

PRNC - 191

PUERTO RICO NUCLEAR CENTER

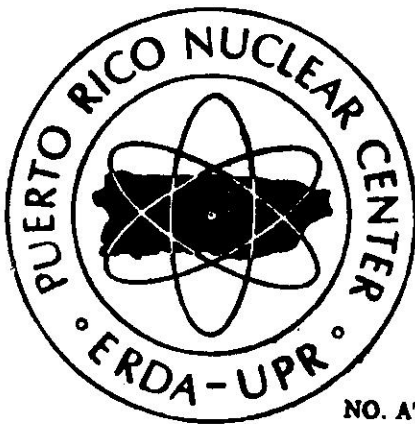
THERMOLUMINESCENCE DOSIMETRY IN NORTHWEST PUERTO RICO

By

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Dedication

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Dedication:

This contribution is respectfully dedicated to Dr. F. G. Lowman, Associate Director, Puerto Rico Nuclear Center for his help and advice in its formulation and execution.

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CHAPTER I

THE RADIOLOGICAL SURVEY

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A. Introduction

Thermoluminescent dosimetry (TLD) has been described most succinctly by Cameron, Suntharalingam and Kenney (1968). The idea that ionizing radiation damage in doped crystal material could be used as a basis for radiation dosimetry appears to have originated with Daniels (1950). The basic physical phenomenon which is used for TLD can be adequately described by a crude crystal model as follows:

Ionizing radiation impinging upon certain crystalline material can create meta-stable states above the ground state (valence band) and below the conduction band and can liberate electrons which can populate these states. Subsequent annealment of the material causes the electrons to return to the ground state (valence band). This repatriation of electrons is accompanied by the emission of visible light of a frequency determined by the energy difference between the metastable state (trap) and the valence band.

Thus, the amount of radiation which has been received by the material can be inferred by measuring the amount of light emitted (TL) by the material upon subsequent annealment. This technique has evolved through a series of studies using materials such as lithium fluoride (LiF) (Daniels, Boyd and Saunders, 1953), calcium fluoride containing small amounts ($\sim 1\%$) of manganese ($\text{CaF}_2:\text{Mn}$) (Ginther and Kirk, 1957) and more recently, calcium fluoride doped with small amounts of dysprosium ($\text{CaF}_2:\text{Dy}$) (Lindeken, Jones and McMillen, 1971; Lebrón, 1974).

In October, 1973, the Puerto Rico Water Resources Authority sought the initiation of studies aimed at determining background radiological characteristics of the northwestern quadrant of Puerto Rico. Some of the studies were required for supporting data for the environmental report submitted as part of the licensing procedure in the establishment of thermonuclear electric power generation facilities in Barrio Islote, Arecibo, Puerto Rico. (Fig. I). Previous studies of radiological characteristics of the area include the "Aeroradioactivity Survey and Geology of Puerto Rico (ARMS-I)" (MacKallor, 1966) which consisted in mapping the radioactivity emanating from the surface of Puerto Rico using sodium iodide sensing equipment in an airplane flying at an altitude of 500 ft. The results are expressed in counts per second, and provide useful comparative levels for radioactivity observed in various sections of the Island.

The only thermoluminescent TL studies yet undertaken in Puerto Rico in conformance with Environmental Protection Agency requirements that the dose measurement be made at a height of 3 ft. were those undertaken for the environmental report of Aguirre, Puerto Rico (Westinghouse Electric Corp., 1972), and the PRNC preliminary data evaluation for the environmental report of Islote (Puerto Rico Water Resources Authority, 1974). Estimates of human dose equivalents in Puerto Rico have also been made and partially checked using TLD (Lebrón, 1974).

B. Station Descriptions

The stations selected for study were believed to be located in directions in which natural (or accidental) plant emissions from Islote would travel. Thus, the preliminary data base could be useful baseline data for comparison with measurements obtained during nuclear plant construction at Islote, or after such a plant were put into operation.

The low-lying vegetation, tree bole direction as well as the directions assumed by wind-swept palm boles all indicated a low elevation wind direction in the prevailing on-shore trade wind directions. Thus wind currents were assumed directed predominantly toward the western south western, and south-south western parts of the island. Subsequent wind rose data taken within the proposed exclusion zone have supported these observations in full, at all altitudes (Puerto Rico Water Resources Authority, 1974).

The full station descriptions including the approximate distances from the proposed plant site at which dosimeter pairs were placed is shown in Table 1.1. All station locations except Barceloneta, Florida Adentro and Islote were located in prevailing wind directions from Islote. Barceloneta and Florida Adentro lie in directions off the principal wind vector directions, but data from these areas can be useful for comparison with unusual climatological conditions or aberrations in the usual air mass flow. Thus virtually complete land-side dosimetry was carried out. The relative locations of the stations can be inferred from Fig. II.

C. Experimental Design

The commercially available Harshaw-2000 TLD reader was the basic instrument used with $\text{CaF}_2:\text{Dy}$ dosimeters. This instrument consists of two parts. The detector part has a heating planchet on which the $1/4 \times 1/4$ inch square dosimeter is heated for a given period of time between carefully maintained temperature limits. In the experiments carried out the heating cycle was for a 30 second period, with initial heating of the platinum planchet from 40°C to 240°C in approximately 10 seconds followed by approximate 20 seconds at the 240°C temperature level. All calibration and field dose TL's received precisely the same temperature program described. The light emitted by the dosimeter upon heating is sensed by a photomultiplier tube.

The second part of the instrument measures the current from the photomultiplier tube and integrates it over the thirty second temperature program. Thus the TL read by the "integrating picoammeter" is in photomultiplier charge or current-time units. These current time units can only be related to the radiation dose received by the dosimeter if the machine is calibrated using dosimeters exposed to precisely known ionizing radiation doses before the field dose is accumulated.

The calibration of dosimeters was carried out using a Cs-137 source a known distance (75 inches) from the dosimeter which was packed in a black plastic bag. Details of the PRNC Cs-137 standard source activity, determination can be obtained from Mr. Santiago Gómez, Health and Safety Division, Puerto Rico Nuclear Center. Inference of source dose was obtained

from the fact that on Nov. 25, 1974, the source dose at 75 inches was 7.8150 mR/hr.

Dosimeters were calibrated by exposing them to the Cs-137 source for three different periods of time estimated to give doses which upon readout would show TL's in the range in which field exposed dosimeter TL's lay. Conventional exposure times were between 11 and 72 minutes. All TL readouts, both on field exposed and calibration exposed dosimeters were carried out with dry nitrogen gas purging of the detector system. This refinement is absolutely necessary when low dose (background) dosimetry is undertaken.

Annealment of dosimeters was necessary both before field placement and before readout. A typical exposure cycle was as follows. The dosimeter was annealed for 1 hr. at 400°C and exposed to the first calibration dose. It was then maintained in lead shielding (1 1/2 inches) for 24 hours and then annealed at 80°C for 15 minutes. After cooling, it was readout over the 40°C - 240°C temperature program. The same cycle was repeated for calibration doses using two different Cs-137 source exposure times, each of which was different from the first exposure time. Then the dosimeters were annealed and placed in field mounts for a minimum field exposure duration of 24 days.

The field packs for mounting the dosimeters consisted of ultra low background polyethylene neutron activation vials. Two dosimeters separated by a short styrofoam plug were placed in each vial with a small piece of paper containing identification or cross referencing data. The vial was tightly sealed and enclosed in a layer of black plastic electrician

First, the $\text{CaF}_2:\text{Dy}$ chip is not equally responsive to ionizing radiation of all types and all energies, and is mainly responsive to gamma and x-rays. Second, the TL emission of a $\text{CaF}_2:\text{Dy}$ dosimeter tends to fade with time.

One alternative to the ionizing radiation energy problem is to enclose the $\text{CaF}_2:\text{Dy}$ dosimeter vial in a lead sheath of .002 inches diameter and a tantalum sheath of .01 inches. This alternative could not be undertaken within the time permitted for the measurements, though a correction involving the ratio of TL for a typical TLD run with and without the sheath has been written into the computer program. Thus all future data obtained using the sheathed configuration can be compared with the data presented herein.

