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Kiwi Transient Nuclear Test
Dose Rate Survey



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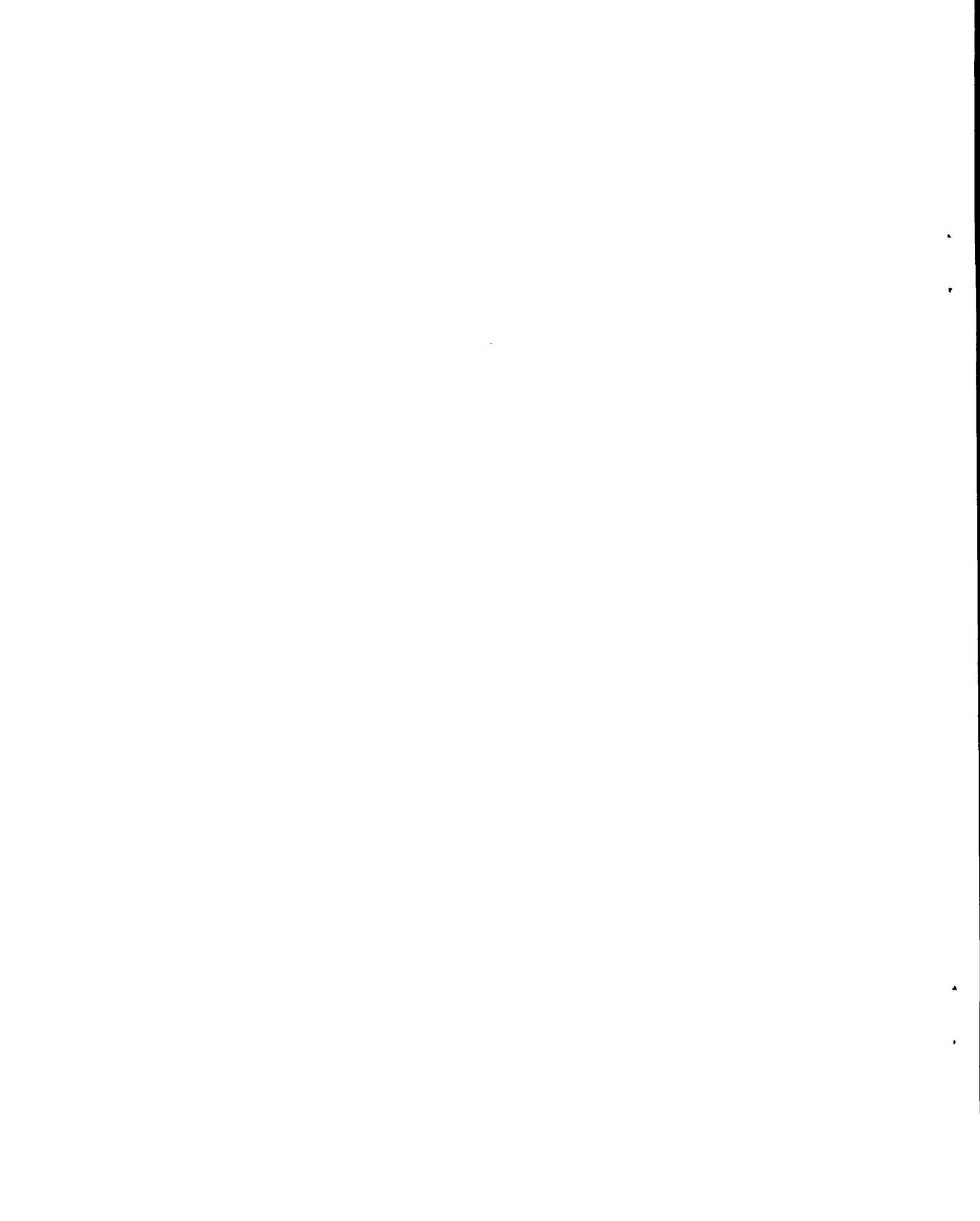
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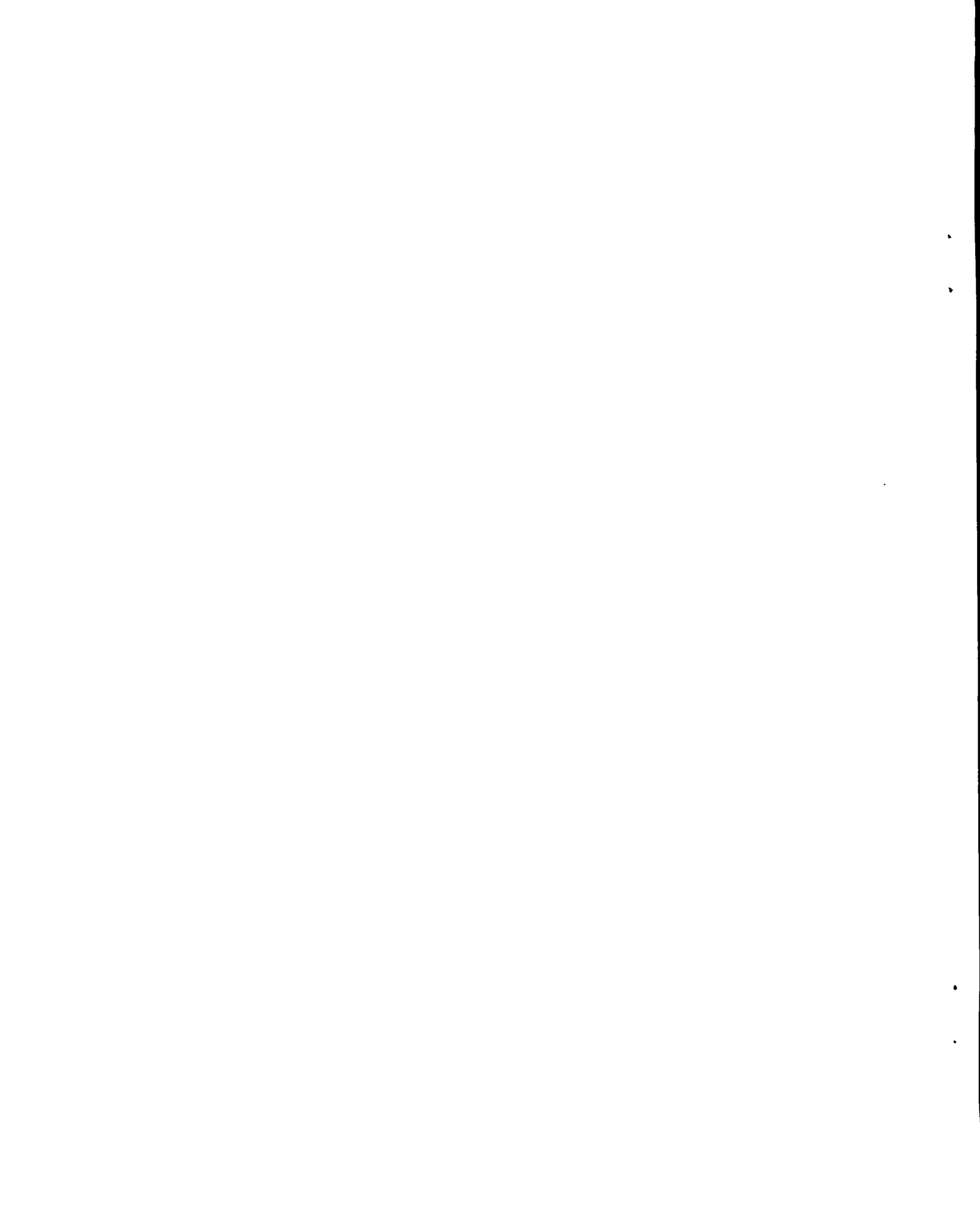
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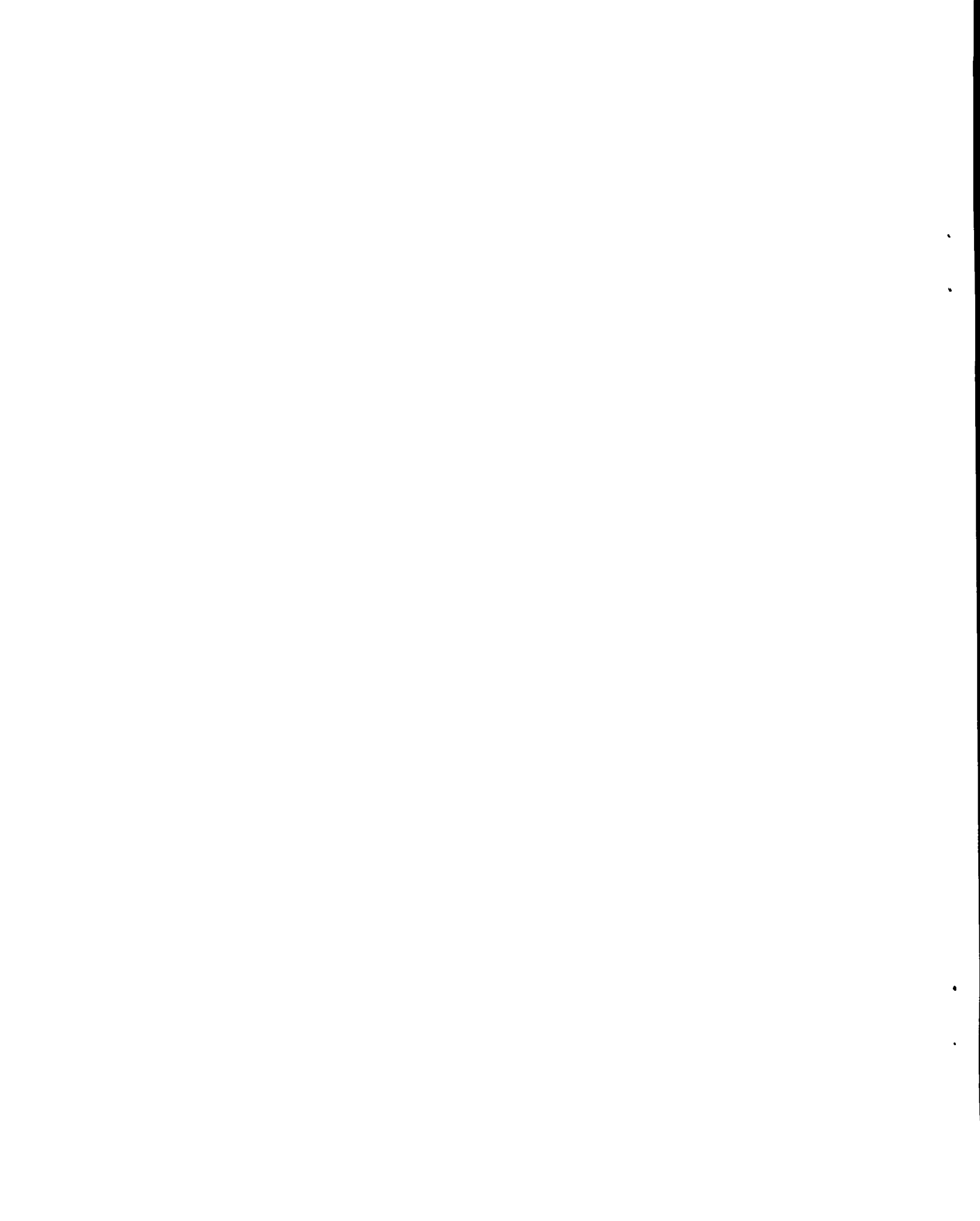
ABSTRACT

Following the KIWI TNT event, intensive, accurate dose rate surveys were taken of the contaminated areas surrounding the test point. The data collected during these surveys, and decay relationships derived therefrom, are presented.



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INTRODUCTION

The Kiwi Transient Nuclear Test (TNT) was a deliberate nuclear destruction experiment of a prototype nuclear rocket engine. This special test was conducted by the Los Alamos Scientific Laboratory (LASL) at the Nuclear Rocket Development Station on January 12, 1965. The purpose of the experiment was to determine the characteristics and effects of nuclear excursions in reactors which are being developed by the Rover Program. A Kiwi B type reactor was modified for the test by deleting the propellant-coolant systems and by changing the control drum drive mechanism to allow an extremely rapid insertion of reactivity.

A nuclear transient was induced at 10:58 PST in the virgin reactor by the rapid rotation of the control drums. The transient produced 3.1×10^{20} fissions before the associated temperatures and pressures pulverized or volatilized most of the core and dismantled the reactor. Approximately two-thirds of the resulting fission product activity was transported away from the test point by the effluent cloud into a direction of about 220° . Reactor components and core fragments were dispersed in the test area with most of this radioactive material being deposited within a few hundred feet of the test point.

Area gamma dose rates were measured after the excursion by LASL H-Division personnel using portable radiation instruments. These repetitive measurements documented dose rates resulting from the radioactive material produced and dispersed by the transient. Results

of the surveys produced indicate the residual radiation environment produced by an excursion of a nuclear rocket engine. Information concerning other radiation measurement programs conducted by LASL H-Division on the TNT event, such as effluent measurements, integral dose measurements, and immediate dose rate measurements, are given in separate reports.

METHODS

Gamma dose rates were measured with portable radiation instruments (Jordan Radectors) of the type normally used for radiation safety surveys. These instruments detect gamma radiation by means of an energy-compensated ionization chamber (Nehr-White). Currents produced by the chamber are measured by a microammeter and indicated on a 3 decade scale in terms of radiation dose rates. The scale has two ranges of 0.5 to 500 mR/hr and a 0.5 to 500 R/hr. An internal radiation source can be activated to periodically verify that a proper instrument calibration is being maintained. Instruments used for the TNT survey were calibrated daily to known fluxes of ^{60}Co radiation at levels varying between 1 mR/hr and 10 R/hr.

An average measurement obtained with two survey instruments was used to document the radiation levels at each surveyed location. Measurements were taken 30 inches above the ground at predetermined survey points which were demarcated by 36-inch wooden stakes. A consistent method for obtaining the measurements was maintained throughout the repetitive surveys with the surveyor facing the test point and positioning the instruments at 30-inch marks on the survey stake.

Dose rate measurements were obtained at 285 separate locations in the vicinity of the TNT test point which was positioned 640 feet northwest of the Test Cell C pad. Stations were located along the 05, 205, 225, and 245^o radials from the test point at general intervals of 25 feet out to 500 feet, and 100 feet intervals out to about 2,000 feet. Stations were also positioned at 20^o intervals around the 100 and 200 foot arcs, and at 10^o intervals on the 500 and 1,000 foot arcs. Other stations were located on the 2,000, 4,000, and 8,000 foot arcs in the downwind direction from the test point.

The survey was initiated 2 hours after the event and continued for about 200 hours. Measured dose rates ranged from the 0.5 mR/hr lower detection limit of the instruments up to a few R/hr. Higher dose rates were not measured because the resulting exposures to the surveyors was not felt to be warranted. Some stations were monitored as many as nine times throughout the survey while the dose rate at other stations was at such levels that only 1 reliable measurement could be obtained.

Radioactive material dispersed in the survey area was not disturbed to any extent during the survey period. A few test samples were removed from the area during the first few days following the event, and attempts were initiated 2 days post event at removing all contamination material from Test Cell C. This removal of material only appeared to seriously affect the dose rate survey data collected at the 500'-320^o and 500'-340^o stations.

The raw data collected for each station was then analyzed to produce decay extrapolation equations of the form

$$\text{dose rate} = At^{-B} \quad (1)$$

where t is the time in hours after the event.

This was done by using an electronic computer to perform a least squares fit to the data to obtain the coefficient and exponent for equation (1) for each station for which sufficient data was collected. Data obtained at stations where fewer than 5 data points were collected was not analyzed to obtain both A and B, but rather a value of $B = 1.30$ (the average of B values obtained for fully analyzed stations) was assumed, and the value of A was then calculated, again using a least squares technique. Using equation (1), dose rates could then be calculated for any station for any desired time.

RESULTS

Table I lists for each survey station the functional equation (1), with values of A and B shown implicitly; the times post event at which a dose rate reading was obtained; the corresponding dose rate reading; and the dose rate calculated for that station using equation (1) for each survey time.

Table II lists for each survey station explicitly the values of A and B used in equation (1) and dose rates calculated from equation (1) for times of 1, 10, 24, 100, 168, and 1000 hours.

Figures 1 through 12 show logarithmic plots of the data collected and the fit obtained using equation (1) for several typical sampling stations. Figures 13, 14, and 15 show the variation of dose rate with azimuth about the test point at distances of 100, 200, 500, and 1,000 feet, extrapolated to 1 hour, 1 day, and 1 week after the event. Figure 16 shows dose rate versus azimuth extrapolated to 1 hour post event for the 2,000, 4,000, and 8,000 foot survey stations.

Figures 17 and 18 show the variation of dose rate with distance for the 205° radial extrapolated to 1 hour and 1 day after the event. Figures 19 through 24 show survey isodose rate contours around the test point at 1 hour, 1 day, and 1 week after the event.

TABLE I. CALCULATED DOSE RATES COMPARED TO MEASURED DOSE RATES AT THE TNT SURVEY STATIONS

Station (ft)	Location (°)	Calculated Function	Time Post Event (hrs)	Measured Dose Rate (mR/hr)	Calculated Dose Rate (mR/hr)			
100	00	$5.12 \times 10^4 t^{-1.28}$	2.15×10^1	1.00×10^3	1.00×10^3			
			4.80×10^1	3.88×10^2	3.59×10^2			
			7.55×10^1	2.00×10^2	2.01×10^2			
			9.65×10^1	1.11×10^2	1.47×10^2			
			1.47×10^2	8.00×10^1	8.55×10^1			
			1.72×10^2	7.50×10^1	7.02×10^1			
			1.95×10^2	6.00×10^1	5.95×10^1			
100	20	$7.70 \times 10^4 t^{-1.37}$	4.80×10^1	3.75×10^2	3.76×10^2			
			7.55×10^1	2.25×10^2	2.02×10^2			
			9.65×10^1	1.03×10^2	1.44×10^2			
			1.47×10^2	9.00×10^1	8.07×10^1			
			1.72×10^2	7.50×10^1	6.53×10^1			
			1.95×10^2	6.00×10^1	5.47×10^1			
			100	40	$4.93 \times 10^4 t^{-1.29}$	2.15×10^1	9.50×10^2	9.52×10^2
4.80×10^1	3.50×10^2	3.39×10^2						
7.55×10^1	2.00×10^2	1.89×10^2						
9.65×10^1	1.03×10^2	1.38×10^2						
1.47×10^2	8.00×10^1	8.03×10^1						
1.72×10^2	7.50×10^1	6.58×10^1						
1.95×10^2	6.00×10^1	5.58×10^1						
100	60	$1.85 \times 10^4 t^{-1.11}$	2.15×10^1	6.00×10^2	6.08×10^2			
			4.80×10^1	2.83×10^2	2.49×10^2			
			7.55×10^1	1.63×10^2	1.50×10^2			
			9.65×10^1	8.50×10^1	1.14×10^2			
			1.47×10^2	6.00×10^1	7.16×10^1			
			1.72×10^2	5.25×10^1	6.03×10^1			
			1.95×10^2	4.00×10^1	5.23×10^1			
100	80	$1.65 \times 10^4 t^{-1.14}$	2.15×10^1	5.00×10^2	5.04×10^2			
			4.80×10^1	2.18×10^2	2.02×10^2			
			1.47×10^2	4.75×10^1	5.66×10^1			
			1.72×10^2	4.00×10^1	4.74×10^1			
			1.95×10^2	3.25×10^1	4.11×10^1			
			100	100	$2.56 \times 10^4 t^{-1.28}$	2.15×10^1	5.00×10^2	5.00×10^2
						7.55×10^1	1.00×10^2	9.98×10^1
9.75×10^1	7.25×10^1	7.19×10^1						
1.47×10^2	3.75×10^1	4.24×10^1						
1.72×10^2	3.85×10^1	3.47×10^1						
1.95×10^2	3.00×10^1	2.95×10^1						
100	120	$2.85 \times 10^4 t^{-1.20}$				2.15×10^1	7.00×10^2	7.09×10^2
			4.80×10^1	3.25×10^2	2.70×10^2			
			7.55×10^1	1.25×10^2	1.56×10^2			
			9.75×10^1	1.00×10^2	1.15×10^2			
			1.47×10^2	6.00×10^1	7.02×10^1			
			1.72×10^2	5.00×10^1	5.81×10^1			
			1.95×10^2	4.25×10^1	4.99×10^1			
100	140	$4.94 \times 10^4 t^{-1.24}$	2.15×10^1	1.10×10^3	1.11×10^3			
			4.80×10^1	4.50×10^2	4.09×10^2			
			7.55×10^1	2.00×10^2	2.33×10^2			
			9.75×10^1	1.40×10^2	1.70×10^2			

TABLE I. (continued)

Station (ft)	Location (°)	Calculated Function	Time Post Event (hrs)	Measured Dose Rate (mR/hr)	Calculated Dose Rate (mR/hr)
100	160	$2.40 \times 10^5 t^{-1.56}$	1.46×10^2	1.13×10^2	1.03×10^2
			1.71×10^2	9.00×10^1	8.51×10^1
			1.95×10^2	8.00×10^1	7.21×10^1
			2.15×10^1	2.00×10^3	1.99×10^3
			4.80×10^1	5.00×10^2	5.67×10^2
			7.55×10^1	3.00×10^2	2.80×10^2
			9.75×10^1	2.13×10^2	1.88×10^2
			1.46×10^2	1.38×10^2	9.98×10^1
			1.71×10^2	1.13×10^2	7.83×10^1
			1.95×10^2	9.00×10^1	6.35×10^1
100	180	$2.16 \times 10^5 t^{-1.45}$	2.15×10^1	2.50×10^3	2.49×10^3
			4.80×10^1	7.00×10^2	7.73×10^2
			7.55×10^1	4.50×10^2	4.00×10^2
			9.75×10^1	2.63×10^2	2.76×10^2
			1.46×10^2	1.88×10^2	1.53×10^2
			1.71×10^2	1.55×10^2	1.22×10^2
			1.95×10^2	1.38×10^2	1.01×10^2
			2.15×10^1	2.75×10^3	2.74×10^3
100	200	$2.43 \times 10^5 t^{-1.46}$	4.80×10^1	8.00×10^2	8.48×10^2
			7.55×10^1	4.75×10^2	4.37×10^2
			9.75×10^1	2.80×10^2	3.01×10^2
			1.46×10^2	1.88×10^2	1.67×10^2
			1.71×10^2	1.63×10^2	1.33×10^2
			1.95×10^2	1.35×10^2	1.09×10^2
			2.15×10^1	2.00×10^3	1.99×10^3
			4.80×10^1	5.50×10^2	6.06×10^2
100	220	$1.88 \times 10^5 t^{-1.48}$	7.55×10^1	3.50×10^2	3.10×10^2
			9.75×10^1	2.13×10^2	2.12×10^2
			1.46×10^2	1.38×10^2	1.17×10^2
			1.71×10^2	1.13×10^2	9.27×10^1
			1.95×10^2	9.50×10^1	7.60×10^1
			2.15×10^1	2.00×10^3	1.99×10^3
			4.80×10^1	5.50×10^2	6.06×10^2
			7.55×10^1	3.50×10^2	3.10×10^2
100	240	$2.86 \times 10^4 t^{-1.09}$	9.75×10^1	1.63×10^2	1.94×10^2
			1.46×10^2	1.00×10^2	1.25×10^2
			1.71×10^2	9.00×10^1	1.06×10^2
			1.95×10^2	7.00×10^1	9.13×10^1
			2.15×10^1	1.00×10^3	1.01×10^3
			4.80×10^1	4.50×10^2	4.21×10^2
			7.50×10^1	3.00×10^2	2.59×10^2
			9.75×10^1	1.63×10^2	1.94×10^2
100	260	$9.00 \times 10^3 t^{-0.93}$	9.75×10^1	1.08×10^2	1.27×10^2
			1.46×10^2	6.50×10^1	8.71×10^1
			1.71×10^2	5.25×10^1	7.54×10^1
			1.95×10^2	5.00×10^1	6.66×10^1
			2.15×10^1	5.00×10^2	5.18×10^2
			4.80×10^1	3.13×10^2	2.45×10^2
			7.50×10^1	1.63×10^2	1.62×10^2
			9.75×10^1	1.08×10^2	1.27×10^2
100	280	$2.24 \times 10^4 t^{-1.18}$	9.65×10^1	8.60×10^1	1.04×10^2
			1.47×10^2	5.25×10^1	6.33×10^1
			2.15×10^1	6.00×10^2	6.06×10^2
			4.80×10^1	2.73×10^2	2.36×10^2
			7.50×10^1	1.25×10^2	1.40×10^2
			9.65×10^1	8.60×10^1	1.04×10^2

TABLE I. (continued)

