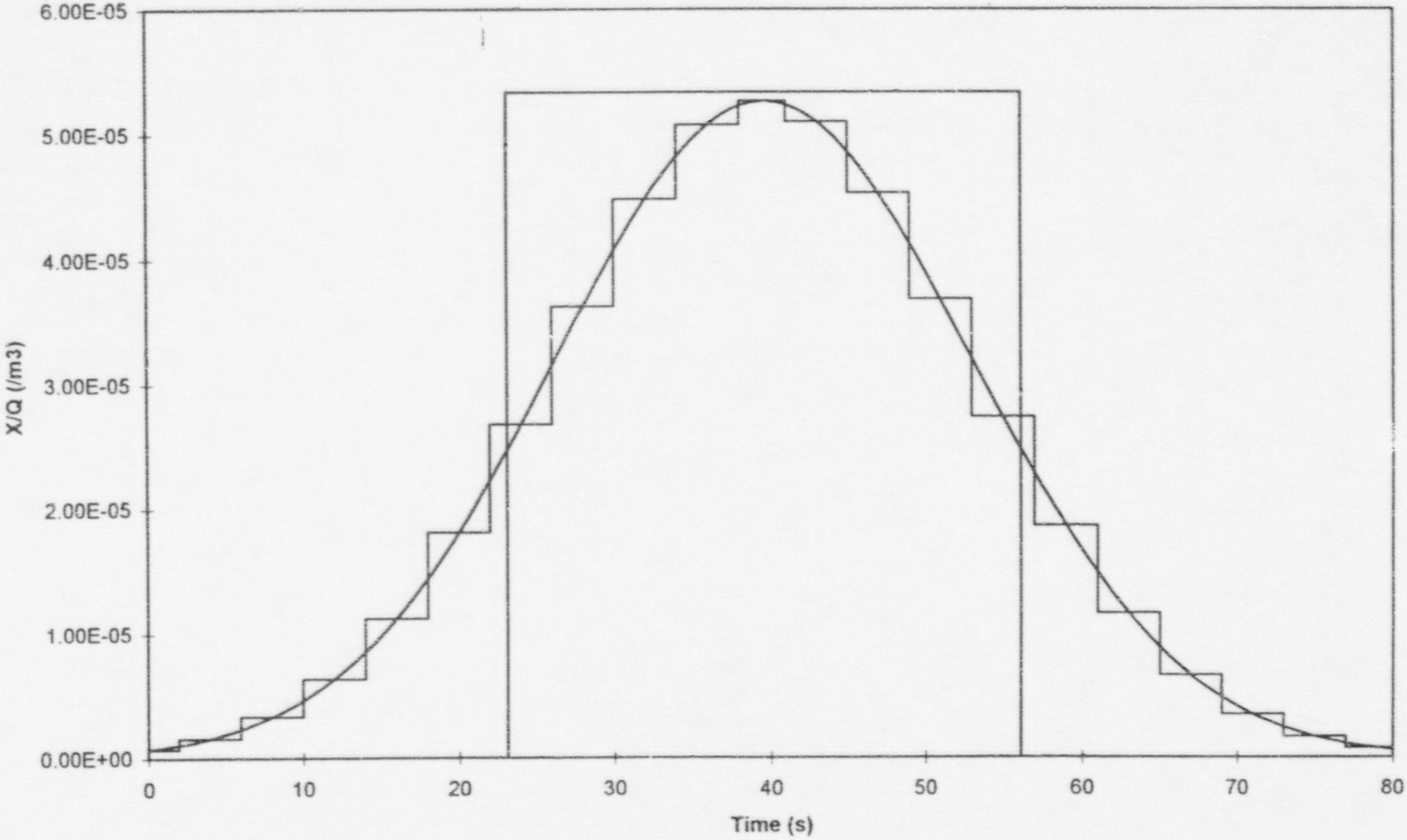
Calc. No. CP&L-CED-M-01, Rev. 4, Attachment P, ICRP 30 DCF Conversion, Uniform Cloud w/3.0 uCi/g

| | 5 sec | 33 sec | 30 min | 2 hrs | 8 hrs | 24 hrs | 4 days | 30 days | Total w/ Axident DCFs | Axident DCF | ICRP 30 DCF | Total w/ ICRP 30 DCFs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Elemental Iodines | | | | | | | | | | | | |
| I-131 | 6.45E-04 | 2.74E-02 | 2.37E+00 | 2.91E+00 | 8.34E-01 | 2.08E-03 | 2.38E-10 | 1.37E-41 | 6.14E+00 | 1.48E+06 | 1.10E+06 | 4.57E+00 |
| I-132 | 2.27E-04 | 9.60E-03 | 7.77E-01 | 7.48E-01 | 1.25E-01 | 5.21E-05 | 5.08E-14 | 1.43E-54 | 1.66E+00 | 5.35E+04 | 6.30E+03 | 1.95E-01 |
| I-133 | 1.19E-03 | 5.07E-02 | 4.35E+00 | 5.21E+00 | 1.41E+00 | 2.96E-03 | 2.11E-10 | 1.46E-42 | 1.10E+01 | 4.00E+05 | 1.80E+05 | 4.96E+00 |
| I-134 | 2.09E-04 | 8.82E-03 | 6.40E-01 | 4.22E-01 | 3.07E-02 | 6.46E-07 | 2.19E-19 | 1.66E-75 | 1.10E+00 | 2.50E+04 | 1.10E+03 | 4.85E-02 |
| I-135 | 5.40E-04 | 2.29E-02 | 1.94E+00 | 2.19E+00 | 5.21E-01 | 7.15E-04 | 1.65E-11 | 7.23E-46 | 4.68E+00 | 1.24E+05 | 3.10E+04 | 1.17E+00 |
| Particulate Iodines | | | | | | | | | | | | |
| I-131 | 3.54E-05 | 1.50E-03 | 1.30E-01 | 1.60E-01 | 4.58E-02 | 1.14E-04 | 1.31E-11 | 7.50E-43 | 3.37E-01 | 1.48E+06 | 1.10E+06 | 2.51E-01 |
| I-132 | 1.25E-05 | 5.28E-04 | 4.27E-02 | 4.11E-02 | 6.85E-03 | 2.86E-06 | 2.79E-15 | 7.85E-56 | 9.12E-02 | 5.35E+04 | 6.30E+03 | 1.07E-02 |
| I-133 | 6.56E-05 | 2.78E-03 | 2.39E-01 | 2.86E-01 | 7.77E-02 | 1.63E-04 | 1.16E-11 | 8.00E-44 | 6.06E-01 | 4.00E+05 | 1.80E+05 | 2.73E-01 |
| I-134 | 1.15E-05 | 4.85E-04 | 3.52E-02 | 2.32E-02 | 1.69E-03 | 3.55E-08 | 1.20E-20 | 9.13E-77 | 6.06E-02 | 2.50E+04 | 1.10E+03 | 2.67E-03 |
| I-135 | 2.97E-05 | 1.26E-03 | 1.06E-01 | 1.20E-01 | 2.86E-02 | 3.93E-05 | 9.09E-13 | 3.97E-47 | 2.56E-01 | 1.24E+05 | 3.10E+04 | 6.40E-02 |
| Organic Iodines | | | | | | | | | | | | |
| I-131 | 2.83E-05 | 1.20E-03 | 1.04E-01 | 1.28E-01 | 3.66E-02 | 9.16E-05 | 1.05E-11 | 6.00E-43 | 2.70E-01 | 1.48E+06 | 1.10E+06 | 2.01E-01 |
| I-132 | 9.96E-06 | 4.22E-04 | 3.41E-02 | 3.29E-02 | 5.48E-03 | 2.29E-06 | 2.23E-15 | 6.28E-56 | 7.29E-02 | 5.35E+04 | 6.30E+03 | 8.59E-03 |
| I-133 | 5.25E-05 | 2.23E-03 | 1.91E-01 | 2.29E-01 | 6.22E-02 | 1.30E-04 | 9.28E-12 | 6.40E-44 | 4.85E-01 | 4.00E+05 | 1.80E+05 | 2.18E-01 |
| I-134 | 9.17E-06 | 3.88E-04 | 2.81E-02 | 1.86E-02 | 1.35E-03 | 2.84E-08 | 9.61E-21 | 7.30E-77 | 4.84E-02 | 2.50E+04 | 1.10E+03 | 2.13E-03 |
| I-135 | 2.37E-05 | 1.01E-03 | 8.52E-02 | 9.62E-02 | 2.29E-02 | 3.14E-05 | 7.27E-13 | 3.18E-47 | 2.05E-01 | 1.24E+05 | 3.10E+04 | 5.13E-02 |
| | | | | | | | | | | | | |
| Total Dose | | | | | | | | | 2.70E+01 | | | 1.20E+01 |
| | | | | | | | | | | | | |
| DCF Dose Reduction Factor | | | | | | | | | | | | 4.45E-01 |

Calc. No. CP&L-CED-M-01, Rev. 4, Attachment Q, ICRP 30 DCF Conversion, Uniform Cloud w/2.0 uCi/g

| | 5 sec | 33 sec | 30 min | 2 hrs | 8 hrs | 24 hrs | 4 days | 30 days | Total w/ Axident DCFs | Axident DCF | ICRP 30 DCF | Total w/ ICRP 30 DCFs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Elemental Iodines | | | | | | | | | | | | |
| I-131 | 4.30E-04 | 1.82E-02 | 1.58E+00 | 1.94E+00 | 5.56E-01 | 1.39E-03 | 1.59E-10 | 9.10E-42 | 4.10E+00 | 1.48E+06 | 1.10E+06 | 3.04E+00 |
| I-132 | 1.51E-04 | 6.40E-03 | 5.18E-01 | 4.99E-01 | 8.32E-02 | 3.47E-05 | 3.38E-14 | 9.52E-55 | 1.11E+00 | 5.35E+04 | 6.30E+03 | 1.30E-01 |
| I-133 | 7.96E-04 | 3.38E-02 | 2.90E+00 | 3.47E+00 | 9.43E-01 | 1.97E-03 | 1.41E-10 | 9.71E-43 | 7.35E+00 | 4.00E+05 | 1.80E+05 | 3.31E+00 |
| I-134 | 1.39E-04 | 5.88E-03 | 4.27E-01 | 2.82E-01 | 2.05E-02 | 4.31E-07 | 1.46E-19 | 1.11E-75 | 7.36E-01 | 2.50E+04 | 1.10E+03 | 3.24E-02 |
| I-135 | 3.60E-04 | 1.53E-02 | 1.29E+00 | 1.46E+00 | 3.47E-01 | 4.76E-04 | 1.10E-11 | 4.82E-46 | 3.11E+00 | 1.24E+05 | 3.10E+04 | 7.78E-01 |
| Particulate Iodines | | | | | | | | | | | | |
| I-131 | 2.36E-05 | 1.00E-03 | 8.67E-02 | 1.06E-01 | 3.05E-02 | 7.63E-05 | 8.71E-12 | 5.00E-43 | 2.24E-01 | 1.48E+06 | 1.10E+06 | 1.67E-01 |
| I-132 | 8.30E-06 | 3.52E-04 | 2.85E-02 | 2.74E-02 | 4.57E-03 | 1.91E-06 | 1.86E-15 | 5.23E-56 | 6.08E-02 | 5.35E+04 | 6.30E+03 | 7.16E-03 |
| I-133 | 4.37E-05 | 1.86E-03 | 1.59E-01 | 1.91E-01 | 5.18E-02 | 1.08E-04 | 7.73E-12 | 5.34E-44 | 4.04E-01 | 4.00E+05 | 1.80E+05 | 1.82E-01 |
| I-134 | 7.65E-06 | 3.23E-04 | 2.35E-02 | 1.55E-02 | 1.12E-03 | 2.37E-08 | 8.01E-21 | 6.09E-77 | 4.05E-02 | 2.50E+04 | 1.10E+03 | 1.78E-03 |
| I-135 | 1.98E-05 | 8.39E-04 | 7.10E-02 | 8.02E-02 | 1.91E-02 | 2.62E-05 | 6.06E-13 | 2.65E-47 | 1.71E-01 | 1.24E+05 | 3.10E+04 | 4.28E-02 |
| Organic Iodines | | | | | | | | | | | | |
| I-131 | 1.89E-05 | 8.02E-04 | 6.94E-02 | 8.51E-02 | 2.44E-02 | 6.10E-05 | 6.97E-12 | 4.00E-43 | 1.80E-01 | 1.48E+06 | 1.10E+06 | 1.34E-01 |
| I-132 | 6.64E-06 | 2.81E-04 | 2.28E-02 | 2.19E-02 | 3.66E-03 | 1.53E-06 | 1.49E-15 | 4.19E-56 | 4.86E-02 | 5.35E+04 | 6.30E+03 | 5.73E-03 |
| I-133 | 3.50E-05 | 1.48E-03 | 1.28E-01 | 1.53E-01 | 4.14E-02 | 8.67E-05 | 6.18E-12 | 4.27E-44 | 3.24E-01 | 4.00E+05 | 1.80E+05 | 1.46E-01 |
| I-134 | 6.12E-06 | 2.59E-04 | 1.88E-02 | 1.24E-02 | 9.00E-04 | 1.89E-08 | 6.41E-21 | 4.87E-77 | 3.24E-02 | 2.50E+04 | 1.10E+03 | 1.42E-03 |
| I-135 | 1.58E-05 | 6.72E-04 | 5.68E-02 | 6.42E-02 | 1.53E-02 | 2.09E-05 | 4.85E-13 | 2.12E-47 | 1.37E-01 | 1.24E+05 | 3.10E+04 | 3.43E-02 |
| | | | | | | | | | | | | |
| Total Dose | | | | | | | | | 1.80E+01 | | | 8.01E+00 |
| | | | | | | | | | | | | |
| DCF Dose Reduction Factor | | | | | | | | | | | | 4.45E-01 |

Calc. No. CP&L-CED-M-01, Rev. 4, Attachment R
Comparison of Diffusion Models



```
AXIDENT VER 2 MOD 4
PRODUCTION DATE 02/18/92
BEGIN EXECUTION DATE:  07/24/1997
BEGIN EXECUTION TIME:  10:52:52.86



 1 MSLB - CHLORINE MODE - 4.0 uCi/g
 2 2 2 1.0 1.0
 3 -2350 2.6E6 2.9865E5 2.9865E5
 4 0.0 0.0 0.0 1.0 6.6234E7 1.0 1.0
 5 33.0 2.592E6
 6 5.333E-7 0.0
 7 2*1.0
 8 2*0.0
 9 2*3000
10 2*1.0
11 2*1.0
12 2*0.0
13 2*0.0
14 2*0.0
15 2*0.0
16 2*0.0
17 2*0.0
18 2*0.0
19 2*0.0
20 2*0.0
21 1.0 1.0 1.0 1.0 1.0 1.0
22 1.0 1.0 1.0
23 6282 61088 43026 120472 62821 0.0 0.0 0.0
24 8*0.0
```

