Enclosure 5

GPU NUCLEAR

Calculation Sheet

Subject	Calc. No.	Rev. No.	
RMS LEVELS CORRESPONDING TO NUMARC EALs	6612-96-030	0	
Originator PARFITT	**Date** November 8, 1996	**Reviewed by**	**Date** 11-8-96

1.0 Problem Statement

To estimate site specific RMS monitor readings that would require an Emergency Plan declaration under the NUMARC EALs.

2.0 Results Summary

RELEASE PATHWAY	UNUSUAL EVENT RMS MONITOR	UNUSUAL EVENT MONITOR READING	UNUSUAL EVENT UNITS	ALERT RMS MONITOR	ALERT MONITOR READING	ALERT UNITS
COG	RM-G-25	2.40E+02	mR/hr	RM-G-25	2.40E+04	mR/hr
STATION VENT	RM-A-8G	2.90E+05	cpm	RM-A-8 HI	8.00E+02	cpm
RB VENT	RM-A-9G	6.40E+05	cpm	RM-A-9 HI	4.40E+03	cpm
ESF VENT	RM-A-14	3.05E-02	uCi/cc	RM-A-14	3.05E+00	uCi/cc
LIQUID OUTFALL	RM-L-7	1.43E+03	cpm	RM-L-7	1.43E+05	cpm
IWTS/IWFS	RM-L-12	1.78E+05	cpm	RM-L-12	Offscale	cpm

RELEASE PATHWAY	SITE AREA EMERGENCY RMS MONITOR	SITE AREA EMERGENCY MONITOR READING	SITE AREA EMERGENCY UNITS	GENERAL EMERGENCY RMS MONITOR	GENERAL EMERGENCY MONITOR READING	GENERAL EMERGENCY UNITS
COG	RM-G-25	3.04E+05	mR/hr	RM-G-25	Offscale	mR/hr
STATION VENT	RM-A-8 HI	1.20E+04	cpm	RM-A-8 HI	1.20E+05	cpm
RB VENT	RM-A-9 HI	6.45E+04	cpm	RM-A-9 HI	6.45E+05	cpm
ESF VENT	RM-A-14	4.48E+01	uCi/cc	RM-A-14	4.48E+02	uCi/cc

3.0 References

3.1. Procedure 6610-PLN-4200.01 "TMI ODCM"

3.2. Procedure 1101-2.1 "Radiation Monitoring System Setpoints"

3.3. TMI-1 FSAR Table 14.2-4

3.4. Procedure 6610-PLN-4200.02 "TMI EDCM"

3.5. Raddecay 4.0

3.6. TMI-1 FSAR Table 14.2-2 and Section 14.2.2.1.b.1

3.7. TDR 989 Rev 1, "TMI-1 Cycle 8 Reload", Table 5.7-2

4.0 Assumptions

4.1 It is assumed that the RCS activity when an event occurs has the same isotopic distribution as Reference 3.7 and Reference 3.3. Both references provide the same values, however, there are typographical errors in Reference 3.3. For the ESF Ventilation System, the isotopic distribution is provided by Reference 3.6.

4.2 Monitor sensitivities and release flow rates are those assumed in Reference 3.2.

4.3 The following Reduction Factors (RF) were used in this analysis

NOBLE GASES (ALL PATHWAYS)	1	Ref. 3.1
IODINES (CONDENSOR OFFGAS)	133	Ref. 3.1
IODINES (STATION VENT AND REACTOR BUILDING)	25	Ref. 3.4
IODINES (ESF VENTILATION)	1000	Ref. 3.6

Iodine reduction factors for station vent assume 60% plateout on building surfaces and 90% charcoal filter efficiency. Iodine reduction factors for ESF Ventilation assume 90% charcoal filter efficiency. A decontamination factor of 100 for the spent fuel pool is already incorporated in Reference 3.6.

4.4 Detector responses (DR) for the monitors were taken from Reference 3.4. Iodine DRs for beta scintillation detectors were not available in Reference 3.4 but were derived in accordance with the methods in Reference 3.4 and beta ray data in Reference 3.5. This derviation is contained in Appendix II. The derived iodine DRs are as follows:

BETA SCINTILLATOR RESPONSE FACTORS			
	(Prob)(Emax)	Xe-133 (Prob)(Emax)	RESPONSE FACTOR
I-131	0.58	0.35	1.67
I-132	1.33	0.35	3.84
I-133	1.14	0.35	3.31
I-134	1.60	0.35	4.64
I-135	1.04	0.35	3.02

4.4 Whole body and organ dose conversion factors are provided in Reference 3.1.

4.5 Maximum annual average atmospheric dispersion factors are 1.16E-5 sec/m^3 for a ground level release and 7.17E-7 sec/m^3 for a station vent release in accordance with Reference 3.1.

5.0 Data and Calculations

5.1. The calculation of the Xe-133 equivalent concentration going past the monitor at a given monitor count rate is determined using the following equation:

$$C_{Xe\text{-}133} = CR/S$$

Where:

$C_{Xe\text{-}133}$ = Xe-133 equivalent concentration going past the monitor (uCi/cc)

CR = Monitor count rate (cpm)

S = Monitor sensitivity to Xe-133 (cpm/uCi/cc)

5.2. The normalized isotopic distribution reaching the detector is based on the RCS activity and any reduction factors that may reduce an isotope's activity prior to reaching the detector. The fraction of the total mix reaching the detector that an isotope i constitutes is calculated as follows:

$$F_i = (A_i/RF_i)/\Sigma(A_i/RF_i)$$

Where:

F_i = The fraction of the total activity reaching the detector constituted by isotope i

A_i = The activity of isotope i in the RCS (uCi/g)

RF_i = The reduction in isotope i between the time it leaves the RCS and gets to the detector

$\Sigma(A_i/RF_i)$ = The total activity that would reach the detector following application of appropriate reduction factors (uCi/g)

The reduction factors for each release pathway are discussed in Assumption 4.4. For releases from the ESF Ventilation System (RM-A-14), the activity released does not come from the RCS but from the postulated fuel handling accident in the FSAR. As a result, the isotopic fractions (F_i) are generated by replacing A_i with the activity released into the fuel handling building from Reference 3.6.

5.3. The conversion of the Xe-133 equivalent concentration to the actual isotopic distribution passing by the detector is accomplished by determining the overall detector response factor for the isotopic mix reaching the detector. This overall response factor is a function of the response factors for the

individual isotopes in the mix. The determination of the overall response factor is performed as follows:

$$DR_o = \Sigma(F_i)(DR_i)$$

Where:

DR_o = The overall response of the detector for the isotopic mix compared to the calibration nuclide (Xe-133)

F_i = The fraction of the total activity reaching the detector constituted by isotope i

Dr_i = The individual response of the detector to isotope i compared to (Xe-133)

The true activity concentration passing the detector is then calculated as follows:

$$C_t = C_{Xe\text{-}133} / DR_o$$

Where:

C_t = the true total activity concentration passing the detector (uCi/cc)

DR_o = The overall response of the detector for the isotopic mix compared to the calibration nuclide (Xe-133)

$C_{Xe\text{-}133}$ = Xe-133 equivalent concentration going past the monitor (uCi/cc)

The isotopic activity passing the detector is then determined:

$$C_i = (C_t)(F_i)$$

Where:

C_i = the activity concentration passing the detector for isotope i (uCi/cc)

C_t = the true total activity concentration passing the detector (uCi/cc)

F_i = The fraction of the total activity reaching the detector constituted by isotope i

The release rate for the pathway is calculated as follows:

$$A_i = (C_i)(Q)$$

Where:

A_i = the release rate of isotope i (uCi/sec)

C_i = the activity concentration passing the detector for isotope i (uCi/cc)

Q = the flow rate from the release path (cc/sec)

5.4 The offsite dose from the release is calculated as follows:

$$D_i = (A_i)(X/Q)(DCF_i)$$

Where:

D_i = The offsite whole body or organ dose rate from isotope i (mrem/yr)

A_i = the release rate of isotope i (uCi/sec)

X/Q = the highest sector annual average gaseous dispersion factor for ground or station vent release (sec/m^3)

DCF_i = the whole body or organ dose factor for the submersion or inhalation pathway ($mrem/yr/uCi/m^3$)

The whole body dose (noble gases) and organ doses (iodines) from each isotope are then summed.

5.5 Using this methodology, the gaseous monitor readings corresponding to the most limiting dose (whole body or organ) for each of the following event categories in the NUMARC EALs were then calculated for RM-G-25, RM-A-8, RM-A-8 Hi, RM-A-9, RM-A-9 Hi, and RM-A-14:

EVENT	WB DOSE	ORGAN DOSE
UNUSUAL EVENT	1E3 mrem/yr (0.11 mrem/hr)	3E3 mrem/yr (0.34 mrem/hr)
ALERT	1E5 mrem/yr (11 mrem/hr)	3E5 mrem/yr (34 mrem/hr)
SITE AREA	8.8E5 mrem/yr (100 mrem/hr)	4.4E6 mrem/yr (500 mrem/hr)
GENERAL	8.8E6 mrem/yr (1000 mrem/hr)	4.4E7 mrem/yr (5000 mrem/hr)

The complete calculations are contained in Appendix I of this calculation.

5.6. For liquid monitors the ODCM limit is 10 times the concentrations specified in 10 CFR 20.1001-20.2401, Appendix B, Table 2. The most limiting concentration for isotopes released by TMI is 1.0E-06 uCi/cc for C-137. The ODCM limit for this isotope is then 1.0E-05 uCi/cc at the station discharge.