Station (ft)	Location (°)	Calculated Function	Time Post Event (hrs)	Measured Dose Rate (mR/hr)	Calculated Dose Rate (mR/hr)
			1.72×10^2	5.50×10^1	5.28×10^1
			1.95×10^2	4.00×10^1	4.54×10^1
100	300	$1.76 \times 10^4 t^{-1.13}$	2.15×10^1	5.50×10^2	5.57×10^2
			4.80×10^1	2.63×10^2	2.26×10^2
			7.50×10^1	1.25×10^2	1.37×10^2
			9.65×10^1	8.50×10^1	1.03×10^2
			1.47×10^2	5.25×10^1	6.40×10^1
			1.72×10^2	5.25×10^1	5.38×10^1
			1.95×10^2	4.25×10^1	4.66×10^1
100	320	$4.99 \times 10^4 t^{-1.29}$	2.15×10^1	9.50×10^2	9.53×10^2
			4.80×10^1	3.55×10^2	3.38×10^2
			7.55×10^1	2.00×10^2	1.89×10^2
			9.65×10^1	1.03×10^2	1.37×10^2
			1.47×10^2	8.00×10^1	7.98×10^1
			1.72×10^2	6.50×10^1	6.54×10^1
			1.95×10^2	5.50×10^1	5.54×10^1
100	340	$1.11 \times 10^5 t^{-1.44}$	2.15×10^1	1.35×10^3	1.35×10^3
			4.80×10^1	4.38×10^2	4.27×10^2
			7.55×10^1	2.25×10^2	2.23×10^2
			9.65×10^1	1.18×10^2	1.56×10^2
			1.47×10^2	9.00×10^1	8.55×10^1
			1.72×10^2	8.50×10^1	6.85×10^1
			1.95×10^2	7.00×10^1	5.70×10^1
200	00	$2.16 \times 10^4 t^{-1.39}$	2.15×10^1	3.00×10^2	3.00×10^2
			4.80×10^1	1.00×10^2	9.79×10^1
			7.50×10^1	4.50×10^1	5.25×10^1
			9.65×10^1	3.25×10^1	3.70×10^1
			1.47×10^2	2.50×10^1	2.06×10^1
			1.72×10^2	2.50×10^1	1.66×10^1
			1.95×10^2	1.75×10^1	1.39×10^1
200	20	$1.56 \times 10^4 t^{-1.32}$	2.15×10^1	2.75×10^2	2.76×10^2
			4.80×10^1	1.00×10^2	9.57×10^1
			7.50×10^1	5.50×10^1	5.32×10^1
			9.65×10^1	2.40×10^1	3.82×10^1
			1.47×10^2	2.50×10^1	2.19×10^1
			1.72×10^2	2.25×10^1	1.79×10^1
			1.95×10^2	1.70×10^1	1.51×10^1
200	40	$4.78 \times 10^4 t^{-1.64}$	2.15×10^1	3.13×10^2	3.12×10^2
			4.80×10^1	8.00×10^1	8.36×10^1
			7.50×10^1	4.00×10^1	4.02×10^1
			9.65×10^1	2.90×10^1	2.66×10^1
			1.47×10^2	1.65×10^1	1.33×10^1
			1.72×10^2	1.35×10^1	1.03×10^1
			1.95×10^2	8.50×10^0	8.38×10^0
200	60	$1.81 \times 10^4 t^{-1.40}$	2.15×10^1	2.50×10^2	2.49×10^2
			4.80×10^1	7.25×10^1	8.09×10^1
			7.50×10^1	4.00×10^1	4.34×10^1
			9.65×10^1	4.60×10^1	3.05×10^1
			1.47×10^2	1.75×10^1	1.69×10^1
			1.72×10^2	1.45×10^1	1.37×10^1

TABLE I. (continued)

Station (ft)	Location (°)	Calculated Function	Time Post Event (hrs)	Measured Dose Rate (mR/hr)	Calculated Dose Rate (mR/hr)
200	80	$2.17 \times 10^4 t^{-1.46}$	1.95×10^2	1.05×10^1	1.14×10^1
			2.15×10^1	2.50×10^2	2.50×10^2
			4.80×10^1	7.75×10^1	7.77×10^1
			7.50×10^1	4.00×10^1	4.06×10^1
			9.65×10^1	2.80×10^1	2.81×10^1
			1.47×10^2	1.65×10^1	1.52×10^1
			1.72×10^2	1.25×10^1	1.22×10^1
200	90	$2.24 \times 10^4 t^{-1.54}$	1.95×10^2	1.00×10^1	1.01×10^1
			4.80×10^1	5.75×10^1	5.72×10^1
			9.65×10^1	1.75×10^1	1.95×10^1
			1.47×10^2	1.05×10^1	1.02×10^1
			1.72×10^2	9.00×10^0	8.02×10^0
200	100	$1.25 \times 10^4 t^{-1.33}$	1.95×10^2	8.00×10^0	6.58×10^0
			2.15×10^1	2.13×10^2	2.13×10^2
			4.80×10^1	8.00×10^1	7.36×10^1
			7.50×10^1	3.50×10^1	4.07×10^1
			1.47×10^2	1.60×10^1	1.67×10^1
200	120	$2.37 \times 10^4 t^{-1.40}$	1.72×10^2	1.25×10^1	1.36×10^1
			1.95×10^2	1.00×10^1	1.15×10^1
			2.15×10^1	3.25×10^2	3.25×10^2
			4.80×10^1	1.05×10^2	1.06×10^2
			7.50×10^1	6.00×10^1	5.66×10^1
			9.70×10^1	3.75×10^1	3.95×10^1
			1.47×10^2	2.10×10^1	2.21×10^1
200	140	$3.50 \times 10^4 t^{-1.42}$	1.72×10^2	1.75×10^1	1.78×10^1
			1.95×10^2	1.50×10^1	1.49×10^1
			2.15×10^1	4.50×10^2	4.50×10^2
			4.80×10^1	1.45×10^2	1.43×10^2
			7.50×10^1	7.50×10^1	7.64×10^1
			9.70×10^1	5.10×10^1	5.30×10^1
			1.47×10^2	3.00×10^1	2.94×10^1
200	160	$2.20 \times 10^4 t^{-1.17}$	1.72×10^2	2.50×10^1	2.36×10^1
			1.95×10^2	2.15×10^1	1.97×10^1
			2.15×10^1	6.00×10^2	6.03×10^2
			4.80×10^1	2.50×10^2	2.35×10^2
			7.50×10^1	1.38×10^2	1.39×10^2
			9.75×10^1	9.00×10^1	1.02×10^2
200	180	$4.53 \times 10^4 t^{-1.18}$	1.46×10^2	6.00×10^1	6.38×10^1
			1.71×10^2	5.50×10^1	5.32×10^1
			1.95×10^2	4.25×10^1	4.55×10^1
			2.15×10^1	1.25×10^3	1.23×10^3
			2.70×10^1	9.00×10^2	9.40×10^2
			4.80×10^1	5.00×10^2	4.78×10^2
			7.50×10^1	3.00×10^2	2.83×10^2
200	200	$2.12 \times 10^5 t^{-1.48}$	9.75×10^1	1.80×10^2	2.08×10^2
			1.46×10^2	1.38×10^2	1.29×10^2
			1.71×10^2	1.13×10^2	1.08×10^2
			1.95×10^2	9.00×10^1	9.20×10^1
			2.20×10^1	2.25×10^3	2.16×10^3
			2.20×10^1	2.25×10^3	2.16×10^3

TABLE I. (continued)

Station (ft)	Location (°)	Calculated Function	Time Post Event (hrs)	Measured Dose Rate (mR/hr)	Calculated Dose Rate (mR/hr)
			2.70×10^1	1.45×10^3	1.59×10^3
			4.80×10^1	6.50×10^2	6.77×10^2
			7.50×10^1	4.00×10^2	3.49×10^2
			9.75×10^1	2.63×10^2	2.37×10^2
			1.46×10^2	1.75×10^2	1.30×10^2
			1.71×10^2	1.50×10^2	1.03×10^2
			1.95×10^2	1.30×10^2	8.46×10^1
200	220	$1.02 \times 10^5 t^{-1.38}$	2.20×10^1	1.50×10^3	1.43×10^3
			2.75×10^1	9.35×10^2	1.05×10^3
			4.80×10^1	5.00×10^2	4.87×10^2
			7.50×10^1	3.00×10^2	2.63×10^2
			9.75×10^1	1.80×10^2	1.83×10^2
			1.46×10^2	1.13×10^2	1.05×10^2
			1.71×10^2	1.13×10^2	8.46×10^1
			1.95×10^2	1.00×10^2	7.03×10^1
200	240	$1.88 \times 10^4 t^{-1.12}$	2.20×10^1	5.50×10^2	5.84×10^2
			2.75×10^1	5.00×10^2	4.55×10^2
			4.80×10^1	2.63×10^2	2.43×10^2
			7.50×10^1	1.38×10^2	1.47×10^2
			9.75×10^1	8.75×10^1	1.10×10^2
			1.46×10^2	6.00×10^1	6.97×10^1
			1.71×10^2	5.25×10^1	5.86×10^1
			1.96×10^2	4.25×10^1	5.02×10^1
200	260	$3.39 \times 10^4 t^{-1.40}$	2.20×10^1	4.50×10^2	4.48×10^2
			2.75×10^1	3.25×10^2	3.28×10^2
			4.80×10^1	1.50×10^2	1.50×10^2
			7.50×10^1	7.50×10^1	8.04×10^1
			9.75×10^1	5.75×10^1	5.57×10^1
			1.46×10^2	3.50×10^1	3.17×10^1
			1.71×10^2	3.00×10^1	2.55×10^1
			1.96×10^2	2.50×10^1	2.10×10^1
200	270	$9.69 \times 10^3 t^{-1.18}$	2.75×10^1	1.95×10^2	1.97×10^2
			4.80×10^1	1.08×10^2	1.02×10^2
			9.65×10^1	4.15×10^1	4.49×10^1
			1.47×10^2	2.50×10^1	2.74×10^1
			1.72×10^2	2.25×10^1	2.28×10^1
			1.95×10^2	2.00×10^1	1.96×10^1
200	280	$2.85 \times 10^4 t^{-1.41}$	2.15×10^1	3.75×10^2	3.74×10^2
			4.80×10^1	1.18×10^2	1.20×10^2
			7.50×10^1	6.50×10^1	6.41×10^1
			9.65×10^1	3.80×10^1	4.49×10^1
			1.47×10^2	3.00×10^1	2.48×10^1
			1.72×10^2	2.50×10^1	1.99×10^1
			1.95×10^2	2.25×10^1	1.66×10^1
200	300	$8.83 \times 10^4 t^{-1.69}$	2.20×10^1	4.75×10^2	4.73×10^2
			4.80×10^1	1.13×10^2	1.26×10^2
			7.50×10^1	6.50×10^1	5.94×10^1
			9.65×10^1	3.90×10^1	3.88×10^1
			1.47×10^2	3.00×10^1	1.90×10^1
			1.72×10^2	2.50×10^1	1.47×10^1
			1.95×10^2	2.10×10^1	1.18×10^1

TABLE I. (continued)

Station (ft)	Location (°)	Calculated Function	Time Post Event (hrs)	Measured Dose Rate (mR/hr)	Calculated Dose Rate (mR/hr)
200	320	$3.75 \times 10^6 t^{-2.68}$	2.20×10^1	9.50×10^2	9.49×10^2
			4.80×10^1	1.00×10^2	1.17×10^2
			7.50×10^1	5.50×10^1	3.55×10^1
			9.65×10^1	3.25×10^1	1.81×10^1
			1.47×10^2	2.10×10^1	5.85×10^0
			1.72×10^2	1.75×10^1	3.87×10^0
			1.95×10^2	1.50×10^1	2.74×10^0
200	340	$1.38 \times 10^7 t^{-3.05}$	2.20×10^1	1.10×10^3	1.10×10^3
			4.80×10^1	8.75×10^1	1.02×10^2
			7.50×10^1	4.25×10^1	2.60×10^1
			9.65×10^1	3.55×10^1	1.20×10^1
			1.47×10^2	1.75×10^1	3.33×10^0
			1.72×10^2	1.50×10^1	2.08×10^0
			1.95×10^2	1.00×10^1	1.41×10^0
500	00	$2.78 \times 10^3 t^{-1.46}$	2.05×10^1	3.35×10^1	3.36×10^1
			4.60×10^1	1.10×10^1	1.03×10^1
			7.25×10^1	5.50×10^0	5.30×10^0
			9.70×10^1	2.75×10^0	3.46×10^0
			1.47×10^2	1.25×10^0	1.90×10^0
			1.72×10^2	1.25×10^0	1.51×10^0
500	10	$3.04 \times 10^3 t^{-1.63}$	2.05×10^1	2.20×10^1	2.21×10^1
			4.60×10^1	6.50×10^0	5.90×10^0
			7.25×10^1	2.25×10^0	2.81×10^0
			9.70×10^1	1.40×10^0	1.75×10^0
			1.47×10^2	8.50×10^{-1}	8.92×10^{-1}
			1.72×10^2	8.00×10^{-1}	6.90×10^{-1}
500	20	$1.78 \times 10^3 t^{-1.37}$	2.05×10^1	2.80×10^1	2.83×10^1
			4.60×10^1	1.10×10^1	9.34×10^0
			7.25×10^1	4.50×10^0	5.00×10^0
			9.70×10^1	2.75×10^0	3.36×10^0
			1.47×10^2	8.50×10^{-1}	1.91×10^0
			1.72×10^2	8.50×10^{-1}	1.54×10^0
500	30	$2.83 \times 10^3 t^{-1.48}$	2.05×10^1	3.25×10^1	3.27×10^1
			4.65×10^1	1.10×10^1	9.75×10^0
			7.25×10^1	4.50×10^0	5.06×10^0
			9.70×10^1	2.75×10^0	3.29×10^0
			1.47×10^2	1.25×10^0	1.79×10^0
			1.72×10^2	8.50×10^{-1}	1.42×10^0
500	40	$2.60 \times 10^3 t^{-1.54}$	2.05×10^1	2.45×10^1	2.46×10^1
			4.65×10^1	7.50×10^0	6.94×10^0
			7.25×10^1	3.50×10^0	3.50×10^0
			9.65×10^1	1.60×10^0	2.25×10^0
			1.47×10^2	9.00×10^{-1}	1.18×10^0
			1.72×10^2	8.00×10^{-1}	9.26×10^{-1}
500	50	$2.61 \times 10^3 t^{-1.55}$	2.05×10^1	2.45×10^1	2.46×10^1
			4.65×10^1	7.50×10^0	6.93×10^0
			7.25×10^1	3.25×10^0	3.49×10^0
			9.65×10^1	2.00×10^0	2.24×10^0
			1.47×10^2	8.00×10^{-1}	1.18×10^0
			1.72×10^2	7.00×10^{-1}	9.23×10^{-1}

TABLE I. (continued)

Station (ft)	Location (°)	Calculated Function	Time Post Event (hrs)	Measured Dose Rate (mR/hr)	Calculated Dose Rate (mR/hr)
500	60	$2.45 \times 10^3 t^{-1.54}$	2.05×10^1	2.35×10^1	2.36×10^1
			4.65×10^1	7.50×10^0	6.70×10^0
			7.25×10^1	3.00×10^0	3.39×10^0
			9.65×10^1	1.65×10^0	2.18×10^0
			1.47×10^2	8.00×10^{-1}	1.15×10^0
			1.72×10^2	8.50×10^{-1}	9.03×10^{-1}
500	70	$2.35 \times 10^3 t^{-1.52}$	2.05×10^1	2.35×10^1	2.36×10^1
			4.65×10^1	7.50×10^0	6.77×10^0
			7.25×10^1	3.00×10^0	3.44×10^0
			9.65×10^1	2.00×10^0	2.23×10^0
			1.47×10^2	8.00×10^{-1}	1.18×10^0
			1.72×10^2	7.00×10^{-1}	9.27×10^{-1}
500	80	$2.92 \times 10^4 t^{-2.09}$	2.05×10^1	5.25×10^1	5.25×10^1
			4.65×10^1	9.50×10^0	9.46×10^0
			7.25×10^1	3.50×10^0	3.73×10^0
			9.65×10^1	2.00×10^0	2.05×10^0
			1.47×10^2	1.25×10^0	8.50×10^{-1}
			1.72×10^2	8.00×10^{-1}	6.16×10^{-1}
500	90	$2.59 \times 10^3 t^{-1.47}$	2.05×10^1	3.00×10^1	3.01×10^1
			4.65×10^1	1.00×10^1	9.01×10^1
			7.25×10^1	4.25×10^0	4.68×10^0
			9.65×10^1	2.50×10^0	3.07×10^0
			1.47×10^2	1.25×10^0	1.65×10^0
			1.72×10^2	1.05×10^0	1.32×10^0
500	100	$1.74 \times 10^3 t^{-1.44}$	2.05×10^1	2.25×10^1	2.27×10^1
			4.65×10^1	8.50×10^0	7.00×10^0
			7.25×10^1	2.50×10^0	3.70×10^0
			9.70×10^1	1.95×10^0	2.44×10^0
			1.47×10^2	1.05×10^0	1.34×10^0
			1.72×10^2	9.00×10^{-1}	1.07×10^0
500	110	$2.63 \times 10^3 t^{-1.48}$	2.05×10^1	3.00×10^1	3.01×10^1
			4.65×10^1	1.00×10^1	8.97×10^0
			7.25×10^1	4.00×10^0	4.65×10^0
			9.70×10^1	2.50×10^0	3.02×10^0
			1.47×10^2	1.25×10^0	1.63×10^0
			1.72×10^2	1.25×10^0	1.30×10^0
500	120	$1.66 \times 10^3 t^{-1.30}$	2.05×10^1	3.25×10^1	3.29×10^1
			4.65×10^1	1.35×10^1	1.13×10^1
			7.25×10^1	6.00×10^0	6.38×10^0
			9.70×10^1	3.00×10^0	4.37×10^0
			1.47×10^2	1.75×10^0	2.55×10^0
			1.72×10^2	1.25×10^0	2.08×10^0
500	130	$3.03 \times 10^3 t^{-1.50}$	2.05×10^1	3.25×10^1	3.28×10^1
			4.70×10^1	1.15×10^1	9.45×10^0
			7.15×10^1	4.00×10^0	5.04×10^0
			9.75×10^1	2.10×10^0	3.16×10^0
			1.46×10^2	9.50×10^{-1}	1.74×10^0
			1.70×10^2	8.00×10^{-1}	1.37×10^0
500	140	$2.13 \times 10^3 t^{-1.38}$	2.05×10^1	3.25×10^1	3.29×10^1

TABLE I. (continued)

Station (ft)	Location (°)	Calculated Function	Time Post Event (hrs)	Measured Dose Rate (mR/hr)	Calculated Dose Rate (mR/hr)
			4.70×10^1	1.35×10^1	1.05×10^1
			7.15×10^1	4.50×10^0	5.87×10^0
			9.75×10^1	2.40×10^0	3.82×10^0
			1.46×10^2	1.25×10^0	2.20×10^0
			1.70×10^2	8.00×10^{-1}	1.78×10^0
500	150	$3.23 \times 10^3 t^{-1.43}$	2.05×10^1	4.25×10^1	4.30×10^1
			4.70×10^1	1.65×10^1	1.31×10^1
			7.15×10^1	5.75×10^0	7.20×10^0
			9.75×10^1	2.95×10^0	4.62×10^0
			1.46×10^2	1.25×10^0	2.61×10^0
500	160	$9.29 \times 10^3 t^{-1.50}$	1.70×10^2	1.00×10^0	2.09×10^0
			2.10×10^1	9.50×10^1	9.55×10^1
			4.70×10^1	3.25×10^1	2.84×10^1
			7.15×10^1	1.20×10^1	1.51×10^1
			9.75×10^1	8.25×10^0	9.49×10^0
500	170	$7.17 \times 10^3 t^{-1.40}$	1.46×10^2	4.25×10^0	5.17×10^0
			1.70×10^2	3.25×10^0	4.12×10^0
			2.10×10^1	1.00×10^2	1.01×10^2
			4.70×10^1	3.75×10^1	3.26×10^1
			7.15×10^1	1.60×10^1	1.81×10^1
500	180	$5.70 \times 10^3 t^{-1.26}$	9.75×10^1	9.75×10^0	1.17×10^1
			1.46×10^2	4.25×10^0	6.66×10^0
			1.70×10^2	4.00×10^0	5.38×10^0
			9.50×10^0	3.30×10^2	3.32×10^2
			2.10×10^1	1.35×10^2	1.22×10^2
500	190	$5.25 \times 10^3 t^{-1.27}$	2.70×10^1	7.60×10^1	8.87×10^1
			4.65×10^1	5.00×10^1	4.46×10^1
			7.30×10^1	2.50×10^1	2.52×10^1
			9.75×10^1	1.50×10^1	1.75×10^1
			1.46×10^2	5.00×10^0	1.05×10^1
500	200	$8.04 \times 10^3 t^{-1.08}$	1.71×10^2	3.75×10^0	8.65×10^0
			1.96×10^2	3.25×10^0	7.28×10^0
			9.50×10^0	3.00×10^2	3.00×10^2
			2.10×10^1	1.15×10^2	1.10×10^2
			2.70×10^1	7.15×10^1	7.96×10^1
500	200	$8.04 \times 10^3 t^{-1.08}$	4.65×10^1	4.00×10^1	3.99×10^1
			7.30×10^1	3.15×10^1	2.25×10^1
			9.75×10^1	1.25×10^1	1.56×10^1
			1.46×10^2	7.00×10^0	9.32×10^0
			1.71×10^2	6.00×10^0	7.66×10^0
500	200	$8.04 \times 10^3 t^{-1.08}$	1.96×10^2	6.00×10^0	6.43×10^0
			9.50×10^0	7.00×10^2	7.10×10^2
			2.10×10^1	3.38×10^2	3.02×10^2
			2.70×10^1	2.30×10^2	2.30×10^2
			4.65×10^1	1.40×10^2	1.28×10^2
500	200	$8.04 \times 10^3 t^{-1.08}$	7.30×10^1	5.00×10^1	7.89×10^1
			9.75×10^1	3.60×10^1	5.77×10^1
			1.46×10^2	2.50×10^1	3.75×10^1
			1.71×10^2	1.95×10^1	3.16×10^1
			1.96×10^2	1.75×10^1	2.73×10^1

TABLE I. (continued)

Station (ft)	Location (°)	Calculated Function	Time Post Event (hrs)	Measured Dose Rate (mR/hr)	Calculated Dose Rate (mR/hr)
500	208	$4.12 \times 10^3 t^{-0.92}$	9.50×10^0	5.00×10^2	5.19×10^2
			2.10×10^1	3.05×10^2	2.50×10^2
			2.70×10^1	2.05×10^2	1.98×10^2
			4.65×10^1	1.15×10^2	1.20×10^2
			7.30×10^1	6.50×10^1	7.94×10^1
			9.75×10^1	3.65×10^1	6.08×10^1
			1.46×10^2	2.25×10^1	4.20×10^1
			1.71×10^2	1.95×10^1	3.64×10^1
			1.96×10^2	1.70×10^1	3.21×10^1
500	220	$7.42 \times 10^3 t^{-1.20}$	9.50×10^0	5.00×10^2	5.02×10^2
			2.10×10^1	2.05×10^2	1.94×10^2
			2.70×10^1	1.40×10^2	1.44×10^2
			4.65×10^1	7.50×10^1	7.51×10^1
			7.30×10^1	4.50×10^1	4.38×10^1
			9.75×10^1	1.80×10^1	3.10×10^1
			1.46×10^2	1.75×10^1	1.91×10^1
			1.71×10^2	1.75×10^1	1.59×10^1
			1.96×10^2	8.50×10^0	1.35×10^1
500	230	$5.04 \times 10^5 t^{-1.97}$	9.50×10^0	6.00×10^3	5.96×10^3
			2.10×10^1	7.00×10^2	1.25×10^3
			2.70×10^1	1.30×10^3	7.61×10^2
			4.65×10^1	4.00×10^2	2.61×10^2
			7.30×10^1	2.50×10^2	1.07×10^2
			9.75×10^1	1.45×10^2	6.06×10^1
			1.46×10^2	1.25×10^2	2.74×10^1
			1.71×10^2	1.00×10^2	2.02×10^1
			1.95×10^2	8.50×10^1	1.55×10^1
500	240	$7.54 \times 10^3 t^{-1.34}$	2.10×10^1	1.25×10^2	1.26×10^2
			2.70×10^1	9.10×10^1	9.01×10^1
			4.65×10^1	4.75×10^1	4.34×10^1
			7.30×10^1	2.25×10^1	2.37×10^1
			9.70×10^1	1.25×10^1	1.62×10^1
			1.46×10^2	8.50×10^0	9.37×10^0
			1.71×10^2	6.50×10^0	7.55×10^0
			1.95×10^2	6.00×10^0	6.35×10^0
			500	250	$4.78 \times 10^3 t^{-1.38}$
2.70×10^1	4.70×10^1	5.03×10^1			
4.65×10^1	2.75×10^1	2.37×10^1			
7.30×10^1	1.25×10^1	1.27×10^1			
9.70×10^1	8.00×10^0	8.59×10^0			
1.46×10^2	4.00×10^0	4.91×10^0			
1.71×10^2	3.50×10^0	3.93×10^0			
1.95×10^2	2.50×10^0	3.29×10^0			
500	260	$4.37 \times 10^3 t^{-1.35}$			
			2.70×10^1	5.15×10^1	5.18×10^1
			4.65×10^1	2.65×10^1	2.49×10^1
			7.30×10^1	1.25×10^1	1.36×10^1
			9.70×10^1	1.05×10^1	9.27×10^0
			1.46×10^2	4.00×10^0	5.37×10^0
			1.71×10^2	3.50×10^0	4.32×10^0
			1.95×10^2	3.00×10^0	3.63×10^0