1

MSLB - CHLORINE MODE - 4.0 uCi/g

INITIAL CONTAINMENT INVENTORY

| ISOTOPE | ACTIVITY (CURIES) |
|---|---|
| I-131 | 6.282E+03 |
| I-132 | 6.109E+04 |
| I-133 | 4.303E+04 |
| I-134 | 1.205E+05 |
| I-135 | 6.282E+04 |
| XE-131M | 0.000E+00 |
| XE-133M | 0.000E+00 |
| XE-133 | 0.000E+00 |
| XE-135M | 0.000E+00 |
| XE-135 | 0.000E+00 |
| XE-138 | 0.000E+00 |
| KR-83M | 0.000E+00 |
| KR-85M | 0.000E+00 |
| KR-85 | 0.000E+00 |
| KR-87 | 0.000E+00 |
| KR-88 | 0.000E+00 |

1 MSLB - CHLORINE MODE - 4.0 uCi/g

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .009 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=3000.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .000 | 1.000 | 1.000 |
| PARTICULATE | .000 | .000 | .000 | .000 | 1.000 | 1.000 |
| ORGANIC | .000 | .000 | .000 | .000 | 1.000 | 1.000 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.43E+03 | 0.00E+00 | 2.52E-02 | 3.55E-02 | 4.20E-06 | 1.29E+01 | 2.33E-03 | 1.14E-03 | 3.56E-02 | 4.10E-07 | 3.14E-06 |
| I-132 | 1.39E+04 | 0.00E+00 | 2.44E-01 | 3.44E-01 | 4.07E-05 | 4.53E+00 | 1.47E-01 | 2.52E-02 | 1.25E-02 | 2.17E-05 | 6.94E-05 |
| I-133 | 9.79E+03 | 0.00E+00 | 1.72E-01 | 2.43E-01 | 2.88E-05 | 2.39E+01 | 2.05E-02 | 1.68E-02 | 6.59E-02 | 4.45E-06 | 4.62E-05 |
| I-134 | 2.72E+04 | 0.00E+00 | 4.81E-01 | 6.76E-01 | 7.99E-05 | 4.17E+00 | 2.33E-01 | 5.03E-02 | 1.15E-02 | 4.58E-05 | 1.39E-04 |
| I-135 | 1.43E+04 | 0.00E+00 | 2.51E-01 | 3.55E-01 | 4.20E-05 | 1.08E+01 | 1.12E-01 | 1.78E-02 | 2.98E-02 | 1.30E-05 | 4.91E-05 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 7.85E+01 | 0.00E+00 | 1.38E-03 | 1.95E-03 | 2.31E-07 | 7.10E-01 | 1.28E-04 | 6.26E-05 | 1.96E-03 | 2.25E-08 | 1.73E-07 |
| I-132 | 7.61E+02 | 0.00E+00 | 1.34E-02 | 1.89E-02 | 2.24E-06 | 2.49E-01 | 8.05E-03 | 1.38E-03 | 6.87E-04 | 1.19E-06 | 3.81E-06 |
| I-133 | 5.38E+02 | 0.00E+00 | 9.46E-03 | 1.34E-02 | 1.58E-06 | 1.31E+00 | 1.13E-03 | 9.21E-04 | 3.62E-03 | 2.44E-07 | 2.54E-06 |
| I-134 | 1.49E+03 | 0.00E+00 | 2.64E-02 | 3.71E-02 | 4.39E-06 | 2.29E-01 | 1.28E-02 | 2.76E-03 | 6.31E-04 | 2.52E-06 | 7.61E-06 |
| I-135 | 7.85E+02 | 0.00E+00 | 1.38E-02 | 1.95E-02 | 2.31E-06 | 5.94E-01 | 6.14E-03 | 9.79E-04 | 1.64E-03 | 7.13E-07 | 2.70E-06 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 6.28E+01 | 0.00E+00 | 1.11E-03 | 1.56E-03 | 1.85E-07 | 5.68E-01 | 1.03E-04 | 5.01E-05 | 1.57E-03 | 1.80E-08 | 1.38E-07 |
| I-132 | 6.09E+02 | 0.00E+00 | 1.07E-02 | 1.51E-02 | 1.79E-06 | 1.99E-01 | 6.44E-03 | 1.11E-03 | 5.49E-04 | 9.55E-07 | 3.05E-06 |
| I-133 | 4.30E+02 | 0.00E+00 | 7.57E-03 | 1.07E-02 | 1.26E-06 | 1.05E+00 | 9.03E-04 | 7.37E-04 | 2.90E-03 | 1.96E-07 | 2.03E-06 |
| I-134 | 1.20E+03 | 0.00E+00 | 2.11E-02 | 2.97E-02 | 3.51E-06 | 1.83E-01 | 1.02E-02 | 2.21E-03 | 5.05E-04 | 2.01E-06 | 6.09E-06 |
| I-135 | 6.28E+02 | 0.00E+00 | 1.11E-02 | 1.56E-02 | 1.84E-06 | 4.75E-01 | 4.91E-03 | 7.83E-04 | 1.31E-03 | 5.70E-07 | 2.16E-06 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 6.19E+01 | 5.65E-01 | 1.22E-01 | 1.71E-01 | 9.38E-05 | 3.37E-04 |

1 MSLB - CHLORINE MODE - 4.0 uCi/g

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT 720.000 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=3000.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTFR | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .000 | 1.000 | 1.000 |
| PARTICULATE | .000 | .000 | .000 | .000 | 1.000 | 1.000 |
| ORGANIC | .000 | .000 | .000 | .000 | 1.000 | 1.000 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.08E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.28E+01 | 1.47E-04 | 1.13E-03 |
| I-132 | 8.37E-91 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.01E+00 | 5.23E-03 | 1.67E-02 |
| I-133 | 4.66E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.26E+01 | 1.52E-03 | 1.58E-02 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.78E+00 | 7.10E-03 | 2.15E-02 |
| I-135 | 7.04E-29 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.20E+00 | 4.01E-03 | 1.52E-02 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 5.92E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.04E-01 | 8.10E-06 | 6.21E-05 |
| I-132 | 4.60E-92 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.65E-01 | 2.88E-04 | 9.18E-04 |
| I-133 | 2.56E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.24E+00 | 8.38E-05 | 8.70E-04 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.78E-02 | 3.90E-04 | 1.18E-03 |
| I-135 | 3.87E-30 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.06E-01 | 2.20E-04 | 8.33E-04 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 4.74E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.63E-01 | 6.48E-06 | 4.97E-05 |
| I-132 | 3.68E-92 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.32E-01 | 2.30E-04 | 7.34E-04 |
| I-133 | 2.05E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.93E-01 | 6.70E-05 | 6.96E-04 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.83E-02 | 3.12E-04 | 9.44E-04 |
| I-135 | 3.10E-30 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.05E-01 | 1.76E-04 | 6.66E-04 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.43E+01 | 1.98E-02 | 7.73E-02 |

| | | | | | | |
|---|---|---|---|---|---|---|
| TOTAL DOSES 0-30 DAYS | 6.19E+01 | 5.65E-01 | 1.22E-01 | 5.45E+01 | 1.99E-02 | 7.76E-02 |

1

MSLB - CHLORINE MODE - 4.0 uCi/g

| ISOTOPE | ACTIVITY RELEASED (CURIES) | | |
|---|---|---|---|
| | 0. HRS | 720. HRS | |
| ELEMENTAL | | | |
| I-131 | 2.52E-02 | 0.00E+00 | 2.52E-02 |
| I-132 | 2.44E-01 | 0.00E+00 | 2.44E-01 |
| I-133 | 1.72E-01 | 0.00E+00 | 1.72E-01 |
| I-134 | 4.81E-01 | 0.00E+00 | 4.81E-01 |
| I-135 | 2.51E-01 | 0.00E+00 | 2.51E-01 |
| PARTICULATE | | | |
| I-131 | 1.38E-03 | 0.00E+00 | 1.38E-03 |
| I-132 | 1.34E-02 | 0.00E+00 | 1.34E-02 |
| I-133 | 9.46E-03 | 0.00E+00 | 9.46E-03 |
| I-134 | 2.64E-02 | 0.00E+00 | 2.64E-02 |
| I-135 | 1.38E-02 | 0.00E+00 | 1.38E-02 |
| ORGANIC | | | |
| I-131 | 1.11E-03 | 0.00E+00 | 1.11E-03 |
| I-132 | 1.07E-02 | 0.00E+00 | 1.07E-02 |
| I-133 | 7.57E-03 | 0.00E+00 | 7.57E-03 |
| I-134 | 2.11E-02 | 0.00E+00 | 2.11E-02 |
| I-135 | 1.11E-02 | 0.00E+00 | 1.11E-02 |
| NOBLE GASES | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

END EXECUTION DATE: 07/24/1997
END EXECUTION TIME: 10:52:52.97

| | 33 secs | 2 hrs | 8 hrs | 24 hrs | 4 days | 30 days | Total w/ Axident DCFs | Axident DCF | ICRP 30 DCF | Total w/ ICRP 30 DCFs |
|---|---|---|---|---|---|---|---|---|---|---|
| Elemental Iodines | | | | | | | | | | |
| I-131 | 3.56E-02 | | | | | 1.28E+01 | 1.28E+01 | 1.48E+06 | 1.10E+06 | 9.54E+00 |
| I-132 | 1.25E-02 | | | | | 3.01E+00 | 3.02E+00 | 5.35E+04 | 6.30E+03 | 3.56E-01 |
| I-133 | 6.59E-02 | | | | | 2.26E+01 | 2.27E+01 | 4.00E+05 | 1.80E+05 | 1.02E+01 |
| I-134 | 1.15E-02 | | | | | 1.78E+00 | 1.79E+00 | 2.50E+04 | 1.10E+03 | 7.88E-02 |
| I-135 | 2.98E-02 | | | | | 9.20E+00 | 9.23E+00 | 1.24E+05 | 3.10E+04 | 2.31E+00 |
| Particulate Iodines | | | | | | | | | | |
| I-131 | 1.96E-03 | | | | | 7.04E-01 | 7.06E-01 | 1.48E+06 | 1.10E+06 | 5.25E-01 |
| I-132 | 6.87E-04 | | | | | 1.65E-01 | 1.66E-01 | 5.35E+04 | 6.30E+03 | 1.95E-02 |
| I-133 | 3.62E-03 | | | | | 1.24E+00 | 1.24E+00 | 4.00E+05 | 1.80E+05 | 5.60E-01 |
| I-134 | 6.31E-04 | | | | | 9.78E-02 | 9.84E-02 | 2.50E+04 | 1.10E+03 | 4.33E-03 |
| I-135 | 1.64E-03 | | | | | 5.06E-01 | 5.08E-01 | 1.24E+05 | 3.10E+04 | 1.27E-01 |
| Organic Iodines | | | | | | | | | | |
| I-131 | 1.57E-03 | | | | | 5.63E-01 | 5.65E-01 | 1.48E+06 | 1.10E+06 | 4.20E-01 |
| I-132 | 5.49E-04 | | | | | 1.32E-01 | 1.33E-01 | 5.35E+04 | 6.30E+03 | 1.56E-02 |
| I-133 | 2.90E-03 | | | | | 9.93E-01 | 9.96E-01 | 4.00E+05 | 1.80E+05 | 4.48E-01 |
| I-134 | 5.05E-04 | | | | | 7.83E-02 | 7.88E-02 | 2.50E+04 | 1.10E+03 | 3.47E-03 |
| I-135 | 1.31E-03 | | | | | 4.05E-01 | 4.06E-01 | 1.24E+05 | 3.10E+04 | 1.02E-01 |
| | | | | | | | | | | |
| Total Dose | | | | | | | 5.44E+01 | | | 2.47E+01 |

```
AXIDENT VER 2 MOD 4
PRODUCTION DATE 02/18/92
BEGIN EXECUTION DATE:  07/24/1997
BEGIN EXECUTION TIME:  10:52:42.97



 1 MSLB - CHLORINE MODE - 3.0 uCi/g
 2 2 2 1.0 1.0
 3 -2350 2.6E6 2.9865E5 2.9865E5
 4 0.0 0.0 0.0 1.0 6.6234E7 1.0 1.0
 5 33.0 2.592E6
 6 5.333E-7 0.0
 7 2*1.0
 8 2*0.0
 9 2*3000
10 2*1.0
11 2*1.0
12 2*0.0
13 2*0.0
14 2*0.0
15 2*0.0
16 2*0.0
17 2*0.0
18 2*0.0
19 2*0.0
20 2*0.0
21 1.0 1.0 1.0 1.0 1.0 1.0
22 1.0 1.0 1.0
23 4712 45816 32269 90354 47115 0.0 0.0 0.0
24 8*0.0
```

1

MSLB - CHLORINE MODE - 3.0 uCi/g

INITIAL CONTAINMENT INVENTORY

| ISOTOPE | ACTIVITY (CURIES) |
|---|---|
| I-131 | 4.712E+03 |
| I-132 | 4.582E+04 |
| I-133 | 3.227E+04 |
| I-134 | 9.035E+04 |
| I-135 | 4.712E+04 |
| XE-131M | 0.000E+00 |
| XE-133M | 0.000E+00 |
| XE-133 | 0.000E+00 |
| XE-135M | 0.000E+00 |
| XE-135 | 0.000E+00 |
| XE-138 | 0.000E+00 |
| KR-83M | 0.000E+00 |
| KR-85M | 0.000E+00 |
| KR-85 | 0.000E+00 |
| KR-87 | 0.000E+00 |
| KR-88 | 0.000E+00 |