The calculation of the limiting concentration for a specific release pathway is as follows:

$$C_w = (C_d)(f+F)/(f)$$

Where:

C_w = The allowable concentration from in the effluent line prior to dilution and release (uCi/cc)

C_d = the limiting concentration at the station discharge after dilution (uCi/cc)

f = the flow rate in the effluent line prior to dilution and release (cc/sec)

F = the flow rate of dilution water prior to the release point (cc/sec)

The monitor reading at the limiting concentration is calculated by:

$$CR = (C_w)(S)$$

Where:

CR = Monitor count rate (cpm)

C_w = The allowable concentration from in the effluent line prior to dilution and release (uCi/cc)

S = Monitor sensitivity to Cs-137 (cpm/uCi/cc)

For RM-L-7 and RM-L-12, the following parameters apply per Reference 3.2:

	RM-L-7	RM-L-12
C_d (uCi/cc)	1.0E-05	1.0E-05
f (gpm)	30,000	280
F (gpm)	30,000	8000
S (cpm/uCi/cc)	7.16E+07	3.0E+08

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The limiting concentration for each pathway, the sensitivity of the detector, and the detector reading at the limiting concentration are tabulated below:

	ODCM CONC (uCi/cc)	SENS (CPM/uCi/cc)	READING 2X ODCM	READING 200X ODCM	UNITS
RML-12	2.96E-04	3.00E+08	1.78E+05	Offscale	CPM
RML-7	1.00E-05	7.16E+07	1.43E+03	1.43E+05	CPM

This approach is conservative in that it assumes that all activity seen by the detector is Cs-137, the isotope with the most limiting concentration limit.

APPENDIX 1
GASEOUS MONITOR CALCULATIONS

MONITOR READING FOR 2X ODCM LIMITS

RMG25

					RCS AFTER PF (A_i/RF_i)	RCS NORM (F_i)	RMG25 RESP (D^{-1}_i)	XE133 EQ (F_i/HDR$_i$)	RELEASE CONC (C_i)	RELEASE RATE (A_i)		WB DCF,	ORGAN DCF,	WB DOSE RATE (D_i)	ORGAN DOSE RATE (D_i)
SENSITIVITY (S)	3.52E+01	mR/hr/uCi/cc	RCS (A_i)												
			uCi/cc		uCi/cc				uCi/cc	uCi/sec	X/Q (sec/m^3)	(mrem/yr) / (uCi/m^3)	(mrem/yr) / (uCi/m^3)	(mrem/yr)	(mrem/yr)
RMA COUNT RATE (CR)	240	mR/hr													
			2.43	KR85M	2.43E+00	5.70E-03	2.35E+00	1.34E-02	3.69E-02	7.0E+02	1.16E-05	1.17E+03		9.45E+00	
XE133 EQ CONC (C_{Xe-133})	6.82E+00	uCi/cc	9.75	KR85	9.75E+00	2.29E-02	1.10E-02	2.52E-04	1.48E-01	2.8E+03	1.16E-05	1.61E+01		5.22E-01	
TRUE ACTIVITY (C_i)	6.47E+00	uCi/cc	1.28	KR87	1.28E+00	3.00E-03	3.59E+00	1.08E-02	1.94E-02	3.7E+02	1.16E-05	5.92E+03		2.52E+01	
			3.95	KR88	3.95E+00	9.27E-03	3.70E+00	3.43E-02	6.00E-02	1.1E+03	1.16E-05	1.47E+04		1.93E+02	
NG/I RATIO	3.23E+03		2.88	XE131M	2.68E+00	6.29E-03	5.40E-02	3.40E-04	4.07E-02	7.7E+02	1.16E-05	9.15E+01		8.15E-01	
I CONC	2.11E-03	uCi/cc	4.22	XE133M	4.22E+00	9.91E-03	3.78E-01	3.74E-03	6.41E-02	1.2E+03	1.16E-05	2.51E+02		3.52E+00	
			392	XE133	3.92E+02	9.20E-01	1.00E+00	9.20E-01	5.98E+00	1.1E+05	1.16E-05	2.94E+02		3.83E+02	
STACK FLOW (Q)	40	CFM	0.485	XE135M	4.85E-01	1.14E-03	2.16E+00	2.46E-03	7.37E-03	1.4E+02	1.16E-05	3.12E+03		5.03E+00	
			8.37	XE135	8.37E+00	1.96E-02	2.54E+00	4.99E-02	1.27E-01	2.4E+03	1.16E-05	1.81E+03		5.04E+01	
IODINE REDUCTION (RF)	133		0.692	XE138	6.92E-01	1.62E-03	1.04E+01	1.69E-02	1.05E-02	2.0E+02	1.16E-05	8.83E+03		2.03E+01	
														6.92E+02	
			5.71	I131	4.29E-02	1.01E-04	2.66E+00	2.68E-04	6.52E-04	1.2E+01	1.16E-05		1.62E+07		2.31E+03
			1.92	I132	1.44E-02	3.39E-05	8.29E+00	2.81E-04	2.19E-04	4.1E+00	1.16E-05		1.94E+05		9.31E+00
			6.07	I133	4.56E-02	1.07E-04	2.43E+00	2.61E-04	6.93E-04	1.3E+01	1.16E-05		3.85E+06		5.84E+02
			0.757	I134	5.69E-03	1.34E-05	6.01E+00	8.03E-05	8.65E-05	1.6E+00	1.16E-05		5.07E+04		9.60E-01
			3.08	I135	2.32E-02	5.44E-05	3.78E+00	2.06E-04	3.52E-04	6.6E+00	1.16E-05		7.92E+05		6.10E+01
			4.26E+02	TOTAL	4.26E+02	1.00	DR$_s$ =	1.05	6.47E+00						2.97E+03
			4.26E+02	NG TOTAL	4.26E+02				6.47E+00						
			1.75E+01	I TOTAL	1.32E-01				2.00E-03						

RCS ACTIVITY REDUCED BY 133 AS PARTIONING OCCURS PRIOR TO REACHING DETECTOR

MONITOR READING FOR 200X ODCM LIMITS — RMG25

SENSITIVITY (S)	3.52E+01	cpm/hr/uCi/cc			RCS AFTER PF (A_i/RF_i)	RCS NORM (F_i)	RMG25 RESP (DR_i)	XE133 EQ (F_i)(DR_i)	RELEASE CONC (C_i)	RELEASE RATE (A_i)	X/Q	WB DCF, (mrem/yr)	ORGAN DCF, (mrem/yr)	WB DOSE RATE (D_i)	ORGAN DOSE RATE (D_i)
			RCS (A_i)												
			uCi/cc		uCi/cc				uCi/cc	uCi/sec	(sec/m^3)	(uCi/m^3)	(uCi/m^3)	(mrem/yr)	(mrem/yr)
RMA COUNT RATE (CR)	24000	mR/hr													
			2.43	KR85M	2.43E+00	5.70E-03	2.35E+00	1.34E-02	3.69E+00	7.0E+04	1.16E-05	1.17E+03		9.45E+02	
XE133 EQ CONC (C_{Xe-133})	6.82E+02	uCi/cc	9.75	KR85	9.75E+00	2.29E-02	1.10E-02	2.52E-04	1.48E+01	2.8E+05	1.16E-05	1.61E+01		5.22E+01	
TRUE ACTIVITY (C_i)	6.47E+02	uCi/cc	1.28	KR87	1.28E+00	3.00E-03	3.59E+00	1.08E-02	1.94E+00	3.7E+04	1.16E-05	5.92E+03		2.52E+03	
			3.95	KR88	3.95E+00	9.27E-03	3.70E+00	3.43E-02	6.00E+00	1.1E+05	1.16E-05	1.47E+04		1.93E+04	
NG/I RATIO	3.23E+03		2.68	XE131M	2.68E+00	6.29E-03	5.40E-02	3.40E-04	4.07E+00	7.7E+04	1.16E-05	9.15E+01		8.15E+01	
I CONC	2.11E-01	uCi/cc	4.22	XE133M	4.22E+00	9.91E-03	3.78E-01	3.74E-03	6.41E+00	1.2E+05	1.16E-05	2.51E+02		3.62E+02	
			392	XE133	3.92E+02	9.20E-01	1.00E+00	9.20E-01	5.96E+02	1.1E+07	1.16E-05	2.94E+02		3.83E+04	
STACK FLOW (Q)	40	CFM	0.485	XE135M	4.85E-01	1.14E-03	2.16E+00	2.46E-03	7.37E-01	1.4E+04	1.16E-05	3.12E+03		5.03E+02	
			8.37	XE135	8.37E+00	1.96E-02	2.54E+00	4.99E-02	1.27E+01	2.4E+05	1.16E-05	1.81E+03		5.04E+03	
IODINE REDUCTION (RF)	133		0.892	XE138	6.82E-01	1.62E-03	1.04E+01	1.69E-02	1.05E+00	2.0E+04	1.16E-05	8.83E+03		2.03E+03	
														6.92E+04	
			5.71	I131	4.29E-02	1.01E-04	2.66E+00	2.68E-04	6.52E-02	1.2E+03	1.16E-05		1.62E+07		2.31E+05
			1.92	I132	1.44E-02	3.39E-05	8.29E+00	2.81E-04	2.19E-02	4.1E+02	1.16E-05		1.94E+05		9.31E+02
			6.07	I133	4.56E-02	1.07E-04	2.43E+00	2.61E-04	6.93E-02	1.3E+03	1.16E-05		3.85E+06		5.84E+04
			0.757	I134	5.69E-03	1.34E-05	8.01E+00	8.03E-05	8.65E-03	1.6E+02	1.16E-05		5.07E+04		9.60E+01
			3.08	I135	2.32E-02	5.44E-05	3.78E+00	2.06E-04	3.52E-02	6.6E+02	1.16E-05		7.92E+05		6.10E+03
			4.26E+02	TOTAL	4.26E+02	1.00	DR_x =	1.05	6.47E+02						2.97E+05
			4.26E+02	NG TOTAL	4.26E+02				6.47E+02						
			1.75E+01	I TOTAL	1.32E-01				2.00E-01						