TABLE I. (continued)

Station (ft)	Location (°)	Calculated Function	Time Post Event (hrs)	Measured Dose Rate (mR/hr)	Calculated Dose Rate (mR/hr)
500	270	$4.62 \times 10^3 t^{-1.36}$	2.10×10^1	7.25×10^1	7.41×10^1
			2.70×10^1	5.50×10^1	5.27×10^1
			4.65×10^1	2.65×10^1	2.52×10^1
			7.30×10^1	1.25×10^1	1.37×10^1
			9.65×10^1	7.50×10^0	9.35×10^0
			1.46×10^2	5.00×10^0	5.35×10^0
			1.71×10^2	4.00×10^0	4.30×10^0
500	280	$3.78 \times 10^3 t^{-1.44}$	2.10×10^1	4.75×10^1	4.77×10^1
			4.65×10^1	1.65×10^1	1.52×10^1
			7.30×10^1	7.00×10^0	7.96×10^0
			9.70×10^1	4.50×10^0	5.29×10^0
			1.47×10^2	2.85×10^0	2.93×10^0
			1.71×10^2	2.50×10^0	2.34×10^0
			500	290	$1.85 \times 10^3 t^{-1.32}$
4.65×10^1	1.30×10^1	1.14×10^1			
7.30×10^1	5.25×10^0	6.29×10^0			
9.70×10^1	3.75×10^0	4.32×10^0			
1.47×10^2	2.25×10^0	2.50×10^0			
1.71×10^2	1.75×10^0	2.04×10^0			
500	300	$2.86 \times 10^3 t^{-1.39}$			
			4.65×10^1	1.55×10^1	1.38×10^1
			7.30×10^1	6.50×10^0	7.40×10^0
			9.70×10^1	4.25×10^0	4.99×10^0
			1.47×10^2	2.25×10^0	2.81×10^0
			1.71×10^2	2.00×10^0	2.27×10^0
			500	310	$3.30 \times 10^3 t^{-1.34}$
4.65×10^1	2.00×10^1	1.90×10^1			
7.30×10^1	9.50×10^0	1.03×10^1			
9.70×10^1	7.00×10^0	7.06×10^0			
1.47×10^2	3.75×10^0	4.06×10^0			
1.72×10^2	3.00×10^0	3.28×10^0			
500	320	$2.55 \times 10^3 t^{-1.16}$			
			4.65×10^1	3.25×10^1	3.01×10^1
			7.30×10^1	1.75×10^1	1.79×10^1
			9.70×10^1	1.00×10^1	1.29×10^1
			1.47×10^2	8.50×10^0	7.98×10^0
			1.72×10^2	6.50×10^0	6.65×10^0
			500	330	$5.28 \times 10^3 t^{-1.60}$
4.65×10^1	1.15×10^1	1.12×10^1			
7.30×10^1	4.75×10^0	5.43×10^0			
9.70×10^1	3.60×10^0	3.44×10^0			
1.47×10^2	1.75×10^0	1.78×10^0			
1.72×10^2	1.75×10^0	1.38×10^0			
500	340	$2.73 \times 10^3 t^{-1.45}$			
			4.65×10^1	1.15×10^1	1.03×10^1
			7.30×10^1	4.75×10^0	5.34×10^0
			9.70×10^1	2.85×10^0	3.53×10^0
			1.47×10^2	1.60×10^0	1.94×10^0
			1.72×10^2	1.25×10^0	1.54×10^0

TABLE I. (continued)

Station (ft)	Location (°)	Calculated Function	Time Post Event (hrs)	Measured Dose Rate (mR/hr)	Calculated Dose Rate (mR/hr)
500	350	$2.28 \times 10^3 t^{-1.37}$	2.10×10^1	3.50×10^1	3.52×10^1
			4.65×10^1	1.30×10^1	1.19×10^1
			7.30×10^1	6.00×10^0	6.39×10^0
			9.70×10^1	4.25×10^0	4.33×10^0
			1.47×10^2	1.60×10^0	2.46×10^0
			1.72×10^2	1.25×10^0	1.98×10^0
1000	00	$1.60 \times 10^2 t^{-1.30}$	2.90×10^1	2.10×10^0	2.01×10^0
			4.45×10^1	1.00×10^0	1.15×10^0
1000	10	$2.18 \times 10^2 t^{-1.30}$	4.60×10^1	1.50×10^0	1.50×10^0
1000	20	$2.10 \times 10^2 t^{-1.30}$	2.95×10^1	2.60×10^0	2.57×10^0
			4.60×10^1	1.40×10^0	1.45×10^0
1000	30	$1.45 \times 10^2 t^{-1.30}$	4.60×10^1	1.00×10^0	1.00×10^0
1000	40	$1.72 \times 10^2 t^{-1.30}$	2.95×10^1	2.00×10^0	2.12×10^0
			4.60×10^1	1.40×10^0	1.19×10^0
1000	50	$5.51 \times 10^2 t^{-1.30}$	4.60×10^1	3.80×10^0	3.80×10^0
1000	60	$2.01 \times 10^2 t^{-1.30}$	2.95×10^1	2.40×10^0	2.47×10^0
			4.60×10^1	1.50×10^0	1.38×10^0
1000	70	$1.45 \times 10^2 t^{-1.30}$	4.60×10^1	1.00×10^0	1.00×10^0
1000	80	$1.81 \times 10^2 t^{-1.30}$	2.95×10^1	2.20×10^0	2.23×10^0
			4.60×10^1	1.30×10^0	1.25×10^0
1000	90	$2.18 \times 10^2 t^{-1.30}$	4.60×10^1	1.50×10^0	1.50×10^0
1000	100	$2.44 \times 10^2 t^{-1.30}$	2.95×10^1	2.90×10^0	3.00×10^0
			4.60×10^1	2.00×10^0	1.68×10^0
			7.15×10^1	7.00×10^{-1}	9.49×10^{-1}
1000	110	$2.18 \times 10^2 t^{-1.30}$	4.60×10^1	1.50×10^0	1.50×10^0
1000	120	$2.97 \times 10^2 t^{-1.30}$	2.95×10^1	3.60×10^0	3.65×10^0
			4.60×10^1	2.30×10^0	2.05×10^0
			7.15×10^1	8.50×10^{-1}	1.15×10^0
1000	130	$2.33 \times 10^2 t^{-1.30}$	2.95×10^1	3.00×10^0	2.86×10^0
			4.60×10^1	1.50×10^0	1.61×10^0
			7.15×10^1	6.50×10^{-1}	9.05×10^{-1}
1000	140	$1.78 \times 10^2 t^{-1.30}$	2.95×10^1	2.10×10^0	2.18×10^0
			4.55×10^1	1.30×10^0	1.24×10^0
			7.15×10^1	8.50×10^{-1}	6.91×10^{-1}
1000	150	$1.43 \times 10^2 t^{-1.30}$	4.55×10^1	1.00×10^0	1.00×10^0

TABLE I. (continued)

Station (ft)	Location (°)	Calculated Function	Time Post Event (hrs)	Measured Dose Rate (mR/hr)	Calculated Dose Rate (mR/hr)
1000	160	$1.43 \times 10^2 t^{-1.30}$	4.55×10^1	1.00×10^0	1.00×10^0
1000	170	$2.69 \times 10^2 t^{-1.30}$	2.95×10^1 4.55×10^1 7.15×10^1	3.30×10^0 2.00×10^0 8.50×10^{-1}	3.31×10^0 1.88×10^0 1.05×10^0
1000	180	$5.39 \times 10^2 t^{-1.30}$	9.00×10^0 2.95×10^1 4.55×10^1 7.15×10^1	3.10×10^1 6.90×10^0 3.80×10^0 8.50×10^{-1}	3.10×10^1 6.62×10^0 3.77×10^0 2.09×10^0
1000	190	$3.74 \times 10^2 t^{-1.30}$	9.50×10^0 4.55×10^1 7.15×10^1	2.00×10^1 2.80×10^0 1.30×10^0	2.00×10^1 2.61×10^0 1.45×10^0
1000	200	$1.50 \times 10^3 t^{-1.30}$	9.50×10^0 4.55×10^1 7.15×10^1	8.00×10^1 1.25×10^1 4.00×10^0	8.01×10^1 1.05×10^1 5.81×10^0
1000	210	$3.90 \times 10^3 t^{-1.30}$	9.00×10^0 4.55×10^1 7.15×10^1	2.25×10^2 2.25×10^1 1.25×10^1	2.73×10^1 2.73×10^1 1.52×10^1
1000	220	$4.35 \times 10^2 t^{-1.30}$	9.00×10^0 4.55×10^1 7.15×10^1	2.50×10^1 3.50×10^0 1.10×10^0	2.50×10^1 3.04×10^0 1.69×10^0
1000	230	$3.24 \times 10^2 t^{-1.30}$	8.50×10^0 4.55×10^1 7.15×10^1	2.00×10^1 2.80×10^0 1.10×10^0	2.01×10^1 2.26×10^0 1.26×10^0
1000	240	$2.42 \times 10^2 t^{-1.30}$	8.50×10^0 4.55×10^1 7.15×10^1	1.50×10^1 1.40×10^0 8.50×10^{-1}	1.50×10^1 1.69×10^0 9.39×10^{-1}
1000	250	$3.47 \times 10^3 t^{-1.30}$	9.00×10^0 4.55×10^1 7.15×10^1	2.00×10^2 2.25×10^1 9.50×10^0	2.00×10^2 2.43×10^1 1.35×10^1
1000	260	$1.92 \times 10^2 t^{-1.30}$	9.00×10^0 4.50×10^1 7.20×10^1	1.10×10^1 1.60×10^0 6.00×10^{-1}	1.10×10^1 1.36×10^0 7.38×10^{-1}
1000	270	$2.08 \times 10^2 t^{-1.30}$	9.00×10^0 4.50×10^1 7.20×10^1	1.20×10^1 1.40×10^0 6.00×10^{-1}	1.20×10^1 1.48×10^0 8.02×10^{-1}
1000	280	$2.11 \times 10^2 t^{-1.30}$	2.95×10^1 4.50×10^1	2.70×10^0 1.30×10^0	2.59×10^0 1.49×10^0
1000	290	$2.16 \times 10^2 t^{-1.30}$	2.95×10^1 4.50×10^1 7.20×10^1	2.70×10^0 1.50×10^0 7.50×10^{-1}	2.65×10^0 1.53×10^0 8.32×10^{-1}
1000	300	$1.70 \times 10^2 t^{-1.30}$	2.95×10^1 7.30×10^1	2.10×10^0 6.00×10^{-1}	2.09×10^0 6.43×10^{-1}

TABLE I. (continued)

Station (ft)	Location (°)	Calculated Function	Time Post Event (hrs)	Measured Dose Rate (mR/hr)	Calculated Dose Rate (mR/hr)
1000	310	$1.50 \times 10^2 t^{-1.30}$	2.90×10^1	2.00×10^0	1.89×10^0
			4.50×10^1	8.50×10^{-1}	1.07×10^0
			7.30×10^1	6.00×10^{-1}	5.68×10^{-1}
1000	320	$1.74 \times 10^2 t^{-1.30}$	2.90×10^1	2.20×10^0	2.19×10^0
			4.45×10^1	1.40×10^0	1.26×10^0
			7.30×10^1	3.50×10^{-1}	6.59×10^{-1}
1000	340	$1.43 \times 10^2 t^{-1.30}$	2.90×10^1 4.45×10^1	1.90×10^0 8.50×10^{-1}	1.80×10^0 1.03×10^0
2000	180	$1.82 \times 10^1 t^{-1.30}$	4.00×10^0	3.00×10^0	3.00×10^0
2000	190	$5.52 \times 10^0 t^{-1.30}$	3.50×10^0	1.00×10^0	1.08×10^0
			5.15×10^1	2.80×10^0	3.29×10^{-2}
2000	200	$1.48 \times 10^1 t^{-1.30}$	3.50×10^0	2.00×10^0	2.91×10^0
			5.15×10^1	3.00×10^1	8.82×10^{-2}
2000	210	$2.58 \times 10^1 t^{-1.30}$	3.50×10^0	5.00×10^0	5.07×10^0
			8.50×10^0	1.70×10^0	1.60×10^0
			5.15×10^1	1.30×10^0	1.54×10^{-1}
2000	220	$1.19 \times 10^3 t^{-1.30}$	3.50×10^0	2.25×10^2	2.33×10^2
			8.50×10^0	1.00×10^2	7.36×10^1
			5.15×10^1	5.00×10^{-1}	7.07×10^0
2000	230	$5.73 \times 10^1 t^{-1.30}$	3.50×10^0	1.10×10^1	1.12×10^1
			8.50×10^0	4.30×10^0	3.55×10^0
2000	240	$4.54 \times 10^1 t^{-1.30}$	3.50×10^0	9.00×10^0	8.90×10^0
			8.50×10^0	2.50×10^0	2.81×10^0
2000	250	$4.58 \times 10^1 t^{-1.30}$	3.50×10^0	9.00×10^0	8.99×10^0
			8.50×10^0	2.80×10^0	2.84×10^0
2000	260	$8.62 \times 10^1 t^{-1.30}$	3.50×10^0	1.75×10^1	1.69×10^1
			8.50×10^0	3.50×10^0	5.34×10^0
2000	270	$2.81 \times 10^1 t^{-1.30}$	3.50×10^0	5.50×10^0	5.52×10^0
			8.50×10^0	1.80×10^0	1.74×10^0
4000	210	$7.51 \times 10^0 t^{-1.30}$	3.00×10^0	1.80×10^0	1.80×10^0
4000	220	$9.59 \times 10^0 t^{-1.30}$	3.00×10^0	2.30×10^0	2.30×10^0
4000	230	$2.71 \times 10^0 t^{-1.30}$	3.00×10^0	6.50×10^{-1}	6.50×10^{-1}
8000	200	$3.39 \times 10^{-1} t^{-1.30}$	1.50×10^0	2.00×10^{-1}	2.00×10^{-1}
8000	205	$1.48 \times 10^0 t^{-1.30}$	2.00×10^0	6.00×10^{-1}	6.00×10^{-1}
8000	210	$4.34 \times 10^0 t^{-1.30}$	2.00×10^0	2.00×10^0	1.76×10^0
			2.50×10^0	1.00×10^0	1.32×10^0
8000	215	$1.46 \times 10^1 t^{-1.30}$	3.00×10^0	3.50×10^0	3.50×10^0

TABLE I. (continued)

Station (ft)	Location (°)	Calculated Function	Time Post Event (hrs)	Measured Dose Rate (mR/hr)	Calculated Dose Rate (mR/hr)
8000	220	$1.72 \times 10^0 t^{-1.30}$	2.00×10^0	7.00×10^{-1}	7.00×10^{-1}
8000	225	$7.39 \times 10^{-1} t^{-1.30}$	2.00×10^0	3.00×10^{-1}	3.00×10^{-1}
8000	230	$4.92 \times 10^{-1} t^{-1.30}$	2.00×10^0	2.00×10^{-1}	2.00×10^{-1}
8000	235	$9.85 \times 10^{-1} t^{-1.30}$	2.00×10^0	4.00×10^{-1}	4.00×10^{-1}
8000	240	$3.69 \times 10^{-1} t^{-1.30}$	2.00×10^0	1.50×10^{-1}	1.50×10^{-1}
100	05	$2.01 \times 10^4 t^{-1.09}$	2.88×10^1	5.00×10^2	5.19×10^2
			4.81×10^1	3.45×10^2	2.97×10^2
			7.31×10^1	2.00×10^2	1.88×10^2
			9.70×10^1	1.13×10^2	1.38×10^2
			1.47×10^2	7.00×10^1	8.80×10^1
			1.72×10^2	6.50×10^1	7.44×10^1
			1.95×10^2	5.50×10^1	6.47×10^1
125	05	$2.23 \times 10^4 t^{-1.17}$	2.88×10^1	4.25×10^2	4.32×10^2
			4.81×10^1	2.55×10^2	2.37×10^2
			7.31×10^1	1.50×10^2	1.45×10^2
			9.70×10^1	9.00×10^1	1.04×10^2
			1.47×10^2	5.50×10^1	6.37×10^1
			1.72×10^2	5.50×10^1	5.31×10^1
			1.95×10^2	4.00×10^1	4.57×10^1
150	05	$1.15 \times 10^4 t^{-1.10}$	2.88×10^1	2.75×10^2	2.87×10^2
			4.81×10^1	1.95×10^2	1.63×10^2
			7.31×10^1	1.00×10^2	1.03×10^2
			9.70×10^1	7.00×10^1	7.55×10^1
			1.47×10^2	3.75×10^1	4.78×10^1
			1.72×10^2	3.50×10^1	4.03×10^1
			1.95×10^2	2.50×10^1	3.50×10^1
175	05	$2.08 \times 10^4 t^{-1.37}$	2.88×10^1	2.05×10^2	2.06×10^2
			4.81×10^1	1.05×10^2	1.02×10^2
			7.31×10^1	5.75×10^1	5.73×10^1
			9.71×10^1	3.50×10^1	3.88×10^1
			1.47×10^2	2.10×10^1	2.19×10^1
			1.72×10^2	2.10×10^1	1.77×10^1
			1.95×10^2	1.25×10^1	1.49×10^1
200	05	$1.56 \times 10^4 t^{-1.35}$	2.88×10^1	1.65×10^2	1.65×10^2
			7.31×10^1	4.50×10^1	4.67×10^1
			9.71×10^1	3.00×10^1	3.18×10^1
			1.47×10^2	2.05×10^1	1.81×10^1
			1.72×10^2	1.75×10^1	1.47×10^1
			1.95×10^2	1.25×10^1	1.24×10^1
			225	05	$1.22 \times 10^4 t^{-1.36}$
4.92×10^1	6.05×10^1	6.03×10^1			
7.31×10^1	3.40×10^1	3.51×10^1			
9.71×10^1	2.35×10^1	2.39×10^1			
1.47×10^2	1.45×10^1	1.35×10^1			
1.72×10^2	1.35×10^1	1.10×10^1			
1.95×10^2	7.50×10^0	9.21×10^0			
250	05	$8.49 \times 10^3 t^{-1.34}$	2.88×10^1	9.25×10^1	9.24×10^1
			4.92×10^1	4.50×10^1	4.51×10^1
			7.31×10^1	2.60×10^1	2.65×10^1

TABLE I. (continued)

Station (ft)	Location (°)	Calculated Function	Time Post Event (hrs)	Measured Dose Rate (mR/hr)	Calculated Dose Rate (mR/hr)
			9.71×10^1	1.85×10^1	1.80×10^1
			1.47×10^2	1.00×10^1	1.03×10^1
			1.72×10^2	9.00×10^0	8.39×10^0
			1.95×10^2	7.00×10^0	7.06×10^0
275	05	$9.83 \times 10^3 t^{-1.42}$	2.88×10^1	8.25×10^1	8.26×10^1
			4.92×10^1	3.90×10^1	3.87×10^1
			7.31×10^1	2.15×10^1	2.20×10^1
			9.71×10^1	1.50×10^1	1.47×10^1
			1.47×10^2	8.50×10^0	8.14×10^0
			1.72×10^2	7.00×10^0	6.54×10^0
			1.95×10^2	4.25×10^0	5.45×10^0
300	05	$8.37 \times 10^3 t^{-1.42}$	2.88×10^1	7.00×10^1	7.00×10^1
			4.92×10^1	3.30×10^1	3.28×10^1
			7.31×10^1	1.75×10^1	1.86×10^1
			9.71×10^1	1.30×10^1	1.24×10^1
			1.47×10^2	7.50×10^0	6.88×10^0
			1.72×10^2	7.00×10^0	5.52×10^0
			1.95×10^2	2.90×10^0	4.60×10^0
325	05	$7.85 \times 10^3 t^{-1.47}$	2.89×10^1	5.70×10^1	5.69×10^1
			4.92×10^1	2.55×10^1	2.60×10^1
			7.31×10^1	1.45×10^1	1.46×10^1
			9.72×10^1	1.03×10^1	9.59×10^0
			1.47×10^2	5.00×10^0	5.22×10^0
			1.72×10^2	5.00×10^0	4.16×10^0
			1.95×10^2	2.90×10^0	3.45×10^0
350	05	$6.61 \times 10^3 t^{-1.43}$	2.89×10^1	5.40×10^1	5.39×10^1
			4.91×10^1	2.50×10^1	2.52×10^1
			7.31×10^1	1.35×10^1	1.43×10^1
			9.72×10^1	1.00×10^1	9.48×10^0
			1.47×10^2	5.75×10^0	5.24×10^0
			1.72×10^2	5.00×10^0	4.20×10^0
			1.95×10^2	2.90×10^0	3.50×10^0
375	05	$4.13 \times 10^3 t^{-1.37}$	2.89×10^1	4.10×10^1	4.11×10^1
			4.91×10^1	1.95×10^1	1.98×10^1
			7.31×10^1	1.35×10^1	1.15×10^1
			9.72×10^1	7.25×10^0	7.79×10^0
			1.47×10^2	3.75×10^0	4.41×10^0
			1.72×10^2	3.00×10^0	3.57×10^0
			1.95×10^2	2.25×10^0	2.99×10^0
400	05	$5.75 \times 10^2 t^{-0.72}$	2.89×10^1	5.50×10^1	5.03×10^1
			4.91×10^1	2.80×10^1	3.42×10^1
			7.30×10^1	2.15×10^1	2.57×10^1
			9.72×10^1	1.50×10^1	2.09×10^1
			1.47×10^2	2.00×10^1	1.54×10^1
			1.72×10^2	1.85×10^1	1.38×10^1
			1.95×10^2	1.80×10^1	1.26×10^1
425	05	$3.60 \times 10^3 t^{-1.32}$	2.89×10^1	4.25×10^1	4.24×10^1
			4.91×10^1	2.10×10^1	2.10×10^1
			7.30×10^1	1.20×10^1	1.25×10^1
			9.72×10^1	8.00×10^0	8.54×10^0

TABLE I. (continued)