A somewhat more conventional procedure is to assume that the energy distribution of gamma and x-rays in the environment is very nearly the same at the 3 ft. level over all time and that a simple factor multiplied by the measured Cs-137 mR equivalent will correct for the change in energy response and stopping power of $\text{CaF}_2:\text{Dy}$ when exposed to natural background radiation. Thus, multiplication of Cs-137 mR equivalents deduced from the observed TL after field exposure by the factor 1.5 yields the effective dose absorbed in mr (Lindeken, Jones and McMillen, 1971).

Two different approaches may also be used for the fading correction. Lebrón (1974) applied a 22% increase to the measured dose based on the signal loss observed when dosimeters were exposed for 1/2 of a standard time interval and then shielded in lead for the remainder of

of the time. The measured "1/2-dose" was compared with the dose measured on dosimeters exposed for the full time interval.

Alternatively, one may use a fading correction which stays relatively constant after the first 24 hours, deduced from the fading data of Derham, Kathren and Corley (1972). Their data indicates that for exposures in excess of 24 days a correction of 16% \pm 2% is realistic for CaF₂:Dy. The field exposures were over periods in excess of 24 days, and many were in excess of the 33 day exposures by Lebron (1974). Thus the correction referred to as the "Denham correction" in this report is an upward adjustment of 16% of the indicated dose.

D. Results and Discussion

The results are summarized in Tables 1.2 - 1.5. The measured dose rates which passed the rejection tests applied in computer program TLDCALC are grouped according to the station in which the pairs were located. These tables also give percent uncertainty in dose rate as calculated using the analysis in Chapter II. The mean dose rate for all dosimeter pairs associated with a particular station and the estimated uncertainty in the mean of the two values of each pair plus the mean estimated uncertainty for all the pairs is also given.

The values for Arecibo indicate a rather low dose rate. Data collection in Arecibo was difficult because of the amount of pilferage, vandalism, or other losses of dosimeter vials sustained when dosimeters were set out for extended periods. The area from which the data were collected was approximately two square miles. Highest and lowest doses are reasonably close and the standard deviation of the pairs over the area surveyed is not large (Table 1.6).

The four stations: Islote, Arecibo, Arecibo Airport and Barceloneta gave substantially the same dose rate of 100-200 cps during the ARMS-1 survey (MacKallor, 1966), and within experimental error, the mean TLD readings at the 3 ft. level reflect similar dose rates for these four stations. The mean TLD reading for Florida Adentro, Charco Hondo and Dos Bocas also are consistent with the ARMS-1 survey as are the Lares, San Sebastián and Quebradillas stations.

The Mayaguez station exhibits a dose rate which is still reasonable compared with ARMS-1 within the limits expressed by the mean standard deviation (Table 1.6), though slightly on the high side. It is suggested that this may be due to the fact that the area surveyed in Mayaguez was rather limited and a more widespread survey of the Mayaguez area such as the ARMS-1 survey might reveal a somewhat lower TLD dose than is indicated here.

It should be noted that the highest dose rate recorded during the TLD survey of Aguirre was at Sabana Llana (11.4-11.5 Micro-rad/Hr) and the lowest was recorded at a dairy north of San Felipe in this region (7.4-7.5 Micro-rad/Hr.). In no case did any of the data taken in the present study exceed about 17 Micro-rad/hr, with average values substantially below this value.

The TLD dose rate profile is, perhaps, better visualized by referring to Fig. II. The route numbers of highways and secondary roads along which dosimeters were placed are given in parentheses. The large type

numbers beneath the station names are the mean doses for the stations sampled, the areas encompassed by a station can be approximated by subtracting the values given for station sampling distances in Table 1.1.

Throughout this analysis, the fading correction preferred has been that given by Denham, Kathren and Corley (1972) rather than Lebrón (1974) because the following experiments indicated that even heavy lead shielding unless used under well-controlled conditions, may not keep the $\text{CaF}_2:\text{Dy}$ dosimeters from being exposed.

At each station, three lead blocks were stacked up. Each lead block was circular, 6 inches in diameter and 3 inches thick. The center block had a small hole drilled through the center just wide enough to contain a vial in which were two dosimeters. These setups are referred to as "STD" in Appendix II. At the beginning of a particular time interval, a pair of dosimeters was placed inside this shielding and retrieved when the other dosimeters in the station were retrieved. Sometimes the indicated dose of these "shielded" pairs was as high as 4 Micro-rads/Hr. and was never less than 0.7 Micro-rads/hr. Thus, corrections based upon maintenance of dosimeters with lead shields after being exposed for 1/2 of the exposure period seem to be subject to some uncertainty.

These results also indicate that the assumption in the error analysis (Chapter II) that at zero dose, zero TL will be observed may not be at all correct. It is clear that uncertainties in the lower dose

measurements (approximately the same order as the measurements themselves) indicate that regression data used to test higher measured field doses is suspect when attempts are made to extrapolate them for use at the lower doses. In view of this observation, it is felt that future measurements ought to make use of statistical sorting of dosimeter pairs or trios such as that used by Lebrón (1974), or ultra low dose data for error and rejection analyses should be taken.

Fig. I. Map of Puerto Rico Showing the Location of Barrio Islote, the Propose Nuclear Plant Site and Distance (in Km.) to Major Coastal Towns and Cities.

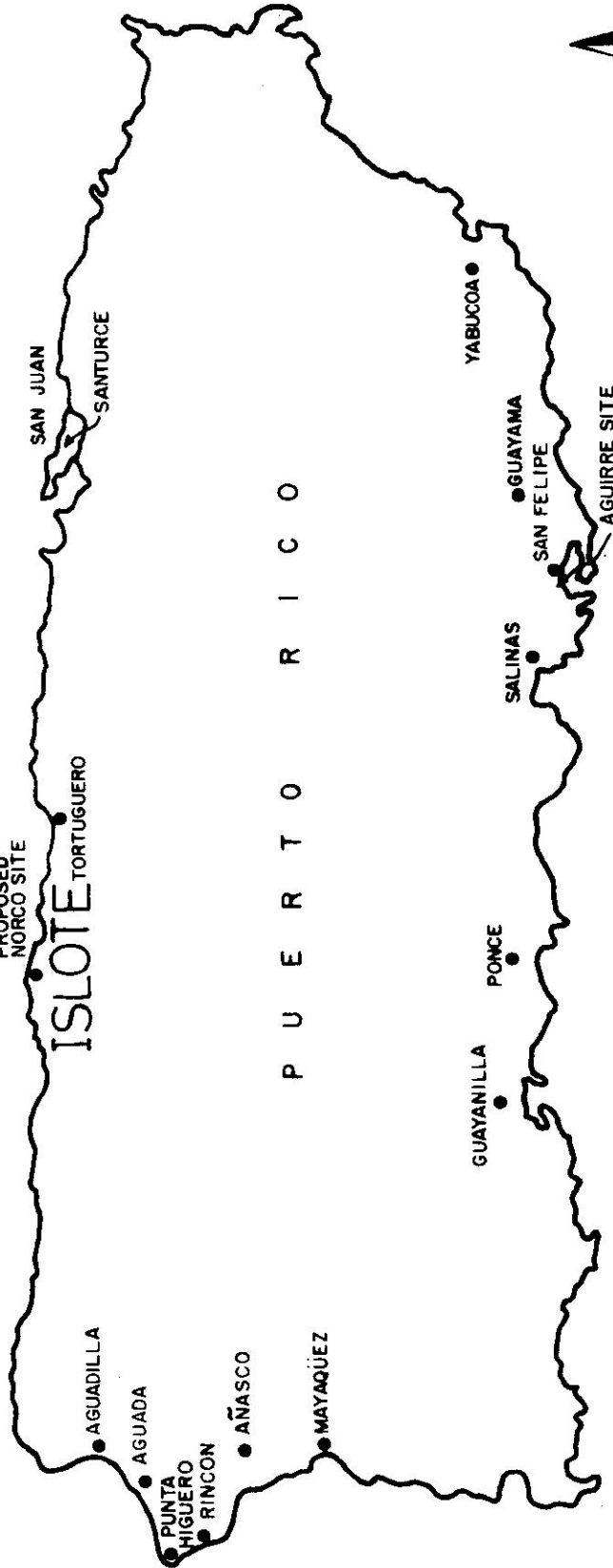
ATLANTIC OCEAN

PROPOSED NORCO SITE

ISLOTE TORTUGUERO

P U E R T O R I C O

C A R I B B E A N S E A



DISTANCE FROM NORCO SITE (Km)