RCS ACTIVITY REDUCED BY 133 AS PARTIONING OCCURS PRIOR TO REACHING DETECTOR

MONITOR READING FOR SITE AREA EMERGENCY — RMG25

					RCS AFTER PF (A_i/RF_i) uCi/cc	RCS NORM (F_i)	RMG25 RESP (DR_i)	XE133 EQ (F_i/DR_i)	RELEASE CONC (C_i) uCi/cc	RELEASE RATE (A_i) uCi/sec	X/Q (sec/m³)	WB DCF, (mrem/yr) (uCi/m³)	ORGAN DCF, (mrem/yr) (uCi/m³)	WB DOSE RATE (D_i) (mrem/yr)	ORGAN DOSE RATE (D_i) (mrem/yr)
SENSITIVITY (S)	3.52E+01	mR/hr/uCi/cc	RCS (A_i) uCi/cc												
RMA COUNT RATE (CR)	304000	mR/hr													
			2.43	KR85M	2.43E+00	5.70E-03	2.35E+00	1.34E-02	4.68E+01	8.8E+05	1.16E-05	1.17E+03		1.20E+04	
XE133 EQ CONC ($C_{Xe\ 133}$)	8.64E+03	uCi/cc	9.75	KR85	9.75E+00	2.29E-02	1.10E-02	2.52E-04	1.88E+02	3.5E+06	1.16E-05	1.61E+01		6.61E+02	
TRUE ACTIVITY (C_i)	8.20E+03	uCi/cc	1.28	KR87	1.28E+00	3.00E-03	3.59E+00	1.08E-02	2.46E+01	4.6E+05	1.16E-05	5.92E+03		3.19E+04	
			3.95	KR88	3.95E+00	9.27E-03	3.70E+00	3.43E-02	7.60E+01	1.4E+06	1.16E-05	1.47E+04		2.45E+05	
NG/I RATIO	3.23E+03		2.68	XE131M	2.68E+00	6.29E-03	5.40E-02	3.40E-04	5.16E+01	9.7E+05	1.16E-05	9.15E+01		1.03E+03	
I CONC	2.67E+00	uCi/cc	4.22	XE133M	4.22E+00	9.91E-03	3.78E-01	3.74E-03	8.12E+01	1.5E+06	1.16E-05	2.51E+02		4.46E+03	
			392	XE133	3.92E+02	9.20E-01	1.00E+00	9.20E-01	7.54E+03	1.4E+08	1.16E-05	2.94E+02		4.85E+05	
STACK FLOW (Q)	40	CFM	0.485	XE135M	4.85E-01	1.14E-03	2.16E+00	2.46E-03	9.33E+00	1.8E+05	1.16E-05	3.12E+03		6.37E+03	
			8.37	XE135	8.37E+00	1.96E-02	2.54E+00	4.99E-02	1.81E+02	3.0E+06	1.16E-05	1.81E+03		6.38E+04	
IODINE REDUCTION (RF)	133		0.692	XE138	6.92E-01	1.62E-03	1.04E+01	1.69E-02	1.33E+01	2.5E+05	1.16E-05	8.83E+03		2.57E+04	
														8.76E+05	
			5.71	I131	4.29E-02	1.01E-04	2.66E+00	2.68E-04	8.26E-01	1.6E+04	1.18E-05		1.62E+07		2.93E+06
			1.92	I132	1.44E-02	3.39E-05	8.28E+00	2.81E-04	2.78E-01	5.2E+03	1.16E-05		1.94E+05		1.18E+04
			6.07	I133	4.56E-02	1.07E-04	2.43E+00	2.61E-04	8.78E-01	1.7E+04	1.16E-05		3.85E+06		7.40E+05
			0.757	I134	5.69E-03	1.34E-05	6.01E+00	8.03E-05	1.10E-01	2.1E+03	1.16E-05		5.07E+04		1.22E+03
			3.08	I135	2.32E-02	5.14E-05	3.78E+00	2.06E-04	4.46E-01	8.4E+03	1.16E-05		7.92E+05		7.73E+04
			4.26E+02	TOTAL	4.26E+02	1.00	DR_x =	1.05	8.20E+03						3.78E+06
			4.26E+02	NG TOTAL	4.26E+02				8.20E+03						
			1.75E+01	I TOTAL	1.32E-01				2.54E+00						

RCS ACTIVITY REDUCED BY 133 AS PARTIONING OCCURS PRIOR TO REACHING DETECTOR

MONITOR READING FOR GENERAL EMERGENCY

RMG25

SENSITIVITY (S)	3.52E+01	mR/hr/uCi/cc			RCS AFTER PF (A_i/RF_i)	RCS NORM (F_i)	RMG25 RESP (CR_i)	XE133 EQ ($F_i/(DR_i)$)	RELEASE CONC (C_i)	RELEASE RATE (A_i)	X/Q	WB DCF, (mrem/yr)	ORGAN DCF, (mrem/yr)	WB DOSE RATE (D_i)	ORGAN DOSE RATE (D_i)
			RCS (A_i)												
			uCi/cc		uCi/cc				uCi/cc	uCi/sec	(sec/m^3)	(uCi/m^3)	(uCi/m^3)	(mrem/yr)	(mrem/yr)
RMA COUNT RATE (CR)	3040000	mR/hr													
			2.43	KR85M	2.43E+00	5.70E-03	2.35E+00	1.34E-02	4.68E+02	8.8E+06	1.16E-05	1.17E+03		1.20E+05	
XE133 EQ CONC (C_{Xe-133})	8.64E+04	uCi/cc	9.75	KR85	9.75E+00	2.29E-02	1.10E-01	2.52E-04	1.88E+03	3.5E+07	1.16E-05	1.61E+01		6.61E+03	
TRUE ACTIVITY (C_i)	8.20E+04	uCi/cc	1.28	KR87	1.28E+00	3.00E-03	3.59E+00	1.0[illegible]E-02	2.46E+02	4.6E+06	1.16E-05	5.92E+03		3.19E+05	
			3.95	KR88	3.95E+00	9.27E-03	3.70E+00	3.43E-02	7.60E+02	1.4E+07	1.16E-05	1.47E+04		2.45E+06	
NG/I RATIO	3.23E+03		2.68	XE131M	2.68E+00	6.29E-03	5.40E-02	3.40E-0[illegible]	5.16E+02	9.7E+06	1.16E-05	9.15E+01		1.03E+04	
I CONC	2.67E+01	uCi/cc	4.22	XE133M	4.22E+00	9.91E-03	3.78E-01	3.74E-03	8.12E+02	1.5E+07	1.16E-05	2.51E+02		4.46E+04	
			392	XE133	3.92E+02	9.20E-01	1.00E+00	9.20E-01	[illegible]54E+04	1.4E+09	1.16E-05	2.94E+02		4.85E+06	
STACK FLOW (Q)	40	CFM	0.485	XE135M	4.85E-01	1.14E-03	2.16E+00	2.46E-0[illegible]	[illegible]9E+01	1.8E+06	1.16E-05	3.12E+03		6.37E+04	
			8.37	XE135	8.37E+00	1.96E-02	2.54E+00	4.99E-0[illegible]	[illegible]81E+03	3.0E+07	1.16E-05	1.81E+03		6.38E+05	
IODINE REDUCTION (RF)	133		0.692	XE138	6.92E-01	1.62E-03	1.04E+01	1.69E-02	[illegible]33E+02	2.5E+06	1.16E-05	8.83E+03		2.57E+05	
														8.76E+06	
			5.71	I131	4.29E-02	1.01E-04	2.68E+00	2.68E-04	8.26E+00	1.6E+05	1.16E-05		1.62E+07		2.93E+07
			1.92	I132	1.44E-02	3.39E-05	8.29E+00	2.81E-04	2.78E+00	5.2E+04	1.16E-05		1.94E+05		1.18E+05
			8.07	I133	4.56E-02	1.07E-04	2.43E+00	2.61E-04	8.78E+00	1.7E+05	1.16E-05		3.85E+06		7.40E+06
			0.757	I134	5.69E-03	1.34E-05	8.01E+00	8.03E-05	1.10E+00	2.1E+04	1.16E-05		5.07E+04		1.22E+04
			3.08	I135	2.32E-02	5.44E-05	3.78E+00	2.06E-04	4.46E+00	8.4E+04	1.16E-05		7.92E+05		7.73E+05
			4.26E+02	TOTAL	4.26E+02	1.00	DR$_t$ =	1.05	8.20E+04						3.76E+07
			4.26E+02	NG TOTAL	4.26E+02				8.20E+04						
			1.75E+01	I TOTAL	1.32E-01				2.54E+01						

RCS ACTIVITY REDUCED BY 133 AS PARTIONING OCCURS PRIOR TO REACHING DETECTOR

MONITOR READING FOR 2X ODCM LIMITS — RMA8

				RCS AFTER PF (A_i/RF_i) uCi/cc	RCS NORM (F_i)	RMA8 RESP (DR_i)	XE133 EQ (F_i)(DR_i)	RELEASE CONC (C_i) uCi/cc	RELEASE RATE (A_i) uCi/sec	X/Q (sec/m^3)	WB DCF, (mrem/yr) (uCi/m^3)	RGAN DC (mrem/yr) (uCi/m^3)	WB DOSE RATE (D_i) (mrem/yr)	ORGAN DOSE RATE (D_i) (mrem/yr)
SENSITIVITY (S)	3.69E+07	CPM/uCi/cc												
RMA COUNT RATE (CR)	290000	CPM												
			KR85M	2.43E+00	5.70E-03	1.92	1.09E-02	4.10E-05	2.1E+03	7.17E-07	1.17E+03		1.79E+00	
XE133 EQ CONC ($C_{Xe\ 133}$)	7.86E-03	uCi/cc	KR85	9.75E+00	2.29E-02	1.98	4.53E-02	1.65E-04	8.5E+03	7.17E-07	1.61E+01		9.86E-02	
TRUE ACTIVITY (C_i)	7.20E-03	uCi/cc	KR87	1.28E+00	3.00E-03	9.12	2.74E-02	2.16E-05	1.1E+03	7.17E-07	5.92E+03		4.76E+00	
			KR88	3.95E+00	9.26E-03	2.78	2.57E-02	6.67E-05	3.5E+03	7.17E-07	1.47E+04		3.65E+01	
NG/I RATIO	607.0836		XE131M	2.68E+00	6.28E-03	0	0.00E+00	4.52E-05	2.3E+03	7.17E-07	9.15E+01		1.54E-01	
I CONC	1.29E-05	uCi/cc	XE133M	4.22E+00	9.89E-03	0	0.00E+00	7.12E-05	3.7E+03	7.17E-07	2.51E+02		6.65E-01	
			XE133	3.92E+02	9.19E-01	1	9.19E-01	6.62E-03	3.4E+05	7.17E-07	2.94E+02		7.24E+01	
STACK FLOW (Q)	110000	CFM	XE135M	4.85E-01	1.14E-03	0	0.00E+00	8.19E-06	4.2E+02	7.17E-07	3.12E+03		9.50E-01	
			XE135	8.37E+00	1.96E-02	2.59	5.08E-02	1.41E-04	7.3E+03	7.17E-07	1.81E+03		9.52E+00	
IODINE REDUCTION (RF)	25		XE138	6.92E-01	1.62E-03	4.62	7.49E-03	1.17E-05	6.1E+02	7.17E-07	8.83E+03		3.84E+00	
												TOTAL = >	1.31E+02	
	5.71		I131	2.28E-01	5.35E-04	1.67	8.93E-04	3.86E-06	2.0E+02	7.17E-07		1.62E+07		2.32E+03
	1.92		I132	7.68E-02	1.80E-04	3.84	6.90E-04	1.30E-06	6.7E+01	7.17E-07		1.94E+05		9.36E+00
	6.07		I133	2.43E-01	5.69E-04	3.31	1.88E-03	4.10E-06	2.1E+02	7.17E-07		3.85E+06		5.87E+02
	0.757		I134	3.03E-02	7.10E-05	4.64	3.29E-04	5.11E-07	2.7E+01	7.17E-07		5.07E+04		9.64E-01
	3.08		I135	1.23E-01	2.89E-04	3.02	8.71E-04	2.08E-06	1.1E+02	7.17E-07		7.92E+05		6.13E+01
			TOTAL	4.27E+02	1.00E+00	DR_o =	1.09E+00	7.20E-03					TOTAL = >	2.98E+03