Station (ft)	Location (°)	Calculated Function	Time Post Event (hrs)	Measured Dose Rate (mR/hr)	Calculated Dose Rate (mR/hr)
			1.47×10^2	6.00×10^0	4.94×10^0
			1.72×10^2	5.00×10^0	4.03×10^0
			1.95×10^2	2.75×10^0	3.40×10^0
460	05	$4.42 \times 10^3 t^{-1.54}$	2.89×10^1	2.50×10^1	2.52×10^1
			4.91×10^1	1.20×10^1	1.11×10^1
			7.30×10^1	5.75×10^0	6.06×10^0
			9.78×10^1	3.00×10^0	3.87×10^0
			1.47×10^2	2.25×10^0	2.06×10^0
			1.72×10^2	1.75×10^0	1.63×10^0
			1.95×10^2	1.25×10^0	1.34×10^0
475	05	$3.72 \times 10^3 t^{-1.59}$	2.89×10^1	1.80×10^1	1.79×10^1
			4.91×10^1	7.50×10^0	7.75×10^0
			7.30×10^1	4.25×10^0	4.13×10^1
			9.78×10^1	2.85×10^0	2.60×10^1
			1.47×10^2	1.25×10^0	1.36×10^1
500	05	$9.29 \times 10^3 t^{-1.76}$	2.89×10^1	2.50×10^1	2.52×10^1
			4.91×10^1	1.10×10^1	9.94×10^0
			7.30×10^1	4.00×10^0	4.95×10^0
			9.68×10^1	2.75×10^0	3.02×10^0
			1.47×10^2	1.35×10^0	1.45×10^0
600	05	$7.82 \times 10^2 t^{-1.30}$	2.90×10^1	1.05×10^1	9.82×10^0
			4.90×10^1	4.30×10^0	4.96×10^0
			7.30×10^1	1.80×10^0	2.96×10^0
700	05	$5.72 \times 10^2 t^{-1.30}$	2.90×10^1	7.80×10^0	7.18×10^0
			4.90×10^1	3.10×10^0	3.63×10^0
			7.30×10^1	1.00×10^0	2.16×10^0
800	05	$3.97 \times 10^2 t^{-1.30}$	2.90×10^1	5.20×10^0	4.99×10^0
			4.90×10^1	2.40×10^0	2.52×10^0
			7.30×10^1	1.00×10^0	1.50×10^0
900	05	$2.51 \times 10^2 t^{-1.30}$	2.90×10^1	3.30×10^0	3.15×10^0
			4.90×10^1	1.30×10^0	1.59×10^0
1000	05	$1.75 \times 10^2 t^{-1.30}$	2.90×10^1	2.30×10^0	2.19×10^0
			4.90×10^1	9.00×10^{-1}	1.11×10^0
1100	05	$1.24 \times 10^2 t^{-1.30}$	2.90×10^1	1.60×10^0	1.56×10^0
			4.90×10^1	7.00×10^{-1}	7.87×10^{-1}
1200	05	$9.37 \times 10^1 t^{-1.30}$	2.90×10^1	1.20×10^0	1.18×10^0
			4.90×10^1	5.50×10^{-1}	5.95×10^{-1}
1300	05	$6.29 \times 10^1 t^{-1.30}$	2.90×10^1	8.50×10^{-1}	7.90×10^{-1}
			4.90×10^1	2.80×10^{-1}	3.99×10^{-1}
1400	05	$6.77 \times 10^1 t^{-1.30}$	2.90×10^1	8.50×10^{-1}	8.50×10^{-1}
1500	05	$5.18 \times 10^1 t^{-1.30}$	2.90×10^1	6.50×10^{-1}	6.50×10^{-1}

TABLE I. (continued)

Station (ft)	Location (°)	Calculated Function	Time Post Event (hrs)	Measured Dose Rate (mR/hr)	Calculated Dose Rate (mR/hr)
100	205	$9.71 \times 10^4 t^{-1.30}$	5.20×10^1	5.50×10^2	5.71×10^2
			7.30×10^1	4.00×10^2	3.67×10^2
125	205	$9.11 \times 10^4 t^{-1.30}$	5.20×10^1	5.00×10^2	5.36×10^2
			7.30×10^1	4.00×10^2	3.45×10^2
150	205	$9.11 \times 10^4 t^{-1.30}$	5.20×10^1	5.00×10^2	5.36×10^2
			7.30×10^1	4.00×10^2	3.45×10^2
175	205	$1.43 \times 10^5 t^{-1.38}$	2.65×10^1	1.55×10^3	1.54×10^3
			4.78×10^1	6.75×10^2	6.81×10^2
			5.21×10^1	5.50×10^2	6.04×10^2
			7.32×10^1	4.00×10^2	3.78×10^2
			9.63×10^1	2.63×10^2	2.59×10^2
			1.46×10^2	1.63×10^2	1.45×10^2
			1.70×10^2	1.38×10^2	1.18×10^2
			1.95×10^2	1.30×10^2	9.77×10^1
200	205	$1.90 \times 10^5 t^{-1.48}$	2.65×10^1	1.50×10^3	1.48×10^3
			4.78×10^1	5.50×10^2	6.18×10^2
			5.21×10^1	5.00×10^2	5.43×10^2
			7.32×10^1	4.00×10^2	3.29×10^2
			9.63×10^1	2.25×10^2	2.19×10^2
			1.46×10^2	1.38×10^2	1.18×10^2
			1.70×10^2	1.25×10^2	9.41×10^1
			1.95×10^2	1.13×10^2	7.70×10^1
225	205	$1.07 \times 10^5 t^{-1.35}$	2.65×10^1	1.30×10^3	1.29×10^3
			4.82×10^1	5.50×10^2	5.76×10^2
			5.21×10^1	5.00×10^2	5.18×10^2
			7.32×10^1	3.50×10^2	3.28×10^2
			9.63×10^1	2.25×10^2	2.26×10^2
			1.46×10^2	1.38×10^2	1.29×10^2
			1.71×10^2	1.25×10^2	1.04×10^2
			1.95×10^2	1.00×10^2	8.75×10^1
250	205	$8.29 \times 10^4 t^{-1.29}$	2.65×10^1	1.20×10^3	1.20×10^3
			4.82×10^1	5.25×10^2	5.51×10^2
			5.21×10^1	5.00×10^2	4.98×10^2
			7.32×10^1	3.50×10^2	3.21×10^2
			9.63×10^1	2.13×10^2	2.25×10^2
			1.46×10^2	1.38×10^2	1.31×10^2
			1.71×10^2	1.13×10^2	1.07×10^2
			1.95×10^2	9.00×10^1	9.06×10^1

TABLE I. (continued)

Station (ft)	Location (°)	Calculated Function	Time Post Event (hrs)	Measured Dose Rate (mR/hr)	Calculated Dose Rate (mR/hr)
275	205	$5.41 \times 10^4 t^{-1.21}$	2.65×10^1	1.03×10^3	1.03×10^3
			4.82×10^1	4.88×10^2	4.98×10^2
			5.21×10^1	4.75×10^2	4.53×10^2
			7.32×10^1	3.13×10^2	3.01×10^2
			9.63×10^1	1.93×10^2	2.16×10^2
			1.46×10^2	1.30×10^2	1.30×10^2
			1.71×10^2	1.06×10^2	1.08×10^2
			1.95×10^2	9.00×10^1	9.20×10^1
300	205	$4.29 \times 10^4 t^{-1.19}$	2.65×10^1	8.75×10^2	8.76×10^2
			4.82×10^1	3.88×10^2	4.30×10^2
			5.21×10^1	4.50×10^2	3.92×10^2
			7.32×10^1	2.50×10^2	2.62×10^2
			1.46×10^2	1.13×10^2	1.15×10^2
			1.71×10^2	9.25×10^1	9.56×10^1
			1.95×10^2	8.00×10^1	8.19×10^1
			325	205	$3.19 \times 10^4 t^{-1.15}$
4.82×10^1	3.50×10^2	3.66×10^2			
5.21×10^1	3.75×10^2	3.35×10^2			
7.32×10^1	2.25×10^2	2.26×10^2			
9.63×10^1	1.43×10^2	1.65×10^2			
1.46×10^2	1.00×10^2	1.02×10^2			
1.71×10^2	8.50×10^1	8.50×10^1			
1.95×10^2	7.00×10^1	7.31×10^1			
350	205	$2.49 \times 10^4 t^{-1.11}$	2.65×10^1	6.50×10^2	6.60×10^2
			4.82×10^1	3.25×10^2	3.39×10^2
			5.21×10^1	3.75×10^2	3.12×10^2
			7.32×10^1	2.00×10^2	2.14×10^2
			9.63×10^1	1.30×10^2	1.58×10^2
			1.46×10^2	9.00×10^1	9.94×10^1
			1.71×10^2	8.50×10^1	8.36×10^1
			1.95×10^2	7.00×10^1	7.23×10^1
425	205	$1.89 \times 10^4 t^{-1.07}$	2.65×10^1	5.50×10^2	5.66×10^2
			4.83×10^1	3.00×10^2	2.97×10^2
			5.21×10^1	3.25×10^2	2.74×10^2
			7.32×10^1	2.00×10^2	1.90×10^2
			9.63×10^1	1.13×10^2	1.42×10^2
			1.46×10^2	7.00×10^1	9.06×10^1
			1.71×10^2	6.50×10^1	7.67×10^1
			1.95×10^2	5.50×10^1	6.67×10^1
450	205	$2.76 \times 10^4 t^{-1.22}$	2.65×10^1	5.00×10^2	5.02×10^2
			4.83×10^1	2.25×10^2	2.41×10^2
			5.20×10^1	2.50×10^2	2.20×10^2
			7.32×10^1	1.45×10^2	1.45×10^2
			9.63×10^1	8.75×10^1	1.03×10^2
			1.46×10^2	6.25×10^1	6.20×10^1
			1.71×10^2	5.00×10^1	5.13×10^1
			1.95×10^2	4.25×10^1	4.37×10^1
475	205	$2.50 \times 10^4 t^{-1.25}$	2.65×10^1	4.10×10^2	4.11×10^2

TABLE I. (continued)

Station (ft)	Location (°)	Calculated Function	Time Post Event (hrs)	Measured Dose Rate (mR/hr)	Calculated Dose Rate (mR/hr)
			4.83 x 10 ¹	1.80 x 10 ²	1.93 x 10 ²
			5.20 x 10 ¹	2.00 x 10 ²	1.76 x 10 ²
			7.32 x 10 ¹	1.10 x 10 ²	1.15 x 10 ²
			9.63 x 10 ¹	7.50 x 10 ¹	8.13 x 10 ¹
			1.46 x 10 ²	4.75 x 10 ¹	4.81 x 10 ¹
			1.71 x 10 ²	4.00 x 10 ¹	3.96 x 10 ¹
			1.95 x 10 ²	3.25 x 10 ¹	3.36 x 10 ¹
500	205	2.68 x 10 ⁴ t ^{-1.27}	2.65 x 10 ¹	4.20 x 10 ²	4.20 x 10 ²
			4.83 x 10 ¹	1.80 x 10 ²	1.96 x 10 ²
			5.20 x 10 ¹	2.00 x 10 ²	1.78 x 10 ²
			7.32 x 10 ¹	1.10 x 10 ²	1.15 x 10 ²
			9.63 x 10 ¹	7.50 x 10 ¹	8.14 x 10 ¹
			1.46 x 10 ²	5.00 x 10 ¹	4.79 x 10 ¹
			1.71 x 10 ²	4.00 x 10 ¹	3.93 x 10 ¹
			1.95 x 10 ²	3.75 x 10 ¹	3.33 x 10 ¹
600	205	2.09 x 10 ⁴ t ^{-1.28}	2.64 x 10 ¹	3.15 x 10 ²	3.16 x 10 ²
			4.83 x 10 ¹	1.35 x 10 ²	1.46 x 10 ²
			5.20 x 10 ¹	1.50 x 10 ²	1.33 x 10 ²
			7.32 x 10 ¹	8.25 x 10 ¹	8.57 x 10 ¹
			9.74 x 10 ¹	5.50 x 10 ¹	5.94 x 10 ¹
			1.46 x 10 ²	3.75 x 10 ¹	3.53 x 10 ¹
			1.71 x 10 ²	3.00 x 10 ¹	2.89 x 10 ¹
			1.95 x 10 ²	2.10 x 10 ¹	2.45 x 10 ¹
700	205	2.40 x 10 ⁴ t ^{-1.37}	2.64 x 10 ¹	2.65 x 10 ²	2.66 x 10 ²
			4.83 x 10 ¹	1.08 x 10 ²	1.16 x 10 ²
			5.20 x 10 ¹	1.25 x 10 ²	1.05 x 10 ²
			7.32 x 10 ¹	5.75 x 10 ¹	6.56 x 10 ¹
			9.74 x 10 ¹	4.00 x 10 ¹	4.43 x 10 ¹
			1.46 x 10 ²	2.50 x 10 ¹	2.53 x 10 ¹
			1.71 x 10 ²	2.10 x 10 ¹	2.04 x 10 ¹
			1.95 x 10 ²	1.60 x 10 ¹	1.71 x 10 ¹
800	205	1.91 x 10 ⁴ t ^{-1.35}	2.64 x 10 ¹	2.33 x 10 ²	2.33 x 10 ²
			4.83 x 10 ¹	9.75 x 10 ¹	1.03 x 10 ²
			5.20 x 10 ¹	1.05 x 10 ²	9.36 x 10 ¹
			7.32 x 10 ¹	5.50 x 10 ¹	5.91 x 10 ¹
			9.74 x 10 ¹	3.75 x 10 ¹	4.02 x 10 ¹
			1.46 x 10 ²	2.50 x 10 ¹	2.33 x 10 ¹
			1.71 x 10 ²	1.85 x 10 ¹	1.89 x 10 ¹
			1.95 x 10 ²	1.50 x 10 ¹	1.58 x 10 ¹
900	205	1.35 x 10 ⁴ t ^{-1.34}	2.64 x 10 ¹	1.70 x 10 ²	1.70 x 10 ²
			4.83 x 10 ¹	7.25 x 10 ¹	7.59 x 10 ¹
			5.20 x 10 ¹	7.50 x 10 ¹	6.88 x 10 ¹
			7.33 x 10 ¹	4.25 x 10 ¹	4.36 x 10 ¹
			9.79 x 10 ¹	3.00 x 10 ¹	2.96 x 10 ¹
			1.46 x 10 ²	1.75 x 10 ¹	1.73 x 10 ¹
			1.71 x 10 ²	1.25 x 10 ¹	1.40 x 10 ¹
			1.95 x 10 ²	9.00 x 10 ⁰	1.18 x 10 ¹
1000	205	1.24 x 10 ⁴ t ^{-1.36}	2.64 x 10 ¹	1.45 x 10 ²	1.46 x 10 ²
			4.84 x 10 ¹	6.25 x 10 ¹	6.41 x 10 ¹
			5.20 x 10 ¹	6.50 x 10 ¹	5.81 x 10 ¹
			7.33 x 10 ¹	3.25 x 10 ¹	3.65 x 10 ¹

TABLE I. (continued)

Station (ft)	Location (°)	Calculated Function	Time Post Event (hrs)	Measured Dose Rate (mR/hr)	Calculated Dose Rate (mR/hr)
			9.79 x 10 ¹	2.50 x 10 ¹	2.46 x 10 ¹
			1.46 x 10 ²	1.25 x 10 ¹	1.43 x 10 ¹
			1.71 x 10 ²	1.10 x 10 ¹	1.15 x 10 ¹
			1.95 x 10 ²	8.50 x 10 ⁰	9.68 x 10 ⁰
1100	205	1.58 x 10 ⁴ t ^{-1.37}	2.65 x 10 ¹	1.78 x 10 ²	1.78 x 10 ²
			4.85 x 10 ¹	7.75 x 10 ¹	7.79 x 10 ¹
			5.20 x 10 ¹	7.50 x 10 ¹	7.09 x 10 ¹
			7.35 x 10 ¹	4.25 x 10 ¹	4.41 x 10 ¹
			9.80 x 10 ¹	2.85 x 10 ¹	2.98 x 10 ¹
			1.47 x 10 ²	1.75 x 10 ¹	1.72 x 10 ¹
			1.71 x 10 ²	1.30 x 10 ¹	1.39 x 10 ¹
			1.95 x 10 ²	1.00 x 10 ¹	1.17 x 10 ¹
1200	205	9.85 x 10 ³ t ^{-1.44}	2.65 x 10 ¹	8.65 x 10 ¹	8.69 x 10 ¹
			4.85 x 10 ¹	3.75 x 10 ¹	3.63 x 10 ¹
			5.20 x 10 ¹	3.35 x 10 ¹	3.29 x 10 ¹
			7.35 x 10 ¹	2.00 x 10 ¹	1.99 x 10 ¹
			9.80 x 10 ¹	1.20 x 10 ¹	1.32 x 10 ¹
			1.47 x 10 ²	7.00 x 10 ⁰	7.37 x 10 ⁰
			1.71 x 10 ²	5.00 x 10 ⁰	5.90 x 10 ⁰
			1.95 x 10 ²	4.25 x 10 ⁰	4.90 x 10 ⁰
1300	205	1.20 x 10 ⁴ t ^{-1.53}	2.65 x 10 ¹	8.00 x 10 ¹	8.01 x 10 ¹
			4.85 x 10 ¹	3.00 x 10 ¹	3.18 x 10 ¹
			5.20 x 10 ¹	3.10 x 10 ¹	2.86 x 10 ¹
			7.35 x 10 ¹	1.75 x 10 ¹	1.68 x 10 ¹
			9.80 x 10 ¹	9.50 x 10 ⁰	1.08 x 10 ¹
			1.47 x 10 ²	5.50 x 10 ⁰	5.87 x 10 ⁰
			1.71 x 10 ²	5.00 x 10 ⁰	4.63 x 10 ⁰
			1.95 x 10 ²	3.25 x 10 ⁰	3.80 x 10 ⁰
1400	205	7.49 x 10 ³ t ^{-1.40}	2.65 x 10 ¹	7.50 x 10 ¹	7.55 x 10 ¹
			4.85 x 10 ¹	3.35 x 10 ¹	3.23 x 10 ¹
			5.20 x 10 ¹	3.00 x 10 ¹	2.93 x 10 ¹
			7.35 x 10 ¹	1.75 x 10 ¹	1.80 x 10 ¹
			9.80 x 10 ¹	1.25 x 10 ¹	1.20 x 10 ¹
			1.47 x 10 ²	5.50 x 10 ⁰	6.86 x 10 ⁰
			1.71 x 10 ²	5.00 x 10 ⁰	5.52 x 10 ⁰
			1.95 x 10 ²	3.25 x 10 ⁰	4.61 x 10 ⁰
1500	205	7.54 x 10 ³ t ^{-1.43}	2.65 x 10 ¹	6.80 x 10 ¹	6.87 x 10 ¹
			4.85 x 10 ¹	3.10 x 10 ¹	2.89 x 10 ¹
			5.20 x 10 ¹	2.75 x 10 ¹	2.61 x 10 ¹
			7.35 x 10 ¹	1.35 x 10 ¹	1.59 x 10 ¹
			9.80 x 10 ¹	9.50 x 10 ⁰	1.05 x 10 ¹
			1.47 x 10 ²	6.00 x 10 ⁰	5.91 x 10 ⁰
			1.71 x 10 ²	4.25 x 10 ⁰	4.74 x 10 ⁰
			1.95 x 10 ²	3.25 x 10 ⁰	3.94 x 10 ⁰
1600	205	5.92 x 10 ³ t ^{-1.39}	2.65 x 10 ¹	6.00 x 10 ¹	6.14 x 10 ¹
			4.85 x 10 ¹	3.10 x 10 ¹	2.64 x 10 ¹
			5.20 x 10 ¹	2.65 x 10 ¹	2.40 x 10 ¹
			7.35 x 10 ¹	1.00 x 10 ¹	1.48 x 10 ¹
			9.80 x 10 ¹	8.50 x 10 ⁰	9.91 x 10 ⁰
			1.47 x 10 ²	5.00 x 10 ⁰	5.66 x 10 ⁰
			1.71 x 10 ²	3.50 x 10 ⁰	4.56 x 10 ⁰

TABLE I. (continued)

Station (ft)	Location (°)	Calculated Function	Time Post Event (hrs)	Measured Dose Rate (mR/hr)	Calculated Dose Rate (mR/hr)			
1700	205	$4.53 \times 10^3 t^{-1.35}$	1.95×10^2	2.75×10^0	3.81×10^0			
			2.60×10^1	5.50×10^1	5.65×10^1			
			4.85×10^1	3.10×10^1	2.44×10^1			
			5.20×10^1	2.25×10^1	2.22×10^1			
			7.35×10^1	1.05×10^1	1.40×10^1			
			9.80×10^1	8.00×10^0	9.48×10^0			
			1.47×10^2	4.00×10^0	5.52×10^0			
			1.71×10^2	3.25×10^0	4.48×10^0			
			1.95×10^2	2.40×10^0	3.77×10^0			
1800	205	$9.81 \times 10^3 t^{-1.64}$	2.60×10^1	4.75×10^1	4.76×10^1			
			4.85×10^1	1.95×10^1	1.72×10^1			
			5.20×10^1	1.35×10^1	1.53×10^1			
			7.35×10^1	7.00×10^0	8.69×10^0			
			9.80×10^1	6.00×10^0	5.43×10^0			
			1.47×10^2	3.25×10^0	2.81×10^0			
			1.71×10^2	3.00×10^0	2.18×10^0			
			1.95×10^2	1.75×10^0	1.77×10^0			
			1900	205	$5.54 \times 10^3 t^{-1.50}$	2.60×10^1	4.10×10^1	4.14×10^1
4.85×10^1	1.75×10^1	1.62×10^1						
5.20×10^1	1.55×10^1	1.46×10^1						
7.35×10^1	7.00×10^0	8.68×10^0						
9.80×10^1	6.00×10^0	5.64×10^0						
1.47×10^2	2.25×10^0	3.08×10^0						
1.71×10^2	2.00×10^0	2.44×10^0						
1.95×10^2	1.25×10^0	2.01×10^0						
2000	205	$3.58 \times 10^3 t^{-1.44}$				2.60×10^1	3.25×10^1	3.26×10^1
			4.85×10^1	1.35×10^1	1.33×10^1			
			5.20×10^1	1.25×10^1	1.20×10^1			
			7.35×10^1	7.00×10^0	7.30×10^0			
			9.80×10^1	5.00×10^0	4.82×10^0			
			1.47×10^2	2.25×10^0	2.70×10^0			
			1.71×10^2	2.00×10^0	2.16×10^0			
			1.95×10^2	1.25×10^0	1.79×10^0			
			125	225	$6.84 \times 10^4 t^{-1.27}$	2.65×10^1	1.05×10^3	1.05×10^3
4.80×10^1	5.00×10^2	4.94×10^2						
7.45×10^1	3.00×10^2	2.82×10^2						
9.75×10^1	1.80×10^2	2.00×10^2						
1.46×10^2	1.13×10^2	1.20×10^2						
1.71×10^2	1.00×10^2	9.80×10^1						
1.95×10^2	8.00×10^1	8.29×10^1						
150	225	$6.95 \times 10^4 t^{-1.28}$				2.65×10^1	1.05×10^3	1.05×10^3
						4.80×10^1	5.00×10^2	4.92×10^2
			7.45×10^1	2.88×10^2	2.81×10^2			
			9.75×10^1	1.80×10^2	1.99×10^2			
			1.46×10^2	1.13×10^2	1.19×10^2			
			1.71×10^2	1.00×10^2	9.70×10^1			
			1.95×10^2	9.00×10^1	8.20×10^1			
			175	225	$4.60 \times 10^4 t^{-1.21}$	2.65×10^1	8.75×10^2	8.84×10^2
						4.80×10^1	4.63×10^2	4.32×10^2
7.45×10^1	2.50×10^2	2.54×10^2						

TABLE I. (continued)

Station (ft)	Location (°)	Calculated Function	Time Post Event (hrs)	Measured Dose Rate (mR/hr)	Calculated Dose Rate (mR/hr)
			9.75×10^1	1.75×10^2	1.84×10^2
			1.46×10^2	1.00×10^2	1.13×10^2
			1.71×10^2	9.00×10^1	9.34×10^1
			1.95×10^2	7.00×10^1	7.97×10^1
200	225	$3.75 \times 10^4 t^{-1.18}$	2.65×10^1	7.75×10^2	7.82×10^2
			5.20×10^1	3.88×10^2	3.53×10^2
			7.45×10^1	2.13×10^2	2.31×10^2
			9.75×10^1	1.58×10^2	1.68×10^2
			1.46×10^2	1.00×10^2	1.04×10^2
			1.71×10^2	8.50×10^1	8.65×10^1
			1.95×10^2	7.00×10^1	7.41×10^1
			2.65×10^1	6.25×10^2	6.28×10^2
225	225	$2.58 \times 10^4 t^{-1.13}$	4.85×10^1	3.25×10^2	3.17×10^2
			7.55×10^1	2.00×10^2	1.92×10^2
			9.75×10^1	1.30×10^2	1.43×10^2
			1.46×10^2	8.50×10^1	9.08×10^1
			1.71×10^2	7.25×10^1	7.59×10^1
			1.95×10^2	7.00×10^1	6.54×10^1
			2.65×10^1	5.25×10^2	5.26×10^2
			4.85×10^1	2.63×10^2	2.61×10^2
250	225	$2.33 \times 10^4 t^{-1.16}$	7.55×10^1	1.63×10^2	1.56×10^2
			9.75×10^1	1.08×10^2	1.16×10^2
			1.46×10^2	7.00×10^1	7.29×10^1
			1.71×10^2	6.25×10^1	6.07×10^1
			1.95×10^2	5.50×10^1	5.22×10^1
			2.65×10^1	5.25×10^2	5.24×10^2
			4.85×10^1	2.63×10^2	2.64×10^2
			7.55×10^1	1.63×10^2	1.60×10^2
275	225	$2.17 \times 10^4 t^{-1.14}$	9.75×10^1	1.10×10^2	1.19×10^2
			1.46×10^2	8.00×10^1	7.54×10^1
			1.71×10^2	6.75×10^1	6.30×10^1
			1.95×10^2	5.50×10^1	5.43×10^1
			2.65×10^1	4.75×10^2	4.75×10^2
			4.85×10^1	2.38×10^2	2.35×10^2
			7.55×10^1	1.38×10^2	1.40×10^2
			9.75×10^1	1.00×10^2	1.04×10^2
300	225	$2.16 \times 10^4 t^{-1.16}$	1.46×10^2	6.50×10^1	6.51×10^1
			1.71×10^2	5.75×10^1	5.42×10^1
			1.95×10^2	5.00×10^1	4.65×10^1
			2.65×10^1	4.50×10^2	4.46×10^2
325	225	$1.62 \times 10^4 t^{-1.10}$	4.85×10^1	2.20×10^2	2.30×10^2
			7.55×10^1	1.38×10^2	1.41×10^2
			9.75×10^1	9.75×10^1	1.07×10^2
			1.46×10^2	8.00×10^1	6.85×10^1
			1.71×10^2	6.50×10^1	5.76×10^1
			1.95×10^2	6.00×10^1	4.99×10^1
			2.65×10^1	3.50×10^2	3.47×10^2
			4.85×10^1	1.65×10^2	1.75×10^2
350	225	$1.43 \times 10^4 t^{-1.13}$	7.55×10^1	1.13×10^2	1.06×10^2
			9.75×10^1	7.75×10^1	7.93×10^1