AGUADILLA	55	MAYAQUEZ	63
AGUADA	59	SAN FELIPE	75
PUNTA HIGUERO	69	AGUIRRE SITE	75
RINCON	68	SAN JUAN	58
AÑASCO	59	SANTURCE	61

PUERTO RICO WATER RESOURCES AUTHORITY
 NORTH COAST NUCLEAR PLANT
 UNIT NO. 1

BACKGROUND RADIOLOGICAL SAMPLING
 LOCATIONS AND PROPOSED SITE

ER

FIG. 2.8-1

Fig. II. Map of Northwest Puerto Rico Showing Approximate Station Locations, Roads and Highways Along Which Dosimeters were Placed (in Parentheses), and Mean TLD-Measured Doserates (Large Type Beneath Station Names).

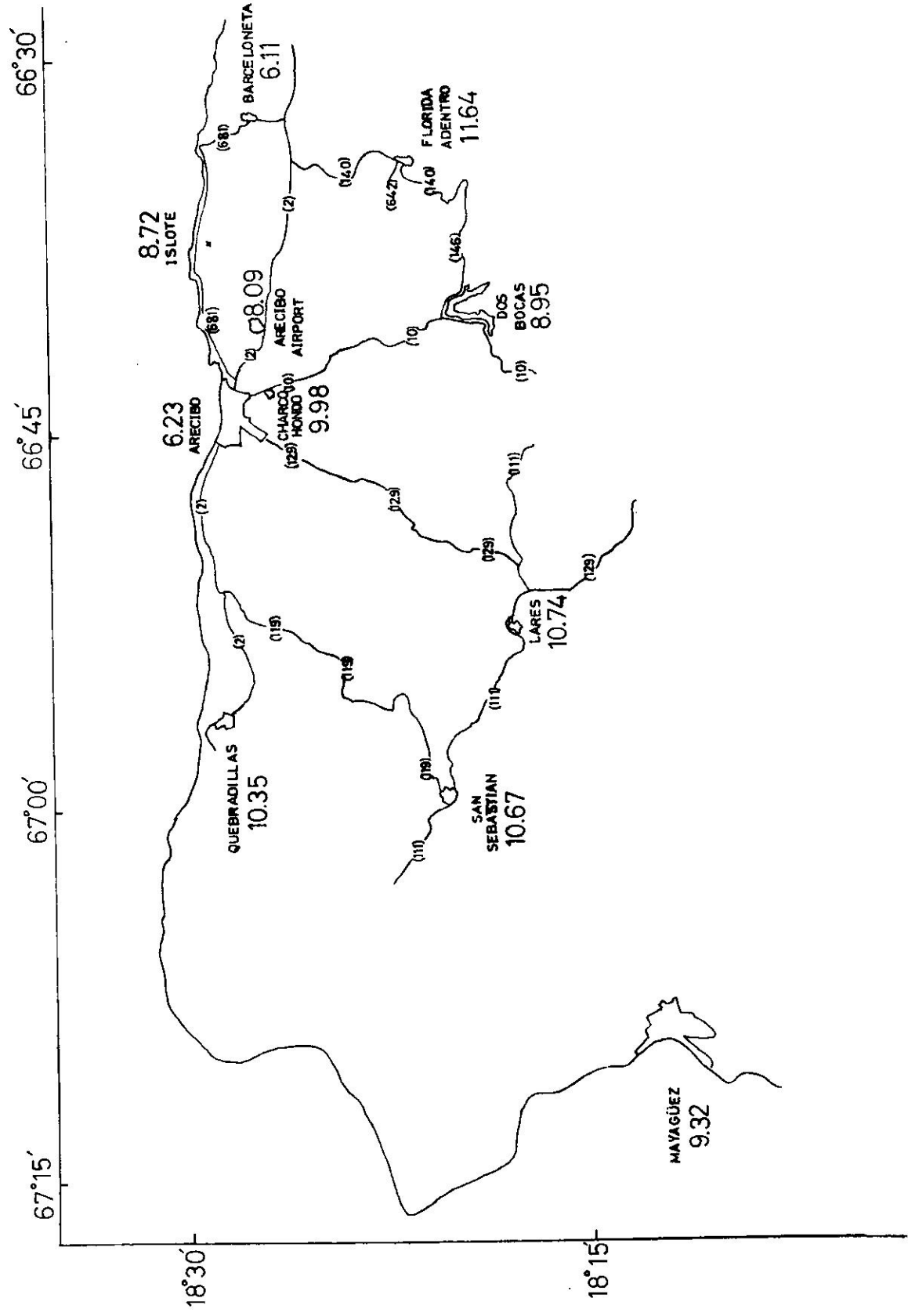


Table 1.1

Station	Distance from NORCO-1 Site (Miles)	Direction from NORCO-1 Site
Arecibo	5-7	W - WSW
Arecibo Airport	2-3	WSW
Barceloneta	3-5	ESE - E
Charco Hondo	8-10	WSW - SW
Dos Bocas	10-12	SSW
Florida Adentro	8-12	SSE - S
Islote	0	Within Exclusion Zone
Lares	15-20	SW
Mayaguez	40	WSW
Quebradillas	18-22	W
San Sebastian	21-25	WSW

Table 1.2

Station	Calculated Dose Rates* Micro-Rad/Hr.	Estimated Uncertainty % Dose Rate	Mean Dose Rate Micro Rad/Hr.	Mean Estimated Uncertainty % Dose Rate
Arecibo	4.114	± 30%	6.23	± 22%
	6.706	20%		
	5.496	23%		
	6.497	21%		
	8.316	18%		
Arecibo Airport	6.630	± 20%	8.09	± 18%
	6.282	21%		
	8.009	18%		
	6.665	20%		
	7.179	19%		
	13.634	15%		
	9.598	16%		
	8.711	17%		
	11.168	15%		
	9.132	16%		
	7.769	16%		
	8.708	16%		
	6.112	19%		
	6.057	19%		
6.089	19%			
7.694	17%			
Barceloneta	5.758	± 23%	6.11	± 22%
	7.279	19%		
	5.149	25%		
	6.269	21%		

* Using the Lindeken-Denham corrections to the measured dose.

Table 1.3

Station	Calculated Dose Rate* Micro-Rad/Hr.	Estimated Uncertainty % Dose Rate	Mean Dose Rate Micro Rad/Hr.	Mean Estimated Uncertainty % Dose Rate
Charco Hondo	10.055	± 16%	9.98	± 17%
	7.621	19%		
	10.525	17%		
	11.195	17%		
	10.490	17%		
Dos Bocas	9.075	± 17%	8.95	± 19%
	6.307	22%		
	9.071	18%		
	10.518	17%		
	11.062	17%		
	7.676	21%		
Florida Adentro	15.567	+ 16%	11.64	± 17%
	14.055	- 15%		
	16.272	16%		
	6.926	19%		
	9.441	16%		
	6.076	21%		
	9.538	16%		
	13.453	16%		
	9.864	18%		
	15.403	15%		
13.505	16%			
9.635	18%			

* Using the Lindeken - Denham corrections to the measured dose.