MONITOR READING FOR 200X ODCM LIMITS RMA8 HI

				RCS AFTER PF (A_i/RF_i) uCi/cc	RCS NORM (F_i)	RMA8 HI RESP (DR_i)	XE133 EQ (F_i)(DR_i)	RELEASE CONC (C_i) uCi/cc	RELEASE RATE (A_i) uCi/sec	X/Q (sec/m^3)	WB DCF, (mrem/yr) (uCi/m^3)	RGAN DC (mrem/yr) (uCi/m^3)	WB DOSE RATE (D_i) (mrem/yr)	ORGAN DOSE RATE (D_i) (mrem/yr)
SENSITIVITY (S)	1.08E+03	CPM/uCi/cc												
RMA COUNT RATE (CR)	800	CPM												
			KR85M	2.43E+00	5.70E-03	2.35	1.34E-02	3.99E-03	2.1E+05	7.17E-07	1.17E+03		1.74E+02	
XE133 EQ CONC ($C_{Xe\ 133}$)	7.41E-01	uCi/cc	KR85	9.75E+00	2.29E-02	0.011	2.51E-04	1.60E-02	8.3E+05	7.17E-07	1.61E+01		9.60E+00	
TRUE ACTIVITY (C_i)	7.01E-01	uCi/cc	KR87	1.28E+00	3.00E-03	3.59	1.08E-02	2.10E-03	1.1E+05	7.17E-07	5.92E+03		4.63E+02	
			KR88	3.95E+00	9.26E-03	3.7	3.43E-02	6.49E-03	3.4E+05	7.17E-07	1.47E+04		3.55E+03	
NG/I RATIO	607.0838		XE131M	2.68E+00	6.28E-03	0.054	3.39E-04	4.40E-03	2.3E+05	7.17E-07	9.15E+01		1.50E+01	
I CONC	1.22E-03	uCi/cc	XE133M	4.22E+00	9.89E-03	0.378	3.74E-03	6.93E-03	3.6E+05	7.17E-07	2.51E+02		6.48E+01	
			XE133	3.92E+02	9.19E-01	1	9.19E-01	6.44E-01	3.3E+07	7.17E-07	2.94E+02		7.05E+03	
STACK FLOW (Q)	110000	CFM	XE135M	4.85E-01	1.14E-03	2.16	2.46E-03	7.97E-04	4.1E+04	7.17E-07	3.12E+03		9.25E+01	
			XE135	8.37E+00	1.96E-02	2.54	4.98E-02	1.38E-02	7.1E+05	7.17E-07	1.81E+03		9.26E+02	
IODINE REDUCTION (RF)	25		XE138	6.92E-01	1.62E-03	10.41	1.69E-02	1.14E-03	5.9E+04	7.17E-07	8.83E+03		3.74E+02	
												TOTAL = >	1.27E+04	
	5.71		I131	2.28E-01	5.35E-04	2.86	1.42E-03	3.75E-04	1.9E+04	7.17E-07		1.62E+07		2.26E+05
	1.92		I132	7.68E-02	1.80E-04	8.286	1.49E-03	1.26E-04	6.5E+03	7.17E-07		1.94E+05		9.11E+02
	6.07		I133	2.43E-01	5.69E-04	2.432	1.38E-03	3.99E-04	2.1E+04	7.17E-07		3.85E+06		5.71E+04
	0.757		I134	3.03E-02	7.10E-05	6.011	4.27E-04	4.98E-05	2.6E+03	7.17E-07		5.07E+04		9.38E+01
	3.08		I135	1.23E-01	2.89E-04	3.784	1.09E-03	2.02E-04	1.1E+04	7.17E-07		7.92E+05		5.96E+03
			TOTAL	4.27E+02	1.00E+00	DR_o =	1.06E+00	7.01E-01					TOTAL = >	2.90E+05

MONITOR READING FOR SITE AREA EMERGENCY RMA8 HI

				RCS AFTER PF (A_i/RF_i) uCi/cc	RCS NORM (F_i)	RMA8 HI RESP (DR_i)	XE133 EQ (F_i)(DR_i)	RELEASE CONC (C_i) uCi/cc	RELEASE RATE (A_i) uCi/sec	X/Q (sec/m^3)	WB DCF, (mrem/yr) (uCi/m^3)	RGAN DC (mrem/yr) (uCi/m^3)	WB DOSE RATE (D_i) (mrem/yr)	ORGAN DOSE RATE (D_i) (mrem/yr)
SENSITIVITY (S)	1.08E+03	CPM/uCi/cc												
RMA COUNT RATE (CR)	12000	CPM												
			KR85M	2.43E+00	5.70E-03	2.35	1.34E-02	5.99E-02	3.1E+06	7.17E-07	1.17E+03		2.61E+03	
XE133 EQ CONC ($C_{Xe\ 133}$)	1.11E+01	uCi/cc	KR85	9.75E+00	2.29E-02	0.011	2.51E-04	2.40E-01	1.2E+07	7.17E-07	1.61E+01		1.44E+02	
TRUE ACTIVITY (C_i)	1.05E+01	uCi/cc	KR87	1.28E+00	3.00E-03	3.59	1.08E-02	3.16E-02	1.6E+06	7.17E-07	5.92E+03		6.95E+03	
			KR88	3.95E+00	9.26E-03	3.7	3.43E-02	9.74E-02	5.1E+06	7.17E-07	1.47E+04		5.32E+04	
NG/I RATIO	607.0836		XE131M	2.68E+00	6.28E-03	0.054	3.39E-04	6.61E-02	3.4E+06	7.17E-07	9.15E+01		2.25E+02	
I CONC	1.83E-02	uCi/cc	XE133M	4.22E+00	9.89E-03	0.378	3.74E-03	1.04E-01	5.4E+06	7.17E-07	2.51E+02		9.71E+02	
			XE133	3.92E+02	9.19E-01	1	9.19E-01	9.66E+00	5.0E+08	7.17E-07	2.94E+02		1.06E+05	
STACK FLOW (Q)	110000	CFM	XE135M	4.85E-01	1.14E-03	2.16	2.48E-03	1.20E-02	6.2E+05	7.17E-07	3.12E+03		1.39E+03	
			XE135	8.37E+00	1.96E-02	2.54	4.98E-02	2.08E-01	1.1E+07	7.17E-07	1.81E+03		1.39E+04	
IODINE REDUCTION (RF)	25		XE138	6.92E-01	1.62E-03	10.41	1.69E-02	1.71E-02	8.9E+05	7.17E-07	8.83E+03		5.60E+03	
												TOTAL = >	1.91E+05	
	5.71		I131	2.28E-01	5.35E-04	2.66	1.42E-03	5.63E-03	2.9E+05	7.17E-07		1.62E+07		3.39E+06
	1.92		I132	7.68E-02	1.80E-04	8.286	1.49E-03	1.89E-03	9.8E+04	7.17E-07		1.94E+05		1.37E+04
	6.07		I133	2.43E-01	5.69E-04	2.432	1.38E-03	5.98E-03	3.1E+05	7.17E-07		3.85E+06		8.57E+05
	0.757		I134	3.03E-02	7.10E-05	6.011	4.27E-04	7.46E-04	3.9E+04	7.17E-07		5.07E+04		1.41E+03
	3.08		I135	1.23E-01	2.89E-04	3.784	1.09E-03	3.04E-03	1.6E+05	7.17E-07		7.92E+05		8.95E+04
			TOTAL	4.27E+02	1.00E+00	DR_o =	1.06E+00	1.05E+01					TOTAL = >	4.35E+06