1 MSLB - CHLORINE MODE - 3.0 uCi/g

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .009 HOURS: X/Q(SITE)= .10E+01 SEC/M3 | PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=3000.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .000 | 1.000 | 1.000 |
| PARTICULATE | .000 | .000 | .000 | .000 | 1.000 | 1.000 |
| ORGANIC | .000 | .000 | .000 | .000 | 1.000 | 1.000 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.07E+03 | 0.00E+00 | 1.89E-02 | 2.66E-02 | 3.15E-06 | 9.69E+00 | 1.75E-03 | 8.55E-04 | 2.67E-02 | 3.03E-07 | 2.36E-06 |
| I-132 | 1.04E+04 | 0.00E+00 | 1.83E-01 | 2.58E-01 | 3.05E-05 | 3.40E+00 | 1.10E-01 | 1.89E-02 | 9.37E-03 | 1.63E-05 | 5.20E-05 |
| I-133 | 7.34E+03 | 0.00E+00 | 1.29E-01 | 1.82E-01 | 2.16E-05 | 1.79E+01 | 1.54E-02 | 1.26E-02 | 4.94E-02 | 3.34E-06 | 3.47E-05 |
| I-134 | 2.04E+04 | 0.00E+00 | 3.60E-01 | 5.07E-01 | 6.00E-05 | 3.13E+00 | 1.75E-01 | 3.77E-02 | 8.61E-03 | 3.43E-05 | 1.04E-04 |
| I-135 | 1.07E+04 | 0.00E+00 | 1.89E-01 | 2.66E-01 | 3.15E-05 | 8.11E+00 | 8.39E-02 | 1.34E-02 | 2.24E-02 | 9.73E-06 | 3.68E-05 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 5.89E+01 | 0.00E+00 | 1.04E-03 | 1.46E-03 | 1.73E-07 | 5.32E-01 | 9.61E-05 | 4.70E-05 | 1.47E-03 | 1.69E-08 | 1.30E-07 |
| I-132 | 5.71E+02 | 0.00E+00 | 1.01E-02 | 1.42E-02 | 1.68E-06 | 1.87E-01 | 6.04E-03 | 1.04E-03 | 5.15E-04 | 8.95E-07 | 2.86E-06 |
| I-133 | 4.03E+02 | 0.00E+00 | 7.10E-03 | 1.00E-02 | 1.18E-06 | 9.85E-01 | 8.46E-04 | 6.91E-04 | 2.72E-03 | 1.83E-07 | 1.90E-06 |
| I-134 | 1.12E+03 | 0.00E+00 | 1.98E-02 | 2.79E-02 | 3.29E-06 | 1.72E-01 | 9.60E-03 | 2.07E-03 | 4.73E-04 | 1.89E-06 | 5.71E-06 |
| I-135 | 5.88E+02 | 0.00E+00 | 1.04E-02 | 1.46E-02 | 1.73E-06 | 4.46E-01 | 4.61E-03 | 7.34E-04 | 1.23E-03 | 5.35E-07 | 2.02E-06 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 4.71E+01 | 0.00E+00 | 8.29E-04 | 1.17E-03 | 1.38E-07 | 4.26E-01 | 7.69E-05 | 3.76E-05 | 1.17E-03 | 1.35E-08 | 1.04E-07 |
| I-132 | 4.57E+02 | 0.00E+00 | 8.05E-03 | 1.14E-02 | 1.34E-06 | 1.49E-01 | 4.83E-03 | 8.30E-04 | 4.12E-04 | 7.16E-07 | 2.29E-06 |
| I-133 | 3.23E+02 | 0.00E+00 | 5.68E-03 | 8.02E-03 | 9.48E-07 | 7.88E-01 | 6.77E-04 | 5.52E-04 | 2.17E-03 | 1.47E-07 | 1.52E-06 |
| I-134 | 8.97E+02 | 0.00E+00 | 1.58E-02 | 2.23E-02 | 2.64E-06 | 1.37E-01 | 7.68E-03 | 1.66E-03 | 3.79E-04 | 1.51E-06 | 4.57E-06 |
| I-135 | 4.71E+02 | 0.00E+00 | 8.29E-03 | 1.17E-02 | 1.38E-06 | 3.57E-01 | 3.69E-03 | 5.87E-04 | 9.83E-04 | 4.28E-07 | 1.62E-06 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 4.64E+01 | 4.24E-01 | 9.16E-02 | 1.28E-01 | 7.03E-05 | 2.52E-04 |

1 MSLB - CHLORINE MODE - 3.0 uCi/g

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT 720.000 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=3000.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .000 | 1.000 | 1.000 |
| PARTICULATE | .000 | .000 | .000 | .000 | 1.000 | 1.000 |
| ORGANIC | .000 | .000 | .000 | .000 | 1.000 | 1.000 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 8.09E+01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.60E+00 | 1.11E-04 | 8.47E-04 |
| I-132 | 6.28E-91 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.26E+00 | 3.93E-03 | 1.25E-02 |
| I-133 | 3.49E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.69E+01 | 1.14E-03 | 1.19E-02 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.34E+00 | 5.33E-03 | 1.61E-02 |
| I-135 | 5.28E-29 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.90E+00 | 3.00E-03 | 1.14E-02 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 4.44E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.28E-01 | 6.07E-06 | 4.66E-05 |
| I-132 | 3.45E-92 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.24E-01 | 2.16E-04 | 6.89E-04 |
| I-133 | 1.92E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.31E-01 | 6.28E-05 | 6.53E-04 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.34E-02 | 2.93E-04 | 8.85E-04 |
| I-135 | 2.90E-30 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.79E-01 | 1.65E-04 | 6.24E-04 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 3.56E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.22E-01 | 4.86E-06 | 3.72E-05 |
| I-132 | 2.76E-92 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.92E-02 | 1.73E-04 | 5.51E-04 |
| I-133 | 1.54E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.45E-01 | 5.03E-05 | 5.22E-04 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.87E-02 | 2.34E-04 | 7.08E-04 |
| I-135 | 2.32E-30 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.03E-01 | 1.32E-04 | 5.00E-04 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.07E+01 | 1.48E-02 | 5.80E-02 |

| | | | | | | |
|---|---|---|---|---|---|---|
| TOTAL DOSES 0-30 DAYS | 4.64E+01 | 4.24E-01 | 9.16E-02 | 4.08E+01 | 1.49E-02 | 5.82E-02 |

1

MSLB - CHLORINE MODE - 3.0 uCi/g

| ISOTOPE | ACTIVITY RELEASED (CURIES) | | |
|---|---|---|---|
| | 0. HRS | 720. HRS | |
| ELEMENTAL | | | |
| I-131 | 1.89E-02 | 0.00E+00 | 1.89E-02 |
| I-132 | 1.83E-01 | 0.00E+00 | 1.83E-01 |
| I-133 | 1.29E-01 | 0.00E+00 | 1.29E-01 |
| I-134 | 3.60E-01 | 0.00E+00 | 3.60E-01 |
| I-135 | 1.89E-01 | 0.00E+00 | 1.89E-01 |
| PARTICULATE | | | |
| I-131 | 1.04E-03 | 0.00E+00 | 1.04E-03 |
| I-132 | 1.01E-02 | 0.00E+00 | 1.01E-02 |
| I-133 | 7.10E-03 | 0.00E+00 | 7.10E-03 |
| I-134 | 1.98E-02 | 0.00E+00 | 1.98E-02 |
| I-135 | 1.04E-02 | 0.00E+00 | 1.04E-02 |
| ORGANIC | | | |
| I-131 | 8.29E-04 | 0.00E+00 | 8.29E-04 |
| I-132 | 8.05E-03 | 0.00E+00 | 8.05E-03 |
| I-133 | 5.68E-03 | 0.00E+00 | 5.68E-03 |
| I-134 | 1.58E-02 | 0.00E+00 | 1.58E-02 |
| I-135 | 8.29E-03 | 0.00E+00 | 8.29E-03 |
| NOBLE GASES | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

END EXECUTION DATE: 07/24/1997
END EXECUTION TIME: 10:52:43.08

| | 33 secs | 2 hrs | 8 hrs | 24 hrs | 4 days | 30 days | Total w/ Axident DCFs | Axident DCF | ICRP 30 DCF | Total w/ ICRP 30 DCFs |
|---|---|---|---|---|---|---|---|---|---|---|
| Elemental Iodines | | | | | | | | | | |
| I-131 | 2.67E-02 | | | | | 9.60E+00 | 9.63E+00 | 1.48E+06 | 1.10E+06 | 7.15E+00 |
| I-132 | 9.37E-03 | | | | | 2.26E+00 | 2.27E+00 | 5.35E+04 | 6.30E+03 | 2.67E-01 |
| I-133 | 4.94E-02 | | | | | 1.69E+01 | 1.69E+01 | 4.00E+05 | 1.80E+05 | 7.63E+00 |
| I-134 | 8.61E-03 | | | | | 1.34E+00 | 1.35E+00 | 2.50E+04 | 1.10E+03 | 5.93E-02 |
| I-135 | 2.24E-02 | | | | | 6.90E+00 | 6.92E+00 | 1.24E+05 | 3.10E+04 | 1.73E+00 |
| Particulate Iodines | | | | | | | | | | |
| I-131 | 1.47E-03 | | | | | 5.28E-01 | 5.29E-01 | 1.48E+06 | 1.10E+06 | 3.94E-01 |
| I-132 | 5.15E-04 | | | | | 1.24E-01 | 1.25E-01 | 5.35E+04 | 6.30E+03 | 1.47E-02 |
| I-133 | 2.72E-03 | | | | | 9.31E-01 | 9.34E-01 | 4.00E+05 | 1.80E+05 | 4.20E-01 |
| I-134 | 4.73E-04 | | | | | 7.34E-02 | 7.39E-02 | 2.50E+04 | 1.10E+03 | 3.25E-03 |
| I-135 | 1.23E-03 | | | | | 3.79E-01 | 3.80E-01 | 1.24E+05 | 3.10E+04 | 9.51E-02 |
| Organic Iodines | | | | | | | | | | |
| I-131 | 1.17E-03 | | | | | 4.22E-01 | 4.23E-01 | 1.48E+06 | 1.10E+06 | 3.15E-01 |
| I-132 | 4.12E-04 | | | | | 9.92E-02 | 9.96E-02 | 5.35E+04 | 6.30E+03 | 1.17E-02 |
| I-133 | 2.17E-03 | | | | | 7.45E-01 | 7.47E-01 | 4.00E+05 | 1.80E+05 | 3.36E-01 |
| I-134 | 3.79E-04 | | | | | 5.87E-02 | 5.91E-02 | 2.50E+04 | 1.10E+03 | 2.60E-03 |
| I-135 | 9.83E-04 | | | | | 3.03E-01 | 3.04E-01 | 1.24E+05 | 3.10E+04 | 7.60E-02 |
| | | | | | | | | | | |
| Total Dose | | | | | | | 4.08E+01 | | | 1.85E+01 |

```
AXIDENT VER 2 MOD 4
PRODUCTION DATE 02/18/92
BEGIN EXECUTION DATE:  07/24/1997
BEGIN EXECUTION TIME:  11:16:13.73



 1 MSLB - 1800 CFM FILTERED, 136 CFM UNFILTERED
 2 2 2 1.0 1.0
 3 -2350 2.6E6 2.9865E5 2.9865E5
 4 0.0 0.0 0.0 1.0 6.6234E7 1.0 1.0
 5 33.0 2.592E6
 6 5.333E-7 0.0
 7 2*1.0
 8 2*0.0
 9 2*1936
10 2*1.0
11 2*1.0
12 2*0.0
13 2*0.0
14 2*0.0
15 2*0.0
16 2*0.0
17 2*0.0
18 2*0.0
19 2*0.0
20 2*0.0
21 1.0 1.0 1.0 0.1632 0.1632 0.1632
22 1.0 1.0 1.0
23 4712 45816 32269 90354 47115 0 0 0.0 0.0
24 8*0.0
```

1

MSLB - 1800 CFM FILTERED, 136 CFM UNFILTERED

INITIAL CONTAINMENT INVENTORY

| ISOTOPE | ACTIVITY (CURIES) |
|---|---|
| I-131 | 4.712E+03 |
| I-132 | 4.582E+04 |
| I-133 | 3.227E+04 |
| I-134 | 9.035E+04 |
| I-135 | 4.712E+04 |
| XE-131M | 0.000E+00 |
| XE-133M | 0.000E+00 |
| XE-133 | 0.000E+00 |
| XE-135M | 0.000E+00 |
| XE-135 | 0.000E+00 |
| XE-138 | 0.000E+00 |
| KR-83M | 0.000E+00 |
| KR-85M | 0.000E+00 |
| KR-85 | 0.000E+00 |
| KR-87 | 0.000E+00 |
| KR-88 | 0.000E+00 |

1 MSLB - 1800 CFM FILTERED, 136 CFM UNFILTERED

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .009 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=1936.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .000 | 1.000 | .163 |
| PARTICULATE | .000 | .000 | .000 | .000 | 1.000 | .163 |
| ORGANIC | .000 | .000 | .000 | .000 | 1.000 | .163 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.07E+03 | 0.00E+00 | 1.89E-02 | 2.81E-03 | 3.32E-07 | 9.69E+00 | 1.75E-03 | 8.55E-04 | 2.82E-03 | 3.24E-08 | 2.48E-07 |
| I-132 | 1.04E+04 | 0.00E+00 | 1.83E-01 | 2.72E-02 | 3.22E-06 | 3.40E+00 | 1.10E-01 | 1.89E-02 | 9.88E-04 | 1.72E-06 | 5.48E-06 |
| I-133 | 7.34E+03 | 0.00E+00 | 1.29E-01 | 1.92E-02 | 2.27E-06 | 1.79E+01 | 1.54E-02 | 1.26E-02 | 5.21E-03 | 3.52E-07 | 3.65E-06 |
| I-134 | 2.04E+04 | 0.00E+00 | 3.60E-01 | 5.35E-02 | 6.32E-06 | 3.13E+00 | 1.75E-01 | 3.77E-02 | 9.07E-04 | 3.62E-06 | 1.09E-05 |
| I-135 | 1.07E+04 | 0.00E+00 | 1.89E-01 | 2.81E-02 | 3.32E-06 | 8.11E+00 | 8.39E-02 | 1.34E-02 | 2.36E-03 | 1.03E-06 | 3.88E-06 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 5.89E+01 | 0.00E+00 | 1.04E-03 | 1.54E-04 | 1.82E-08 | 5.32E-01 | 9.61E-05 | 4.70E-05 | 1.55E-04 | 1.78E-09 | 1.36E-08 |
| I-132 | 5.71E+02 | 0.00E+00 | 1.01E-02 | 1.50E-03 | 1.77E-07 | 1.87E-01 | 6.04E-03 | 1.04E-03 | 5.43E-05 | 9.44E-08 | 3.01E-07 |
| I-133 | 4.03E+02 | 0.00E+00 | 7.10E-03 | 1.06E-03 | 1.25E-07 | 9.85E-01 | 8.46E-04 | 6.91E-04 | 2.86E-04 | 1.93E-08 | 2.01E-07 |
| I-134 | 1.12E+03 | 0.00E+00 | 1.98E-02 | 2.94E-03 | 3.47E-07 | 1.72E-01 | 9.60E-03 | 2.07E-03 | 4.99E-05 | 1.99E-07 | 6.02E-07 |
| I-135 | 5.88E+02 | 0.00E+00 | 1.04E-02 | 1.54E-03 | 1.82E-07 | 4.46E-01 | 4.61E-03 | 7.34E-04 | 1.30E-04 | 5.64E-08 | 2.13E-07 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 4.71E+01 | 0.00E+00 | 8.29E-04 | 1.23E-04 | 1.46E-08 | 4.26E-01 | 7.69E-05 | 3.76E-05 | 1.24E-04 | 1.42E-09 | 1.09E-08 |
| I-132 | 4.57E+02 | 0.00E+00 | 8.05E-03 | 1.20E-03 | 1.42E-07 | 1.49E-01 | 4.83E-03 | 8.30E-04 | 4.34E-05 | 7.55E-08 | 2.41E-07 |
| I-133 | 3.23E+02 | 0.00E+00 | 5.68E-03 | 8.45E-04 | 9.99E-08 | 7.88E-01 | 6.77E-04 | 5.52E-04 | 2.29E-04 | 1.55E-08 | 1.61E-07 |
| I-134 | 8.97E+02 | 0.00E+00 | 1.58E-02 | 2.35E-03 | 2.78E-07 | 1.37E-01 | 7.68E-03 | 1.66E-03 | 3.99E-05 | 1.59E-07 | 4.81E-07 |
| I-135 | 4.71E+02 | 0.00E+00 | 8.29E-03 | 1.23E-03 | 1.46E-07 | 3.57E-01 | 3.69E-03 | 5.87E-04 | 1.04E-04 | 4.51E-08 | 1.71E-07 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 4.64E+01 | 4.24E-01 | 9.16E-02 | 1.35E-02 | 7.41E-06 | 2.66E-05 |