TABLE I. (continued)

Station (ft)	Location (°)	Calculated Function	Time Post Event (hrs)	Measured Dose Rate (mR/hr)	Calculated Dose Rate (mR/hr)
			1.46 x 10 ²	5.00 x 10 ¹	5.02 x 10 ¹
			1.71 x 10 ²	4.75 x 10 ¹	4.19 x 10 ¹
			1.95 x 10 ²	3.75 x 10 ¹	3.61 x 10 ¹
375	225	1.66 x 10 ⁴ t ^{-1.22}	2.65 x 10 ¹	3.00 x 10 ²	3.01 x 10 ²
			4.85 x 10 ¹	1.50 x 10 ²	1.44 x 10 ²
			7.55 x 10 ¹	7.75 x 10 ¹	8.36 x 10 ¹
			9.75 x 10 ¹	6.00 x 10 ¹	6.12 x 10 ¹
			1.46 x 10 ²	3.75 x 10 ¹	3.73 x 10 ¹
			1.71 x 10 ²	3.00 x 10 ¹	3.08 x 10 ¹
			1.95 x 10 ²	2.85 x 10 ¹	2.62 x 10 ¹
400	225	9.33 x 10 ³ t ^{-1.19}	2.65 x 10 ¹	1.90 x 10 ²	1.91 x 10 ²
			4.85 x 10 ¹	9.75 x 10 ¹	9.34 x 10 ¹
			7.55 x 10 ¹	5.50 x 10 ¹	5.52 x 10 ¹
			9.75 x 10 ¹	3.85 x 10 ¹	4.08 x 10 ¹
			1.46 x 10 ²	2.50 x 10 ¹	2.53 x 10 ¹
			1.71 x 10 ²	1.95 x 10 ¹	2.09 x 10 ¹
			1.95 x 10 ²	1.70 x 10 ¹	1.79 x 10 ¹
425	225	8.48 x 10 ³ t ^{-1.22}	2.65 x 10 ¹	1.55 x 10 ²	1.56 x 10 ²
			4.85 x 10 ¹	8.00 x 10 ¹	7.47 x 10 ¹
			7.55 x 10 ¹	4.00 x 10 ¹	4.36 x 10 ¹
			9.75 x 10 ¹	3.00 x 10 ¹	3.19 x 10 ¹
			1.46 x 10 ²	2.00 x 10 ¹	1.95 x 10 ¹
			1.71 x 10 ²	1.50 x 10 ¹	1.61 x 10 ¹
			1.95 x 10 ²	1.45 x 10 ¹	1.37 x 10 ¹
450	225	8.48 x 10 ³ t ^{-1.25}	2.65 x 10 ¹	1.40 x 10 ²	1.40 x 10 ²
			4.85 x 10 ¹	6.75 x 10 ¹	6.59 x 10 ¹
			7.55 x 10 ¹	3.50 x 10 ¹	3.78 x 10 ¹
			9.75 x 10 ¹	3.00 x 10 ¹	2.75 x 10 ¹
			1.46 x 10 ²	1.65 x 10 ¹	1.66 x 10 ¹
			1.71 x 10 ²	1.25 x 10 ¹	1.36 x 10 ¹
			1.95 x 10 ²	1.10 x 10 ¹	1.15 x 10 ¹
475	225	4.92 x 10 ³ t ^{-1.19}	2.65 x 10 ¹	1.00 x 10 ²	1.01 x 10 ²
			4.85 x 10 ¹	5.25 x 10 ¹	4.93 x 10 ¹
			9.75 x 10 ¹	1.90 x 10 ¹	2.15 x 10 ¹
			1.46 x 10 ²	1.35 x 10 ¹	1.33 x 10 ¹
			1.71 x 10 ²	1.05 x 10 ¹	1.11 x 10 ¹
			1.95 x 10 ²	8.50 x 10 ⁰	9.46 x 10 ⁰
500	225	2.64 x 10 ³ t ^{-0.93}	2.65 x 10 ¹	1.28 x 10 ²	1.27 x 10 ²
			4.85 x 10 ¹	7.50 x 10 ¹	7.27 x 10 ¹
			7.55 x 10 ¹	4.00 x 10 ¹	4.83 x 10 ¹
			9.80 x 10 ¹	4.00 x 10 ¹	3.79 x 10 ¹
			1.46 x 10 ²	2.75 x 10 ¹	2.62 x 10 ¹
			1.71 x 10 ²	2.75 x 10 ¹	2.27 x 10 ¹
			1.95 x 10 ²	1.90 x 10 ¹	2.01 x 10 ¹
600	225	3.69 x 10 ³ t ^{-1.30}	2.65 x 10 ¹	5.15 x 10 ¹	5.23 x 10 ¹
			5.25 x 10 ¹	2.50 x 10 ¹	2.15 x 10 ¹
			7.55 x 10 ¹	1.25 x 10 ¹	1.34 x 10 ¹
			1.47 x 10 ²	3.75 x 10 ⁰	5.67 x 10 ⁰
			1.70 x 10 ²	3.25 x 10 ⁰	4.68 x 10 ⁰
			1.95 x 10 ²	3.00 x 10 ⁰	3.93 x 10 ⁰

TABLE I. (continued)

Station (ft)	Location (°)	Calculated Function	Time Post Event (hrs)	Measured Dose Rate (mR/hr)	Calculated Dose Rate (mR/hr)
700	225	$2.36 \times 10^3 t^{-1.19}$	2.65×10^1	4.65×10^1	4.74×10^1
			5.25×10^1	2.50×10^1	2.10×10^1
			7.55×10^1	1.20×10^1	1.36×10^1
			1.47×10^2	5.00×10^0	6.18×10^0
			1.70×10^2	3.25×10^0	5.17×10^0
			1.95×10^2	4.00×10^0	4.41×10^0
800	225	$8.74 \times 10^2 t^{-1.20}$	2.65×10^1	1.65×10^1	1.71×10^1
			5.25×10^1	1.00×10^1	7.51×10^0
			7.55×10^1	4.00×10^0	4.86×10^0
			1.47×10^2	1.25×10^0	2.19×10^0
			1.70×10^2	1.00×10^0	1.83×10^0
			1.95×10^2	9.00×10^{-1}	1.56×10^0
900	225	$4.10 \times 10^3 t^{-1.55}$	2.65×10^1	2.55×10^1	2.57×10^1
			5.25×10^1	1.00×10^1	8.92×10^0
			7.55×10^1	4.50×10^0	5.08×10^0
			1.47×10^2	1.25×10^0	1.82×10^0
			1.70×10^2	8.00×10^{-1}	1.45×10^0
1000	225	$5.50 \times 10^2 t^{-1.30}$	2.65×10^1	8.00×10^0	7.77×10^0
			5.25×10^1	3.00×10^0	3.19×10^0
			7.55×10^1	1.40×10^0	1.99×10^0
1100	225	$5.26 \times 10^2 t^{-1.30}$	2.70×10^1	7.30×10^0	7.25×10^0
			5.25×10^1	3.50×10^0	3.05×10^0
			7.55×10^1	1.00×10^0	1.90×10^0
1200	225	$2.42 \times 10^2 t^{-1.30}$	2.70×10^1	3.30×10^0	3.34×10^0
			5.25×10^1	1.50×10^0	1.41×10^0
1300	225	$1.73 \times 10^2 t^{-1.30}$	2.70×10^1	2.30×10^0	2.38×10^0
			5.25×10^1	1.20×10^0	1.00×10^0
1400	225	$1.05 \times 10^2 t^{-1.30}$	2.70×10^1	1.50×10^0	1.45×10^0
			5.25×10^1	5.00×10^{-1}	6.12×10^{-1}
1500	225	$9.07 \times 10^1 t^{-1.30}$	2.70×10^1	1.25×10^0	1.25×10^0
1600	225	$9.07 \times 10^1 t^{-1.30}$	2.70×10^1	1.25×10^0	1.25×10^0
1700	225	$7.26 \times 10^1 t^{-1.30}$	2.70×10^1	1.00×10^0	1.00×10^0
1800	225	$7.26 \times 10^1 t^{-1.30}$	2.70×10^1	1.00×10^0	1.00×10^0
1900	225	$6.89 \times 10^1 t^{-1.30}$	2.70×10^1	9.50×10^{-1}	9.50×10^{-1}
2000	225	$4.93 \times 10^1 t^{-1.30}$	2.70×10^1	6.80×10^{-1}	6.80×10^{-1}
125	245	$6.38 \times 10^4 t^{-1.29}$	4.80×10^1	4.13×10^2	4.28×10^2
			5.25×10^1	4.00×10^2	3.81×10^2
			7.45×10^1	2.50×10^2	2.43×10^2
			9.75×10^1	1.58×10^2	1.71×10^2
			1.46×10^2	1.03×10^2	1.02×10^2
			1.71×10^2	8.00×10^1	8.32×10^1
			1.95×10^2	7.50×10^1	6.99×10^1

TABLE I. (continued)

Station (ft)	Location (°)	Calculated Function	Time Post Event (hrs)	Measured Dose Rate (mR/hr)	Calculated Dose Rate (mR/hr)
175	245	$4.19 \times 10^4 t^{-1.30}$	4.80×10^1	2.63×10^2	2.71×10^2
			5.25×10^1	2.50×10^2	2.41×10^2
			7.45×10^1	1.63×10^2	1.53×10^2
			9.70×10^1	9.75×10^1	1.08×10^2
			1.46×10^2	6.00×10^1	6.37×10^1
			1.71×10^2	5.50×10^1	5.21×10^1
			1.95×10^2	4.50×10^1	4.37×10^1
200	245	$5.97 \times 10^4 t^{-1.41}$	5.25×10^1	2.25×10^2	2.23×10^2
			7.45×10^1	1.38×10^2	1.36×10^2
			9.70×10^1	8.25×10^1	9.38×10^1
			1.46×10^2	5.25×10^1	5.27×10^1
			1.71×10^2	4.75×10^1	4.23×10^1
			1.95×10^2	4.25×10^1	3.50×10^1
225	245	$1.61 \times 10^4 t^{-1.16}$	4.85×10^1	1.70×10^2	1.80×10^2
			5.25×10^1	1.80×10^2	1.64×10^2
			7.45×10^1	1.00×10^2	1.09×10^2
			9.70×10^1	7.75×10^1	8.04×10^1
			1.46×10^2	5.25×10^1	5.01×10^1
			1.71×10^2	4.50×10^1	4.18×10^1
			1.95×10^2	3.75×10^1	3.58×10^1
250	245	$2.07 \times 10^4 t^{-1.27}$	4.85×10^1	1.38×10^2	1.48×10^2
			5.25×10^1	1.50×10^2	1.33×10^2
			7.45×10^1	7.50×10^1	8.54×10^1
			9.70×10^1	6.00×10^1	6.10×10^1
			1.46×10^2	3.75×10^1	3.62×10^1
			1.71×10^2	3.50×10^1	2.97×10^1
			1.95×10^2	2.50×10^1	2.51×10^1
275	245	$1.44 \times 10^4 t^{-1.22}$	4.85×10^1	1.25×10^2	1.28×10^2
			5.25×10^1	1.25×10^2	1.16×10^2
			7.45×10^1	6.50×10^1	7.58×10^1
			9.75×10^1	5.25×10^1	5.47×10^1
			1.46×10^2	3.25×10^1	3.35×10^1
			1.71×10^2	3.75×10^1	2.77×10^1
			1.95×10^2	2.50×10^1	2.35×10^1
300	245	$1.80 \times 10^4 t^{-1.35}$	4.85×10^1	8.75×10^1	9.49×10^1
			5.25×10^1	9.50×10^1	8.53×10^1
			7.45×10^1	5.25×10^1	5.31×10^1
			9.75×10^1	3.40×10^1	3.69×10^1
			1.46×10^2	2.10×10^1	2.14×10^1
			1.71×10^2	1.75×10^1	1.74×10^1
			1.95×10^2	1.60×10^1	1.45×10^1
325	245	$1.54 \times 10^4 t^{-1.34}$	4.85×10^1	7.75×10^1	8.63×10^1
			5.25×10^1	9.00×10^1	7.76×10^1
			7.35×10^1	4.50×10^1	4.95×10^1
			9.75×10^1	3.40×10^1	3.39×10^1
			1.46×10^2	2.00×10^1	1.98×10^1
			1.71×10^2	1.65×10^1	1.61×10^1
			1.95×10^2	1.35×10^1	1.34×10^1

TABLE I. (continued)

Station (ft)	Location (°)	Calculated Function	Time Post Event (hrs)	Measured Dose Rate (mR/hr)	Calculated Dose Rate (mR/hr)
350	245	$5.83 \times 10^3 t^{-1.09}$	4.85×10^1	7.50×10^1	8.43×10^1
			5.25×10^1	9.00×10^1	7.74×10^1
			7.50×10^1	5.25×10^1	5.24×10^1
			9.75×10^1	3.25×10^1	3.94×10^1
			1.46×10^2	2.50×10^1	2.53×10^1
			1.71×10^2	2.10×10^1	2.14×10^1
			1.95×10^2	2.35×10^1	1.85×10^1
375	245	$1.19 \times 10^4 t^{-1.22}$	4.85×10^1	9.75×10^1	1.06×10^2
			5.25×10^1	1.10×10^2	9.66×10^1
			7.50×10^1	5.75×10^1	6.26×10^1
			9.75×10^1	4.25×10^1	4.55×10^1
			1.46×10^2	3.00×10^1	2.79×10^1
			1.71×10^2	2.50×10^1	2.31×10^1
			1.95×10^2	2.00×10^1	1.96×10^1
400	245	$1.25 \times 10^4 t^{-1.38}$	4.85×10^1	5.25×10^1	5.79×10^1
			5.25×10^1	6.00×10^1	5.19×10^1
			7.50×10^1	2.75×10^1	3.17×10^1
			9.75×10^1	2.25×10^1	2.20×10^1
			1.46×10^2	1.25×10^1	1.26×10^1
			1.71×10^2	1.15×10^1	1.02×10^1
			1.95×10^2	8.50×10^0	8.43×10^0
425	245	$3.52 \times 10^5 t^{-2.23}$	4.85×10^1	5.50×10^1	6.01×10^1
			5.25×10^1	6.00×10^1	5.04×10^1
			7.50×10^1	1.30×10^1	2.27×10^1
			1.71×10^2	1.15×10^1	3.62×10^0
			1.95×10^2	8.50×10^0	2.68×10^0
450	245	$1.04 \times 10^4 t^{-1.33}$	4.85×10^1	5.25×10^1	5.86×10^1
			5.25×10^1	6.00×10^1	5.27×10^1
			9.75×10^1	2.25×10^1	2.31×10^1
			1.46×10^2	1.25×10^1	1.35×10^1
			1.71×10^2	1.10×10^1	1.09×10^1
			1.95×10^2	8.50×10^0	9.14×10^0
500	245	$2.40 \times 10^3 t^{-1.13}$	4.90×10^1	2.80×10^1	2.95×10^1
			9.75×10^1	2.10×10^1	1.35×10^1
			1.47×10^2	5.50×10^0	8.55×10^0
			1.70×10^2	5.00×10^0	7.22×10^0
			1.95×10^2	3.75×10^0	6.20×10^0
750	245	$6.79 \times 10^2 t^{-1.30}$	4.90×10^1	4.30×10^0	4.31×10^0
			7.50×10^1	2.50×10^0	2.48×10^0
1000	245	$1.34 \times 10^2 t^{-1.30}$	4.90×10^1	8.50×10^{-1}	8.50×10^{-1}
2000	245	$9.45 \times 10^1 t^{-1.30}$	4.90×10^1	6.00×10^{-1}	6.00×10^{-1}

TABLE II. CALCULATED DOSE RATES FOLLOWING TNT

STATION		PARAMETERS			DOSE RATES(MR/HR) AT TIMES POST EVENT					
DISTANCE(FT)	DEGREES	A	B	1 HR	10 HR	24 HR	100 HR	168 HR	1000 HR	
100	0	5.12E 04	-1.28E 00	5.12E 04	2.67E 03	8.70E 02	1.39E 02	7.17E 01	7.28E 00	
100	20	7.70E 04	-1.37E 00	7.70E 04	3.25E 03	9.75E 02	1.37E 02	6.72E 01	5.79E 00	
100	40	4.93E 04	-1.29E 00	4.93E 04	2.55E 03	8.26E 02	1.32E 02	6.76E 01	6.82E 00	
100	60	1.85E 04	-1.11E 00	1.85E 04	1.43E 03	5.38E 02	1.10E 02	6.17E 01	8.48E 00	
100	80	1.65E 04	-1.14E 00	1.65E 04	1.20E 03	4.45E 02	8.77E 01	4.86E 01	6.40E 00	
100	100	2.56E 04	-1.28E 00	2.56E 04	1.34E 03	4.34E 02	6.96E 01	3.58E 01	3.62E 00	
100	120	2.85E 04	-1.20E 00	2.85E 04	1.78E 03	6.21E 02	1.12E 02	5.97E 01	6.98E 00	
100	140	4.94E 04	-1.24E 00	4.94E 04	2.85E 03	9.65E 02	1.65E 02	8.67E 01	9.52E 00	
100	160	2.40E 05	-1.56E 00	2.40E 05	6.58E 03	1.68E 03	1.80E 02	8.01E 01	4.94E 00	
100	180	2.16E 05	-1.45E 00	2.16E 05	7.58E 03	2.12E 03	2.66E 02	1.25E 02	9.34E 00	
100	200	2.43E 05	-1.46E 00	2.43E 05	8.40E 03	2.34E 03	2.90E 02	1.36E 02	10.00E 00	
100	220	1.88E 05	-1.48E 00	1.88E 05	6.19E 03	1.69E 03	2.04E 02	9.48E 01	6.75E 00	
100	240	2.86E 04	-1.09E 00	2.86E 04	2.33E 03	8.96E 02	1.89E 02	1.07E 02	1.54E 01	
100	260	9.00E 03	-9.31E-01	9.00E 03	1.06E 03	4.68E 02	1.24E 02	7.65E 01	1.45E 01	
100	280	2.24E 04	-1.18E 00	2.24E 04	1.49E 03	5.33E 02	9.95E 01	5.41E 01	6.64E 00	
100	300	1.76E 04	-1.13E 00	1.76E 04	1.32E 03	4.92E 02	9.87E 01	5.51E 01	7.40E 00	
100	320	4.99E 04	-1.29E 00	4.99E 04	2.56E 03	8.27E 02	1.31E 02	6.72E 01	6.73E 00	
100	340	1.11E 05	-1.44E 00	1.11E 05	4.05E 03	1.15E 03	1.49E 02	7.06E 01	5.45E 00	
200	0	2.16E 04	-1.39E 00	2.16E 04	8.71E 02	2.57E 02	3.52E 01	1.71E 01	1.42E 00	
200	20	1.56E 04	-1.32E 00	1.56E 04	7.55E 02	2.38E 02	3.64E 01	1.84E 01	1.76E 00	
200	40	4.78E 04	-1.64E 00	4.78E 04	1.09E 03	2.60E 02	2.51E 01	1.07E 01	5.74E-01	
200	60	1.81E 04	-1.40E 00	1.81E 04	7.25E 02	2.13E 02	2.90E 01	1.40E 01	1.16E 00	
200	80	2.17E 04	-1.46E 00	2.17E 04	7.61E 02	2.13E 02	2.67E 01	1.25E 01	9.35E-01	
200	90	2.24E 04	-1.54E 00	2.24E 04	6.43E 02	1.67E 02	1.84E 01	8.28E 00	5.28E-01	
200	100	1.25E 04	-1.33E 00	1.25E 04	5.89E 02	1.84E 02	2.78E 01	1.40E 01	1.31E 00	
200	120	2.37E 04	-1.40E 00	2.37E 04	9.48E 02	2.79E 02	3.79E 01	1.83E 01	1.51E 00	
200	140	3.50E 04	-1.42E 00	3.50E 04	1.33E 03	3.85E 02	5.08E 01	2.43E 01	1.94E 00	
200	160	2.20E 04	-1.17E 00	2.20E 04	1.48E 03	5.30E 02	9.94E 01	5.41E 01	6.69E 00	
200	180	4.53E 04	-1.18E 00	4.53E 04	3.02E 03	1.08E 03	2.02E 02	1.10E 02	1.35E 01	
200	200	2.12E 05	-1.48E 00	2.12E 05	6.95E 03	1.89E 03	2.28E 02	1.06E 02	7.48E 00	
200	220	1.02E 05	-1.38E 00	1.02E 05	4.25E 03	1.27E 03	1.77E 02	8.63E 01	7.35E 00	
200	240	1.88E 04	-1.12E 00	1.88E 04	1.42E 03	5.30E 02	1.07E 02	5.95E 01	8.03E 00	
200	260	3.39E 04	-1.40E 00	3.39E 04	1.35E 03	3.96E 02	5.38E 01	2.60E 01	2.14E 00	
200	270	9.69E 03	-1.18E 00	9.69E 03	6.46E 02	2.31E 02	4.31E 01	2.34E 01	2.87E 00	
200	280	2.85E 04	-1.41E 00	2.85E 04	1.10E 03	3.20E 02	4.27E 01	2.05E 01	1.65E 00	
200	300	8.83E 04	-1.69E 00	8.83E 04	1.80E 03	4.08E 02	3.65E 01	1.52E 01	7.42E-01	
200	320	3.75E 06	-2.68E 00	3.75E 06	7.85E 03	7.52E 02	1.64E 01	4.09E 00	3.43E-02	
200	340	1.38E 07	-3.05E 00	1.38E 07	1.22E 04	8.43E 02	1.08E 01	2.22E 00	9.57E-03	
500	0	2.78E 03	-1.46E 00	2.78E 03	9.60E 01	2.67E 01	3.31E 00	1.55E 00	1.14E-01	
500	10	3.04E 03	-1.63E 00	3.04E 03	7.12E 01	1.71E 01	1.66E 00	7.14E-01	3.89E-02	
500	20	1.78E 03	-1.37E 00	1.78E 03	7.57E 01	2.28E 01	3.22E 00	1.58E 00	1.37E-01	
500	30	2.83E 03	-1.48E 00	2.83E 03	9.43E 01	2.59E 01	3.15E 00	1.46E 00	1.05E-01	
500	40	2.60E 03	-1.54E 00	2.60E 03	7.44E 01	1.93E 01	2.13E 00	9.56E-01	6.10E-02	
500	50	2.61E 03	-1.55E 00	2.61E 03	7.45E 01	1.93E 01	2.12E 00	9.53E-01	6.05E-02	
500	60	2.45E 03	-1.54E 00	2.45E 03	7.11E 01	1.85E 01	2.07E 00	9.32E-01	6.01E-02	
500	70	2.35E 03	-1.52E 00	2.35E 03	7.04E 01	1.86E 01	2.11E 00	9.57E-01	6.31E-02	
500	80	2.92E 04	-2.09E 00	2.92E 04	2.36E 02	3.77E 01	1.90E 00	6.43E-01	1.54E-02	
500	90	2.59E 03	-1.47E 00	2.59E 03	8.68E 01	2.39E 01	2.91E 00	1.36E 00	9.78E-02	
500	100	1.74E 03	-1.44E 00	1.74E 03	6.36E 01	1.81E 01	2.33E 00	1.11E 00	8.54E-02	
500	110	2.63E 03	-1.48E 00	2.63E 03	8.72E 01	2.39E 01	2.89E 00	1.34E 00	9.56E-02	

TABLE II. (Continued)