Table 1.4

Station	Calculated Dose Rates* Micro-Rad/Hr.	Estimated Uncertainty % Dose Rate	Mean Dose Rate Micro Rad/Hr.	Mean Estimated Uncertainty % Dose Rate
Islote	10.607	± 16%	8.72	± 17%
	8.906	17%		
	9.696	16%		
	8.271	16%		
	7.825	16%		
	8.176	16%		
	8.260	16%		
	8.460	17%		
	9.429	16%		
	9.227	16%		
	11.507	15%		
4.221	25%			
Lares	7.559	± 20%	10.74	± 17%
	8.594	18%		
	7.960	19%		
	11.291	16%		
	7.833	19%		
	11.492	16%		
	11.553	15%		
	13.885	15%		
	10.490	17%		
	12.125	16%		
	9.061	18%		
16.992	15%			
Mayaguez	8.642	+19%	9.32	± 18%
	7.235	-21%		
	7.624	20%		
	8.850	18%		
	11.322	16%		
	10.403	17%		
	11.463	16%		

* Using the Lindeken - Denham corrections to the measured dose.

Table 1.5

Station	Calculated Dose Rate* Micro Rad/Hr.	Estimated Uncertainty % Dose Rate	Mean Dose Rate Micro Rad/Hr.	Mean Estimated Uncertainty % Dose Rate
Quebradillas	11.499	± 15%	10.35	± 16%
	12.662	15%		
	7.628	18%		
	9.624	16%		
San Sebastian	8.514	± 18%	10.67	± 16%
	8.470	18%		
	9.477	17%		
	13.335	15%		
	9.224	17%		
	9.493	17%		
	9.527	17%		
	12.132	15%		
	11.710	15%		
	12.362	16%		
	13.730	15%		
10.030	17%			

* Using the Lindeken - Denham corrections to the measured dose.

Table 1.6

Station Name	Lowest Obs. Dose Rate Micro Rad/Hr.	Highest Obs. Dose Rate Micro Rad/Hr.	Mean Dose Rate Micro Rad/Hr.	ARMS-1 Dose Rate, Counts/ Sec.	Mean Std. Deviation of Single Observations Micro Rad/Hr.	No. of Pairs of Dose Observations
Islote	4.221	11.507	8.72	(Estimated) 100-200	1.78	12
Arecibo	4.114	8.316	6.23	100-200	1.52	5
Arecibo Airport	6.057	13.634	8.09	100-200	2.08	16
Barceloneta	5.149	7.279	6.11	100-200	0.90	4
Florida Adentro	6.076	15.567	11.64	200-350	3.48	12
Charco Hondo	7.621	11.195	9.98	200-300	1.38	5
Dos Bocas	6.307	11.062	8.95	200-300	1.76	6
Lares	7.559	16.992	10.74	350-500	2.81	12
San Sebastián	8.470	13.730	10.67	200-500	1.87	12
Quebradillas	7.628	12.662	10.35	300-400	2.21	4
Mayaguez	7.235	11.463	9.32	100-200	1.66	7

CHAPTER II

STATISTICAL VARIATION OF $\text{CaF}_2:\text{Dy}$: DOSIMETER (TLD-200)
RESPONSE UNDER LABORATORY CONDITIONS

By

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¹Experimental work carried out in partial fulfillment of the Master in Public Health Degree offered in Radiological Health, Medical Physics Program, Dr. E. T. Agard, Director.

A. Introduction and Experiment Description

In order to determine the uncertainty associated with CaF₂:Dy (TLD-200) dosimeter data for non-statistically-sorted groups, the following experiments were carried out. A group of 10 dosimeters (5 pairs) were exposed to known doses of gamma radiation using the PRNC Cs-137 source.

The first dose selected was approximately 2.75 mR, the second 7.75 mR, and the third 13.25 mR. The 10 dosimeters were taken through the following cycle 5 times at each dose. 1. Anneal at 400°C for 1 hour prior to irradiation. 2. Irradiation. 3. Storage for 24 hours in lead shielding. 4. Anneal at 80°C for 15 minutes prior to thermoluminescence readout. 5. Readout over a 50°C to 240°C temperature range. Since the dosimeters are light sensitive, care was exercised to exclude visible light during handling and processing.

The variation within the group of 10 as a function of dose was then evaluated. The variation of dosimeter pair values was also of interest since field measurements were undertaken with pairs of dosimeters rather than with single chips. The mean response per dose of single dosimeters and for dosimeter pairs was of interest at the three doses because field doses below the lowest dosimeter calibration dose value were inferred by linear extrapolation from the low dose value to zero dose (zero TL). Likewise the doses which were above the highest calibration dose were also inferred from extrapolation using the intermediate and the highest dose thermoluminescence (TL) response points to obtain a TL response vs dose slope. This slope was presumed to hold at higher field doses provided the doses were not excessively high (i.e. less than twice the highest calibration dose).

The raw TL responses for the 10 dosimeters in the five experiments at each dose are presented in Tables 1, 2 and 3. Dosimeter pairs are taken to be consecutively numbered (i.e. 1 & 2, 3 & 4 etc.). The arithmetic mean TL response of all 10 dosimeters, and the standard deviation on a single TL-response from the entire group at each exposure is also tabulated. Also, the reproducibility of TL-response for all 10 dosimeters exposed 5 times to the same dose is evaluated by calculating the mean TL for the 5 equal dose exposures and the standard deviation of a single TL response at a given exposure in the 5 exposure series. This latter quantity is probably most important in determining whether or not pairs of TL values for field exposures ought to be rejected on the basis of failure to lie within reasonable statistically variable limits.

B. Rejection Parameters for Field Dose Determination

Implicit in any criterion for rejection of pairs of TL-values is an acceptance of some absolute calibration value or a group of absolute calibration values in the absence of a known scaling factor (linear or non-linear). Our criterion for rejection of field dosimeter readings is based on the TL-indicated Cs-137 equivalent dose in mR and our assumption of absolute values involves an acceptance of the Cs-137 standard source values given.

A cursory inspection of the standard deviations of single chips exposed to particular levels of radiation (Tables 1, 2 and 3) indicates that, with the possible exception of the highest dose, a simple differential propagation of uncertainties (Daniels et al, 1962; Pugh and Winslow, 1966) in the pair means is a slight over-simplification of the problem of estimation of uncertainties were it not for the fact that no weighted

function is used to calculate the pair means. A simple arithmetic function is used which does not imply differential multipliers other than unity. The calculated propagated uncertainties in TL using pair-wise averaging are given in Table 4 as a function of dose, with the average uncertainty for the pairs.

In practice the uncertainties calculated can be used by fitting the dose to the TL values using a known functional dependence. In the low dosage region, this functional dependence is very nearly linear. Thus the TL per unit dose are .454, .452 and .434 for the doses of 2.741, 7.676 and 13.158 mR respectively. Assuming zero TL with zero dose, a convenient equation for dose as a function of TL is:

$$(1) D = a \overline{TL}^3 + b \overline{TL}^2 + c \overline{TL}$$

in which D is the dose, TL is the measured thermoluminescence and a, b, and c are constants. Using the dose and TL-values from Table 4, a, b, and c are .007218, -.027871 and 2.225703 respectively.

Of greater importance is the variation of uncertainty in TL readings with dose changes and variations in uncertainty of indicated dose with changes in observed TL for the field-exposed dosimeter. In this case, a convenient equation which takes into account non-linear changes in uncertainties is a quadratic equation for ΔTL , the deviation in thermoluminescence associated with an observed TL level. Expressing this uncertainty as a fraction of the measured TL is somewhat more useful in the actual data analysis.

The percent uncertainty in pair average for the three Cs-137 doses: 2.741, 7.676 and 13.158 mR are calculated to be: 22.09%, 14.90% and 4.81% respectively from the data in Tables 1, 2 and 3.

If the equation:

$$(2) V = d \overline{TL}^2 + e \overline{TL} + f$$

in which V is the percent uncertainty in measured TL (\overline{TL}) and d , e , and f are constants, is used, no assumption need be made for the uncertainty at zero exposure (zero TL). The calculated values of d , e and f from the data in Table 4 are: -0.002783, -0.019297 and 0.249239 respectively.