MONITOR READING FOR GENERAL EMERGENCY RMA8 HI

				RCS AFTER PF (A_i/RF_i) uCi/cc	RCS NORM (F_i)	RMA8 HI RESP (DR_i)	XE133 EQ (F_i)(DR_i)	RELEASE CONC (C_i) uCi/cc	RELEASE RATE (A_i) uCi/sec	X/Q (sec/m^3)	WB DCF, (mrem/yr) (uCi/m^3)	RGAN DC (mrem/yr) (uCi/m^3)	WB DOSE RATE (D_i) (mrem/yr)	ORGAN DOSE RATE (D_i) (mrem/yr)
SENSITIVITY (S)	1.08E+03	CPM/uCi/cc												
RMA COUNT RATE (CR)	120000	CPM												
			KR85M	2.43E+00	5.70E-03	2.35	1.34E-02	5.99E-01	3.1E+07	7.17E-07	1.17E+03		2.61E+04	
XE133 EQ CONC (C_{Xe-133})	1.11E+02	uCi/cc	KR85	9.75E+00	2.29E-02	0.011	2.51E-04	2.40E+00	1.2E+08	7.17E-07	1.61E+01		1.44E+03	
TRUE ACTIVITY (C_i)	1.05E+02	uCi/cc	KR87	1.28E+00	3.00E-03	3.59	1.08E-02	3.16E-01	1.6E+07	7.17E-07	5.92E+03		6.95E+04	
			KR88	3.95E+00	9.26E-03	3.7	3.43E-02	9.74E-01	5.1E+07	7.17E-07	1.47E+04		5.32E+05	
NG/I RATIO	607.0836		XE131M	2.68E+00	6.28E-03	0.054	3.39E-04	6.61E-01	3.4E+07	7.17E-07	9.15E+01		2.25E+03	
I CONC	1.83E-01	uCi/cc	XE133M	4.22E+00	9.89E-03	0.378	3.74E-03	1.04E+00	5.4E+07	7.17E-07	2.51E+02		9.71E+03	
			XE133	3.92E+02	9.19E-01	1	9.19E-01	9.66E+01	5.0E+09	7.17E-07	2.94E+02		1.06E+06	
STACK FLOW (Q)	110000	CFM	XE135M	4.85E-01	1.14E-03	2.16	2.46E-03	1.20E-01	6.2E+06	7.17E-07	3.12E+03		1.39E+04	
			XE135	8.37E+00	1.96E-02	2.54	4.98E-02	2.06E+00	1.1E+08	7.17E-07	1.81E+03		1.39E+05	
IODINE REDUCTION (RF)	25		XE138	6.92E-01	1.62E-03	10.41	1.69E-02	1.71E-01	8.9E+06	7.17E-07	8.83E+03		5.60E+04	
												TOTAL = >	1.91E+06	
	5.71		I131	2.28E-01	5.35E-04	2.66	1.42E-03	5.63E-02	2.9E+06	7.17E-07		1.62E+07		3.39E+07
	1.92		I132	7.68E-02	1.80E-04	8.286	1.49E-03	1.89E-02	9.8E+05	7.17E-07		1.94E+05		1.37E+05
	6.07		I133	2.43E-01	5.69E-04	2.432	1.38E-03	5.98E-02	3.1E+06	7.17E-07		3.85E+06		8.57E+06
	0.757		I134	3.03E-02	7.10E-05	6.011	4.27E-04	7.46E-03	3.9E+05	7.17E-07		5.07E+04		1.41E+04
	3.08		I135	1.23E-01	2.89E-04	3.784	1.09E-03	3.04E-02	1.6E+06	7.17E-07		7.92E+05		8.95E+05
			TOTAL	4.27E+02	1.00E+00	DR_o =	1.06E+00	1.05E+02					TOTAL = >	4.35E+07

MONITOR READING FOR 2X ODCM LIMITS RMA-9

				RCS AFTER PF (A_i/RF_i) uCi/cc	RCS NORM (F_i)	RMA-9 RESP (DR_i)	XE133 EQ (F_i)(DR_i)	RELEASE CONC (C_i) uCi/cc	RELEASE RATE (A_i) uCi/sec	X/Q (sec/m^3)	WB DCF, (mrem/yr)/(uCi/m^3)	RGAN DC (mrem/yr)/(uCi/m^3)	WB DOSE RATE (D_i) (mrem/yr)	ORGAN DOSE RATE (D_i) (mrem/yr)
SENSITIVITY (S)	3.69E+07	CPM/uCi/cc												
RMA COUNT RATE (CR)	640000	CPM												
			KR85M	2.43E+00	5.70E-03	1.92	1.09E-02	9.05E-05	2.1E+03	7.17E-07	1.17E+03		1.79E+00	
XE133 EQ CONC ($C_{Xe\ 133}$)	1.73E-02	uCi/cc	KR85	9.75E+00	2.29E-02	1.98	4.53E-02	3.63E-04	8.6E+03	7.17E-07	1.61E+01		9.89E-02	
TRUE ACTIVITY (C_i)	1.59E-02	uCi/cc	KR87	1.28E+00	3.00E-03	9.12	2.74E-02	4.77E-05	1.1E+03	7.17E-07	5.92E+03		4.77E+00	
			KR88	3.95E+00	9.26E-03	2.78	2.57E-02	1.47E-04	3.5E+03	7.17E-07	1.47E+04		3.66E+01	
NG/I RATIO	607.0836		XE131M	2.68E+00	6.28E-03	0	0.00E+00	9.99E-05	2.4E+03	7.17E-07	9.15E+01		1.54E-01	
I CONC	2.86E-05	uCi/cc	XE133M	4.22E+00	9.89E-03	0	0.00E+00	1.57E-04	3.7E+03	7.17E-07	2.51E+02		6.67E-01	
			XE133	3.92E+02	9.19E-01	1	9.19E-01	1.46E-02	3.4E+05	7.17E-07	2.94E+02		7.26E+01	
STACK FLOW (Q)	50000	CFM	XE135M	4.86E-01	1.14E-03	0	0.00E+00	1.81E-05	4.3E+02	7.17E-07	3.12E+03		9.53E 01	
			XE135	8.37E+00	1.96E-02	2.59	5.08E-02	3.12E-04	7.4E+03	7.17E-07	1.81E+03		9.54E+00	
IODINE REDUCTION (RF)	25		XE138	6.92E-01	1.62E-03	4.62	7.49E-03	2.58E-05	6.1E+02	7.17E-07	8.83E+03		3.85E+00	
												TOTAL = >	1.31E+02	
	5.71		I131	2.28E-01	5.35E-04	1.67	8.93E-04	8.51E-06	2.0E+02	7.17E-07		1.62E+07		2.33E+03
	1.92		I132	7.68E-02	1.80E-04	3.84	6.90E-04	2.86E-06	6.7E+01	7.17E-07		1.94E+05		9.39E+00
	6.07		I133	2.43E-01	5.69E-04	3.31	1.88E-03	9.05E-06	2.1E+02	7.17E-07		3.85E+06		5.89E+02
	0.757		I134	3.03E-02	7.10E-05	4.64	3.29E-04	1.13E-06	2.7E+01	7.17E-07		5.07E+04		9.67E-01
	3.08		I135	1.23E-01	2.89E-04	3.02	8.71E-04	4.59E-06	1.1E+02	7.17E-07		7.92E+05		6.15E+01
			TOTAL	4.27E+02	1.00E+00	DR_o =	1.09E+00	1.59E-02					TOTAL = >	2.99E+03

MONITOR READING FOR 2X ODCM LIMITS — RMA9 HI

				RCS AFTER PF (A_i/RF_i) uCi/cc	RCS NORM (F_i)	RMA9 HI RESP (DR_i)	XE133 EQ (F_i)(DR_i)	RELEASE CONC (C_i) uCi/cc	RELEASE RATE (A_i) uCi/sec	X/Q (sec/m^3)	WB DCF, (mrem/yr) (uCi/m^3)	RGAN DC (mrem/yr) (uCi/m^3)	WB DOSE RATE (D_i) (mrem/yr)	ORGAN DOSE RATE (D_i) (mrem/yr)
SENSITIVITY (S)	2.64E+03	CPM/uCi/cc												
RMA COUNT RATE (CR)	44	CPM												
			KR85M	2.43E+00	5.70E-03	2.35	1.34E-02	8.98E-05	2.1E+03	7.17E-07	1.17E+03		1.78E+00	
XE133 EQ CONC ($C_{Xe\ 133}$)	1.67E-02	uCi/cc	KR85	9.75E+00	2.29E-02	0.011	2.51E-04	3.61E-04	8.5E+03	7.17E-07	1.61E+01		9.81E-02	
TRUE ACTIVITY (C_i)	1.58E-02	uCi/cc	KR87	1.28E+00	3.00E-03	3.59	1.08E-02	4.73E-05	1.1E+03	7.17E-07	5.92E+03		4.74E+00	
			KR88	3.95E+00	9.26E-03	3.7	3.43E-02	1.46E-04	3.4E+03	7.17E-07	1.47E+04		3.63E+01	
NG/I RATIO	807.0836		XE131M	2.68E+00	6.28E-03	0.054	3.39E-04	9.91E-05	2.3E+03	7.17E-07	9.15E+01		1.53E-01	
I CONC	2.75E-05	uCi/cc	XE133M	4.22E+00	9.89E-03	0.378	3.74E-03	1.56E-04	3.7E+03	7.17E-07	2.51E+02		6.62E-01	
			XE133	3.92E+02	9.19E-01	1	9.19E-01	1.45E-02	3.4E+05	7.17E-07	2.94E+02		7.21E+01	
STACK FLOW (Q)	50000	CFM	XE135M	4.85E-01	1.14E-03	2.16	2.46E-03	1.79E-05	4.2E+02	7.17E-07	3.12E+03		9.46E-01	
			XE135	8.37E+00	1.96E-02	2.54	4.98E-02	3.09E-04	7.3E+03	7.17E-07	1.81E+03		9.47E+00	
IODINE REDUCTION (RF)	25		XE138	6.92E-01	1.62E-03	10.41	1.69E-02	2.56E-05	6.0E+02	7.17E-07	8.63E+03		3.82E+00	
												TOTAL = >	1.30E+02	
ORIGINAL RCS I = = = = >	5.71		I131	2.28E-01	5.35E-04	2.66	1.42E-03	8.44E-06	2.0E+02	7.17E-07		1.62E+07		2.31E+03
VALUES	1.92		I132	7.48E-02	1.80E-04	8.286	1.49E-03	2.84E-06	6.7E+01	7.17E-07		1.94E+05		9.32E+00
	6.07		I133	2.43E-01	5.69E-04	2.432	1.38E-03	8.98E-06	2.1E+02	7.17E-07		3.85E+06		5.84E+02
	0.757		I134	3.03E-02	7.10E-05	6.011	4.27E-04	1.12E-06	2.6E+01	7.17E-07		5.07E+04		9.60E-01
	3.08		I135	1.23E-01	2.89E-04	3.784	1.09E-03	4.56E-06	1.1E+02	7.17E-07		7.92E+05		6.10E+01
			TOTAL	4.27E+02	1.00E+00	DR_s =	1.06E+00	1.58E-02					TOTAL = >	2.97E+03