1 MSLB - 1800 CFM FILTERED, 136 CFM UNFILTERED

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT 720.000 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=1936.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .000 | 1.000 | .163 |
| PARTICULATE | .000 | .000 | .000 | .000 | 1.000 | .163 |
| ORGANIC | .000 | .000 | .000 | .000 | 1.000 | .163 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 8.09E+01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.56E+00 | 1.80E-05 | 1.38E-04 |
| I-132 | 6.28E-91 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.12E-01 | 5.42E-04 | 1.73E-03 |
| I-133 | 3.49E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.69E+00 | 1.82E-04 | 1.89E-03 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.66E-01 | 6.62E-04 | 2.00E-03 |
| I-135 | 5.28E-29 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.04E+00 | 4.54E-04 | 1.72E-03 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 4.44E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.59E-02 | 9.89E-07 | 7.58E-06 |
| I-132 | 3.45E-92 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.71E-02 | 2.98E-05 | 9.51E-05 |
| I-133 | 1.92E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.48E-01 | 9.98E-06 | 1.04E-04 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.13E-03 | 3.64E-05 | 1.10E-04 |
| I-135 | 2.90E-30 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.73E-02 | 2.50E-05 | 9.44E-05 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 3.56E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.87E-02 | 7.91E-07 | 6.06E-06 |
| I-132 | 2.76E-92 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.37E-02 | 2.38E-05 | 7.61E-05 |
| I-133 | 1.54E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.18E-01 | 7.98E-06 | 8.29E-05 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.30E-03 | 2.91E-05 | 8.81E-05 |
| I-135 | 2.32E-30 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.59E-02 | 2.00E-05 | 7.55E-05 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.35E+00 | 2.04E-03 | 8.22E-03 |

| | | | | | | |
|---|---|---|---|---|---|---|
| TOTAL DOSES 0-30 DAYS | 4.64E+01 | 4.24E-01 | 9.16E-02 | 6.36E+00 | 2.05E-03 | 8.24E-03 |

1

MSLB - 1800 CFM FILTERED, 136 CFM UNFILTERED

| ISOTOPE | ACTIVITY RELEASED (CURIES) | | |
|---|---|---|---|
| | 0. HRS | 720. HRS | |
| ELEMENTAL | | | |
| I-131 | 1.89E-02 | 0.00E+00 | 1.89E-02 |
| I-132 | 1.83E-01 | 0.00E+00 | 1.83E-01 |
| I-133 | 1.29E-01 | 0.00E+00 | 1.29E-01 |
| I-134 | 3.60E-01 | 0.00E+00 | 3.60E-01 |
| I-135 | 1.89E-01 | 0.00E+00 | 1.89E-01 |
| PARTICULATE | | | |
| I-131 | 1.04E-03 | 0.00E+00 | 1.04E-03 |
| I-132 | 1.01E-02 | 0.00E+00 | 1.01E-02 |
| I-133 | 7.10E-03 | 0.00E+00 | 7.10E-03 |
| I-134 | 1.98E-02 | 0.00E+00 | 1.98E-02 |
| I-135 | 1.04E-02 | 0.00E+00 | 1.04E-02 |
| ORGANIC | | | |
| I-131 | 8.29E-04 | 0.00E+00 | 8.29E-04 |
| I-132 | 8.05E-03 | 0.00E+00 | 8.05E-03 |
| I-133 | 5.68E-03 | 0.00E+00 | 5.68E-03 |
| I-134 | 1.58E-02 | 0.00E+00 | 1.58E-02 |
| I-135 | 8.29E-03 | 0.00E+00 | 8.29E-03 |
| NOBLE GASES | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

END EXECUTION DATE: 07/24/1997
END EXECUTION TIME: 11:16:13.90

| | 33 secs | 2 hrs | 8 hrs | 24 hrs | 4 days | 30 days | Total w/ Axident DCFs | Axident DCF | ICRP 30 DCF | Total w/ ICRP 30 DCFs |
|---|---|---|---|---|---|---|---|---|---|---|
| Elemental Iodines | | | | | | | | | | |
| I-131 | 2.82E-03 | | | | | 1.56E+00 | 1.56E+00 | 1.48E+06 | 1.10E+06 | 1.16E+00 |
| I-132 | 9.88E-04 | | | | | 3.12E-01 | 3.13E-01 | 5.35E+04 | 6.30E+03 | 3.69E-02 |
| I-133 | 5.21E-03 | | | | | 2.69E+00 | 2.70E+00 | 4.00E+05 | 1.80E+05 | 1.21E+00 |
| I-134 | 9.07E-04 | | | | | 1.66E-01 | 1.67E-01 | 2.50E+04 | 1.10E+03 | 7.34E-03 |
| I-135 | 2.36E-03 | | | | | 1.04E+00 | 1.04E+00 | 1.24E+05 | 3.10E+04 | 2.61E-01 |
| Particulate Iodines | | | | | | | | | | |
| I-131 | 1.55E-04 | | | | | 8.59E-02 | 8.61E-02 | 1.48E+06 | 1.10E+06 | 6.40E-02 |
| I-132 | 5.43E-05 | | | | | 1.71E-02 | 1.72E-02 | 5.35E+04 | 6.30E+03 | 2.02E-03 |
| I-133 | 2.86E-04 | | | | | 1.48E-01 | 1.48E-01 | 4.00E+05 | 1.80E+05 | 6.67E-02 |
| I-134 | 4.99E-05 | | | | | 9.13E-03 | 9.18E-03 | 2.50E+04 | 1.10E+03 | 4.04E-04 |
| I-135 | 1.30E-04 | | | | | 5.73E-02 | 5.74E-02 | 1.24E+05 | 3.10E+04 | 1.44E-02 |
| Organic Iodines | | | | | | | | | | |
| I-131 | 1.24E-04 | | | | | 6.87E-02 | 6.88E-02 | 1.48E+06 | 1.10E+06 | 5.12E-02 |
| I-132 | 4.34E-05 | | | | | 1.37E-02 | 1.37E-02 | 5.35E+04 | 6.30E+03 | 1.62E-03 |
| I-133 | 2.29E-04 | | | | | 1.18E-01 | 1.18E-01 | 4.00E+05 | 1.80E+05 | 5.32E-02 |
| I-134 | 3.99E-05 | | | | | 7.30E-03 | 7.34E-03 | 2.50E+04 | 1.10E+03 | 3.23E-04 |
| I-135 | 1.04E-04 | | | | | 4.59E-02 | 4.60E-02 | 1.24E+05 | 3.10E+04 | 1.15E-02 |
| | | | | | | | | | | |
| Total Dose | | | | | | | 6.35E+00 | | | 2.94E+00 |

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AXIDENT VER 2 MOD 4
PRODUCTION DATE 02/18/92
BEGIN EXECUTION DATE:  07/24/1997
BEGIN EXECUTION TIME:  11:16:31.36


 1 MSLB - 2000 CFM FILTERED, 136 CFM UNFILTERED
 2 2 2 1.0 1.0
 3 -2350 2.6E6 2.9865E5 2.9865E5
 4 0.0 0.0 0.0 1.0 6.6234E7 1.0 1.0
 5 33.0 2.592E6
 6 5.333E-7 0.0
 7 2*1.0
 8 2*0.0
 9 2*2136
10 2*1.0
11 2*1.0
12 2*0.0
13 2*0.0
14 2*0.0
15 2*0.0
16 2*0.0
17 2*0.0
18 2*0.0
19 2*0.0
20 2*0.0
21 1.0 1.0 1.0 0.1573 0.1573 0.1573
22 1.0 1.0 1.0
23 4712 45816 32269 90354 47115 0.0 0.0 0.0
24 8*0.0
```

1

MSLB - 2000 CFM FILTERED, 136 CFM UNFILTERED

INITIAL CONTAINMENT INVENTORY

| ISOTOPE | ACTIVITY (CURIES) |
|---|---|
| I-131 | 4.712E+03 |
| I-132 | 4.582E+04 |
| I-133 | 3.227E+04 |
| I-134 | 9.035E+04 |
| I-135 | 4.712E+04 |
| XE-131M | 0.000E+00 |
| XE-133M | 0.000E+00 |
| XE-133 | 0.000E+00 |
| XE-135M | 0.000E+00 |
| XE-135 | 0.000E+00 |
| XE-138 | 0.000E+00 |
| KR-83M | 0.000E+00 |
| KR-85M | 0.000E+00 |
| KR-85 | 0.000E+00 |
| KR-87 | 0.000E+00 |
| KR-88 | 0.000E+00 |

1 MSLB - 2000 CFM FILTERED, 136 CFM UNFILTERED

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .009 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=2136.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .000 | 1.000 | .157 |
| PARTICULATE | .000 | .000 | .000 | .000 | 1.000 | .157 |
| ORGANIC | .000 | .000 | .000 | .000 | 1.000 | .157 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.07E+03 | 0.00E+00 | 1.89E-02 | 2.99E-03 | 3.53E-07 | 9.69E+00 | 1.75E-03 | 8.55E-04 | 2.99E-03 | 3.45E-08 | 2.64E-07 |
| I-132 | 1.04E+04 | 0.00E+00 | 1.83E-01 | 2.90E-02 | 3.42E-06 | 3.40E+00 | 1.10E-01 | 1.89E-02 | 1.05E-03 | 1.83E-06 | 5.83E-06 |
| I-133 | 7.34E+03 | 0.00E+00 | 1.29E-01 | 2.04E-02 | 2.42E-06 | 1.79E+01 | 1.54E-02 | 1.26E-02 | 5.54E-03 | 3.74E-07 | 3.88E-06 |
| I-134 | 2.04E+04 | 0.00E+00 | 3.60E-01 | 5.68E-02 | 6.72E-06 | 3.13E+00 | 1.75E-01 | 3.77E-02 | 9.65E-04 | 3.85E-06 | 1.16E-05 |
| I-135 | 1.07E+04 | 0.00E+00 | 1.89E-01 | 2.98E-02 | 3.53E-06 | 8.11E+00 | 8.39E-02 | 1.34E-02 | 2.51E-03 | 1.09E-06 | 4.13E-06 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 5.89E+01 | 0.00E+00 | 1.04E-03 | 1.64E-04 | 1.94E-08 | 5.32E-01 | 9.61E-05 | 4.70E-05 | 1.64E-04 | 1.89E-09 | 1.45E-08 |
| I-132 | 5.71E+02 | 0.00E+00 | 1.01E-02 | 1.59E-03 | 1.88E-07 | 1.87E-01 | 6.04E-03 | 1.04E-03 | 5.77E-05 | 1.00E-07 | 3.20E-07 |
| I-133 | 4.03E+02 | 0.00E+00 | 7.10E-03 | 1.12E-03 | 1.33E-07 | 9.85E-01 | 8.46E-04 | 6.91E-04 | 3.04E-04 | 2.05E-08 | 2.13E-07 |
| I-134 | 1.12E+03 | 0.00E+00 | 1.98E-02 | 3.12E-03 | 3.69E-07 | 1.72E-01 | 9.60E-03 | 2.07E-03 | 5.30E-05 | 2.11E-07 | 6.40E-07 |
| I-135 | 5.88E+02 | 0.00E+00 | 1.04E-02 | 1.64E-03 | 1.94E-07 | 4.46E-01 | 4.61E-03 | 7.34E-04 | 1.38E-04 | 5.99E-08 | 2.27E-07 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 4.71E+01 | 0.00E+00 | 8.29E-04 | 1.31E-04 | 1.55E-08 | 4.26E-01 | 7.69E-05 | 3.76E-05 | 1.32E-04 | 1.51E-09 | 1.16E-08 |
| I-132 | 4.57E+02 | 0.00E+00 | 8.05E-03 | 1.27E-03 | 1.50E-07 | 1.49E-01 | 4.83E-03 | 8.30E-04 | 4.62E-05 | 8.03E-08 | 2.56E-07 |
| I-133 | 3.23E+02 | 0.00E+00 | 5.68E-03 | 8.98E-04 | 1.06E-07 | 7.88E-01 | 6.77E-04 | 5.52E-04 | 2.44E-04 | 1.64E-08 | 1.71E-07 |
| I-134 | 8.97E+02 | 0.00E+00 | 1.58E-02 | 2.50E-03 | 2.95E-07 | 1.37E-01 | 7.68E-03 | 1.66E-03 | 4.24E-05 | 1.69E-07 | 5.12E-07 |
| I-135 | 4.71E+02 | 0.00E+00 | 8.29E-03 | 1.31E-03 | 1.55E-07 | 3.57E-01 | 3.69E-03 | 5.87E-04 | 1.10E-04 | 4.79E-08 | 1.81E-07 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 4.64E+01 | 4.24E-01 | 9.16E-02 | 1.43E-02 | 7.88E-06 | 2.83E-05 |

1 MSLB - 2000 CFM FILTERED, 136 CFM UNFILTERED

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT 720.000 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=2136.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .000 | 1.000 | .157 |
| PARTICULATE | .000 | .000 | .000 | .000 | 1.000 | .157 |
| ORGANIC | .000 | .000 | .000 | .000 | 1.000 | .157 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 8.09E+01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.51E+00 | 1.74E-05 | 1.33E-04 |
| I-132 | 6.28E-91 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.13E-01 | 5.45E-04 | 1.74E-03 |
| I-133 | 3.49E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.61E+00 | 1.76E-04 | 1.83E-03 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.71E-01 | 6.81E-04 | 2.06E-03 |
| I-135 | 5.28E-29 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.03E+00 | 4.46E-04 | 1.69E-03 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 4.44E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.29E-02 | 9.54E-07 | 7.31E-06 |
| I-132 | 3.45E-92 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.72E-02 | 2.99E-05 | 9.55E-05 |
| I-133 | 1.92E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.44E-01 | 9.69E-06 | 1.01E-04 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.39E-03 | 3.74E-05 | 1.13E-04 |
| I-135 | 2.90E-30 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.64E-02 | 2.45E-05 | 9.28E-05 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 3.56E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.63E-02 | 7.63E-07 | 5.85E-06 |
| I-132 | 2.76E-92 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.38E-02 | 2.39E-05 | 7.64E-05 |
| I-133 | 1.54E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.15E-01 | 7.75E-06 | 8.05E-05 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.51E-03 | 2.99E-05 | 9.06E-05 |
| I-135 | 2.32E-30 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.51E-02 | 1.96E-05 | 7.42E-05 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.19E+00 | 2.05E-03 | 8.19E-03 |

| | | | | | | |
|---|---|---|---|---|---|---|
| TOTAL DOSES 0-30 DAYS | 4.64E+01 | 4.24E-01 | 9.16E-02 | 6.20E+00 | 2.06E-03 | 8.22E-03 |

1

MSLB - 2000 CFM FILTERED, 136 CFM UNFILTERED

| ISOTOPE | ACTIVITY RELEASED (CURIES) | | |
|---|---|---|---|
| | 0. HRS | 720. HRS | |
| ELEMENTAL | | | |
| I-131 | 1.89E-02 | 0.00E+00 | 1.89E-02 |
| I-132 | 1.83E-01 | 0.00E+00 | 1.83E-01 |
| I-133 | 1.29E-01 | 0.00E+00 | 1.29E-01 |
| I-134 | 3.60E-01 | 0.00E+00 | 3.60E-01 |
| I-135 | 1.89E-01 | 0.00E+00 | 1.89E-01 |
| PARTICULATE | | | |
| I-131 | 1.04E-03 | 0.00E+00 | 1.04E-03 |
| I-132 | 1.01E-02 | 0.00E+00 | 1.01E-02 |
| I-133 | 7.10E-03 | 0.00E+00 | 7.10E-03 |
| I-134 | 1.98E-02 | 0.00E+00 | 1.98E-02 |
| I-135 | 1.04E-02 | 0.00E+00 | 1.04E-02 |
| ORGANIC | | | |
| I-131 | 8.29E-04 | 0.00E+00 | 8.29E-04 |
| I-132 | 8.05E-03 | 0.00E+00 | 8.05E-03 |
| I-133 | 5.68E-03 | 0.00E+00 | 5.68E-03 |
| I-134 | 1.58E-02 | 0.00E+00 | 1.58E-02 |
| I-135 | 8.29E-03 | 0.00E+00 | 8.29E-03 |
| NOBLE GASES | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

END EXECUTION DATE: 07/24/1997
END EXECUTION TIME: 11:16:31.47

| | 33 secs | 2 hrs | 8 hrs | 24 hrs | 4 days | 30 days | Total w/ Axident DCFs | Axident DCF | ICRP 30 DCF | Total w/ ICRP 30 DCFs |
|---|---|---|---|---|---|---|---|---|---|---|
| Elemental Iodines | | | | | | | | | | |
| I-131 | 2.99E-03 | | | | | 1.51E+00 | 1.51E+00 | 1.48E+06 | 1.10E+06 | 1.12E+00 |
| I-132 | 1.05E-03 | | | | | 3.13E-01 | 3.14E-01 | 5.35E+04 | 6.30E+03 | 3.70E-02 |
| I-133 | 5.54E-03 | | | | | 2.61E+00 | 2.62E+00 | 4.00E+05 | 1.80E+05 | 1.18E+00 |
| I-134 | 9.65E-04 | | | | | 1.71E-01 | 1.72E-01 | 2.50E+04 | 1.10E+03 | 7.57E-03 |
| I-135 | 2.51E-03 | | | | | 1.03E+00 | 1.03E+00 | 1.24E+05 | 3.10E+04 | 2.58E-01 |
| Particulate Iodines | | | | | | | | | | |
| I-131 | 1.64E-04 | | | | | 8.29E-02 | 8.31E-02 | 1.48E+06 | 1.10E+06 | 6.17E-02 |
| I-132 | 5.77E-05 | | | | | 1.72E-02 | 1.73E-02 | 5.35E+04 | 6.30E+03 | 2.03E-03 |
| I-133 | 3.04E-04 | | | | | 1.44E-01 | 1.44E-01 | 4.00E+05 | 1.80E+05 | 6.49E-02 |
| I-134 | 5.30E-05 | | | | | 9.39E-03 | 9.44E-03 | 2.50E+04 | 1.10E+03 | 4.15E-04 |
| I-135 | 1.38E-04 | | | | | 5.64E-02 | 5.65E-02 | 1.24E+05 | 3.10E+04 | 1.41E-02 |
| Organic Iodines | | | | | | | | | | |
| I-131 | 1.32E-04 | | | | | 6.63E-02 | 6.64E-02 | 1.48E+06 | 1.10E+06 | 4.94E-02 |
| I-132 | 4.62E-05 | | | | | 1.38E-02 | 1.38E-02 | 5.35E+04 | 6.30E+03 | 1.63E-03 |
| I-133 | 2.44E-04 | | | | | 1.15E-01 | 1.15E-01 | 4.00E+05 | 1.80E+05 | 5.19E-02 |
| I-134 | 4.24E-05 | | | | | 7.51E-03 | 7.55E-03 | 2.50E+04 | 1.10E+03 | 3.32E-04 |
| I-135 | 1.10E-04 | | | | | 4.51E-02 | 4.52E-02 | 1.24E+05 | 3.10E+04 | 1.13E-02 |
| | | | | | | | | | | |
| Total Dose | | | | | | | 6.21E+00 | | | 2.86E+00 |