The two regression equations - one for D and the other for V provide a basis for estimation of the uncertainty in sample dose of an exposed dosimeter - ΔD .

Thus if $D = D(\overline{TL})$,

$$(3) \Delta D = \pm \left(\frac{\partial D}{\partial \overline{TL}} \right) \Delta \overline{TL},$$

recognizing that this is a first approximation to ΔD since the weighting function for $\Delta \overline{TL}$: $\pm \left(\frac{\partial D}{\partial \overline{TL}} \right)$ - in this case, is not unity.

From equation (1),

$$(4) \Delta D = \pm (3a \overline{TL}^2 + 2b \overline{TL} + c) \Delta \overline{TL}.$$

Pair values can now be rejected on the basis of whether or not the values of average dose of the pairs plus-or-minus some adjusted value of ΔD inferred from (4) overlaps the individual doses inferred from the measured TL values. The quantity ΔD with scaling factor of unity ought to be a sufficient criterion provided that the coefficients a , b , and c and d , e and f derived from experiments such as the one described are "double-blind" in nature, or that the dosimeters used to measure field dose are subjected to some sort of initial laboratory statistical selection before field use, by a single field investigator.

Assuming that the parameters characterizing the readout of dosimeter TL i.e. heating cycle, nitrogen flow and annealment times are

the same for both field and controlled exposure measurements the data in Tables 1, 2 and 3 is sufficiently general for field-correction applications such as pair value rejections.

Thus

$$(5) \Delta D = \pm (.021654 \overline{TL}^2 - .055742 \overline{TL} + 2.225703) \cdot \Delta \overline{TL}$$

in which \overline{TL} is the mean value for a dosimeter pair, V is calculated from equation (2) and

$$(6) \Delta \overline{TL} = (V) \cdot (\overline{TL})$$

As an illustration, consider what the estimated uncertainty in D , ΔD , would be if a thermoluminescence of 1.245 resulted from the mean of a field-pair measurement. From Table 4: $\Delta \overline{TL} = 0.275$, a , b and c are known, so ΔD of an inferred exposure is calculable. In order to use this uncertainty data with other TL measurements on a field-exposed dosimeter, the derivation of ΔD as a function of \overline{TL} is the most useful equation of all and it may be readily inserted in a computer routine for testing the pairs of dosages calculated.

Thus Table 5 gives ΔD as a function of TL near three known doses. Using the same type of regression equation as before, a general expression for the uncertainty in indicated dose as a function of indicated dose may now be evaluated;

$$(7) \Delta D_i = p D_i^2 + q D_i + r,$$

in which the subscript i refers to dose indicated using the TL observed for a field exposed dosimeter with calibration data of \overline{TL} as a function of known dose. Evaluating the three constants from the data in Table 4,

$$(8) \Delta D_i = .013835 D_i^2 - .027196 D_i + .57655.$$

This equation is the basis for estimated uncertainty in dose, when the dose is derived by interpolation of calibration dose vs TL points.

C. Extrapolation and Interpolation of Calibration Curves

The inference of doses from field measurements yielding TL values which lie between two known calibration points presents no serious obstacle. Lebrón (1974) has used the statistical sorting (selection) method with dosimeter handling procedures currently in practice in the PRNC Terrestrial Ecology laboratory facilities through it is unclear what statistical rejection procedure was used in his work. Assuming a linear function of the log of TL response versus calibration dose, his method has some advantage in the relative rapidity with which many samples can be processed, and his field dose uncertainty estimates are approximately 30%, not considered a large uncertainty for the type of field work which was carried out.

The data in Tables 1, 2 and 3 do show that a linear interpolation of calibration data can be used to derive unknown field doses from measured TL's without introduction of excessive errors, provided doses larger than approximately 15 mR of Cs-137 equivalent are not encountered. Using a standard 30-50 day field exposure for the characterization of local environmental radioactivity Cs-137 dose equivalents as high as 14 mR have been infrequently encountered. In areas of high dose rate, shorter field exposure times can be used to maintain the lower uncertainties introduced by the linear interpolation approximation. Another alternative in this case is to select chips which have lower sensitivity, since this characteristic can vary widely from chip to chip. Our experience indicates that overlong exposure times increase the risk of vandalism of dosimeters placed in field stations. Furthermore, long exposures may be impractical if TLD is used as an environmental monitor under future Nuclear Regulatory Commission (NRC) policy commitments.

Extrapolation of calibration dose versus TL curves to doses below the lowest TL observed in the Cs-137 calibration is difficult. It is not clear that the measurement techniques used in this study warrant the assumption of zero TL for zero dosage. Thus linear or first order slope-correction derived curves from zero dose up to the lowest calibration dose may be subject to errors in TL approaching the values of the indicated dose. Some of the experiments described in Chapter I suggest that an uncertainty of 100% is not unreasonable if the linear extrapolation is employed. The additional assumption that the lowest calibration dose point is fixed and absolutely correct for the purposes of zero-to-lowest-dose slope determination is not good. However, in the absence of reliable very low dose data, this approach has been used and the values which result should be regarded as trend indicators, unsuitable for all but the most qualitative of interpretations.

D. Caveat Lector

The analysis presented above is a practical approach to a field research problem. The confidence which can be placed in single field measurements carried out at different times (and frequently at different locations) is never very great. There simply is no substitute for the classic f and t tests when data significance is at issue. Such tests generally need considerable data taken over the same period of time, using substantially the same techniques in order to be conscientiously applied.

In this, the initial survey of Northwest Puerto Rico, resources of man power, instrumentation and (most important) time did not permit more than a general description of radiation levels using TLD. Presumably,

future measurements of background radioactivity will be able to build upon the experience obtained herein. Analysis of variance using accepted techniques should be high on the list of priorities in such future studies.

Table 1

Dose: 2.741 mR.

Dosimeter #	TLD-Response in Exposure					Mean of 5 Exposures	Std. Deviation Single Exposure
	1	2	3	4	5		
1	1.183	2.549	1.600	1.407	1.285	1.605	± 0.550
2	0.953	1.042	1.128	1.261	1.269	1.131	± 0.138
3	1.117	1.640	1.179	1.314	1.578	1.366	± 0.234
4	1.348	1.468	1.094	1.358	1.248	1.303	± 0.141
5	1.040	1.626	1.438	1.157	1.289	1.310	± 0.231
6	0.760	1.643	1.116	1.241	1.377	1.227	± 0.326
7	0.986	1.345	0.941	1.172	1.128	1.114	± 0.161
8	1.065	1.302	1.089	1.271	1.112	1.168	± 0.110
9	1.312	0.217	1.413	1.131	1.336	1.082	± 0.494
10	1.147	1.001	1.073	1.151	1.359	1.146	± 0.134
Mean Response (Intra-group Non-sorted)	1.091	1.383	1.207	1.246	1.298		
St. Deviation of a single Dosimeter TL in the Group	±0.176	±0.595	±0.206	±0.094	±0.131		

Table 2

Dose: 7.676 mR.