STATION DISTANCE(FT)	DEGREES	PARAMETERS		DOSE RATES(MR/HR) AT TIMES POST EVENT					
		A	B	1 HR	10 HR	24 HR	100 HR	168 HR	1000 HR
500	120	1.66E 03	-1.30E 00	1.66E 03	8.35E 01	2.68E 01	4.20E 00	2.14E 00	2.11E-01
500	130	3.03E 03	-1.50E 00	3.03E 03	9.61E 01	2.59E 01	3.05E 00	1.40E 00	9.65E-02
500	140	2.13E 03	-1.38E 00	2.13E 03	8.87E 01	2.65E 01	3.69E 00	1.80E 00	1.54E-01
500	150	3.23E 03	-1.43E 00	3.23E 03	1.20E 02	3.43E 01	4.46E 00	2.12E 00	1.66E-01
500	160	9.29E 03	-1.50E 00	9.29E 03	2.91E 02	7.81E 01	9.14E 00	4.19E 00	2.87E-01
500	170	7.17E 03	-1.40E 00	7.17E 03	2.85E 02	8.36E 01	1.13E 01	5.47E 00	4.50E-01
500	180	5.70E 03	-1.26E 00	5.70E 03	3.11E 02	1.03E 02	1.70E 01	8.81E 00	9.26E-01
500	190	5.25E 03	-1.27E 00	5.25E 03	2.81E 02	9.25E 01	1.51E 01	7.80E 00	8.09E-01
500	200	8.04E 03	-1.08E 00	8.04E 03	6.72E 02	2.62E 02	5.62E 01	3.21E 01	4.70E 00
500	208	4.12E 03	-9.21E-01	4.12E 03	4.95E 02	2.21E 02	5.94E 01	3.69E 01	7.14E 00
500	220	7.42E 03	-1.20E 00	7.42E 03	4.72E 02	1.66E 02	3.00E 01	1.62E 01	1.91E 00
500	230	5.04E 05	-1.97E 00	5.04E 05	5.39E 03	9.60E 02	5.77E 01	2.07E 01	6.17E-01
500	240	7.54E 03	-1.34E 00	7.54E 03	3.42E 02	1.06E 02	1.55E 01	7.73E 00	7.04E-01
500	250	4.78E 03	-1.38E 00	4.78E 03	1.98E 02	5.92E 01	8.24E 00	4.02E 00	3.42E-01
500	260	4.37E 03	-1.35E 00	4.37E 03	1.97E 02	6.07E 01	8.89E 00	4.43E 00	4.01E-01
500	270	4.62E 03	-1.36E 00	4.62E 03	2.03E 02	6.18E 01	8.91E 00	4.40E 00	3.91E-01
500	280	3.78E 03	-1.44E 00	3.78E 03	1.38E 02	3.93E 01	5.06E 00	2.40E 00	1.85E-01
500	290	1.85E 03	-1.32E 00	1.85E 03	8.75E 01	2.74E 01	4.14E 00	2.09E 00	1.96E-01
500	300	2.86E 03	-1.39E 00	2.86E 03	1.17E 02	3.47E 01	4.78E 00	2.33E 00	1.95E-01
500	310	3.30E 03	-1.34E 00	3.30E 03	1.49E 02	4.61E 01	6.77E 00	3.37E 00	3.07E-01
500	320	2.55E 03	-1.16E 00	2.55E 03	1.78E 02	6.46E 01	1.24E 01	6.81E 00	8.65E-01
500	330	5.28E 03	-1.60E 00	5.28E 03	1.31E 02	3.23E 01	3.28E 00	1.43E 00	8.17E-02
500	340	2.73E 03	-1.45E 00	2.73E 03	9.61E 01	2.69E 01	3.38E 00	1.59E 00	1.19E-01
500	350	2.28E 03	-1.37E 00	2.28E 03	9.72E 01	2.93E 01	4.15E 00	2.04E 00	1.77E-01
1000	0	1.60E 02	-1.30E 00	1.60E 02	8.03E 00	2.57E 00	4.03E-01	2.05E-01	2.02E-02
1000	10	2.18E 02	-1.30E 00	2.18E 02	1.09E 01	3.49E 00	5.47E-01	2.78E-01	2.74E-02
1000	20	2.10E 02	-1.30E 00	2.10E 02	1.05E 01	3.37E 00	5.27E-01	2.68E-01	2.64E-02
1000	30	1.45E 02	-1.30E 00	1.45E 02	7.27E 00	2.33E 00	3.64E-01	1.86E-01	1.83E-02
1000	40	1.72E 02	-1.30E 00	1.72E 02	8.65E 00	2.77E 00	4.33E-01	2.21E-01	2.17E-02
1000	50	5.51E 02	-1.30E 00	5.51E 02	2.76E 01	8.85E 00	1.38E 00	7.05E-01	6.94E-02
1000	60	2.01E 02	-1.30E 00	2.01E 02	1.01E 01	3.22E 00	5.04E-01	2.57E-01	2.53E-02
1000	70	1.45E 02	-1.30E 00	1.45E 02	7.27E 00	2.33E 00	3.64E-01	1.86E-01	1.83E-02
1000	80	1.81E 02	-1.30E 00	1.81E 02	9.09E 00	2.91E 00	4.56E-01	2.32E-01	2.28E-02
1000	90	2.18E 02	-1.30E 00	2.18E 02	1.09E 01	3.49E 00	5.47E-01	2.78E-01	2.74E-02
1000	100	2.44E 02	-1.30E 00	2.44E 02	1.22E 01	3.92E 00	6.13E-01	3.13E-01	3.07E-02
1000	110	2.18E 02	-1.30E 00	2.18E 02	1.09E 01	3.49E 00	5.47E-01	2.78E-01	2.74E-02
1000	120	2.97E 02	-1.30E 00	2.97E 02	1.49E 01	4.77E 00	7.46E-01	3.80E-01	3.74E-02
1000	130	2.33E 02	-1.30E 00	2.33E 02	1.17E 01	3.74E 00	5.85E-01	2.98E-01	2.93E-02
1000	140	1.78E 02	-1.30E 00	1.78E 02	8.91E 00	2.85E 00	4.46E-01	2.27E-01	2.24E-02
1000	150	1.43E 02	-1.30E 00	1.43E 02	7.17E 00	2.30E 00	3.59E-01	1.83E-01	1.80E-02
1000	160	1.43E 02	-1.30E 00	1.43E 02	7.17E 00	2.30E 00	3.59E-01	1.83E-01	1.80E-02
1000	170	2.69E 02	-1.30E 00	2.69E 02	1.35E 01	4.32E 00	6.76E-01	3.44E-01	3.39E-02
1000	180	5.39E 02	-1.30E 00	5.39E 02	2.70E 01	8.66E 00	1.35E 00	6.90E-01	6.79E-02
1000	190	3.74E 02	-1.30E 00	3.74E 02	1.87E 01	6.00E 00	9.38E-01	4.78E-01	4.70E-02
1000	200	1.50E 03	-1.30E 00	1.50E 03	7.50E 01	2.40E 01	3.76E 00	1.91E 00	1.88E-01
1000	210	3.90E 03	-1.30E 00	3.90E 03	1.96E 02	6.27E 01	9.80E 00	4.99E 00	4.91E-01
1000	220	4.35E 02	-1.30E 00	4.35E 02	2.18E 01	6.99E 00	1.09E 00	5.57E-01	5.48E-02
1000	230	3.24E 02	-1.30E 00	3.24E 02	1.62E 01	5.20E 00	8.14E-01	4.14E-01	4.08E-02
1000	240	2.42E 02	-1.30E 00	2.42E 02	1.21E 01	3.88E 00	6.07E-01	3.09E-01	3.04E-02
1000	250	3.47E 03	-1.30E 00	3.47E 03	1.74E 02	5.57E 01	8.72E 00	4.44E 00	4.37E-01

TABLE II. (Continued)

STATION DISTANCE (FT)	DEGREES	PARAMETERS		DOSE RATES (MR/HR) AT TIMES POST EVENT						
		A	B	1 HR	10 HR	24 HR	100 HR	168 HR	1000 HR	
1000	260	1.92E 02	-1.30E 00	1.92E 02	9.61E 00	3.08E 00	4.82E-01	2.45E-01	2.41E-02	
1000	270	2.08E 02	-1.30E 00	2.08E 02	1.04E 01	3.35E 00	5.23E-01	2.67E-01	2.62E-02	
1000	280	2.11E 02	-1.30E 00	2.11E 02	1.06E 01	3.38E 00	5.29E-01	2.70E-01	2.65E-02	
1000	290	2.16E 02	-1.30E 00	2.16E 02	1.08E 01	3.47E 00	5.43E-01	2.77E-01	2.72E-02	
1000	300	1.70E 02	-1.30E 00	1.70E 02	8.52E 00	2.73E 00	4.27E-01	2.17E-01	2.14E-02	
1000	310	1.50E 02	-1.30E 00	1.50E 02	7.53E 00	2.41E 00	3.78E-01	1.92E-01	1.89E-02	
1000	320	1.74E 02	-1.30E 00	1.74E 02	8.74E 00	2.80E 00	4.38E-01	2.23E-01	2.20E-02	
1000	340	1.43E 02	-1.30E 00	1.43E 02	7.17E 00	2.30E 00	3.59E-01	1.83E-01	1.80E-02	
2000	180	1.82E 01	-1.30E 00	1.82E 01	9.12E-01	2.92E-01	4.57E-02	2.33E-02	2.29E-03	
2000	190	5.52E 00	-1.30E 00	5.52E 00	2.77E-01	8.87E-02	1.39E-02	7.07E-03	6.95E-04	
2000	200	1.48E 01	-1.30E 00	1.48E 01	7.43E-01	2.38E-01	3.72E-02	1.90E-02	1.87E-03	
2000	210	2.58E 01	-1.30E 00	2.58E 01	1.29E 00	4.15E-01	6.49E-02	3.30E-02	3.25E-03	
2000	220	1.19E 03	-1.30E 00	1.19E 03	5.96E 01	1.91E 01	2.98E 00	1.52E 00	1.50E-01	
2000	230	5.73E 01	-1.30E 00	5.73E 01	2.87E 00	9.20E-01	1.44E-01	7.33E-02	7.21E-03	
2000	240	4.54E 01	-1.30E 00	4.54E 01	2.27E 00	7.29E-01	1.14E-01	5.81E-02	5.71E-03	
2000	250	4.58E 01	-1.30E 00	4.58E 01	2.30E 00	7.36E-01	1.15E-01	5.86E-02	5.77E-03	
2000	260	8.62E 01	-1.30E 00	8.62E 01	4.32E 00	1.38E 00	2.17E-01	1.10E-01	1.09E-02	
2000	270	2.81E 01	-1.30E 00	2.81E 01	1.41E 00	4.52E-01	7.07E-02	3.60E-02	3.54E-03	
4000	210	7.51E 00	-1.30E 00	7.51E 00	5.76E-01	1.21E-01	1.89E-02	9.61E-03	9.45E-04	
4000	220	9.59E 00	-1.30E 00	9.59E 00	4.81E-01	1.54E-01	2.41E-02	1.23E-02	1.21E-03	
4000	230	2.71E 00	-1.30E 00	2.71E 00	1.36E-01	4.35E-02	6.81E-03	3.47E-03	3.41E-04	
8000	200	3.39E-01	-1.30E 00	3.39E-01	1.70E-02	5.44E-03	8.51E-04	4.34E-04	4.27E-05	
8000	205	1.48E 00	-1.30E 00	1.48E 00	7.40E-02	2.37E-02	3.71E-03	1.89E-03	1.86E-04	
8000	210	4.34E 00	-1.30E 00	4.34E 00	2.17E-01	6.97E-02	1.09E-02	5.55E-03	5.46E-04	
8000	215	1.46E 01	-1.30E 00	1.46E 01	7.32E-01	2.34E-01	3.67E-02	1.87E-02	1.84E-03	
8000	220	1.72E 00	-1.30E 00	1.72E 00	8.64E-02	2.77E-02	4.33E-03	2.21E-03	2.17E-04	
8000	225	7.39E-01	-1.30E 00	7.39E-01	3.70E-02	1.19E-02	1.86E-03	9.45E-04	9.30E-05	
8000	230	4.92E-01	-1.30E 00	4.92E-01	2.47E-02	7.91E-03	1.24E-03	6.30E-04	6.20E-05	
8000	235	9.85E-01	-1.30E 00	9.85E-01	4.94E-02	1.58E-02	2.47E-03	1.26E-03	1.24E-04	
8000	240	3.69E-01	-1.30E 00	3.69E-01	1.85E-02	5.93E-03	9.28E-04	4.73E-04	4.65E-05	
100	5	2.01E 04	-1.09E 00	2.01E 04	1.64E 03	6.33E 02	1.34E 02	7.61E 01	1.09E 01	
125	5	2.23E 04	-1.17E 00	2.23E 04	1.49E 03	5.35E 02	1.00E 02	5.45E 01	6.72E 00	
150	5	1.15E 04	-1.10E 00	1.15E 04	9.17E 02	3.50E 02	7.30E 01	4.13E 01	5.81E 00	
175	5	2.08E 04	-1.37E 00	2.08E 04	8.81E 02	2.65E 02	3.72E 01	1.82E 01	1.57E 00	
200	5	1.56E 04	-1.35E 00	1.56E 04	6.90E 02	2.11E 02	3.06E 01	1.52E 01	1.36E 00	
225	5	1.22E 04	-1.36E 00	1.22E 04	5.29E 02	1.60E 02	2.29E 01	1.13E 01	9.93E-01	
250	5	8.49E 03	-1.34E 00	8.49E 03	3.84E 02	1.18E 02	1.73E 01	8.64E 00	7.84E-01	
275	5	9.83E 03	-1.42E 00	9.83E 03	3.72E 02	1.07E 02	1.41E 01	6.74E 00	5.34E-01	
300	5	8.37E 03	-1.42E 00	8.37E 03	3.16E 02	9.09E 01	1.19E 01	5.70E 00	4.50E-01	
325	5	7.85E 03	-1.47E 00	7.85E 03	2.69E 02	7.45E 01	9.19E 00	4.30E 00	3.15E-01	
350	5	6.61E 03	-1.43E 00	6.61E 03	2.45E 02	7.01E 01	9.10E 00	4.33E 00	3.38E-01	
375	5	4.13E 03	-1.37E 00	4.13E 03	1.76E 02	5.30E 01	7.49E 00	3.68E 00	3.19E-01	
400	5	5.75E 02	-7.25E-01	5.75E 02	1.08E 02	5.75E 01	2.04E 01	1.40E 01	3.85E 00	
425	5	3.60E 03	-1.32E 00	3.60E 03	1.72E 02	5.41E 01	8.23E 00	4.15E 00	3.93E-01	
460	5	4.42E 03	-1.54E 00	4.42E 03	1.29E 02	3.35E 01	3.74E 00	1.68E 00	1.09E-01	
475	5	3.72E 03	-1.59E 00	3.72E 03	9.66E 01	2.41E 01	2.51E 00	1.10E 00	6.52E-02	
500	5	9.29E 03	-1.76E 00	9.29E 03	1.63E 02	3.50E 01	2.85E 00	1.15E 00	4.99E-02	
600	5	7.82E 02	-1.30E 00	7.82E 02	3.92E 01	1.26E 01	1.96E 00	1.00E 00	9.84E-02	
700	5	5.72E 02	-1.30E 00	5.72E 02	2.87E 01	9.18E 00	1.44E 00	7.32E-01	7.20E-02	
800	5	3.97E 02	-1.30E 00	3.97E 02	1.99E 01	6.38E 00	9.98E-01	5.08E-01	5.00E-02	

TABLE II. (Continued)

STATION DISTANCE(FT)	DEGREES	PARAMETERS		DOSE RATES(MR/HR) AT TIMES POST EVENT					
		A	B	1 HR	10 HR	24 HR	100 HR	168 HR	1000 HR
900	5	2.51E 02	-1.30E 00	2.51E 02	1.26E 01	4.03E 00	6.30E-01	3.21E-01	3.16E-02
1000	5	1.75E 02	-1.30E 00	1.75E 02	8.76E 00	2.81E 00	4.39E-01	2.24E-01	2.20E-02
1100	5	1.24E 02	-1.30E 00	1.24E 02	6.21E 00	1.99E 00	3.11E-01	1.59E-01	1.56E-02
1200	5	9.37E 01	-1.30E 00	9.37E 01	4.70E 00	1.51E 00	2.35E-01	1.20E-01	1.18E-02
1300	5	6.29E 01	-1.30E 00	6.29E 01	3.15E 00	1.01E 00	1.58E-01	8.05E-02	7.92E-03
1400	5	6.77E 01	-1.30E 00	6.77E 01	3.39E 00	1.09E 00	1.70E-01	8.66E-02	8.52E-03
1500	5	5.18E 01	-1.30E 00	5.18E 01	2.59E 00	8.31E-01	1.30E-01	6.62E-02	6.52E-03
100	205	9.71E 04	-1.30E 00	9.71E 04	4.87E 03	1.56E 03	2.44E 02	1.24E 02	1.22E 01
125	205	9.11E 04	-1.30E 00	9.11E 04	4.57E 03	1.46E 03	2.29E 02	1.17E 02	1.15E 01
150	205	9.11E 04	-1.30E 00	9.11E 04	4.57E 03	1.46E 03	2.29E 02	1.17E 02	1.15E 01
175	205	1.43E 05	-1.38E 00	1.43E 05	5.92E 03	1.76E 03	2.45E 02	1.20E 02	1.02E 01
200	205	1.90E 05	-1.48E 00	1.90E 05	6.27E 03	1.71E 03	2.07E 02	9.58E 01	6.81E 00
225	205	1.07E 05	-1.35E 00	1.07E 05	4.81E 03	1.47E 03	2.15E 02	1.07E 02	9.62E 00
250	205	8.29E 04	-1.29E 00	8.29E 04	4.22E 03	1.36E 03	2.14E 02	1.10E 02	1.09E 01
275	205	5.41E 04	-1.29E 00	5.41E 04	2.77E 03	8.95E 02	1.42E 02	7.26E 01	7.27E 00
300	205	4.29E 04	-1.19E 00	4.29E 04	2.79E 03	9.84E 02	1.81E 02	9.76E 01	1.17E 01
325	205	3.19E 04	-1.15E 00	3.19E 04	2.24E 03	8.17E 02	1.58E 02	8.67E 01	1.11E 01
350	205	2.49E 04	-1.11E 00	2.49E 04	1.94E 03	7.35E 02	1.51E 02	8.52E 01	1.18E 01
425	205	1.89E 04	-1.07E 00	1.89E 04	1.61E 03	6.28E 02	1.36E 02	7.81E 01	1.16E 01
450	205	2.76E 04	-1.22E 00	2.76E 04	1.65E 03	5.66E 02	9.87E 01	5.23E 01	5.90E 00
475	205	2.50E 04	-1.25E 00	2.50E 04	1.39E 03	4.65E 02	7.75E 01	4.04E 01	4.32E 00
500	205	2.68E 04	-1.27E 00	2.68E 04	1.44E 03	4.75E 02	7.77E 01	4.02E 01	4.18E 00
600	205	2.09E 04	-1.28E 00	2.09E 04	1.10E 03	3.57E 02	5.75E 01	2.96E 01	3.02E 00
700	205	2.40E 04	-1.37E 00	2.40E 04	1.01E 03	3.04E 02	4.27E 01	2.09E 01	1.80E 00
800	205	1.91E 04	-1.35E 00	1.91E 04	8.61E 02	2.65E 02	3.88E 01	1.93E 01	1.75E 00
900	205	1.35E 04	-1.34E 00	1.35E 04	6.23E 02	1.93E 02	2.87E 01	1.44E 01	1.33E 00
1000	205	1.24E 04	-1.36E 00	1.24E 04	5.44E 02	1.66E 02	2.39E 01	1.18E 01	1.05E 00
1100	205	1.58E 04	-1.37E 00	1.58E 04	6.76E 02	2.04E 02	2.90E 01	1.42E 01	1.24E 00
1200	205	9.85E 03	-1.44E 00	9.85E 03	3.55E 02	1.00E 02	1.28E 01	6.05E 00	4.61E-01
1300	205	1.20E 04	-1.53E 00	1.20E 04	3.55E 02	9.32E 01	1.05E 01	4.76E 00	3.11E-01
1400	205	7.49E 03	-1.40E 00	7.49E 03	2.96E 02	8.67E 01	1.17E 01	5.66E 00	4.63E-01
1500	205	7.54E 03	-1.43E 00	7.54E 03	2.78E 02	7.91E 01	1.02E 01	4.86E 00	3.76E-01
1600	205	5.92E 03	-1.39E 00	5.92E 03	2.39E 02	7.05E 01	9.63E 00	4.67E 00	3.88E-01
1700	205	4.53E 03	-1.35E 00	4.53E 03	2.04E 02	6.29E 01	9.23E 00	4.59E 00	4.17E-01
1800	205	9.81E 03	-1.64E 00	9.81E 03	2.27E 02	5.42E 01	5.25E 00	2.25E 00	1.22E-01
1900	205	5.54E 03	-1.50E 00	5.54E 03	1.74E 02	4.67E 01	5.47E 00	2.51E 00	1.72E-01
2000	205	3.58E 03	-1.44E 00	3.58E 03	1.29E 02	3.66E 01	4.68E 00	2.22E 00	1.69E-01
125	225	6.84E 04	-1.27E 00	6.84E 04	3.64E 03	1.19E 03	1.94E 02	1.00E 02	1.03E 01
150	225	6.95E 04	-1.28E 00	6.95E 04	3.66E 03	1.19E 03	1.93E 02	9.92E 01	1.01E 01
175	225	4.60E 04	-1.21E 00	4.60E 04	2.86E 03	9.96E 02	1.78E 02	9.54E 01	1.11E 01
200	225	3.75E 04	-1.18E 00	3.75E 04	2.47E 03	8.79E 02	1.63E 02	8.84E 01	1.08E 01
225	225	2.58E 04	-1.13E 00	2.58E 04	1.90E 03	7.03E 02	1.39E 02	7.74E 01	1.03E 01
250	225	2.33E 04	-1.16E 00	2.33E 04	1.62E 03	5.89E 02	1.13E 02	6.20E 01	7.86E 00
275	225	2.17E 04	-1.14E 00	2.17E 04	1.59E 03	5.87E 02	1.16E 02	6.43E 01	8.48E 00
300	225	2.16E 04	-1.16E 00	2.16E 04	1.48E 03	5.33E 02	1.01E 02	5.53E 01	6.93E 00
325	225	1.62E 04	-1.10E 00	1.62E 04	1.30E 03	4.97E 02	1.04E 02	5.87E 01	8.29E 00
350	225	1.43E 04	-1.13E 00	1.43E 04	1.05E 03	3.89E 02	7.70E 01	4.28E 01	5.66E 00
375	225	1.66E 04	-1.22E 00	1.66E 04	9.93E 02	3.40E 02	5.93E 01	3.14E 01	3.54E 00
400	225	9.33E 03	-1.19E 00	9.33E 03	6.07E 02	2.15E 02	3.96E 01	2.14E 01	2.58E 00
425	225	8.48E 03	-1.22E 00	8.48E 03	5.12E 02	1.76E 02	3.09E 01	1.64E 01	1.87E 00

TABLE II. (Continued)