```
AXIDENT VER 2 MOD 4
PRODUCTION DATE 02/18/92
BEGIN EXECUTION DATE:  07/24/1997
BEGIN EXECUTION TIME:  11:16:45.09



 1 MSLB - 2200 CFM FILTERED, 136 CFM UNFILTERED
 2 2 2 1.0 1.0
 3 -2350 2.6E6 2.9865E5 2.9865E5
 4 0.0 0.0 0.0 1.0 6.6234E7 1.0 1.0
 5 33.0 2.592E6
 6 5.333E-7 0.0
 7 2*1.0
 8 2*0.0
 9 2*2336
10 2*1.0
11 2*1.0
12 2*0.0
13 2*0.0
14 2*0.0
15 2*0.0
16 2*0.0
17 2*0.0
18 2*0.0
19 2*0.0
20 2*0.0
21 1.0 1.0 1.0 0.1524 0.1524 0.1524
22 1.0 1.0 1.0
23 4712 45816 32269 90354 47115 0.0 0.0 0.0
24 8*0.0
```

1

MSLB - 2200 CFM FILTERED, 136 CFM UNFILTERED

INITIAL CONTAINMENT INVENTORY

| ISOTOPE | ACTIVITY (CURIES) |
|---|---|
| I-131 | 4.712E+03 |
| I-132 | 4.582E+04 |
| I-133 | 3.227E+04 |
| I-134 | 9.035E+04 |
| I-135 | 4.712E+04 |
| XE-131M | 0.000E+00 |
| XE-133M | 0.000E+00 |
| XE-133 | 0.000E+00 |
| XE-135M | 0.000E+00 |
| XE-135 | 0.000E+00 |
| XE-138 | 0.000E+00 |
| KR-83M | 0.000E+00 |
| KR-85M | 0.000E+00 |
| KR-85 | 0.000E+00 |
| KR-87 | 0.000E+00 |
| KR-88 | 0.000E+00 |

1 MSLB - 2200 CFM FILTERED, 136 CFM UNFILTERED

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .009 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=2336.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .000 | 1.000 | .152 |
| PARTICULATE | .000 | .000 | .000 | .000 | 1.000 | .152 |
| ORGANIC | .000 | .000 | .000 | .000 | 1.000 | .152 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.07E+03 | 0.00E+00 | 1.89E-02 | 3.16E-03 | 3.74E-07 | 9.69E+00 | 1.75E-03 | 8.55E-04 | 3.17E-03 | 3.65E-08 | 2.80E-07 |
| I-132 | 1.04E+04 | 0.00E+00 | 1.83E-01 | 3.07E-02 | 3.63E-06 | 3.40E+00 | 1.10E-01 | 1.89E-02 | 1.11E-03 | 1.93E-06 | 6.18E-06 |
| I-133 | 7.34E+03 | 0.00E+00 | 1.29E-01 | 2.17E-02 | 2.56E-06 | 1.79E+01 | 1.54E-02 | 1.26E-02 | 5.87E-03 | 3.96E-07 | 4.11E-06 |
| I-134 | 2.04E+04 | 0.00E+00 | 3.60E-01 | 6.02E-02 | 7.12E-06 | 3.13E+00 | 1.75E-01 | 3.77E-02 | 1.02E-03 | 4.08E-06 | 1.23E-05 |
| I-135 | 1.07E+04 | 0.00E+00 | 1.89E-01 | 3.16E-02 | 3.74E-06 | 8.11E+00 | 8.39E-02 | 1.34E-02 | 2.66E-03 | 1.16E-06 | 4.37E-06 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 5.89E+01 | 0.00E+00 | 1.04E-03 | 1.74E-04 | 2.05E-08 | 5.32E-01 | 9.61E-05 | 4.70E-05 | 1.74E-04 | 2.01E-09 | 1.54E-08 |
| I-132 | 5.71E+02 | 0.00E+00 | 1.01E-02 | 1.69E-03 | 1.99E-07 | 1.87E-01 | 6.04E-03 | 1.04E-03 | 6.11E-05 | 1.06E-07 | 3.39E-07 |
| I-133 | 4.03E+02 | 0.00E+00 | 7.10E-03 | 1.19E-03 | 1.41E-07 | 9.85E-01 | 8.46E-04 | 6.91E-04 | 3.22E-04 | 2.18E-08 | 2.26E-07 |
| I-134 | 1.12E+03 | 0.00E+00 | 1.98E-02 | 3.31E-03 | 3.91E-07 | 1.72E-01 | 9.60E-03 | 2.07E-03 | 5.62E-05 | 2.24E-07 | 6.78E-07 |
| I-135 | 5.88E+02 | 0.00E+00 | 1.04E-02 | 1.74E-03 | 2.05E-07 | 4.46E-01 | 4.61E-03 | 7.34E-04 | 1.46E-04 | 6.35E-08 | 2.40E-07 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 4.71E+01 | 0.00E+00 | 8.29E-04 | 1.39E-04 | 1.64E-08 | 4.26E-01 | 7.69E-05 | 3.76E-05 | 1.39E-04 | 1.60E-09 | 1.23E-08 |
| I-132 | 4.57E+02 | 0.00E+00 | 8.05E-03 | 1.35E-03 | 1.59E-07 | 1.49E-01 | 4.83E-03 | 8.30E-04 | 4.89E-05 | 8.50E-08 | 2.71E-07 |
| I-133 | 3.23E+02 | 0.00E+00 | 5.68E-03 | 9.52E-04 | 1.13E-07 | 7.88E-01 | 6.77E-04 | 5.52E-04 | 2.58E-04 | 1.74E-08 | 1.81E-07 |
| I-134 | 8.97E+02 | 0.00E+00 | 1.58E-02 | 2.65E-03 | 3.13E-07 | 1.37E-01 | 7.68E-03 | 1.66E-03 | 4.49E-05 | 1.79E-07 | 5.42E-07 |
| I-135 | 4.71E+02 | 0.00E+00 | 8.29E-03 | 1.39E-03 | 1.64E-07 | 3.57E-01 | 3.69E-03 | 5.87E-04 | 1.17E-04 | 5.08E-08 | 1.92E-07 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 4.64E+01 | 4.24E-01 | 9.16E-02 | 1.52E-02 | 8.35E-06 | 3.00E-05 |

1 MSLB - 2200 CFM FILTERED, 136 CFM UNFILTERED

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT 720.000 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=2336.0 CFM

X/Q CONT RGOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .000 | 1.000 | .152 |
| PARTICULATE | .000 | .000 | .000 | .000 | 1.000 | .152 |
| ORGANIC | .000 | .000 | .000 | .000 | 1.000 | .152 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 8.09E+01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.46E+00 | 1.68E-05 | 1.29E-04 |
| I-132 | 6.28E-91 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.15E-01 | 5.47E-04 | 1.75E-03 |
| I-133 | 3.49E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.55E+00 | 1.72E-04 | 1.79E-03 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.75E-01 | 6.99E-04 | 2.11E-03 |
| I-135 | 5.28E-29 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.01E+00 | 4.40E-04 | 1.66E-03 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 4.44E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.03E-02 | 9.25E-07 | 7.09E-06 |
| I-132 | 3.45E-92 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.73E-02 | 3.00E-05 | 9.59E-05 |
| I-133 | 1.92E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.40E-01 | 9.44E-06 | 9.81E-05 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.63E-03 | 3.84E-05 | 1.16E-04 |
| I-135 | 2.90E-30 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.55E-02 | 2.42E-05 | 9.14E-05 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 3.56E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.43E-02 | 7.40E-07 | 5.67E-06 |
| I-132 | 2.76E-92 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.38E-02 | 2.40E-05 | 7.67E-05 |
| I-133 | 1.54E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.12E-01 | 7.55E-06 | 7.85E-05 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.70E-03 | 3.07E-05 | 9.29E-05 |
| I-135 | 2.32E-30 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.44E-02 | 1.93E-05 | 7.31E-05 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.05E+00 | 2.06E-03 | 8.17E-03 |

| | | | | | | |
|---|---|---|---|---|---|---|
| TOTAL DOSES 0-30 DAYS | 4.64E+01 | 4.24E-01 | 9.16E-02 | 6.07E+00 | 2.07E-03 | 8.20E-03 |

1

MSLB - 2200 CFM FILTERED, 136 CFM UNFILTERED

| ISOTOPE | ACTIVITY RELEASED (CURIES) | | |
|---|---|---|---|
| | 0. HRS | 720. HRS | |
| ELEMENTAL | | | |
| I-131 | 1.89E-02 | 0.00E+00 | 1.89E-02 |
| I-132 | 1.83E-01 | 0.00E+00 | 1.83E-01 |
| I-133 | 1.29E-01 | 0.00E+00 | 1.29E-01 |
| I-134 | 3.60E-01 | 0.00E+00 | 3.60E-01 |
| I-135 | 1.89E-01 | 0.00E+00 | 1.89E-01 |
| PARTICULATE | | | |
| I-131 | 1.04E-03 | 0.00E+00 | 1.04E-03 |
| I-132 | 1.01E-02 | 0.00E+00 | 1.01E-02 |
| I-133 | 7.10E-03 | 0.00E+00 | 7.10E-03 |
| I-134 | 1.98E-02 | 0.00E+00 | 1.98E-02 |
| I-135 | 1.04E-02 | 0.00E+00 | 1.04E-02 |
| ORGANIC | | | |
| I-131 | 8.29E-04 | 0.00E+00 | 8.29E-04 |
| I-132 | 8.05E-03 | 0.00E+00 | 8.05E-03 |
| I-133 | 5.68E-03 | 0.00E+00 | 5.68E-03 |
| I-134 | 1.58E-02 | 0.00E+00 | 1.58E-02 |
| I-135 | 8.29E-03 | 0.00E+00 | 8.29E-03 |
| NOBLE GASES | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

END EXECUTION DATE: 07/24/1997
END EXECUTION TIME: 11:16:45.20

| | 33 secs | 2 hrs | 8 hrs | 24 hrs | 4 days | 30 days | Total w/ Axident DCFs | Axident DCF | ICRP 30 DCF | Total w/ ICRP 30 DCFs |
|---|---|---|---|---|---|---|---|---|---|---|
| Elemental Iodines | | | | | | | | | | |
| I-131 | 3.17E-03 | | | | | 1.46E+00 | 1.46E+00 | 1.48E+06 | 1.10E+06 | 1.09E+00 |
| I-132 | 1.11E-03 | | | | | 3.15E-01 | 3.16E-01 | 5.35E+04 | 6.30E+03 | 3.72E-02 |
| I-133 | 5.87E-03 | | | | | 2.55E+00 | 2.56E+00 | 4.00E+05 | 1.80E+05 | 1.15E+00 |
| I-134 | 1.02E-03 | | | | | 1.75E-01 | 1.76E-01 | 2.50E+04 | 1.10E+03 | 7.74E-03 |
| I-135 | 2.66E-03 | | | | | 1.01E+00 | 1.01E+00 | 1.24E+05 | 3.10E+04 | 2.53E-01 |
| Particulate Iodines | | | | | | | | | | |
| I-131 | 1.74E-04 | | | | | 8.03E-02 | 8.05E-02 | 1.48E+06 | 1.10E+06 | 5.98E-02 |
| I-132 | 6.11E-05 | | | | | 1.73E-02 | 1.74E-02 | 5.35E+04 | 6.30E+03 | 2.04E-03 |
| I-133 | 3.22E-04 | | | | | 1.40E-01 | 1.40E-01 | 4.00E+05 | 1.80E+05 | 6.31E-02 |
| I-134 | 5.62E-05 | | | | | 9.63E-03 | 9.69E-03 | 2.50E+04 | 1.10E+03 | 4.26E-04 |
| I-135 | 1.46E-04 | | | | | 5.55E-02 | 5.56E-02 | 1.24E+05 | 3.10E+04 | 1.39E-02 |
| Organic Iodines | | | | | | | | | | |
| I-131 | 1.39E-04 | | | | | 6.43E-02 | 6.44E-02 | 1.48E+06 | 1.10E+06 | 4.79E-02 |
| I-132 | 4.89E-05 | | | | | 1.38E-02 | 1.38E-02 | 5.35E+04 | 6.30E+03 | 1.63E-03 |
| I-133 | 2.58E-04 | | | | | 1.12E-01 | 1.12E-01 | 4.00E+05 | 1.80E+05 | 5.05E-02 |
| I-134 | 4.49E-05 | | | | | 7.70E-03 | 7.74E-03 | 2.50E+04 | 1.10E+03 | 3.41E-04 |
| I-135 | 1.17E-04 | | | | | 4.44E-02 | 4.45E-02 | 1.24E+05 | 3.10E+04 | 1.11E-02 |
| | | | | | | | | | | |
| Total Dose | | | | | | | 6.07E+00 | | | 2.79E+00 |