Dosimeter #	TL-Response for Exposure					Mean of 5 Exposures	Std. Deviation Single Exposure
	1	2	3	4	5		
1	4.062	3.464	3.741	3.763	3.828	3.772	± 0.214
2	3.979	2.577	4.045	3.537	3.216	3.471	± 0.603
3	3.715	2.730	3.936	3.296	3.103	3.356	± 0.481
4	3.924	2.654	3.977	3.658	3.608	3.564	± 0.534
5	3.776	2.556	3.910	3.376	3.176	3.359	± 0.538
6	3.785	2.593	4.013	4.272	3.637	3.660	± 0.643
7	3.512	2.405	3.792	3.465	2.805	3.196	± 0.571
8	3.661	2.753	4.092	3.030	3.182	3.344	± 0.532
9	3.689	2.741	3.692	3.518	3.048	3.338	± 0.425
10	3.754	2.747	3.845	4.094	3.452	3.578	± 0.518
Mean Response (Non-sorted Intragroup)							
	3.786	2.722	3.904	3.601	3.306		
Std. Deviation of a Single Dosimeter TL in the Group							
	±0.162	±0.425	±0.134	±0.368	±0.315		

Table 3

Dose: 13.158 mR

Dosimeter #	TL-Response for Exposure	1	2	3	4	5	Mean of 5 Exposures	Std. Deviation Single Exposure
1		5.646	5.638	5.831	5.405	5.794	5.663	± 0.168
2		5.899	5.551	5.631	5.337	5.797	5.643	± 0.219
3		5.725	5.734	5.802	5.388	5.746	5.679	± 0.169
4		6.142	5.682	5.914	5.633	6.142	5.903	± 0.243
5		5.694	5.577	5.879	5.229	5.820	5.640	± 0.266
6		5.839	5.643	5.455	5.668	5.902	5.701	± 0.176
7		5.521	5.386	5.620	5.797	5.534	5.572	± 0.152
8		5.852	5.737	5.717	5.015	5.890	5.642	± 0.358
9		5.578	5.304	5.423	5.301	5.919	5.505	± 0.258
10		6.048	5.616	6.335	-	6.826	6.206	± 0.508

Mean Response
(Non-sorted
Intragroup)

5.794 5.587 5.761 5.419 5.937

Std. Deviation
of a Single
Dosimeter TL
in the Group

±0.200 ±0.142 ±0.263 ±0.243 ±0.353

Table 4

TL PAIR AVERAGES WITH PROPAGATED R.M.S. UNCERTAINTIES*

Dose	Pair No. 1	Pair No. 2	Pair No. 3	Pair No. 4	Pair No. 5	Mean TL \pm Mean Uncertainty
2.741 mR	1.368 \pm 0.401	1.335 \pm 0.193	1.269 \pm 0.283	1.141 \pm 0.138	1.114 \pm 0.362	1.245 \pm 0.275
7.674	3.621 \pm 0.452	3.460 \pm 0.508	3.509 \pm 0.593	3.270 \pm 0.552	3.458 \pm 0.474	3.464 \pm 0.516
13.158	5.653 \pm 0.195	5.791 \pm 0.209	5.671 \pm 0.294	5.607 \pm 0.275	5.855 \pm 0.403	5.715 \pm 0.275

* Based upon 10 exposures for each chip.

Table 5

Dose	\bar{TL}	$\Delta \bar{TL}$	a	b	c	ΔD
mR						mR
2.741	1.245	± 0.275	0.007218	-0.027872	2.225703	± 0.606
7.676	3.464	± 0.516				± 1.183
13.158	5.715	± 0.275				± 0.719

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APPENDIX I

H A S P J O B L O G

15.22.51	JOB	248	-- TLDCALC	-- BEGINNING EXFC - INIT 3 - CLASS F
15.22.58	JOB	248	IEF403I TLDCALC	STARTED
16.25.01	JOB	248	IEF404I TLDCALC	ENDED
15.25.02	JOB	248	END EXECUTION.	

----- H A S P - I I J O B S T A T I S T I C S -----

979 CARDS READ

2,779 SYSOUT PRINT RECORDS

0 SYSOUT PUNCH RECORDS

2.20 MINUTES EXECUTION TIME

IEF373I STEP /GO / START 75163.1624
 IEF374I STEP /GO / STOP 75163.1624 CPU OMIN 14.57SEC STOR VIRT 40K
 IEF285I SYS75163.T064623-RV000.TLDCALC.GOSET DELETED
 IEF295I VJL SER NOS= MFT013.
 IEF375I JOB /TLDCALC / START 75163.1622
 IEF376I JOB /TLDCALC / STOP 75163.1625 CPU OMIN 28.94SEC

***** JOB STATISTICS FOR JOB TLDCALC *****

*** STEP INFORMATION ***

STEP NUMBER	SHIFT	PROGRAM NAME	STEP NAME	MAIN CORE REQUESTED	MAIN CORE USED	DASD EXCPS	OTHER EXCPS	CPU TIME USED	COST OF STEP
1	1	IEYF0PT	FORT	100 K	100 K	182	991	0 MIN 12.43 SEC	\$8.06
2	1	IFWL	LKED	128 K	128 K	276	6	0 MIN 1.94 SEC	\$1.36
3	1	PGM=*.DD	GO	40 K	40 K	1	2663	0 MIN 14.57 SEC	\$17.96

*** JOB SUMMARY ***

DATE	ACCOUNT NUMBER	USER CLASS	JOB CLASS	PRIORITY	NO. OF STEPS	DASD EXCPS	OTHER EXCPS	TOTAL CPU TIME USED	TOTAL COST OF JOB
9/12/75	4300402J	G	F	4	3	461	3660	0 MIN 28.94 SEC	\$27.39

C *****TDCALC*****
 C
 C
 C
 C

TDCALC WAS WRITTEN BY ARTHUR MCB. BLOCK AND FELIX SANTOS WITH THE AID OF KARL PRADO (IN PARTIAL FULFILLMENT OF THE MASTER DEGREE IN PUBLIC HEALTH), PUERTO RICO NUCLEAR CENTER, CAPARRA HGTS. RIO PIEDRAS PUERTO RICO, 00935, MAY, 1975. THE LANGUAGE IS FORTRAN 4.

TDCALC CALCULATES THE BACKGROUND DOSE RATE IN MICRORADS PER HOUR FOR CAFE2: DY FIELD-EXPOSED DOSIMETERS WHICH HAVE BEEN PREVIOUSLY CALIBRATED USING THE PRNC CS-137 SOURCE. THE FOLLOWING SUBROUTINES ARE USED BY THE MAIN PROGRAM. CALIB ADJUSTS THE CALIBRATION SOURCE ACTIVITY TO TAKE ACCOUNT OF RADIOACTIVE DECAY OF CS-137. IT USES THE SUBROUTINE: DATE WITH CALIBRATION DATA SUPPLIED BY THE HEALTH AND SAFETY DIVISION OF PRNC (DR. SANTIAGO GOMEZ). DATE ACCEPTS TWO DATES, THE EARLIER ONE FIRST AND THE LATER ONE SECOND, FROM WHICH IT CALCULATES THE INTERVAL BETWEEN THE TWO DATES IN DAYS. THE SOURCE DATA WAS A MEASUREMENT OF THE CS-137 SOURCE DOSE RATE MADE ON 25-OCT.-1974. CRYG CALCULATES THE DOSE RECEIVED BY A DOSIMETER GIVEN THREE SOURCE EXPOSURE TIMES (AT 75IN.) AND THE THERMOLUMINESCENCE MEASURED FOR EACH TIME. THEN THE FIELD EXPOSED THERMOLUMINESCENCE IS ALSO GIVEN. TLCOR CORRECTS THE MEASURED FIELD DOSE FOR STOPPING POWER OF CAF2 (IE IT CONVERTS THE MILLIROENTGENS OF CALIBRATION SOURCE TO MILLIRADS OF DOSE EQUIVALENT TO THE SPECTRUM OF ENERGIES ASSOCIATED WITH THE NATURAL (OBSERVED) BACKGROUND RADIATION). IT ALSO APPLIES CORRECTIONS FOR FADING OF THE THERMOLUMINESCENCE WITH TIME.