STATION DISTANCE (FT)	LATITUDE DEGREES	PARAMETERS		DOSE RATES (MR/HR) AT TIMES POST EVENT					
		A	B	1 HR	10 HR	24 HR	100 HR	168 HR	1000 HR
450	225	8.48E 03	-1.25E 00	8.48E 03	4.75E 02	1.59E 02	2.66E 01	1.39E 01	1.49E 00
475	225	4.92E 03	-1.19E 00	4.92E 03	3.21E 02	1.13E 02	2.09E 01	1.13E 01	1.36E 00
500	225	2.64E 03	-9.25E-01	2.64E 03	3.13E 02	1.39E 02	3.72E 01	2.30E 01	4.43E 00
600	225	3.69E 03	-1.30E 00	3.69E 03	1.85E 02	5.95E 01	9.32E 00	4.75E 00	4.68E-01
700	225	2.36E 03	-1.19E 00	2.36E 03	1.51E 02	5.34E 01	9.74E 00	5.25E 00	6.26E-01
800	225	8.74E 02	-1.20E 00	8.74E 02	5.51E 01	1.92E 01	3.47E 00	1.86E 00	2.18E-01
900	225	4.10E 03	-1.55E 00	4.10E 03	1.16E 02	2.99E 01	3.29E 00	1.47E 00	9.32E-02
1000	225	5.50E 02	-1.30E 00	5.50E 02	2.76E 01	8.84E 00	1.38E 00	7.04E-01	6.93E-02
1100	225	5.26E 02	-1.30E 00	5.26E 02	2.64E 01	8.45E 00	1.32E 00	6.73E-01	6.62E-02
1200	225	2.42E 02	-1.30E 00	2.42E 02	1.21E 01	3.89E 00	6.09E-01	3.10E-01	3.05E-02
1300	225	1.73E 02	-1.30E 00	1.73E 02	8.67E 00	2.78E 00	4.34E-01	2.21E-01	2.18E-02
1400	225	1.05E 02	-1.30E 00	1.05E 02	5.28E 00	1.69E 00	2.65E-01	1.35E-01	1.33E-02
1500	225	9.07E 01	-1.30E 00	9.07E 01	4.55E 00	1.46E 00	2.28E-01	1.16E-01	1.14E-02
1600	225	9.07E 01	-1.30E 00	9.07E 01	4.55E 00	1.46E 00	2.28E-01	1.16E-01	1.14E-02
1700	225	7.26E 01	-1.30E 00	7.26E 01	3.64E 00	1.17E 00	1.82E-01	9.29E-02	9.14E-03
1800	225	7.26E 01	-1.30E 00	7.26E 01	3.64E 00	1.17E 00	1.82E-01	9.29E-02	9.14E-03
1900	225	6.89E 01	-1.30E 00	6.89E 01	3.46E 00	1.11E 00	1.73E-01	8.82E-02	8.68E-03
2000	225	4.93E 01	-1.30E 00	4.93E 01	2.47E 00	7.93E-01	1.24E-01	6.32E-02	6.21E-03
125	245	6.38E 04	-1.29E 00	6.38E 04	3.25E 03	1.05E 03	1.66E 02	8.48E 01	8.46E 00
175	245	4.19E 04	-1.30E 00	4.19E 04	2.09E 03	6.69E 02	1.04E 02	5.31E 01	5.20E 00
200	245	5.97E 04	-1.41E 00	5.97E 04	2.32E 03	6.73E 02	8.99E 01	4.32E 01	3.49E 00
225	245	1.61E 04	-1.16E 00	1.61E 04	1.12E 03	4.06E 02	7.76E 01	4.26E 01	5.38E 00
250	245	2.07E 04	-1.27E 00	2.07E 04	1.10E 03	3.61E 02	5.87E 01	3.03E 01	3.12E 00
275	245	1.44E 04	-1.22E 00	1.44E 04	8.73E 02	3.01E 02	5.30E 01	2.82E 01	3.22E 00
300	245	1.80E 04	-1.35E 00	1.80E 04	8.02E 02	2.46E 02	3.57E 01	1.77E 01	1.59E 00
325	245	1.54E 04	-1.34E 00	1.54E 04	7.11E 02	2.21E 02	3.28E 01	1.64E 01	1.51E 00
350	245	5.83E 03	-1.09E 00	5.83E 03	4.73E 02	1.82E 02	3.83E 01	2.17E 01	3.10E 00
375	245	1.19E 04	-1.22E 00	1.19E 04	7.26E 02	2.50E 02	4.41E 01	2.35E 01	2.68E 00
400	245	1.25E 04	-1.38E 00	1.25E 04	5.15E 02	1.53E 02	2.13E 01	1.04E 01	8.77E-01
425	245	3.52E 05	-2.23E 00	3.52E 05	2.05E 03	2.90E 02	1.19E 01	3.74E 00	6.96E-02
450	245	1.04E 04	-1.33E 00	1.04E 04	4.82E 02	1.50E 02	2.23E 01	1.12E 01	1.03E 00
500	245	2.40E 03	-1.13E 00	2.40E 03	1.78E 02	6.61E 01	1.32E 01	7.32E 00	9.74E-01
750	245	6.79E 02	-1.30E 00	6.79E 02	3.40E 01	1.09E 01	1.71E 00	8.69E-01	8.55E-02
1000	245	1.34E 02	-1.30E 00	1.34E 02	6.71E 00	2.15E 00	3.36E-01	1.71E-01	1.69E-02
2000	245	9.45E 01	-1.30E 00	9.45E 01	4.74E 00	1.52E 00	2.37E-01	1.21E-01	1.19E-02

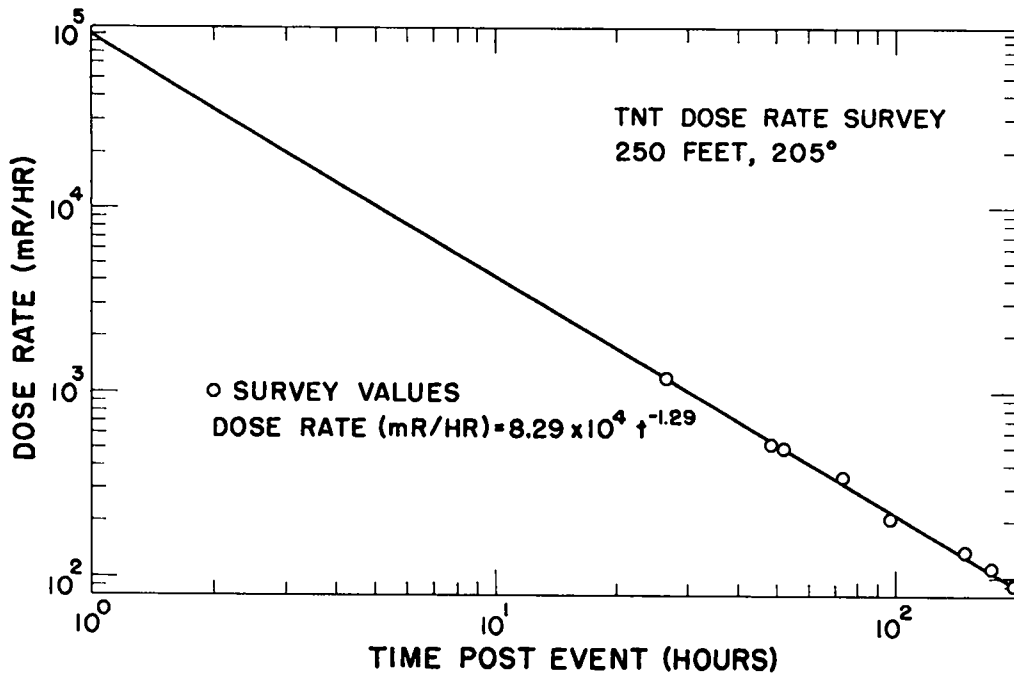


Fig. 1.

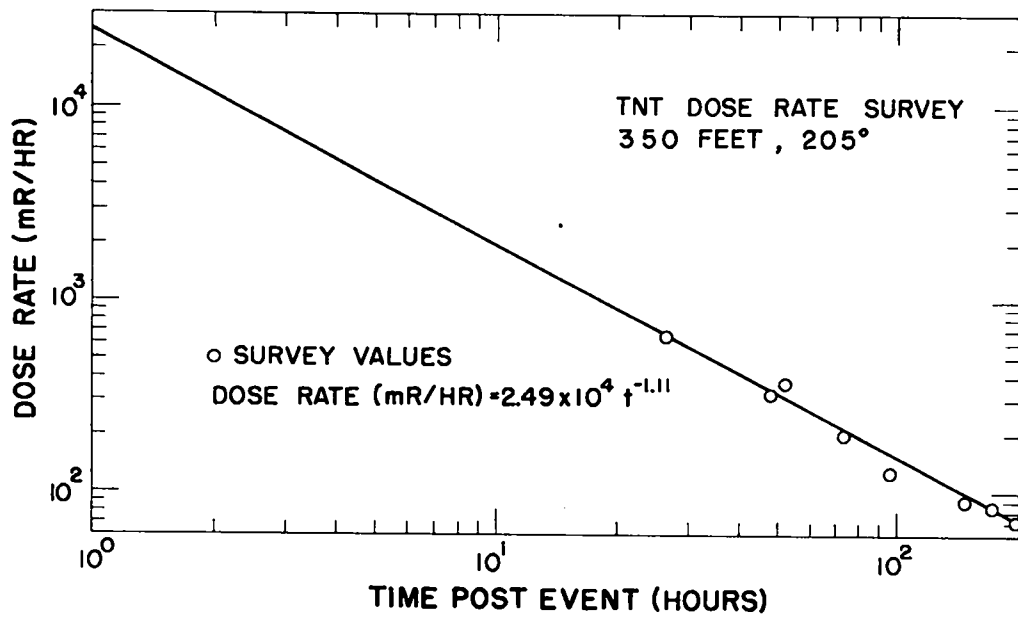


Fig. 2.

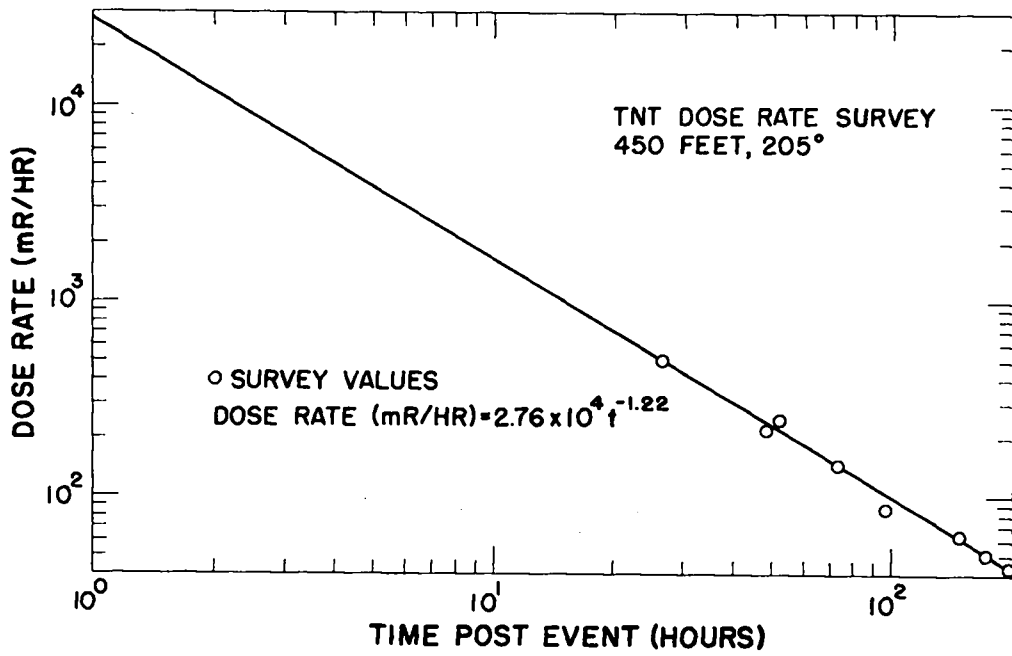


Fig. 3.

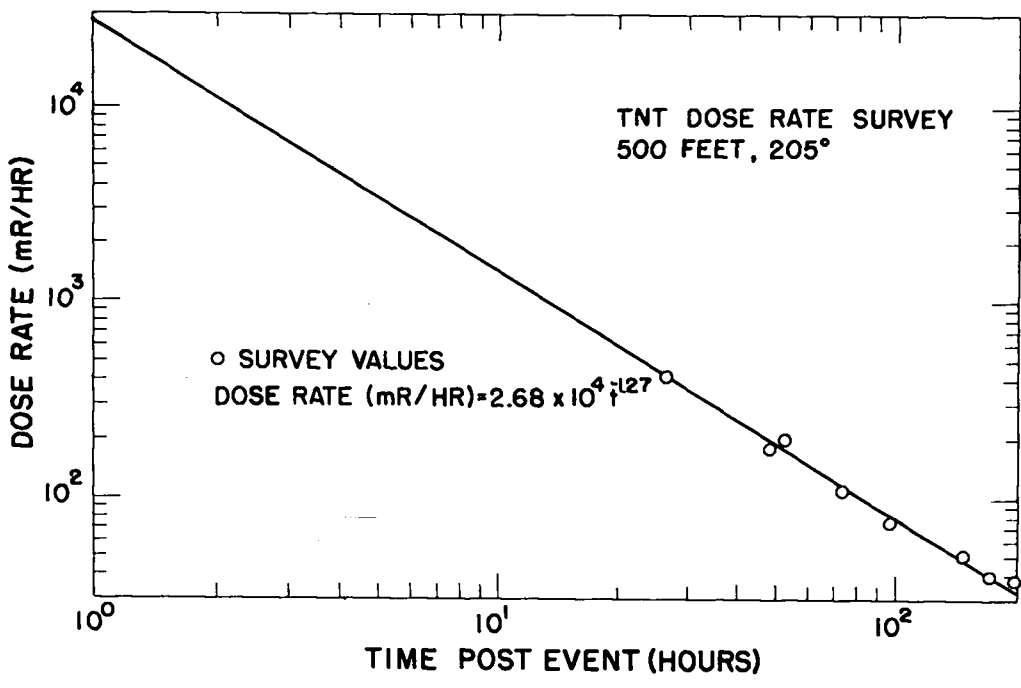


Fig. 4.

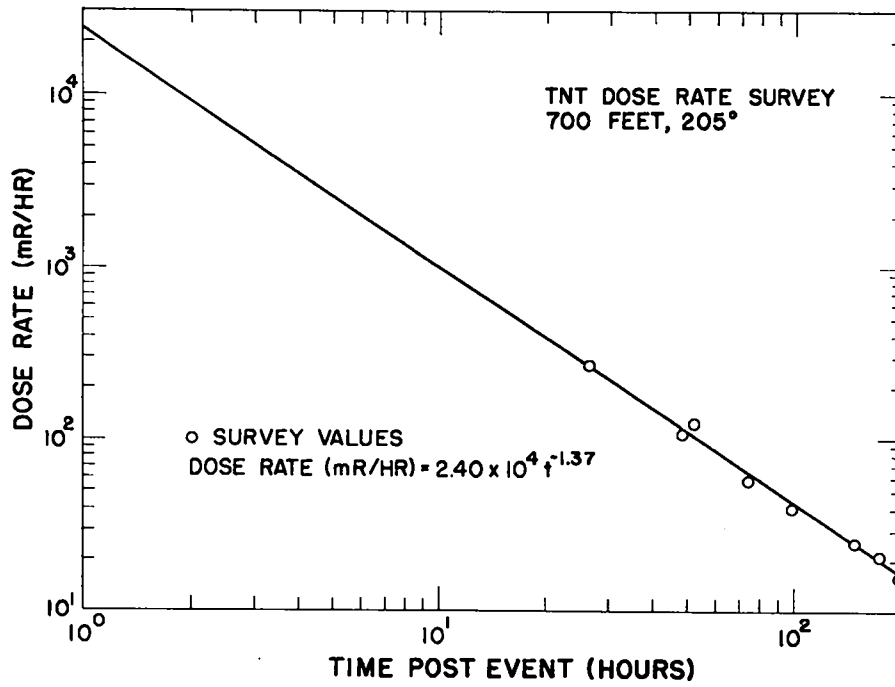


Fig. 5.

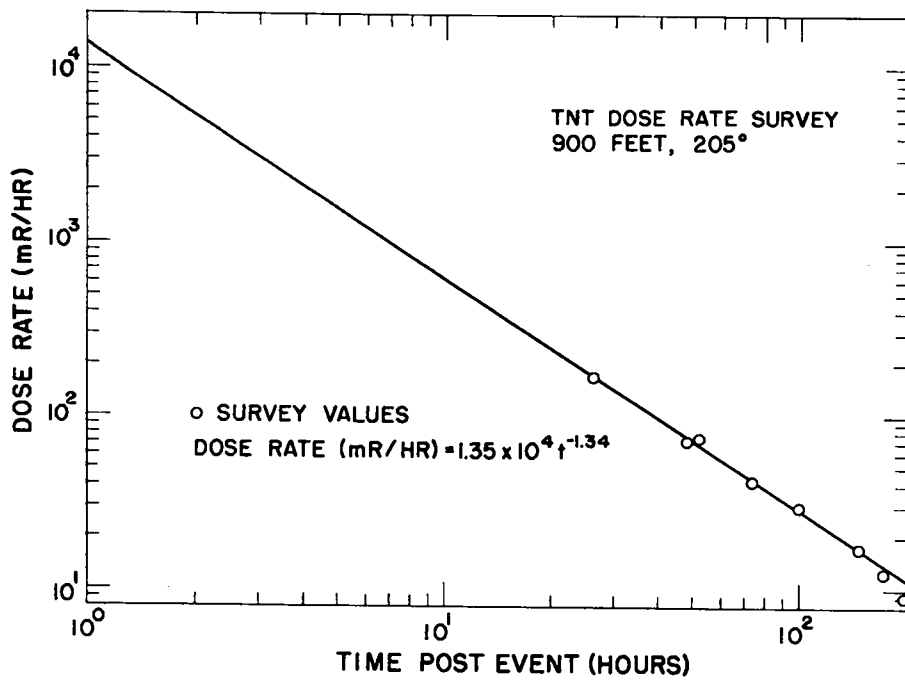


Fig. 6.

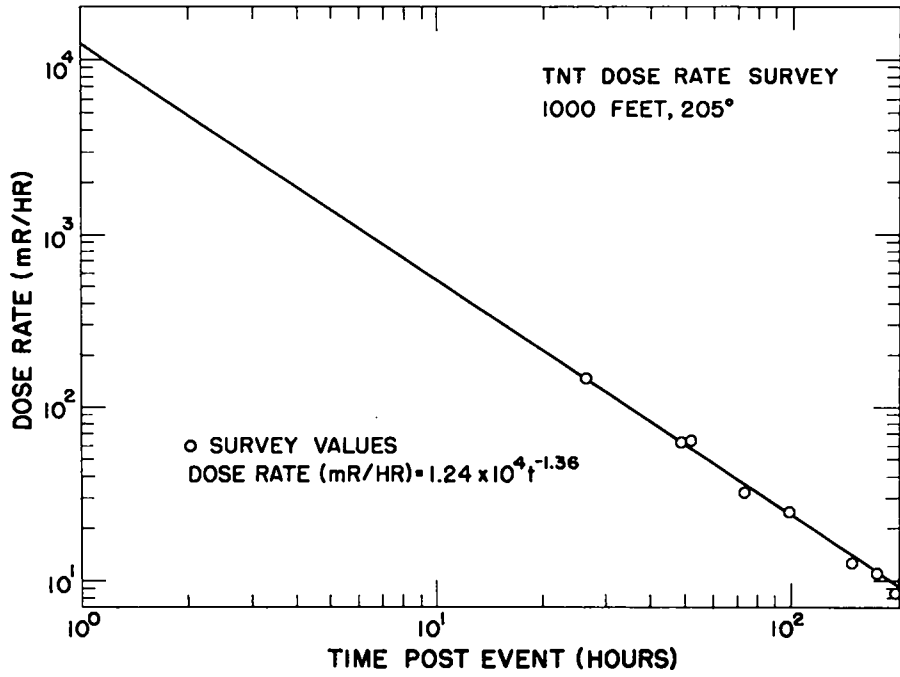


Fig. 7.

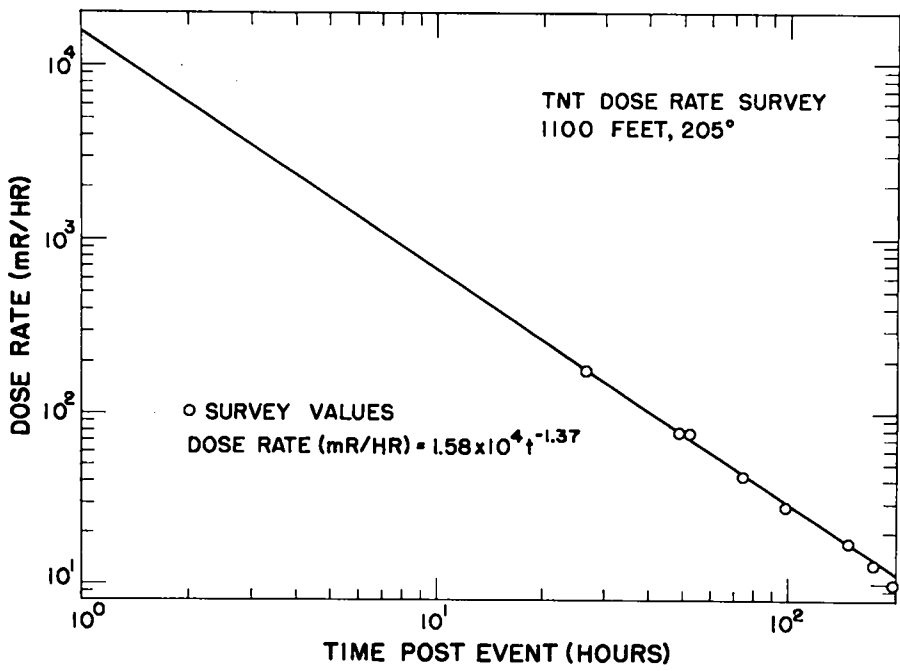


Fig. 8.

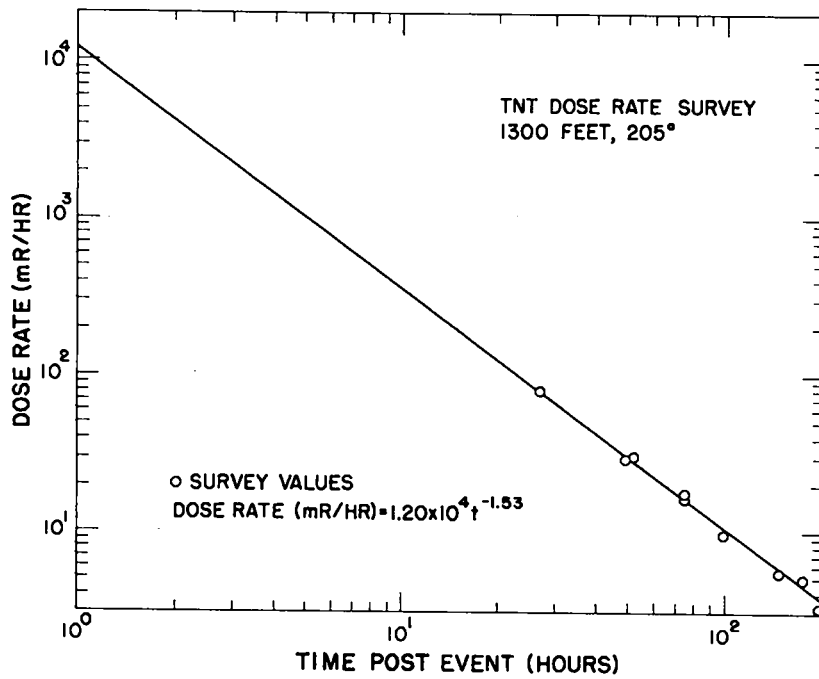


Fig. 9.

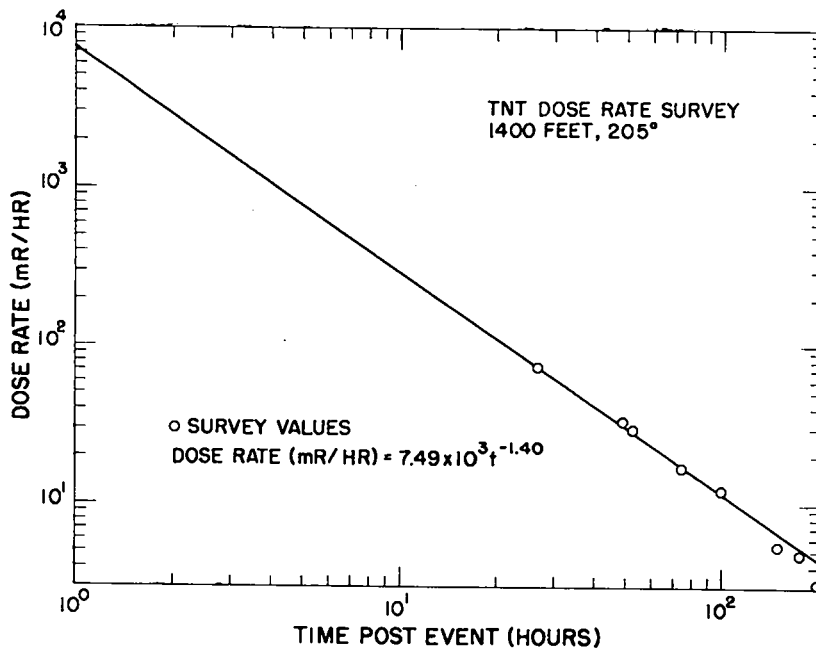


Fig. 10.