```
AXIDENT VER 2 MOD 4
PRODUCTION DATE 02/18/92
BEGIN EXECUTION DATE:  07/24/1997
BEGIN EXECUTION TIME:  11:16:58.00


 1 MSLB - 1800 CFM FILTERED, 3000 CFM UNFILTERED
 2 2 2 1.0 1.0
 3 -2350 2.6E6 2.9865E5 2.9865E5
 4 0.0 0.0 0.0 1.0 6.6234E7 1.0 1.0
 5 33.0 2.592E6
 6 5.333E-7 0.0
 7 2*1.0
 8 2*0.0
 9 2*4800
10 2*1.0
11 2*1.0
12 2*0.0
13 2*0.0
14 2*0.0
15 2*0.0
16 2*0.0
17 2*0.0
18 2*0.0
19 2*0.0
20 2*0.0
21 1.0 1.0 1.0 0.6625 0.6625 0.6625
22 1.0 1.0 1.0
23 4712 45816 32269 90354 47115 0.0 0.0 0.0
24 8*0.0
```

1

MSLB - 1800 CFM FILTERED, 3000 CFM UNFILTERED

INITIAL CONTAINMENT INVENTORY

| ISOTOPE | ACTIVITY (CURIES) |
|---|---|
| I-131 | 4.712E+03 |
| I-132 | 4.582E+04 |
| I-133 | 3.227E+04 |
| I-134 | 9.035E+04 |
| I-135 | 4.712E+04 |
| XE-131M | 0.000E+00 |
| XE-133M | 0.000E+00 |
| XE-133 | 0.000E+00 |
| XE-135M | 0.000E+00 |
| XE-135 | 0.000E+00 |
| XE-138 | 0.000E+00 |
| KR-83M | 0.000E+00 |
| KR-85M | 0.000E+00 |
| KR-85 | 0.000E+00 |
| KR-87 | 0.000E+00 |
| KR-88 | 0.000E+00 |

1 MSLB - 1800 CFM FILTERED, 3000 CFM UNFILTERED

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .009 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=4800.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .000 | 1.000 | .663 |
| PARTICULATE | .000 | .000 | .000 | .000 | 1.000 | .663 |
| ORGANIC | .000 | .000 | .000 | .000 | 1.000 | .663 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.07E+03 | 0.00E+00 | 1.89E-02 | 2.82E-02 | 3.33E-06 | 9.69E+00 | 1.75E-03 | 8.55E-04 | 2.83E-02 | 3.26E-07 | 2.50E-06 |
| I-132 | 1.04E+04 | 0.00E+00 | 1.83E-01 | 2.73E-01 | 3.23E-05 | 3.40E+00 | 1.10E-01 | 1.89E-02 | 9.92E-03 | 1.73E-05 | 5.51E-05 |
| I-133 | 7.34E+03 | 0.00E+00 | 1.29E-01 | 1.93E-01 | 2.28E-05 | 1.79E+01 | 1.54E-02 | 1.26E-02 | 5.23E-02 | 3.53E-06 | 3.67E-05 |
| I-134 | 2.04E+04 | 0.00E+00 | 3.60E-01 | 5.37E-01 | 6.34E-05 | 3.13E+00 | 1.75E-01 | 3.77E-02 | 9.12E-03 | 3.64E-05 | 1.10E-04 |
| I-135 | 1.07E+04 | 0.00E+00 | 1.89E-01 | 2.82E-01 | 3.33E-05 | 8.11E+00 | 8.39E-02 | 1.34E-02 | 2.37E-02 | 1.03E-05 | 3.90E-05 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 5.89E+01 | 0.00E+00 | 1.04E-03 | 1.55E-03 | 1.83E-07 | 5.32E-01 | 9.61E-05 | 4.70E-05 | 1.55E-03 | 1.79E-08 | 1.37E-07 |
| I-132 | 5.71E+02 | 0.00E+00 | 1.01E-02 | 1.50E-02 | 1.78E-06 | 1.87E-01 | 6.04E-03 | 1.04E-03 | 5.45E-04 | 9.48E-07 | 3.03E-06 |
| I-133 | 4.03E+02 | 0.00E+00 | 7.10E-03 | 1.06E-02 | 1.25E-06 | 9.85E-01 | 8.46E-04 | 6.91E-04 | 2.88E-03 | 1.94E-07 | 2.02E-06 |
| I-134 | 1.12E+03 | 0.00E+00 | 1.98E-02 | 2.95E-02 | 3.49E-06 | 1.72E-01 | 9.60E-03 | 2.07E-03 | 5.01E-04 | 2.00E-06 | 6.04E-06 |
| I-135 | 5.88E+02 | 0.00E+00 | 1.04E-02 | 1.55E-02 | 1.83E-06 | 4.46E-01 | 4.61E-03 | 7.34E-04 | 1.30E-03 | 5.66E-07 | 2.14E-06 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 4.71E+01 | 0.00E+00 | 8.29E-04 | 1.24E-03 | 1.47E-07 | 4.26E-01 | 7.69E-05 | 3.76E-05 | 1.24E-03 | 1.43E-08 | 1.10E-07 |
| I-132 | 4.57E+02 | 0.00E+00 | 8.05E-03 | 1.20E-02 | 1.42E-06 | 1.49E-01 | 4.83E-03 | 8.30E-04 | 4.36E-04 | 7.58E-07 | 2.42E-06 |
| I-133 | 3.23E+02 | 0.00E+00 | 5.68E-03 | 8.48E-03 | 1.00E-06 | 7.88E-01 | 6.77E-04 | 5.52E-04 | 2.30E-03 | 1.55E-07 | 1.61E-06 |
| I-134 | 8.97E+02 | 0.00E+00 | 1.58E-02 | 2.36E-02 | 2.79E-06 | 1.37E-01 | 7.68E-03 | 1.66E-03 | 4.01E-04 | 1.60E-06 | 4.83E-06 |
| I-135 | 4.71E+02 | 0.00E+00 | 8.29E-03 | 1.24E-02 | 1.46E-06 | 3.57E-01 | 3.69E-03 | 5.87E-04 | 1.04E-03 | 4.53E-07 | 1.71E-06 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 4.64E+01 | 4.24E-01 | 9.16E-02 | 1.36E-01 | 7.45E-05 | 2.67E-04 |

1 MSLB - 1800 CFM FILTERED, 3000 CFM UNFILTERED

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT 720.000 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=4800.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .000 | 1.000 | .663 |
| PARTICULATE | .000 | .000 | .000 | .000 | 1.000 | .663 |
| ORGANIC | .000 | .000 | .000 | .000 | 1.000 | .663 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 8.09E+01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.37E+00 | 7.33E-05 | 5.62E-04 |
| I-132 | 6.28E-91 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.71E+00 | 2.97E-03 | 9.47E-03 |
| I-133 | 3.49E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.14E+01 | 7.71E-04 | 8.01E-03 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.12E+00 | 4.48E-03 | 1.36E-02 |
| I-135 | 5.28E-29 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.83E+00 | 2.10E-03 | 7.95E-03 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 4.44E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.50E-01 | 4.03E-06 | 3.09E-05 |
| I-132 | 3.45E-92 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.38E-02 | 1.63E-04 | 5.20E-04 |
| I-133 | 1.92E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.28E-01 | 4.24E-05 | 4.40E-04 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.17E-02 | 2.46E-04 | 7.45E-04 |
| I-135 | 2.90E-30 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.65E-01 | 1.16E-04 | 4.37E-04 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 3.56E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.80E-01 | 3.22E-06 | 2.47E-05 |
| I-132 | 2.76E-92 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.50E-02 | 1.30E-04 | 4.16E-04 |
| I-133 | 1.54E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.03E-01 | 3.39E-05 | 3.52E-04 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.94E-02 | 1.97E-04 | 5.96E-04 |
| I-135 | 2.32E-30 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.12E-01 | 9.24E-05 | 3.50E-04 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.80E+01 | 1.14E-02 | 4.35E-02 |

| | | | | | | |
|---|---|---|---|---|---|---|
| TOTAL DOSES 0-30 DAYS | 4.64E+01 | 4.24E-01 | 9.16E-02 | 2.81E+01 | 1.15E-02 | 4.37E-02 |

1

MSLB - 1800 CFM FILTERED, 3000 CFM UNFILTERED

| ISOTOPE | ACTIVITY RELEASED (CURIES) | | |
|---|---|---|---|
| | 0. HRS | 720. HRS | |
| ELEMENTAL | | | |
| I-131 | 1.89E-02 | 0.00E+00 | 1.89E-02 |
| I-132 | 1.83E-01 | 0.00E+00 | 1.83E-01 |
| I-133 | 1.29E-01 | 0.00E+00 | 1.29E-01 |
| I-134 | 3.60E-01 | 0.00E+00 | 3.60E-01 |
| I-135 | 1.89E-01 | 0.00E+00 | 1.89E-01 |
| PARTICULATE | | | |
| I-131 | 1.04E-03 | 0.00E+00 | 1.04E-03 |
| I-132 | 1.01E-02 | 0.00E+00 | 1.01E-02 |
| I-133 | 7.10E-03 | 0.00E+00 | 7.10E-03 |
| I-134 | 1.98E-02 | 0.00E+00 | 1.98E-02 |
| I-135 | 1.04E-02 | 0.00E+00 | 1.04E-02 |
| ORGANIC | | | |
| I-131 | 8.29E-04 | 0.00E+00 | 8.29E-04 |
| I-132 | 8.05E-03 | 0.00E+00 | 8.05E-03 |
| I-133 | 5.68E-03 | 0.00E+00 | 5.68E-03 |
| I-134 | 1.58E-02 | 0.00E+00 | 1.58E-02 |
| I-135 | 8.29E-03 | 0.00E+00 | 8.29E-03 |
| NOBLE GASES | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

END EXECUTION DATE: 07/24/1997
END EXECUTION TIME: 11:16:58.17

| | 33 secs | 2 hrs | 8 hrs | 24 hrs | 4 days | 30 days | Total w/ Axident DCFs | Axident DCF | ICRP 30 DCF | Total w/ ICRP 30 DCFs |
|---|---|---|---|---|---|---|---|---|---|---|
| Elemental Iodines | | | | | | | | | | |
| I-131 | 2.83E-02 | | | | | 6.37E+00 | 6.40E+00 | 1.48E+06 | 1.10E+06 | 4.76E+00 |
| I-132 | 9.92E-03 | | | | | 1.71E+00 | 1.72E+00 | 5.35E+04 | 6.30E+03 | 2.03E-01 |
| I-133 | 5.23E-02 | | | | | 1.14E+01 | 1.15E+01 | 4.00E+05 | 1.80E+05 | 5.15E+00 |
| I-134 | 9.12E-03 | | | | | 1.12E+00 | 1.13E+00 | 2.50E+04 | 1.10E+03 | 4.97E-02 |
| I-135 | 2.37E-02 | | | | | 4.83E+00 | 4.85E+00 | 1.24E+05 | 3.10E+04 | 1.21E+00 |
| Particulate Iodines | | | | | | | | | | |
| I-131 | 1.55E-03 | | | | | 3.50E-01 | 3.52E-01 | 1.48E+06 | 1.10E+06 | 2.61E-01 |
| I-132 | 5.45E-04 | | | | | 9.38E-02 | 9.43E-02 | 5.35E+04 | 6.30E+03 | 1.11E-02 |
| I-133 | 2.88E-03 | | | | | 6.28E-01 | 6.31E-01 | 4.00E+05 | 1.80E+05 | 2.84E-01 |
| I-134 | 5.01E-04 | | | | | 6.17E-02 | 6.22E-02 | 2.50E+04 | 1.10E+03 | 2.74E-03 |
| I-135 | 1.30E-03 | | | | | 2.65E-01 | 2.66E-01 | 1.24E+05 | 3.10E+04 | 6.66E-02 |
| Organic Iodines | | | | | | | | | | |
| I-131 | 1.24E-03 | | | | | 2.80E-01 | 2.81E-01 | 1.48E+06 | 1.10E+06 | 2.09E-01 |
| I-132 | 4.36E-04 | | | | | 7.50E-02 | 7.54E-02 | 5.35E+04 | 6.30E+03 | 8.88E-03 |
| I-133 | 2.30E-03 | | | | | 5.03E-01 | 5.05E-01 | 4.00E+05 | 1.80E+05 | 2.27E-01 |
| I-134 | 4.01E-04 | | | | | 4.94E-02 | 4.98E-02 | 2.50E+04 | 1.10E+03 | 2.19E-03 |
| I-135 | 1.04E-03 | | | | | 2.12E-01 | 2.13E-01 | 1.24E+05 | 3.10E+04 | 5.33E-02 |
| | | | | | | | | | | |
| Total Dose | | | | | | | 2.81E+01 | | | 1.25E+01 |