MONITOR READING FOR 200X ODCM LIMITS RMA9 HI

				RCS AFTER PF (A_i/RF_i) uCi/cc	RCS NORM (F_i)	RMA9 HI RESP (DR_i)	XE133 EQ (F_i)(DR_i)	RELEASE CONC (C_i) uCi/cc	RELEASE RATE (A_i) uCi/sec	X/Q (sec/m^3)	WB DCF, (mrem/yr) (uCi/m^3)	RGAN DC (mrem/yr) (uCi/m^3)	WB DOSE RATE (D_i) (mrem/yr)	ORGAN DOSE RATE (D_i) (mrem/yr)
SENSITIVITY (S)	2.64E+03	CPM/uCi/cc												
RMA COUNT RATE (CR)	4400	CPM												
			KR85M	2.43E+00	5.70E-03	2.35	1.34E-02	8.98E-03	2.1E+05	7.17E-07	1.17E+03		1.78E+02	
XE133 EQ CONC ($C_{Xe\ 133}$)	1.67E+00	uCi/cc	KR85	9.75E+00	2.29E-02	0.011	2.51E-04	3.61E-02	8.5E+05	7.17E-07	1.61E+01		9.81E+00	
TRUE ACTIVITY (C_i)	1.58E+00	uCi/cc	KR87	1.28E+00	3.00E-03	3.59	1.08E-02	4.73E-03	1.1E+05	7.17E-07	5.92E+03		4.74E+02	
			KR88	3.95E+00	9.26E-03	3.7	3.43E-02	1.46E-02	3.4E+05	7.17E-07	1.47E+04		3.63E+03	
NG/I RATIO	807.0836		XE131M	2.68E+00	6.28E-03	0.054	3.39E-04	9.91E-03	2.3E+05	7.17E-07	9.15E+01		1.53E+01	
I CONC	2.76E-03	uCi/cc	XE133M	4.22E+00	9.89E-03	0.378	3.74E-03	1.56E-02	3.7E+05	7.17E-07	2.51E+02		6.62E+01	
			XE133	3.92E+02	9.19E-01	1	9.19E-01	1.45E+00	3.4E+07	7.17E-07	2.94E+02		7.21E+03	
STACK FLOW (Q)	50000	CFM	XE135M	4.85E-01	1.14E-03	2.16	2.46E-03	1.79E-03	4.2E+04	7.17E-07	3.12E+03		9.46E+01	
			XE135	8.37E+00	1.96E-02	2.54	4.98E-02	3.09E-02	7.3E+05	7.17E-07	1.81E+03		9.47E+02	
IODINE REDUCTION (RF)	25		XE138	6.92E-01	1.62E-03	10.41	1.69E-02	2.56E-03	6.0E+04	7.17E-07	8.83E+03		3.82E+02	
												TOTAL = >	1.30E+04	
ORIGINAL RCS I = = = = >	5.71		I131	2.28E-01	5.35E-04	2.66	1.42E-03	8.44E-04	2.0E+04	7.17E-07		1.62E+07		2.31E+05
VALUES	1.92		I132	7.68E-02	1.80E-04	8.286	1.49E-03	2.84E-04	6.7E+03	7.17E-07		1.94E+05		9.32E+02
	6.07		I133	2.43E-01	5.69E-04	2.432	1.38E-03	8.98E-04	2.1E+04	7.17E-07		3.85E+06		5.84E+04
	0.757		I134	3.03E-02	7.10E-05	6.011	4.27E-04	1.12E-04	2.6E+03	7.17E-07		5.07E+04		9.60E+01
	3.08		I135	1.23E-01	2.89E-04	3.784	1.09E-03	4.56E-04	1.1E+04	7.17E-07		7.92E+05		6.10E+03
			TOTAL	4.27E+02	1.00E+00	DR_o =	1.06E+00	1.58E+00					TOTAL = >	2.97E+05

MONITOR READING FOR SITE AREA EMERGENCY RMA9 HI

				RCS AFTER PF (A_i/RF_i) uCi/cc	RCS NORM (F_i)	RMA9 HI RESP (DR_i)	XE133 EQ (F_i)(DR_i)	RELEASE CONC (C_i) uCi/cc	RELEASE RATE (A_i) uCi/sec	X/Q (sec/m^3)	WB DCF, (mrem/yr) (uCi/m^3)	RGAN DC (mrem/yr) (uCi/m^3)	WB DOSE RATE (D_i) (mrem/yr)	ORGAN DOSE RATE (D_i) (mrem/yr)
SENSITIVITY (S)	2.64E+03	CPM/uCi/cc												
RMA COUNT RATE (CR)	64500	CPM												
			KR85M	2.43E+00	5.70E-03	2.35	1.34E-02	1.32E-01	3.1E+06	7.17E-07	1.17E+03		2.61E+03	
XE133 EQ CONC ($C_{Xe\ 133}$)	2.44E+01	uCi/cc	KR85	9.75E+00	2.29E-02	0.011	2.51E-04	5.28E-01	1.2E+07	7.17E-07	1.61E+01		1.44E+02	
TRUE ACTIVITY (C_i)	2.31E+01	uCi/cc	KR87	1.28E+00	3.00E-03	3.59	1.08E-02	6.94E-02	1.6E+06	7.17E-07	5.92E+03		6.94E+03	
			KR88	3.95E+00	9.26E-03	3.7	3.43E-02	2.14E-01	5.0E+06	7.17E-07	1.47E+04		5.32E+04	
NG/I RATIO	607.0836		XE131M	2.68E+00	6.28E-03	0.054	3.39E-04	1.45E-01	3.4E+06	7.17E-07	9.15E+01		2.25E+02	
I CONC	4.02E-02	uCi/cc	XE133M	4.22E+00	9.89E-03	0.378	3.74E-03	2.29E-01	5.4E+06	7.17E-07	2.51E+02		9.71E+02	
			XE133	3.92E+02	9.19E-01	1	9.19E-01	2.12E+01	5.0E+08	7.17E-07	2.94E+02		1.06E+05	
STACK FLOW (Q)	50000	CFM	XE135M	4.85E-01	1.14E-03	2.18	2.48E-03	2.63E-02	6.2E+05	7.17E-07	3.12E+03		1.39E+03	
			XE135	8.37E+00	1.96E-02	2.84	4.98E-02	4.54E-01	1.1E+07	7.17E-07	1.81E+03		1.39E+04	
IODINE REDUCTION (RF)	25		XE138	6.92E-01	1.62E-03	10.41	1.69E-02	3.75E-02	8.8E+05	7.17E-07	8.83E+03		5.60E+03	
												TOTAL = >	1.91E+05	
ORIGINAL RCS I = = = = >	5.71		I131	2.28E-01	5.35E-04	2.66	1.42E-03	1.24E-02	2.9E+05	7.17E-07		1.62E+07		3.39E+06
VALUES	1.92		I132	7.68E-02	1.80E-04	8.286	1.49E-03	4.16E-03	9.8E+04	7.17E-07		1.94E+05		1.37E+04
	6.07		I133	2.43E-01	5.69E-04	2.432	1.38E-03	1.32E-02	3.1E+05	7.17E-07		3.85E+06		8.57E+05
	0.757		I134	3.03E-02	7.10E-05	6.011	4.27E-04	1.64E-03	3.9E+04	7.17E-07		5.07E+04		1.41E+03
	3.08		I135	1.23E-01	2.89E-04	3.784	1.09E-03	6.68E-03	1.6E+05	7.17E-07		7.92E+05		8.94E+04
			TOTAL	4.27E+02	1.00E+00	DR_s =	1.06E+00	2.31E+01					TOTAL = >	4.35E+06

MONITOR READING FOR GENERAL EMERGENCY RMA9 HI

				RCS AFTER PF (A_i/Ri'_i) uCi/cc	RCS NORM (F_i)	RMA9 HI RESP (DR_i)	XE133 EQ (F_i)(DR_i)	RELEASE CONC (C_i) uCi/cc	RELEASE RATE (A_i) uCi/sec	X/Q (sec/m^3)	WB DCF, (mrem/yr) (uCi/m^3)	RGAN DC (mrem/yr) (uCi/m^3)	WB DOSE RATE (D_i) (mrem/yr)	ORGAN DOSE RATE (D_i) (mrem/yr)
SENSITIVITY (S)	2.64E+03	CPM/uCi/cc												
RMA COUNT RATE (CR)	645000	CPM												
			KR85M	2.43E+00	5.70E-03	2.35	1.34E-02	1.32E+00	3.1E+07	7.17E-07	1.17E+03		2.61E+04	
XE133 EQ CONC ($C_{Xe\ 133}$)	2.44E+02	uCi/cc	KR85	9.75E+00	2.29E-02	0.011	2.51E-04	5.28E+00	1.2E+08	7.17E-07	1.61E+01		1.44E+03	
TRUE ACTIVITY (C_i)	2.31E+02	uCi/cc	KR87	1.28E+00	3.00E-03	3.59	1.08E-02	6.94E-01	1.6E+07	7.17E-07	5.92E+03		6.94E+04	
			KR88	3.95E+00	9.26E-03	3.7	3.43E-02	2.14E+00	5.0E+07	7.17E-07	1.47E+04		5.32E+05	
NG/I RATIO	607.0836		XE131M	2.68E+00	6.28E-03	0.054	3.39E-04	1.45E+00	3.4E+07	7.17E-07	9.15E+01		2.25E+03	
I CONC	4.02E-01	uCi/cc	XE133M	4.22E+00	9.89E-03	0.378	3.74E-03	2.29E+00	5.4E+07	7.17E-07	2.51E+02		9.71E+03	
			XE133	3.92E+02	9.19E-01	1	9.19E-01	2.12E+02	5.0E+09	7.17E-07	2.94E+02		1.06E+06	
STACK FLOW (Q)	50000	CFM	XE135M	4.85E-01	1.14E-03	2.16	2.46E-03	2.63E-01	6.2E+06	7.17E-07	3.12E+03		1.39E+04	
			XE135	8.37E+00	1.96E-02	2.54	4.98E-02	4.54E+00	1.1E+08	7.17E-07	1.81E+03		1.39E+05	
IODINE REDUCTION (RF)	25		XE138	6.92E-01	1.62E-03	10.41	1.69E-02	3.75E-01	8.8E+06	7.17E-07	8.83E+03		5.60E+04	
												TOTAL = >	1.91E+06	
ORIGINAL RCS I = = = = >	5.71		I131	2.28E-01	5.35E-04	2.66	1.42E-03	1.24E-01	2.9E+06	7.17E-07		1.62E+07		3.39E+07
VALUES	1.92		I132	7.68E-02	1.80E-04	8.286	1.49E-03	4.16E-02	9.8E+05	7.17E-07		1.94E+05		1.37E+05
	6.07		I133	2.43E-01	5.69E-04	2.432	1.38E-03	1.32E-01	3.1E+06	7.17E-07		3.85E+06		8.57E+06
	0.757		I134	3.03E-02	7.10E-05	6.011	4.27E-04	1.64E-02	3.9E+05	7.17E-07		5.07E+04		1.41E+04
	3.08		I135	1.23E-01	2.89E-04	3.784	1.09E-03	6.68E-02	1.6E+06	7.17E-07		7.92E+05		8.94E+05
			TOTAL	4.27E+02	1.00E+00	DR_s =	1.06E+00	2.31E+02					TOTAL = >	4.35E+07