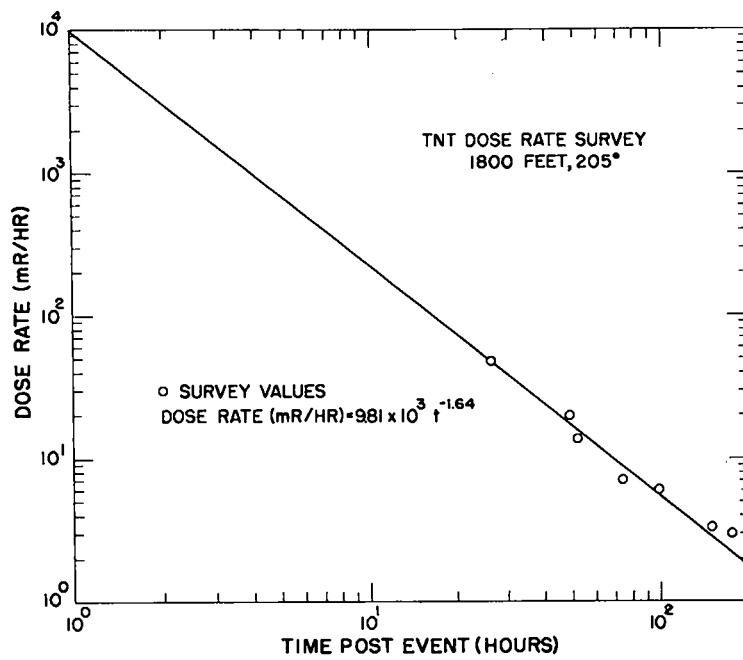


Fig. 11.

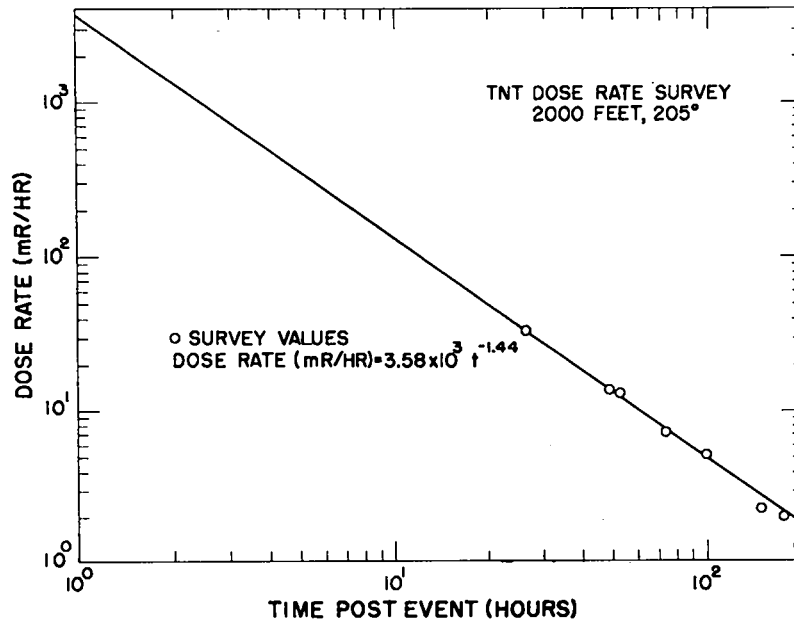


Fig. 12.

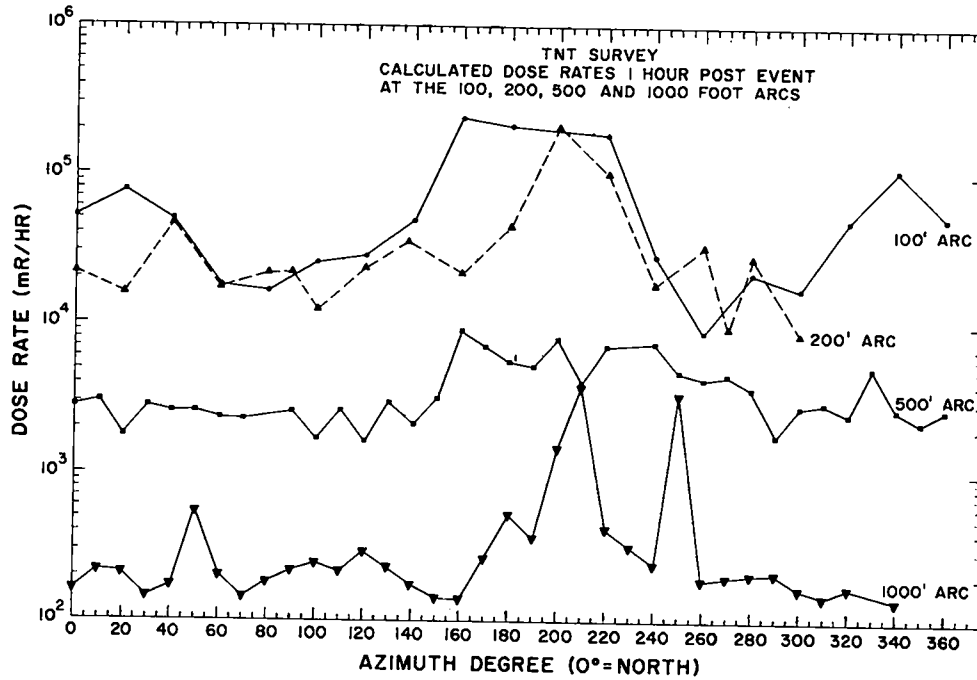


Fig. 13.

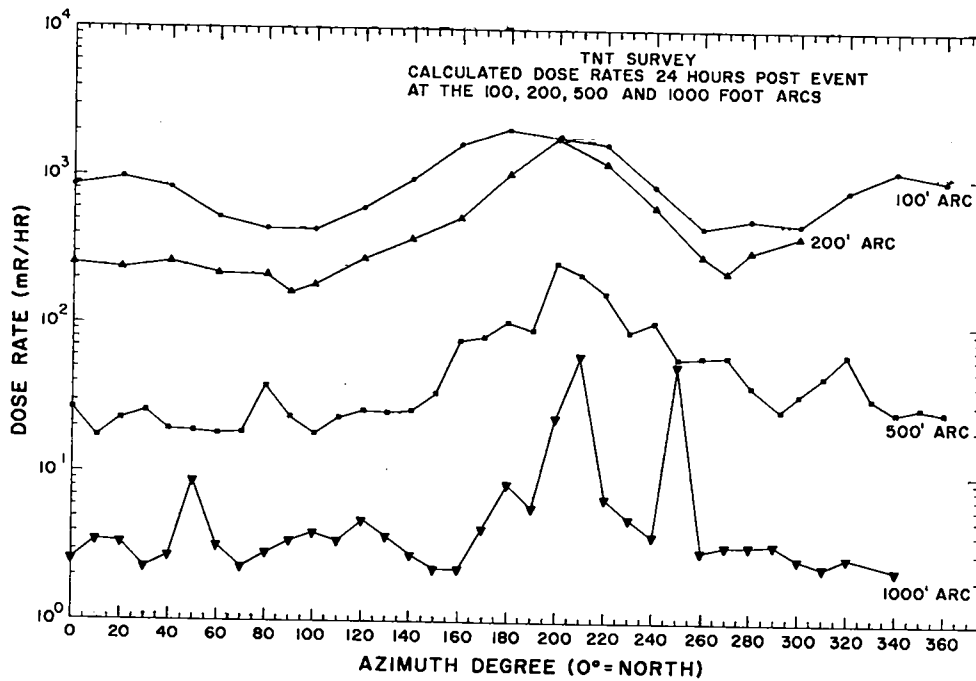


Fig. 14.

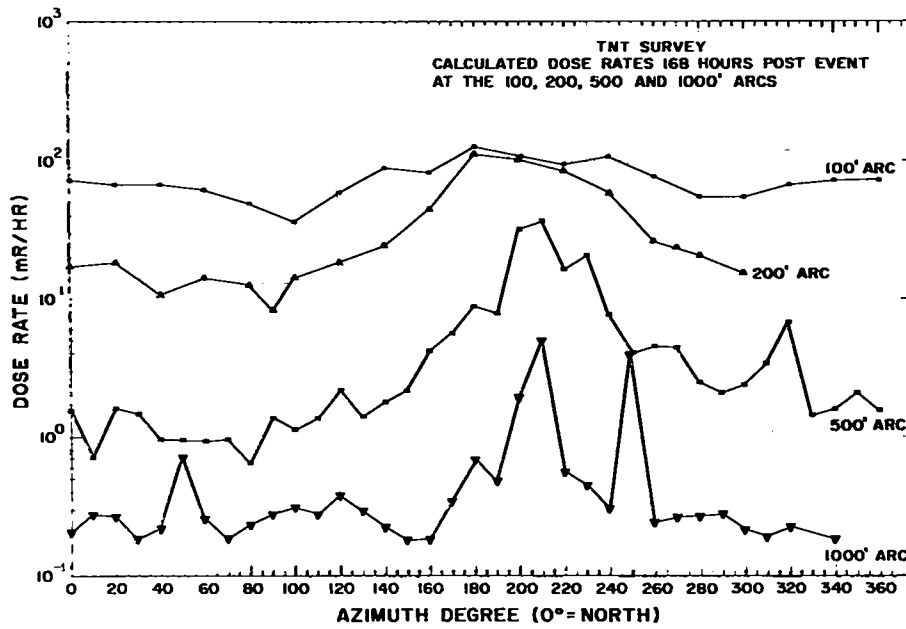


Fig. 15.

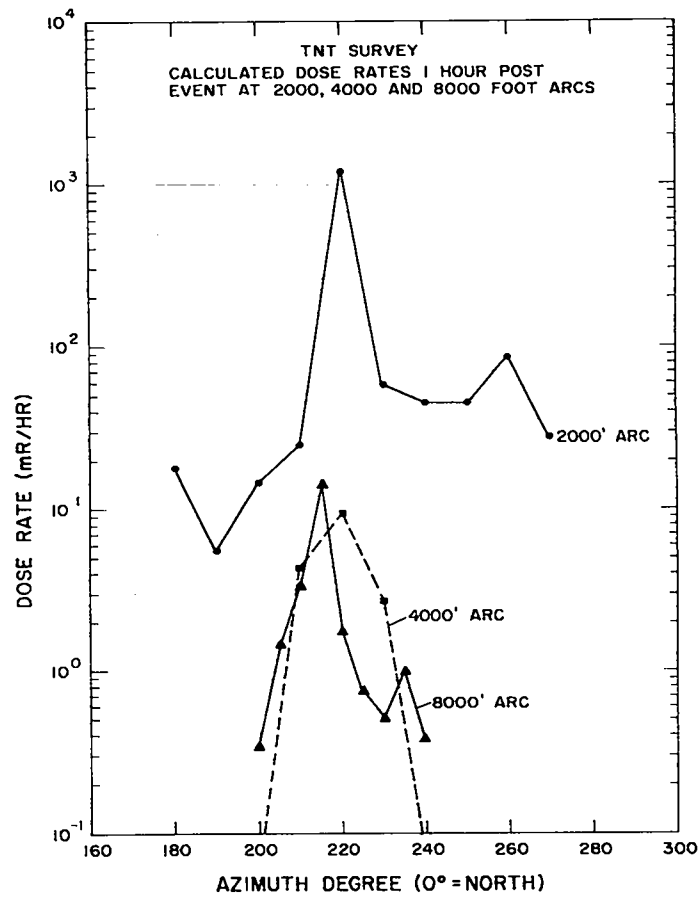


Fig. 16.

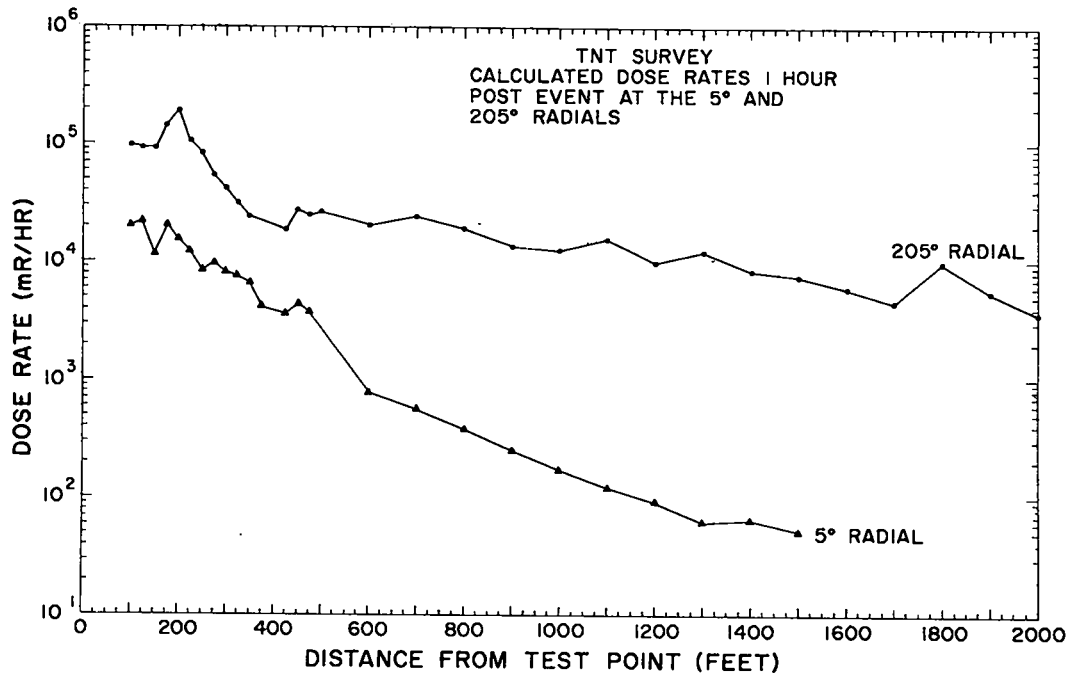


Fig. 17.

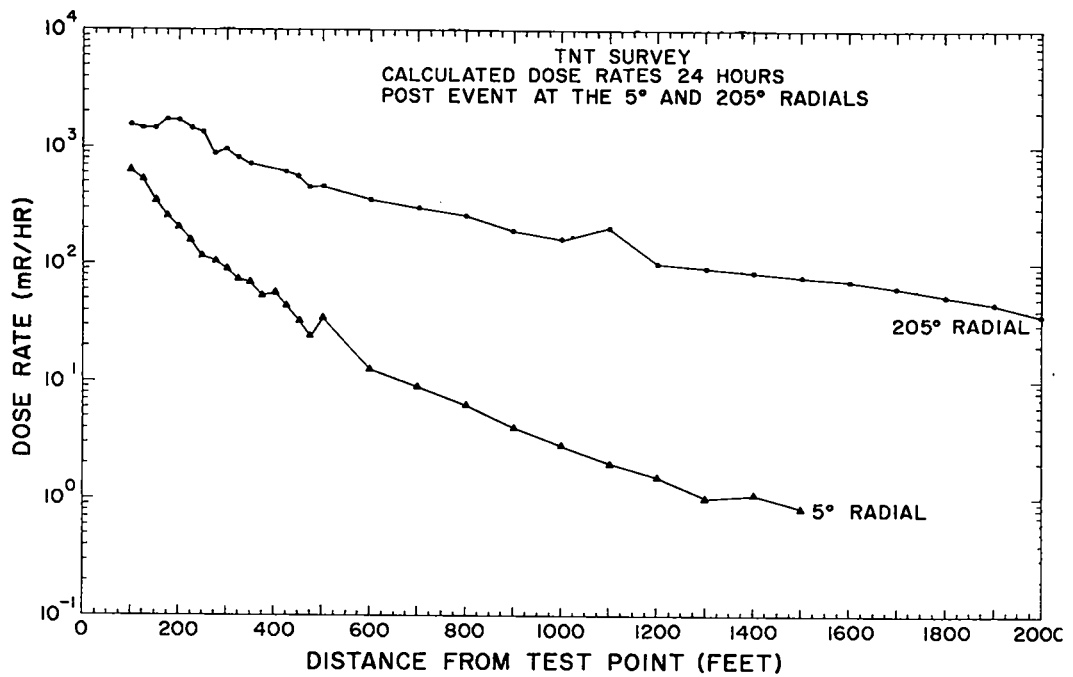


Fig. 18.

TNT DOSE RATE SURVEY ISODOSE RATE
CONTOURS AT ONE HOUR POST EVENT.

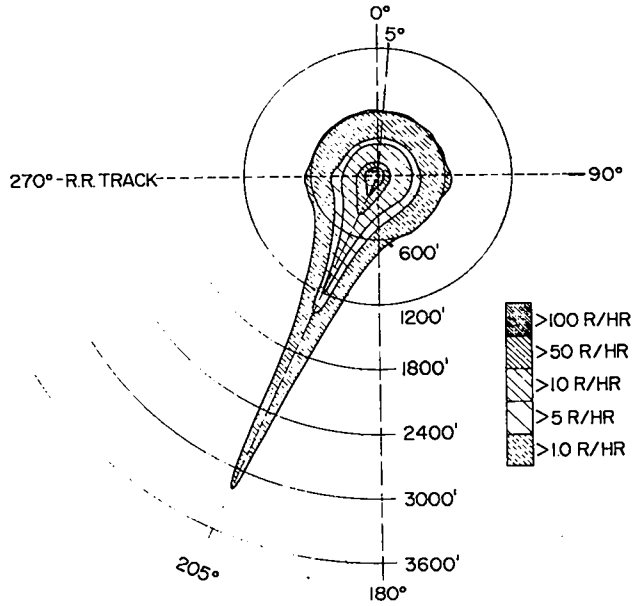


Fig. 19.

TNT DOSE RATE SURVEY ISODOSE RATE
CONTOURS AT ONE HOUR POST EVENT.

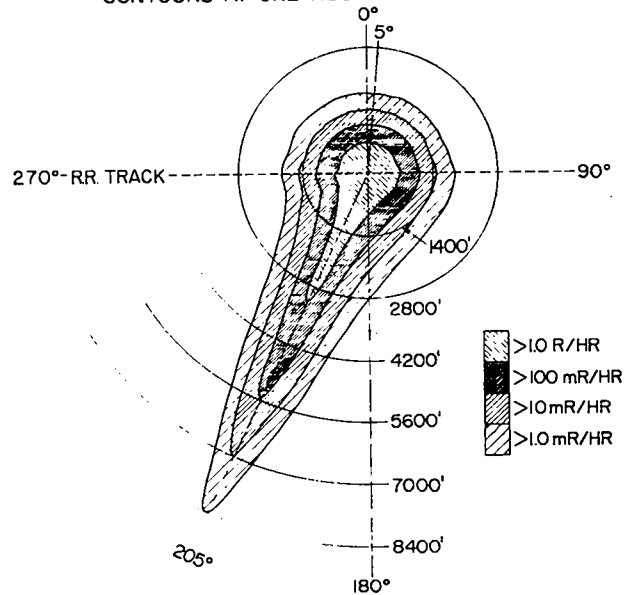


Fig. 20.

TNT DOSE RATE SURVEY ISODOSE RATE
CONTOURS AT ONE DAY POST EVENT.

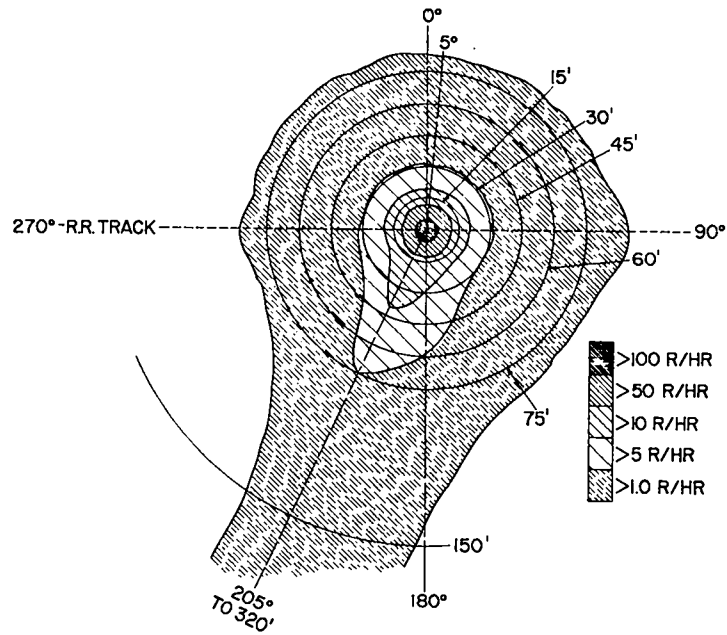


Fig. 21.

TNT DOSE RATE SURVEY ISODOSE RATE
CONTOURS AT ONE DAY POST EVENT.

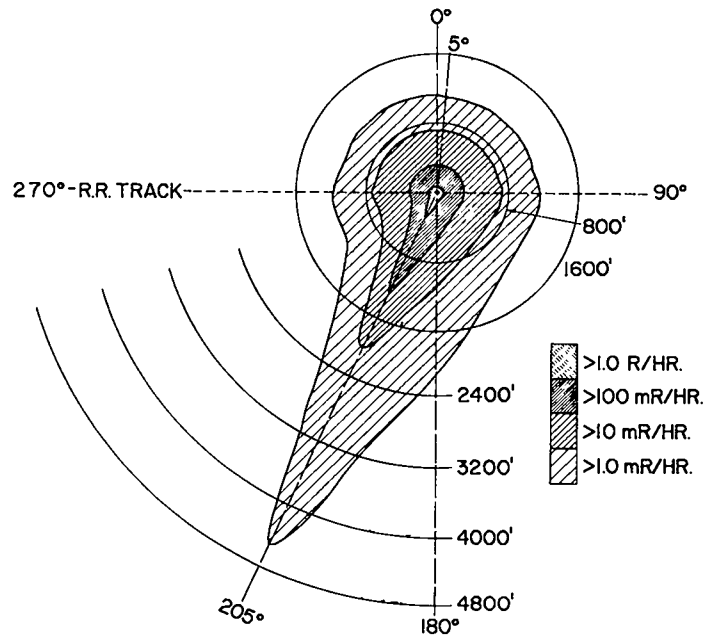


Fig. 22.

TNT DOSE RATE SURVEY ISODOSE RATE
CONTOURS AT ONE WEEK POST EVENT.

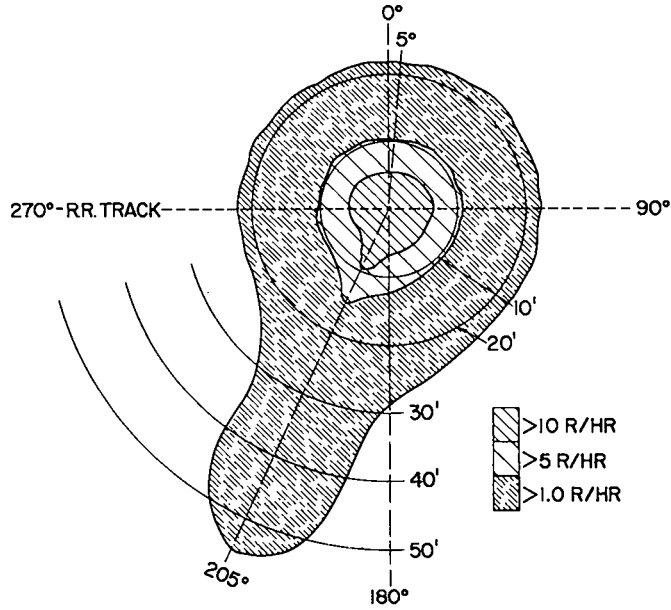


Fig. 23.

TNT DOSE RATE SURVEY ISODOSE RATE
CONTOURS AT ONE WEEK POST EVENT.

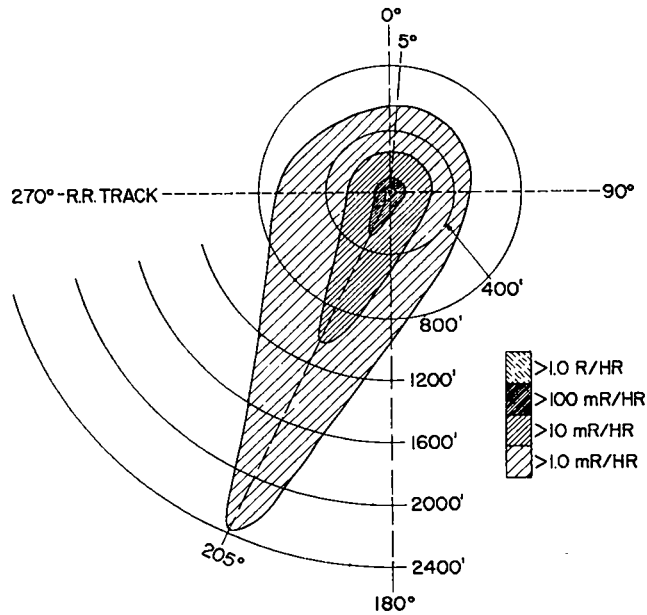


Fig. 24.