```
AXIDENT VER 2 MOD 4
PRODUCTION DATE 02/18/92
BEGIN EXECUTION DATE:  07/24/1997
BEGIN EXECUTION TIME:  11:17:08.49


 1 MSLB - 2000 CFM FILTERED, 3000 CFM UNFILTERED
 2 2 2 1.0 1.0
 3 -2350 2.6E6 2.9865E5 2.9865E5
 4 0.0 0.0 0.0 1.0 6.6234E7 1.0 1.0
 5 33.0 2.592E6
 6 5.333E-7 0.0
 7 2*1.0
 8 2*0.0
 9 2*5000
10 2*1.0
11 2*1.0
12 2*0.0
13 2*0.0
14 2*0.0
15 2*0.0
16 2*0.0
17 2*0.0
18 2*0.0
19 2*0.0
20 2*0.0
21 1.0 1.0 1.0 0.64 0.64 0.64
22 1.0 1.0 1.0
23 4712 45816 32269 90354 47115 0.0 0.0 0.0
24 8*0.0
```

1

MSLB - 2000 CFM FILTERED, 3000 CFM UNFILTERED

INITIAL CONTAINMENT INVENTORY

| ISOTOPE | ACTIVITY (CURIES) |
|---|---|
| I-131 | 4.712E+03 |
| I-132 | 4.582E+04 |
| I-133 | 3.227E+04 |
| I-134 | 9.035E+04 |
| I-135 | 4.712E+04 |
| XE-131M | 0.000E+00 |
| XE-133M | 0.000E+00 |
| XE-133 | 0.000E+00 |
| XE-135M | 0.000E+00 |
| XE-135 | 0.000E+00 |
| XE-138 | 0.000E+00 |
| KR-83M | 0.000E+00 |
| KR-85M | 0.000E+00 |
| KR-85 | 0.000E+00 |
| KR-87 | 0.000E+00 |
| KR-88 | 0.000E+00 |

1 MSLB - 2000 CFM FILTERED, 3000 CFM UNFILTERED

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .009 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=5000.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .000 | 1.000 | .640 |
| PARTICULATE | .000 | .000 | .000 | .000 | 1.000 | .640 |
| ORGANIC | .000 | .000 | .000 | .000 | 1.000 | .640 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.07E+03 | 0.00E+00 | 1.89E-02 | 2.84E-02 | 3.35E-06 | 9.69E+00 | 1.75E-03 | 8.55E-04 | 2.85E-02 | 3.28E-07 | 2.51E-06 |
| I-132 | 1.04E+04 | 0.00E+00 | 1.83E-01 | 2.75E-01 | 3.25E-05 | 3.40E+00 | 1.10E-01 | 1.89E-02 | 9.99E-03 | 1.74E-05 | 5.54E-05 |
| I-133 | 7.34E+03 | 0.00E+00 | 1.29E-01 | 1.94E-01 | 2.30E-05 | 1.79E+01 | 1.54E-02 | 1.26E-02 | 5.27E-02 | 3.55E-06 | 3.69E-05 |
| I-134 | 2.04E+04 | 0.00E+00 | 3.60E-01 | 5.40E-01 | 6.38E-05 | 3.13E+00 | 1.75E-01 | 3.77E-02 | 9.17E-03 | 3.66E-05 | 1.11E-04 |
| I-135 | 1.07E+04 | 0.00E+00 | 1.89E-01 | 2.83E-01 | 3.35E-05 | 8.11E+00 | 8.39E-02 | 1.34E-02 | 2.38E-02 | 1.04E-05 | 3.92E-05 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 5.89E+01 | 0.00E+00 | 1.04E-03 | 1.56E-03 | 1.84E-07 | 5.32E-01 | 9.61E-05 | 4.70E-05 | 1.56E-03 | 1.80E-08 | 1.38E-07 |
| I-132 | 5.71E+02 | 0.00E+00 | 1.01E-02 | 1.51E-02 | 1.79E-06 | 1.87E-01 | 6.04E-03 | 1.04E-03 | 5.49E-04 | 9.54E-07 | 3.05E-06 |
| I-133 | 4.03E+02 | 0.00E+00 | 7.10E-03 | 1.07E-02 | 1.26E-06 | 9.85E-01 | 8.46E-04 | 6.91E-04 | 2.89E-03 | 1.95E-07 | 2.03E-06 |
| I-134 | 1.12E+03 | 0.00E+00 | 1.98E-02 | 2.97E-02 | 3.51E-06 | 1.72E-01 | 9.60E-03 | 2.07E-03 | 5.04E-04 | 2.01E-06 | 6.08E-06 |
| I-135 | 5.88E+02 | 0.00E+00 | 1.04E-02 | 1.56E-02 | 1.84E-06 | 4.46E-01 | 4.61E-03 | 7.34E-04 | 1.31E-03 | 5.70E-07 | 2.16E-06 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 4.71E+01 | 0.00E+00 | 8.29E-04 | 1.25E-03 | 1.47E-07 | 4.26E-01 | 7.69E-05 | 3.76E-05 | 1.25E-03 | 1.44E-08 | 1.10E-07 |
| I-132 | 4.57E+02 | 0.00E+00 | 8.05E-03 | 1.21E-02 | 1.43E-06 | 1.49E-01 | 4.83E-03 | 8.30E-04 | 4.39E-04 | 7.63E-07 | 2.44E-06 |
| I-133 | 3.23E+02 | 0.00E+00 | 5.68E-03 | 8.53E-03 | 1.01E-06 | 7.88E-01 | 6.77E-04 | 5.52E-04 | 2.32E-03 | 1.56E-07 | 1.62E-06 |
| I-134 | 8.97E+02 | 0.00E+00 | 1.58E-02 | 2.37E-02 | 2.81E-06 | 1.37E-01 | 7.68E-03 | 1.66E-03 | 4.03E-04 | 1.61E-06 | 4.86E-06 |
| I-135 | 4.71E+02 | 0.00E+00 | 8.29E-03 | 1.25E-02 | 1.47E-06 | 3.57E-01 | 3.69E-03 | 5.87E-04 | 1.05E-03 | 4.56E-07 | 1.72E-06 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 4.64E+01 | 4.24E-01 | 9.16E-02 | 1.36E-01 | 7.49E-05 | 2.69E-04 |

1 MSLB - 2000 CFM FILTERED, 3000 CFM UNFILTERED

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT 720.000 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=5000.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .000 | 1.000 | .640 |
| PARTICULATE | .000 | .000 | .000 | .000 | 1.000 | .640 |
| ORGANIC | .000 | .000 | .000 | .000 | 1.000 | .640 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 8.09E+01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.15E+00 | 7.08E-05 | 5.43E-04 |
| I-132 | 6.28E-91 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.66E+00 | 2.89E-03 | 9.24E-03 |
| I-133 | 3.49E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.11E+01 | 7.46E-04 | 7.75E-03 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.11E+00 | 4.41E-03 | 1.33E-02 |
| I-135 | 5.28E-29 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.68E+00 | 2.04E-03 | 7.71E-03 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 4.44E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.38E-01 | 3.89E-06 | 2.98E-05 |
| I-132 | 3.45E-92 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.14E-02 | 1.59E-04 | 5.08E-04 |
| I-133 | 1.92E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.08E-01 | 4.10E-05 | 4.26E-04 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.07E-02 | 2.42E-04 | 7.33E-04 |
| I-135 | 2.90E-30 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.57E-01 | 1.12E-04 | 4.24E-04 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 3.56E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.70E-01 | 3.11E-06 | 2.39E-05 |
| I-132 | 2.76E-92 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.32E-02 | 1.27E-04 | 4.06E-04 |
| I-133 | 1.54E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.86E-01 | 3.28E-05 | 3.41E-04 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.86E-02 | 1.94E-04 | 5.86E-04 |
| I-135 | 2.32E-30 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.06E-01 | 8.96E-05 | 3.39E-04 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.71E+01 | 1.12E-02 | 4.24E-02 |

| | | | | | | |
|---|---|---|---|---|---|---|
| TOTAL DOSES 0-30 DAYS | 4.64E+01 | 4.24E-01 | 9.16E-02 | 2.72E+01 | 1.12E-02 | 4.27E-02 |

1

MSLB - 2000 CFM FILTERED, 3000 CFM UNFILTERED

| ISOTOPE | ACTIVITY RELEASED (CURIES) | | |
|---|---|---|---|
| | 0. HRS | 720. HRS | |
| ELEMENTAL | | | |
| I-131 | ..89E-02 | 0.00E+00 | 1.89E-02 |
| I-132 | 1.83E-01 | 0.00E+00 | 1.83E-01 |
| I-133 | 1.29E-01 | 0.00E+00 | 1.29E-01 |
| I-134 | 3.60E-01 | 0.00E+00 | 3.60E-01 |
| I-135 | 1.89E-01 | 0.00E+00 | 1.89E-01 |
| PARTICULATE | | | |
| I-131 | 1.04E-03 | 0.00E+00 | 1.04E-03 |
| I-132 | 1.01E-02 | 0.00E+00 | 1.01E-02 |
| I-133 | 7.10E-03 | 0.00E+00 | 7.10E-03 |
| I-134 | 1.98E-02 | 0.00E+00 | 1.98E-02 |
| I-135 | 1.04E-02 | 0.00E+00 | 1.04E-02 |
| ORGANIC | | | |
| I-131 | 8.29E-04 | 0.00E+00 | 8.29E-04 |
| I-132 | 8.05E-03 | 0.00E+00 | 8.05E-03 |
| I-133 | 5.68E-03 | 0.00E+00 | 5.68E-03 |
| I-134 | 1.58E-02 | 0.00E+00 | 1.58E-02 |
| I-135 | 8.29E-03 | 0.00E+00 | 8.29E-03 |
| NOBLE GASES | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

END EXECUTION DATE: 07/24/1997
END EXECUTION TIME: 11:17:08.60

| | 33 secs | 2 hrs | 8 hrs | 24 hrs | 4 days | 30 days | Total w/ Axident DCFs | Axident DCF | ICRP 30 DCF | Total w/ ICRP 30 DCFs |
|---|---|---|---|---|---|---|---|---|---|---|
| Elemental Iodines | | | | | | | | | | |
| I-131 | 2.85E-02 | | | | | 6.15E+00 | 6.18E+00 | 1.48E+06 | 1.10E+06 | 4.59E+00 |
| I-132 | 9.99E-03 | | | | | 1.66E+00 | 1.67E+00 | 5.35E+04 | 6.30E+03 | 1.97E-01 |
| I-133 | 5.27E-02 | | | | | 1.11E+01 | 1.12E+01 | 4.00E+05 | 1.80E+05 | 5.02E+00 |
| I-134 | 9.17E-03 | | | | | 1.11E+00 | 1.12E+00 | 2.50E+04 | 1.10E+03 | 4.92E-02 |
| I-135 | 2.38E-02 | | | | | 4.68E+00 | 4.70E+00 | 1.24E+05 | 3.10E+04 | 1.18E+00 |
| Particulate Iodines | | | | | | | | | | |
| I-131 | 1.56E-03 | | | | | 3.38E-01 | 3.40E-01 | 1.48E+06 | 1.10E+06 | 2.52E-01 |
| I-132 | 5.49E-04 | | | | | 9.14E-02 | 9.19E-02 | 5.35E+04 | 6.30E+03 | 1.08E-02 |
| I-133 | 2.89E-03 | | | | | 6.08E-01 | 6.11E-01 | 4.00E+05 | 1.80E+05 | 2.75E-01 |
| I-134 | 5.04E-04 | | | | | 6.07E-02 | 6.12E-02 | 2.50E+04 | 1.10E+03 | 2.69E-03 |
| I-135 | 1.31E-03 | | | | | 2.57E-01 | 2.58E-01 | 1.24E+05 | 3.10E+04 | 6.46E-02 |
| Organic Iodines | | | | | | | | | | |
| I-131 | 1.25E-03 | | | | | 2.70E-01 | 2.71E-01 | 1.48E+06 | 1.10E+06 | 2.02E-01 |
| I-132 | 4.39E-04 | | | | | 7.32E-02 | 7.36E-02 | 5.35E+04 | 6.30E+03 | 8.67E-03 |
| I-133 | 2.32E-03 | | | | | 4.86E-01 | 4.88E-01 | 4.00E+05 | 1.80E+05 | 2.20E-01 |
| I-134 | 4.03E-04 | | | | | 4.86E-02 | 4.90E-02 | 2.50E+04 | 1.10E+03 | 2.16E-03 |
| I-135 | 1.05E-03 | | | | | 2.06E-01 | 2.07E-01 | 1.24E+05 | 3.10E+04 | 5.18E-02 |
| | | | | | | | | | | |
| Total Dose | | | | | | | 2.73E+01 | | | 1.21E+01 |

```
AXIDENT VER 2 MOD 4
PRODUCTION DATE 02/18/92
BEGIN EXECUTION DATE:  07/24/1997
BEGIN EXECUTION TIME:  11:17:18.93
```