MONITOR READING FOR GENERAL EMERGENCY RMA14

				FHB AFTER PF (A_i/RF_i) uCi/cc	RCS NORM (F_i)	RMA14 RESP (DR_i)	XE133 EQ (F_i)(DR_i)	RELEASE CONC (C_i) uCi/cc	RELEASE RATE (A_i) uCi/sec	X/Q (sec/m^3)	WB DCF$_i$ (mrem/yr) / (uCi/m^3)	RGAN DC (mrem/yr) / (uCi/m^3)	WB DOSE RATE (D_i) (mrem/yr)	ORGAN DOSE RATE (D_i) (mrem/yr)
SENSITIVITY (S)	1.05E+07	CPM/uCi/cc												
RMA COUNT RATE (CR)	4.7E+09	CPM												
			KR85M	1.92E-03	9.56E-08	1.92	1.84E-07	3.88E-05	1.3E+02	1.16E-05	1.17E+03		1.74E+00	
XE133 EQ CONC ($C_{Xe\ 133}$)	4.48E+02	uCi/cc	KR85	2.39E+03	1.19E-01	1.98	2.36E-01	4.83E+01	1.6E+08	1.16E-05	1.61E+01		2.98E+04	
TRUE ACTIVITY (C_t)	4.06E+02	uCi/cc	KR87	0.00E+00	0.00E+00	9.12	0.00E+00	0.00E+00	0.0E+00	1.16E-05	5.92E+03		0.00E+00	
			KR88	0.00E+00	0.00E+00	2.78	0.00E+00	0.00E+00	0.0E+00	1.16E-05	1.47E+04		0.00E+00	
NG/I RATIO	5854.867		XE131M	1.70E+02	8.46E-03	0	0.00E+00	3.44E+00	1.1E+07	1.16E-05	9.15E+01		1.20E+04	
I CONC	7.92E-02	uCi/cc	XE133M	1.16E+02	5.78E-03	0	0.00E+00	2.35E+00	7.7E+06	1.16E-05	2.51E+02		2.26E+04	
			XE133	1.74E+04	8.66E-01	1	8.66E-01	3.52E+02	1.2E+09	1.16E-05	2.94E+02		3.96E+06	
STACK FLOW (Q)	7000	CFM	XE135M	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.0E+00	1.16E-05	3.12E+03		0.00E+00	
			XE135	5.28E+00	2.63E-04	2.59	6.81E-04	1.07E-01	3.5E+05	1.16E-05	1.81E+03		7.40E+03	
IODINE REDUCTION (RF)			XE138	0.00E+00	0.00E+00	4.62	0.00E+00	0.00E+00	0.0E+00	1.16E-05	6.83E+03		0.00E+00	
												TOTAL = >	4.03E+06	
	5.71		I131	3.47E+00	1.73E-04	1.67	2.88E-04	7.02E-02	2.3E+05	1.16E-05		1.62E+07		4.35E+07
	1.92		I132	0.00E+00	0.00E+00	3.84	0.00E+00	0.00E+00	0.0E+00	1.16E-05		1.94E+05		0.00E+00
	6.07		I133	8.10E-02	4.03E-06	3.31	1.33E-05	1.64E-03	5.4E+03	1.16E-05		3.85E+06		2.42E+05
	0.757		I134	0.00E+00	0.00E+00	4.64	0.00E+00	0.00E+00	0.0E+00	1.16E-05		5.07E+04		0.00E+00
	3.08		I135	1.50E-04	7.47E-09	3.02	2.25E-08	3.03E-06	1.0E+01	1.16E-05		7.92E+05		9.20E+01
			TOTAL	2.01E+04	1.00E+00	DR_o =	1.10E+00	4.06E+02					TOTAL = >	4.38E+07

MONITOR READING FOR 2X ODCM LIMITS RMA14

				FHB AFTER PF (A_i/RF_i) uCi/cc	RCS NORM (F_i)	RMA14 RESP (DR_i)	XE133 EQ (F_i)(DR_i)	RELEASE CONC (C_i) uCi/cc	RELEASE RATE (A_i) uCi/sec	X/Q (sec/m^3)	WB DCF, (mrem/yr) (uCi/m^3)	RGAN DC (mrem/yr) (uCi/m^3)	WB DOSE RATE (D_i) (mrem/yr)	ORGAN DOSE RATE (D_i) (mrem/yr)
SENSITIVITY (S)	1.05E+07	CPM/uCi/cc												
RMA COUNT RATE (CR)	320000	CPM												
			KR85M	1.92E-03	9.56E-08	1.92	1.84E-07	2.64E-09	8.7E-03	1.16E-05	1.17E+03		1.18E-04	
XE133 EQ CONC ($C_{Xe\ 133}$)	3.05E-02	uCi/cc	KR85	2.39E+03	1.19E-01	1.98	2.36E-01	3.29E-03	1.1E+04	1.16E-05	1.61E+01		2.03E+00	
TRUE ACTIVITY (C_i)	2.77E-02	uCi/cc	KR87	0.00E+00	0.00E+00	9.12	0.00E+00	0.00E+00	0.0E+00	1.16E-05	5.52E+03		0.00E+00	
			KR88	0.00E+00	0.00E+00	2.78	0.00E+00	0.00E+00	0.0E+00	1.16E-05	1.47E+04		0.00E+00	
NG/I RATIO	5654.667		XE131M	1.70E+02	8.46E-03	0	0.00E+00	2.34E-04	7.7E+02	1.16E-05	9.15E+01		8.20E-01	
I CONC	5.39E-06	uCi/cc	XE133M	1.16E+02	5.78E-03	0	0.00E+00	1.60E-04	5.3E+02	1.16E-05	2.51E+02		1.54E+00	
			XE133	1.74E+04	8.66E-01	1	8.66E-01	2.40E-02	7.9E+04	1.16E-05	2.94E+02		2.70E+02	
STACK FLOW (Q)	7000	CFM	XE135M	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.0E+00	1.16E-05	3.12E+03		0.00E+00	
			XE135	5.28E+00	2.63E-04	2.59	6.81E-04	7.27E-06	2.4E+01	1.16E-05	1.81E+03		5.04E-01	
IODINE REDUCTION (RF)			XE138	0.00E+00	0.00E+00	4.62	0.00E+00	0.00E+00	0.0E+00	1.16E-05	8.83E+03		0.00E+00	
												TOTAL = >	2.75E+02	
	5.71		I131	3.47E+00	1.73E-04	1.67	2.88E-04	4.78E-06	1.6E+01	1.16E-05		1.62E+07		2.96E+03
	1.92		I132	0.00E+00	0.00E+00	3.84	0.00E+00	0.00E+00	0.0E+00	1.16E-05		1.94E+05		0.00E+00
	6.07		I133	8.10E-02	4.03E-06	3.31	1.33E-05	1.12E-07	3.7E-01	1.16E-05		3.85E+06		1.64E+01
	0.757		I134	0.00E+00	0.00E+00	4.64	0.00E+00	0.00E+00	0.0E+00	1.16E-05		5.07E+04		0.00E+00
	3.08		I135	1.50E-04	7.47E-09	3.02	2.25E-08	2.07E-10	6.8E-04	1.16E-05		7.92E+05		6.27E-03
			TOTAL	2.01E+04	1.00E+00	DR_o =	1.10E+00	2.77E-02					TOTAL = >	2.98E+03

MONITOR READING FOR 200X ODCM LIMITS RMA14

				FHB AFTER PF (A_i/RF_i) uCi/cc	RCS NORM (F_i)	RMA14 RESP (DR_i)	XE133 EQ ($F_i(DR_i)$)	RELEASE CONC (C_i) uCi/cc	RELEASE RATE (A_i) uCi/sec	X/Q (sec/m^3)	WB DCF, (mrem/yr) (uCi/m^3)	RGAN DC (mrem/yr) (uCi/m^3)	WB DOSE RATE (D_i) (mrem/yr)	ORGAN DOSE RATE (D_i) (mrem/yr)
SENSITIVITY (S)	1.05E+07	CPM/uCi/cc												
RMA COUNT RATE (CR)	32000000	CPM												
			KR85M	1.92E-03	9.56E-08	1.92	1.84E-07	2.64E-07	8.7E-01	1.16E-05	1.17E+03		1.18E-02	
XE133 EQ CONC ($C_{Xe\ 133}$)	3.05E+00	uCi/cc	KR85	2.39E+03	1.19E-01	1.98	2.36E-01	3.29E-01	1.1E+06	1.16E-05	1.61E+01		2.03E+02	
TRUE ACTIVITY (C_i)	2.77E+00	uCi/cc	KR87	0.00E+00	0.00E+00	9.12	0.00E+00	0.00E+00	0.0E+00	1.16E-05	5.92E+03		0.00E+00	
			KR88	0.00E+00	0.00E+00	2.78	0.00E+00	0.00E+00	0.0E+00	1.16E-05	1.47E+04		0.00E+00	
NG/I RATIO	5654.867		XE131M	1.70E+02	8.46E-03	0	0.00E+00	2.34E-02	7.7E+04	1.16E-05	9.15E+01		8.20E+01	
I CONC	5.39E-04	uCi/cc	XE133M	1.18E+02	5.78E-03	0	0.00E+00	1.60E-02	5.3E+04	1.16E-05	2.51E+02		1.54E+02	
			XE133	1.74E+04	8.66E-01	1	8.66E-01	2.40E+00	7.9E+06	1.16E-05	2.94E+02		2.70E+04	
STACK FLOW (Q)	7000	CFM	XE135M	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.0E+00	1.16E-05	3.12E+03		0.00E+00	
			XE135	5.28E+00	2.63E-04	2.59	6.81E-04	7.27E-04	2.4E+03	1.16E-05	1.81E+03		5.04E+01	
IODINE REDUCTION (RF)			XE138	0.00E+00	0.00E+00	4.62	0.00E+00	0.00E+00	0.0E+00	1.16E-05	8.83E+03		0.00E+00	
												TOTAL = >	2.75E+04	
	5.71		I131	3.47E+00	1.73E-04	1.67	2.88E-04	4.78E-04	1.6E+03	1.16E-05		1.62E+07		2.96E+05
	1.92		I132	0.00E+00	0.00E+00	3.84	0.00E+00	0.00E+00	0.0E+00	1.16E-05		1.94E+05		0.00E+00
	6.07		I133	8.10E-02	4.03E-06	3.31	1.33E-05	1.12E-05	3.7E+01	1.16E-05		3.85E+06		1.64E+03
	0.757		I134	0.00E+00	0.00E+00	4.64	0.00E+00	0.00E+00	0.0E+00	1.16E-05		5.07E+04		0.00E+00
	3.08		I135	1.50E-04	7.47E-09	3.02	2.25E-08	2.07E-08	6.8E-02	1.16E-05		7.92E+05		6.27E-01
			TOTAL	2.01E+04	1.00E+00	DR_o =	1.10E+	2.77E+00					TOTAL = >	2.98E+05