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0001 IMPLICIT REAL*8(A-H,O-Z)
0002 COMMON PBCOR
0003 DIMENSION DESC(19),STA(6)
0004
0005 100 FORMAT(11,6A4)
0006 101 FORMAT(1H,27HTLD DOSIMETRY RESULTS FOR :6A4)
0007 102 FORMAT(11,11,2X,19A4)
0008 103 FORMAT(/,10X,'-----',19A4,'-----')
0009 104 FORMAT(3(3I2,1X),11,1X,11,1X,12,1X,12,1X,12,1X,11,1X,F5.3)
0010 105 FORMAT(3X,'GROUP CALIBRATION:',I2,'/',I2,'/',I2,3X,'FIELD PLACEMENT',I2,'/',I2,'/',I2,3X,'RETRIEVAL:',I2,'/',I2,'/',I2,4X,'GROUP NO.:',I2,2X,'CHIP NO.:',I2,2X,'PAIR NO.:',I2,2X,'CAL.TIME3=',F6.3,3X,'CAL.TLA2=',F6.3,1X,'TLB2=',F6.3,1X,'CAL.TLA3=',F6.3,1X,'TLB3=',F6.3)
0011 106 FORMAT(3(2F6.3,F4.1,1X),F6.3,1X,F6.3)
0012 107 FORMAT(3X,'CAL.TIME1=',F4.1,1X,'TLA1=',F6.3,1X,'TLB1=',F6.3,3X,'CAL.TIME2=',F6.3,1X,'TLA2=',F6.3,1X,'TLB2=',F6.3,1X,'CAL.TIME3=',F6.3,1X,'TLA3=',F6.3,1X,'TLB3=',F6.3)
0013 108 FORMAT(3X,'TL-RESPONSE AFTER FIELD EXPOSURE FOR A:',F6.3,2X,'TL-RESPONSE AFTER FIFL) EXPOSURE FOR B:',F6.3)
0014 109 FORMAT(1H,'DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON
    
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0014      1 FADING CORRECTION IS ',F6.3,' MICRO-RAD/HR.')}
110 FORMAT(IH,'DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM
      1 FADING CORRECTION IS ',F6.3,' MICRO-RAD/HR.')}
0015      111 FORMAT(IH,'DOSE RATE USING PB-TA SHIELDING CORRECTION AND LEBRON F
      1 ADING CORRECTION IS ',IX,F6.3,' MICRO-RAD/HR.')}
0016      112 FORMAT(IH,'DOSE RATE USING PB-TA SHIELDING CORRECTION AND DENHAM F
      1 ADING CORRECTION IS ',IX,F6.3,' MICRO-RAD/HR.')}
0017      115 FORMAT(3X,'DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A:',F6.3,3X,'DO
      1 SE AFTER FIELD EXPOSURE FOR DOSIMETER B:',F6.3)
0018      119 FORMAT(1H1,6A4,'CONTINUED')
0019      120 FORMAT(3X,'***DOSIMETER PAIR NOT RECOVERED***,////////)
0020      131 FORMAT(3X,'1DAYS:',I3)
0021      133 FORMAT(3X,'DRAT:',F6.3)
0022      132 FORMAT(3X,'NDAYS:',I3)
C
C      PAIRS OF VALUES SUBJECT TO REJECTION USE STATISTICAL EVALUATION OF
C      BLOCK ET.AL. FOR THREE DATA SETS AT DIFFERENT LAB EXPOSURES.
C      FIVE PAIRS EVALUATED FOR EACH EXPOSURE. SEE CHAP. 2.
C
0023      135 FCRMAT(3X,'*****DOSE VALUES OF PAIR REJECTED BECAUSE AV. DOSE +/-
      1 DELTA DOSE DO NOT OVERLAP INDICATED FIELD DOSES*****')////////)
0024      137 FORMAT(3X,'AVERAGE FIELD DOSE: ',F6.3,' MILLIRAD',3X,' ESTIMATED U
      1 NCERTAINTY: +/- ',IX,F4.0,IX,'%')
0025      144 FORMAT(3X,'***PAIR VALUES REJECTED BECAUSE OF INDICATED UNCERTAINT
      1 Y IN CALIBRATION DATA***,////////)
      1 CONTINUE
0026
0027      145 FORMAT(3X,'***PAIR VALUES REJECTED FOR LACK OF SUFFICIENT EXPOSURE
      1 TIME GIVEN TO FIELD DOSIMETERS***,////////)
C
C      DATA CARD#1 READS IN ISTOP (IN FORMAT11) AND THE STATION NAME STA
C      (6A4). ISTOP IS A PROGRAMMING ARTIFACT. IF ZERO, THE PROGRAM CY-
C      CLES THRU ALL STATIONS SUBMITTED. A CARD AT THE END OF ALL THE
C      DATA BEARING A '1' IN THE FIRST COLUMN CAUSES THE PROGRAM TO TER-
C      MINATE. STATION NAME MAY NOT CONTAIN MORE THAN 24 CHARACTERS.
C
0028      READ(5,100) ISTOP,(STA(I),I=1,6)
0029      IF(ISTOP.NE.0) GOTO 998
0030      WRITE(6,101) (STA(I),I=1,6)
0031      ICONF=0
0032      2 CONTINUE
C
C      CARD#2 READS IN JSTOP (11) AND IWRIT (11) FOLLOWED BY TWO BLANK
C      SPACES (2X) AND THE STATION LOCATION DESCRIPTION, DESC (19A4).
C      DESC MAY NOT EXCEED 76 CHARACTERS IN LENGTH. JSTOP IS A PROGRAM-
C      MING ARTIFACT. IF ZERO, THE PROGRAM CYCLES THRU ALL OF THE STA-
C      TION LOCATIONS WITH THEIR ASSOCIATED DATA. A '1' IN COLUMN 1
C      CAUSES THE PROGRAM TO READ IN A NEW STATION WITH ITS ASSOCIATED
C      STATION LOCATIONS AND THEIR ASSOCIATED DATA. IWRIT IS USED FOR

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C DEBUGGING AND CHECKING. IF IWRIT = AN INTEGER (1-9), THE PROGRAM
 C PRINTS OUT: 1. THE NUMBER OF DAYS BETWEEN CS-137 SOURCE CALIBRATION
 C AND ITS USE IN THE CALIBRATION OF TLD-DOSIMETERS. 2. THE NUMBER OF
 C DAYS BETWEEN FIELD PLACEMENT OF THE DOSIMETER PAIR AND ITS RE-
 C TRIEVAL FROM THE FIELD. 3. THE DOSERATE (DRAT) OF THE SOURCE DURING
 C CALIBRATION IN MILLIROENTGENS PER MINUTE. IF IWRIT = ZERO,
 C THESE THREE QUANTITIES ARE SUPPRESSED FROM THE OUTPUT.

0033 READ(5,102) JSTOP,IWRIT,(DESC(J),J=1,19)
 0034 ICONT=ICONT+1
 0035 WRITE(6,103) (DESC(J),J=1,19)

C CARD #3 READS IN THE BASIC CROSSREFERENCING DATA. 1. DATE OF CALI-
 C BRATION: DAY, MONTH, YEAR (312), IX, 2. DATE OF FIELD PLACEMENT:
 C DAY, MONTH, YEAR (312), IX, 3. DATE OF RETRIEVAL: DAY, MONTH, YEAR
 C (312), IX, 4. NOPT (11), IX, 5. NFADE (11), IX, 6. NOGRU, THE NUMBER
 C OF THE GROUP IN WHICH THE CALIBRATION WAS MADE (12), IX, 7. THE
 C NUMBER ASSIGNED TO DOSIMETER 'A' OF THE PAIR (12), IX, 8. THE NUM-
 C BER ASSIGNED TO DOSIMETER 'B' OF THE PAIR (12), IX, 9. NPAR, THE
 C NUMBER ASSIGNED TO THE VIAL CONTAINING THE PAIR DURING FIELD EXPO-
 C SURE (11), IX, 10. PBCOR, THE FACTOR USED TO CORRECT THE DATA EM-
 C PIRICALLY USING EXPOSURES OF DOSIMETERS CLAD WITH ENERGY LEVELLING
 C MATERIAL AND CUTTING OFF THERMOLUMINESCENCE DUE TO ENERGIES BELOW
 C 100KEV, SUCH AS LEAD AND TANTALUM FOIL LAYERS (F5.3), IX, 11. NOPT
 C AND NFADE ARE CONTINGENCY VARIABLES USEFUL IF OTHER CORRECTIONS
 C FOR ENVIRONMENTAL ENERGY DISTRIBUTION AND AND DOSIMETER THERMO-
 C LUMINESCENCE FADING ARE TO BE MADE.