```
 1 MSLB - 2200 CFM FILTERED, 3000 CFM UNFILTERED
 2 2 2 1.0 1.0
 3 -2350 2.6E6 2.9865E5 2.9865E5
 4 0.0 0.0 0.0 1.0 6.6234E7 1.0 1.0
 5 33.0 2.592E6
 6 5.333E-7 0.0
 7 2*1.0
 8 2*0.0
 9 2*5200
10 2*1.0
11 2*1.0
12 2*0.0
13 2*0.0
14 2*0.0
15 2*0.0
16 2*0.0
17 2*0.0
18 2*0.0
19 2*0.0
20 2*0.0
21 1.0 1.0 1.0 0.6192 0.6192 0.6192
22 1.0 1.0 1.0
23 4712 45816 32269 90354 47115 0.0 0.0 0.0
24 8*0.0
```

1

MSLB - 2200 CFM FILTERED, 3000 CFM UNFILTERED

INITIAL CONTAINMENT INVENTORY

| ISOTOPE | ACTIVITY (CURIES) |
|---|---|
| I-131 | 4.712E+03 |
| I-132 | 4.582E+04 |
| I-133 | 3.227E+04 |
| I-134 | 9.035E+04 |
| I-135 | 4.712E+04 |
| XE-131M | 0.000E+00 |
| XE-133M | 0.000E+00 |
| XE-133 | 0.000E+00 |
| XE-135M | 0.000E+00 |
| XE-135 | 0.000E+00 |
| XE-138 | 0.000E+00 |
| KR-83M | 0.000E+00 |
| KR-85M | 0.000E+00 |
| KR-85 | 0.000E+00 |
| KR-87 | 0.000E+00 |
| KR-88 | 0.000E+00 |

1 MSLB - 2200 CFM FILTERED, 3000 CFM UNFILTERED

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******** FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT .009 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= 4.608 PERCENT/DAY CONTROL ROOM INTAKE=5200.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .000 | 1.000 | .619 |
| PARTICULATE | .000 | .000 | .000 | .000 | 1.000 | .619 |
| ORGANIC | .000 | .000 | .000 | .000 | 1.000 | .619 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 1.07E+03 | 0.00E+00 | 1.89E-02 | 2.85E-02 | 3.37E-06 | 9.69E+00 | 1.75E-03 | 8.55E-04 | 2.86E-02 | 3.30E-07 | 2.53E-06 |
| I-132 | 1.04E+04 | 0.00E+00 | 1.83E-01 | 2.77E-01 | 3.27E-05 | 3.40E+00 | 1.10E-01 | 1.89E-02 | 1.00E-02 | 1.75E-05 | 5.58E-05 |
| I-133 | 7.34E+03 | 0.00E+00 | 1.29E-01 | 1.95E-01 | 2.31E-05 | 1.79E+01 | 1.54E-02 | 1.26E-02 | 5.30E-02 | 3.58E-06 | 3.71E-05 |
| I-134 | 2.04E+04 | 0.00E+00 | 3.60E-01 | 5.43E-01 | 6.42E-05 | 3.13E+00 | 1.75E-01 | 3.77E-02 | 9.23E-03 | 3.68E-05 | 1.11E-04 |
| I-135 | 1.07E+04 | 0.00E+00 | 1.89E-01 | 2.85E-01 | 3.37E-05 | 8.11E+00 | 8.39E-02 | 1.34E-02 | 2.40E-02 | 1.04E-05 | 3.95E-05 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 5.89E+01 | 0.00E+00 | 1.04E-03 | 1.57E-03 | 1.85E-07 | 5.32E-01 | 9.61E-05 | 4.70E-05 | 1.57E-03 | 1.81E-08 | 1.39E-07 |
| I-132 | 5.71E+02 | 0.00E+00 | 1.01E-02 | 1.52E-02 | 1.80E-06 | 1.87E-01 | 6.04E-03 | 1.04E-03 | 5.52E-04 | 9.60E-07 | 3.06E-06 |
| I-133 | 4.03E+02 | 0.00E+00 | 7.10E-03 | 1.07E-02 | 1.27E-06 | 9.85E-01 | 8.46E-04 | 6.91E-04 | 2.91E-03 | 1.96E-07 | 2.04E-06 |
| I-134 | 1.12E+03 | 0.00E+00 | 1.98E-02 | 2.98E-02 | 3.53E-06 | 1.72E-01 | 9.60E-03 | 2.07E-03 | 5.07E-04 | 2.02E-06 | 6.12E-06 |
| I-135 | 5.88E+02 | 0.00E+00 | 1.04E-02 | 1.57E-02 | 1.85E-06 | 4.46E-01 | 4.61E-03 | 7.34E-04 | 1.32E-03 | 5.73E-07 | 2.17E-06 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 4.71E+01 | 0.00E+00 | 8.29E-04 | 1.25E-03 | 1.48E-07 | 4.26E-01 | 7.69E-05 | 3.76E-05 | 1.26E-03 | 1.45E-08 | 1.11E-07 |
| I-132 | 4.57E+02 | 0.00E+00 | 8.05E-03 | 1.22E-02 | 1.44E-06 | 1.49E-01 | 4.83E-03 | 8.30E-04 | 4.42E-04 | 7.68E-07 | 2.45E-06 |
| I-133 | 3.23E+02 | 0.00E+00 | 5.68E-03 | 8.59E-03 | 1.02E-06 | 7.88E-01 | 6.77E-04 | 5.52E-04 | 2.33E-03 | 1.57E-07 | 1.63E-06 |
| I-134 | 8.97E+02 | 0.00E+00 | 1.58E-02 | 2.39E-02 | 2.82E-06 | 1.37E-01 | 7.68E-03 | 1.66E-03 | 4.06E-04 | 1.62E-06 | 4.89E-06 |
| I-135 | 4.71E+02 | 0.00E+00 | 8.29E-03 | 1.25E-02 | 1.48E-06 | 3.57E-01 | 3.69E-03 | 5.87E-04 | 1.05E-03 | 4.59E-07 | 1.73E-06 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 4.64E+01 | 4.24E-01 | 9.16E-02 | 1.37E-01 | 7.54E-05 | 2.71E-04 |

1 MSLB - 2200 CFM FILTERED, 3000 CFM UNFILTERED

ANALYSIS BASED ON: 2350 MWT, 298650. FT3 CONT CENTER VOLUME, 298650. FT3 CONTROL ROOM VOLUME, 52.24 FT EFF RADIUS

******* FT3 SPRAYED VOL, 1. FT3 UNSPRAYED VOL, 1. CFM MIXING, 100.00 PCT REL TO SPRAYED VOL

AT 720.000 HOURS: X/Q(SITE)= .10E+01 SEC/M3 PRIMARY LEAK RATE= .000 PERCENT/DAY CONTROL ROOM INTAKE=5200.0 CFM

X/Q CONT ROOM= .10E+01 SEC/M3 SEC RELEASE RATE= .86E+05 VOL/DAY PCT PRI LKG TO ATM = 100.00

| | CLEANUP RATES (HR-1) | | | | FILTER NON-REMOVAL FACTORS | |
|---|---|---|---|---|---|---|
| | SPRAY | PRIMARY | SECONDARY | CONT CENTER | RELEASE | CONT CENTER |
| ELEMENTAL | .000 | .000 | .000 | .000 | 1.000 | .619 |
| PARTICULATE | .000 | .000 | .000 | .000 | 1.000 | .619 |
| ORGANIC | .000 | .000 | .000 | .000 | 1.000 | .619 |

| | ACTIVITY (CURIES) | | | CONTROL ROOM | | SITE BOUNDARY DOSES (REM) | | | CONTROL ROOM DOSES (REM) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISOTOPE | PRIMARY | SECONDARY | RELEASE | (CURIES) | (UCI/CM3) | THYROID | WH BODY | BETA | THYROID | WH BODY | BETA |
| ELEMENTAL | | | | | | | | | | | |
| I-131 | 8.09E+01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.95E+00 | 6.85E-05 | 5.25E-04 |
| I-132 | 6.28E-91 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.62E+00 | 2.82E-03 | 9.02E-03 |
| I-133 | 3.49E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.07E+01 | 7.23E-04 | 7.51E-03 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.09E+00 | 4.34E-03 | 1.31E-02 |
| I-135 | 5.28E-29 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.55E+00 | 1.98E-03 | 7.49E-03 |
| PARTICULATE | | | | | | | | | | | |
| I-131 | 4.44E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.27E-01 | 3.76E-06 | 2.88E-05 |
| I-132 | 3.45E-92 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.92E-02 | 1.55E-04 | 4.95E-04 |
| I-133 | 1.92E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.88E-01 | 3.97E-05 | 4.12E-04 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.98E-02 | 2.38E-04 | 7.21E-04 |
| I-135 | 2.90E-30 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.50E-01 | 1.09E-04 | 4.11E-04 |
| ORGANIC | | | | | | | | | | | |
| I-131 | 3.56E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.62E-01 | 3.01E-06 | 2.31E-05 |
| I-132 | 2.76E-92 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.14E-02 | 1.24E-04 | 3.96E-04 |
| I-133 | 1.54E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.71E-01 | 3.18E-05 | 3.30E-04 |
| I-134 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.78E-02 | 1.91E-04 | 5.77E-04 |
| I-135 | 2.32E-30 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.00E-01 | 8.70E-05 | 3.29E-04 |
| NOBLE GASES | | | | | | | | | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.63E+01 | 1.09E-02 | 4.14E-02 |

| | | | | | | |
|---|---|---|---|---|---|---|
| TOTAL DOSES 0-30 DAYS | 4.64E+01 | 4.24E-01 | 9.16E-02 | 2.64E+01 | 1.10E-02 | 4.16E-02 |

1

MSLB - 2200 CFM FILTERED, 3000 CFM UNFILTERED

| ISOTOPE | ACTIVITY RELEASED (CURIES) | | |
|---|---|---|---|
| | 0. HRS | 720. HRS | |
| ELEMENTAL | | | |
| I-131 | 1.89E-02 | 0.00E+00 | 1.89E-02 |
| I-132 | 1.83E-01 | 0.00E+00 | 1.83E-01 |
| I-133 | 1.29E-01 | 0.00E+00 | 1.29E-01 |
| I-134 | 3.60E-01 | 0.00E+00 | 3.60E-01 |
| I-135 | 1.89E-01 | 0.00E+00 | 1.89E-01 |
| PARTICULATE | | | |
| I-131 | 1.04E-03 | 0.00E+00 | 1.04E-03 |
| I-132 | 1.01E-02 | 0.00E+00 | 1.01E-02 |
| I-133 | 7.10E-03 | 0.00E+00 | 7.10E-03 |
| I-134 | 1.98E-02 | 0.00E+00 | 1.98E-02 |
| I-135 | 1.04E-02 | 0.00E+00 | 1.04E-02 |
| ORGANIC | | | |
| I-131 | 8.29E-04 | 0.00E+00 | 8.29E-04 |
| I-132 | 8.05E-03 | 0.00E+00 | 8.05E-03 |
| I-133 | 5.68E-03 | 0.00E+00 | 5.68E-03 |
| I-134 | 1.58E-02 | 0.00E+00 | 1.58E-02 |
| I-135 | 8.29E-03 | 0.00E+00 | 8.29E-03 |
| NOBLE GASES | | | |
| XE-131M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-83M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-87 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-88 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

END EXECUTION DATE: 07/24/1997
END EXECUTION TIME: 11:17:19.04

| | 33 secs | 2 hrs | 8 hrs | 24 hrs | 4 days | 30 days | Total w/ Axident DCFs | Axident DCF | ICRP 30 DCF | Total w/ ICRP 30 DCFs |
|---|---|---|---|---|---|---|---|---|---|---|
| Elemental Iodines | | | | | | | | | | |
| I-131 | 2.86E-02 | | | | | 5.95E+00 | 5.98E+00 | 1.48E+06 | 1.10E+06 | 4.44E+00 |
| I-132 | 1.00E-02 | | | | | 1.62E+00 | 1.63E+00 | 5.35E+04 | 6.30E+03 | 1.92E-01 |
| I-133 | 5.30E-02 | | | | | 1.07E+01 | 1.08E+01 | 4.00E+05 | 1.80E+05 | 4.84E+00 |
| I-134 | 9.23E-03 | | | | | 1.09E+00 | 1.10E+00 | 2.50E+04 | 1.10E+03 | 4.84E-02 |
| I-135 | 2.40E-02 | | | | | 4.55E+00 | 4.57E+00 | 1.24E+05 | 3.10E+04 | 1.14E+00 |
| Particulate Iodines | | | | | | | | | | |
| I-131 | 1.57E-03 | | | | | 3.27E-01 | 3.29E-01 | 1.48E+06 | 1.10E+06 | 2.44E-01 |
| I-132 | 5.52E-04 | | | | | 8.92E-02 | 8.98E-02 | 5.35E+04 | 6.30E+03 | 1.06E-02 |
| I-133 | 2.91E-03 | | | | | 5.88E-01 | 5.91E-01 | 4.00E+05 | 1.80E+05 | 2.66E-01 |
| I-134 | 5.07E-04 | | | | | 5.98E-02 | 6.03E-02 | 2.50E+04 | 1.10E+03 | 2.65E-03 |
| I-135 | 1.32E-03 | | | | | 2.50E-01 | 2.51E-01 | 1.24E+05 | 3.10E+04 | 6.28E-02 |
| Organic Iodines | | | | | | | | | | |
| I-131 | 1.26E-03 | | | | | 2E-01 | 2.63E-01 | 1.48E+06 | 1.10E+06 | 1.96E-01 |
| I-132 | 4.42E-04 | | | | | 14E-02 | 7.18E-02 | 5.35E+04 | 6.30E+03 | 8.46E-03 |
| I-133 | 2.33E-03 | | | | | 4.71E-01 | 4.73E-01 | 4.00E+05 | 1.80E+05 | 2.13E-01 |
| I-134 | 4.06E-04 | | | | | 4.78E-02 | 4.82E-02 | 2.50E+04 | 1.10E+03 | 2.12E-03 |
| I-135 | 1.05E-03 | | | | | 2.00E-01 | 2.01E-01 | 1.24E+05 | 3.10E+04 | 5.03E-02 |
| | | | | | | | | | | |
| Total Dose | | | | | | | 2.64E+01 | | | 1.17E+01 |

ATTACHMENT 2
Sheet 1 of 1
Record of Lead Review

Design CALC OVA-105 Revision 5
NYS calc # CP&L-CED-M-01, Rev 5

The signature below of the Lead Reviewer records that:
- the review indicated below has been performed by the Lead Reviewer;
- appropriate reviews were performed and errors/deficiencies (for all reviews performed) have been resolved and these records are included in the design package;
- the review was performed in accordance with EGR-NGGC-0003.

☐ **Design Verification Review** ☐ **Engineering Review** ☒ **Owner Review**
- ☐ Design Review
- ☐ Alternate Calculation
- ☐ Qualification Testing

☐ **Special Engineering Review** _____

☐ YES ☐ N/A **Other Records are attached.**

Deborah A. Norton Deborah A. Norton MECH 9/1/97
**Lead Reviewer** (print/sign) **Discipline** **Date**

| Item No. | Deficiency | Resolution/Date |
|---|---|---|
| 1 | Reference is made to 3126 cfm unfiltered inleakage on page 7 of 19. It is difficult to determine for the calculation the actual inleakage used. other section state 3000 cfm inleakage. | Provided explanation of varying flows - No change required. |
| | | |
| | | |

FORM EGR-NGGC-0003-2-0