MONITOR READING FOR SITE AREA EMERGENCY RMA14

				FHB AFTER PF (A_i/RF_i) uCi/cc	RCS NORM (F_i)	RMA14 RESP (DR_i)	XE133 EQ (F_i)(DR_i)	RELEASE CONC (C_i) uCi/cc	RELEASE RATE (A_i) uCi/sec	X/Q (sec/m^3)	WB DCF$_i$ (mrem/yr) (uCi/m^3)	RGAN DC (mrem/yr) (uCi/m^3)	WB DOSE RATE (D_i) (mrem/yr)	ORGAN DOSE RATE (D_i) (mrem/yr)
SENSITIVITY (S)	1.05E+07	CPM/uCi/cc												
RMA COUNT RATE (CR)	4.7E+08	CPM												
			KR85M	1.92E-03	9.56E-08	1.92	1.84E-07	3.88E-06	1.3E+01	1.16E-05	1.17E+03		1.74E-01	
XE133 EQ CONC ($C_{Xe\ 133}$)	4.48E+01	uCi/cc	KR85	2.39E+03	1.19E-01	1.98	2.36E-01	4.83E+00	1.6E+07	1.16E-05	1.61E+01		2.98E+03	
TRUE ACTIVITY (C_i)	4.06E+01	uCi/cc	KR87	0.00E+00	0.00E+00	9.12	0.00E+00	0.00E+00	0.0E+00	1.16E-05	5.92E+03		0.00E+00	
			KR88	0.00E+00	0.00E+00	2.78	0.00E+00	0.00E+00	0.0E+00	1.16E-05	1.47E+04		0.00E+00	
NG/I RATIO	5654.867		XE131M	1.70E+02	8.46E-03	0	0.00E+00	3.44E-01	1.1E+06	1.16E-05	9.15E+01		1.20E+03	
I CONC	7.92E-03	uCi/cc	XE133M	1.16E+02	5.78E-03	0	0.00E+00	2.35E-01	7.7E+05	1.16E-05	2.51E+02		2.26E+03	
			XE133	1.74E+04	8.66E-01	1	8.66E-01	3.52E+01	1.2E+08	1.16E-05	2.94E+02		3.96E+05	
STACK FLOW (Q)	7000	CFM	XE135M	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.0E+00	1.16E-05	3.12E+03		0.00E+00	
			XE135	5.28E+00	2.63E-04	2.59	6.81E-04	1.07E-02	3.5E+04	1.16E-05	1.81E+03		7.40E+02	
IODINE REDUCTION (RF)			XE138	0.00E+00	0.00E+00	4.62	0.00E+00	0.00E+00	0.0E+00	1.16E-05	8.83E+03		0.00E+00	
												TOTAL = >	4.03E+05	
	5.71		I131	3.47E+00	1.73E-04	1.67	2.88E-04	7.02E-03	2.3E+04	1.16E-05		1.62E+07		4.35E+06
	1.92		I132	0.00E+00	0.00E+00	3.84	0.00E+00	0.00E+00	0.0E+00	1.16E-05		1.94E+05		0.00E+00
	6.07		I133	8.10E-02	4.03E-06	3.31	1.33E-05	1.64E-04	5.4E+02	1.16E-05		3.85E+06		2.42E+04
	0.757		I134	0.00E+00	0.00E+00	4.64	0.00E+00	0.00E+00	0.0E+00	1.16E-05		5.07E+04		0.00E+00
	3.08		I135	1.50E-04	7.47E-09	3.02	2.25E-08	3.03E-07	1.0E+00	1.16E-05		7.92E+05		9.20E+00
			TOTAL	2.01E+04	1.00E+00	DR_s =	1.10E+00	4.06E+01					TOTAL = >	4.38E+06

APPENDIX 2
BETA SCINTILLATOR RESPONSE FACTORS

Nuclide	RadDecay Probability	Generated Max MeV	Beta File Ave MeV	Prob X Emax
Xe-133	0.0069	0.26668	0.0751	0.00184009
Xe-133	0.993	0.3463	0.1006	0.3438759
Xe-133	0.000076	0.0435	0.0111	3.306E-06
			TOTAL	0.3457193
I-131	0.0212	0.24791	0.06936	0.00525569
I-131	0.00627	0.30388	0.08695	0.00190533
I-131	0.0736	0.33383	0.09662	0.02456989
I-131	0.893	0.60632	0.19158	0.54144376
I-131	0.00393	0.80687	0.28325	0.003171
I-131	0.00069	0.6297	0.20022	0.00043449
			TOTAL	0.57678016
I-132	0.0026	0.3191	0.092	0.00082966
I-132	0.0012	0.3532	0.103	0.00042384
I-132	0.0019	0.4244	0.127	0.00080636
I-132	0.0053	0.50332	0.154	0.0026676
I-132	0.0033	0.52176	0.161	0.00172181
I-132	0.0076	0.68919	0.223	0.00523784
I-132	0.124	0.74114	0.242	0.09190136
I-132	0.019	0.73974	0.242	0.01405506
I-132	0.0032	0.82557	0.275	0.00264182
I-132	0.0355	0.90999	0.309	0.03230465
I-132	0.081	0.9664	0.331	0.0782784
I-132	0.0275	0.99132	0.342	0.0272613
I-132	0.0336	0.99607	0.343	0.03346795
I-132	0.0249	1.1551	0.409	0.02876199
I-132	0.189	1.1851	0.422	0.2239839
I-132	0.0095	1.2291	0.44	0.01167645
I-132	0.00113	1.3927	0.51	0.00157375
I-132	0.017	1.4126	0.519	0.0240142
I-132	0.101	1.4698	0.543	0.1484498
I-132	0.02	1.468	0.543	0.02936
I-132	0.0014	1.5396	0.574	0.00215544
I-132	0.124	1.6169	0.608	0.2004956
I-132	0.169	2.1396	0.841	0.3615924
I-132	0.004954	0.44	0.13448	0.00217976
			TOTAL	1.32584094
I-133	0.0041	0.16998	0.046	0.00069692
I-133	0.0124	0.37385	0.11	0.00463574
I-133	0.00397	0.40962	0.122	0.00162619
I-133	0.0375	0.46176	0.14	0.017316
I-133	0.0313	0.52357	0.162	0.01638774
I-133	0.00542	0.7077	0.23	0.00383573
I-133	0.0416	0.88467	0.299	0.03680227
I-133	0.0181	1.0162	0.352	0.01839322
I-133	0.835	1.2301	0.441	1.0271335
I-133	0.0107	1.5268	0.573	0.01633676
I-133	0.00027	0.85	0.284	0.0002295
			TOTAL	1.14339358

Nuclide	RadDecay Probability	Generated Max MeV	Beta File Ave MeV	Prob X Emax
I-134	0.0148	0.77458	0.255	0.01146378
I-134	0.0033	0.78956	0.261	0.00260555
I-134	0.00153	0.8355	0.279	0.00127832
I-134	0.0122	1.0662	0.372	0.01300764
I-134	0.325	1.2826	0.46	0.416845
I-134	0.0053	1.3771	0.5	0.00729863
I-134	0.081	1.4962	0.55	0.1211922
I-134	0.163	1.5615	0.58	0.2545245
I-134	0.0367	1.6024	0.6	0.05880808
I-134	0.076	1.7415	0.66	0.132354
I-134	0.112	1.797	0.69	0.201264
I-134	0.0112	1.8479	0.71	0.02069648
I-134	0.037	2.2304	0.88	0.0825248
I-134	0.115	2.4188	0.97	0.278162
I-134	0.00226	0.795	0.26355	0.0017967
			TOTAL	1.60382168
I-135	0.0014	0.23591	0.066	0.00033027
I-135	0.00126	0.24489	0.068	0.00030856
I-135	0.0014	0.26389	0.074	0.00036917
I-135	0.0108	0.30228	0.086	0.00326462
I-135	0.0091	0.33901	0.098	0.00308499
I-135	0.0139	0.35376	0.103	0.00491726
I-135	0.0473	0.45553	0.138	0.02154657
I-135	0.0733	0.47796	0.145	0.03503447
I-135	0.0157	0.61806	0.196	0.00970354
I-135	0.011	0.66511	0.213	0.00731621
I-135	0.079	0.74268	0.24	0.05867172
I-135	0.0061	0.81656	0.272	0.00498102
I-135	0.087	0.91978	0.313	0.08002086
I-135	0.218	1.0329	0.359	0.2251722
I-135	0.079	1.1457	0.405	0.0905103
I-135	0.074	1.2534	0.451	0.0927516
I-135	0.001	1.2626	0.454	0.0012626
I-135	0.236	1.4506	0.535	0.3423416
I-135	0.012	1.5795	0.591	0.018954
I-135	0.019	2.1845	0.858	0.0415055
I-135	0.00154	0.647	0.20722	0.00099638
			TOTAL	1.04304345