0036 READ(5,104) ICALD,ICALM,ICALY,JSDA1,JSML,JSY1,JSDA2,JSM2,JSY2,NOPT
 1,NFADE,NOGRU,NCRYA,NCRYB,NPAR,PBCOR
 0037 WRITE(6,105) ICALM,ICALD,ICALY,JSML,JSDA1,JSY1,JSM2,JSDA2,JSY2,NOG
 IRU,NCRYA,NCRYB,NPAR

C FOURTH READ GIVES CALIBRATION DATA: THERMOLUMINESCENT RESPONSE FOR
 C CRYSTALS ANB, TLRA1 AND TLRB1 (2F6.3) ARE THERMOLUMINESCENT
 C RESPONSES FOR CRYSTAL ANB RESPECTIVELY FOR CALIBRATION EXPOSURE
 C TIME OF TIME1 (F4.1), TLRA2 AND TLRB2 ARE CORRESPONDING QUANTITIES
 C FOR TIME2 AND TLRA3 AND TLRB3 FOR TIME3 USING THE CESIUM-137
 C SOURCE. STLA (F6.3) AND STLB (F6.3) ARE THE THERMOLUMINESCENT
 C RESPONSES IN THE FIELD SAMPLES. NCRYA AND NCRYB ARE GIVEN AFTER
 C COLUMN 72 FOR EASE OF IDENTIFICATION.

0038 READ(5,106) TLRA1,TLRB1,TIME1,TLPA2,TLK82,TIME2,TLRA3,TLR83,TIME3,
 1,STLA,STLB
 0039 WRITE(6,107) TIME1,TLRA1,TLRB1,TIME2,TLRA2,TLR82,TIME3,TLRA3,TLR83
 0040 IF(STLA.EQ.0) GOT0996
 0041 WRITE(6,108) STLA,STLB
 0042 IF(TLRA1.GE.TLRA2) GOT0 880

```

0043 IF(TLR81.GE.TLR82) GOTU 880
0044 IF(TLR82.GE.TLR83) GOTU 880
0045 IF(TLR82.GE.TLR83) GOTU 880
C DATE OF CS-137 SOURCE CALIBRATION.
0046 NCALD=25
0047 NCALM=10
0048 NCALY=74
0049 IDAYS=0
0050 IF(ICALY.LE.NCALY) GOTU 43
0051 C CONTINUE
C CORRECTION FOR DATE DIFFERENT FROM SOURCE CALIBRATION DATE.
0052 CALL DATE(NCALD,NCALM,NCALY,ICALD,ICALM,ICALY,IDAYS)
0053 CMOS=FLOAT(IDAYS)
0054 AVMS=CMOS/30.0
0055 CALL CALIB(DRAT,AVMS)
0056 GOTU 69
0057 43 IF(ICALY.EQ.NCALY) GOTU 49
0058 44 CONTINUE
0059 CALL DATE(ICALD,ICALM,ICALY,NCALD,NCALM,NCALY,IDAYS)
0060 CMOS=FLOAT(IDAYS)
0061 AVMS=-1.0*(CMOS/30.0)
0062 CALL CALIB(DRAT,AVMS)
0063 GOTU 69
0064 49 CONTINUE
0065 IF(ICALM.GT.NCALM) GOTU 41
0066 IF(NCALM.GT.ICALM) GOTU 44
0067 IF(ICALD.GT.NCALD) GOTU 41
0068 IF(NCALD.GE.ICALD) GOTU 44
0069 69 CONTINUE
0070 IF(IWRITE.NE.0) WRITE(6,131) DRAT
0071 IF(IWRITE.NE.0) WRITE(6,131) IDAYS
C HERE COME THE CALCULATED DOSES FROM THE UPDATED DOSERATE (DRAT)
C AND SUBROUTINE CRY5.
0072 CALL CRY5(TLR81,TIME1,TLR82,TIME2,TLR83,TIME3,STLA,DRAT,DOSE1)
0073 CALL CRY5(TLR81,TIME1,TLR82,TIME2,TLR83,TIME3,STLB,DRAT,DOSE2)
0074 WRITE(6,115) DOSE1,DOSE2
0075 AVD=(DOSE1+DOSE2)/2.0
C
C THE ESTIMATED UNCERTAINTY IN DUSE- DELTA DOSE - CALLED HERE 'DELD'
C IS BASED ON THE EMPIRICAL EQUATION: DELD=P*DOSE**2+Q*DOSE +R.
C DOSE IS THE CALCULATED DOSE OF A FIELD-EXPOSED DOSIMETER AND P, Q,
C AND R ARE CONSTANTS EVALUATED FROM EXPERIMENTAL DATA OBTAINED BY
C E. HERNANDEZ AND R. MOSQUERA BASED ON A TREATMENT SUGGESTED BY
C M. BANJUS. THE DETAILS OF THE DERIVATION OF THIS PARTICULAR EQUA-
C TION ARE CONTAINED IN CHAPTER 2 OF THE PRNC DOCUMENT 'THERMO-
C LUMINESCENCE DOSIMETRY MEASUREMENTS IN NORTHWEST PUERTO RICO'.
C
C DELD=(0.013835*AVD*AVD)-(0.027196*AVD)+0.57600

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CC77 PERER=(DELD/AVD)*100.0
CC78 IF(PERER>5E+100.0) GOTO 854
0079 853 CONTINUE
0080 WRITE(6,137) AVD,PERER
0081 GOTO 852
0082 854 CONTINUE
0083 PERER=100.0
0084 GOTO 853
0085 852 CONTINUE
C THE NEXT 'IF' TESTS WHETHER THE AVERAGE DOSE IS STATISTICALLY
C COMPATIBLE WITH THE INDICATED INDIVIDUAL FIELD DOSES, USING THE
C STATISTICAL TREATMENT MENTIONED IN THE LAST COMMENT SECTION.
0086 IF(DOSE1-DOSE2) 70,80,90
80 CONTINUE
0087 DOSE1=0.0
0088 DOSE2=0.0
0089 AVD3=AVD
0090 AVD=0.0
C NOW LET'S CORRECT THE DOSES FOR CAF2 STOPPING POWER AND TL FADING.
0091 CALL TFCUR(AVDOS,CORD1,CORD2,CORD3,CORD4)
0092 CALL DATE(JSDA1,JSM1,JSY1,JSDA2,JSM2,JSY2,NDAYS)
0093 IF(IWRIT.NE.0) WRITE(6,132) NDAYS
C HERE COMES THE CONVERSION TO MICRO-RADS PER HOUR.
0094 NHRS=NCAYS*24
0095 IF(NDAYS.LE.24) GOTO 881
0096 FNHRS=FLUATINHRS)
0097 RHR=1000.0/FNHRS
0098 RATE1=RHR*CORD1
0099 RATE2=RHR*CORD2
0100 RATE3=RHR*CORD3
0101 RATE4=RHR*CORD4
0102 WRITE(6,110) RATE1
0103 WRITE(6,109) RATE2
0104 WRITE(6,112) RATE3
0105 WRITE(6,111) RATE4
0106 GO TO 20
0107 880 CONTINUE
0108 WRITE(6,144)
0109 GOTO 20
0110 881 CONTINUE
0111 WRITE(6,145)
0112 GOTO 20
0113 90 CONTINUE
0114 DERR1=AVD*DELD
0115 DERR2=AVD*DELD
0116 IF(DERR1.LT.DOSE1) GOTO 81
0117 IF(DERR2.GT.DOSE2) GOTO 81
0118 GOTO 30
0119

```

FORTRAN IV G LEVEL 21

```

0120      81 CONTINUE
0121      WRITE(6,135)
0122      GOTO 20
0123      70 CONTINUE
0124      DERR1=AVD-DELD
0125      DERR2=AVD+DELD
0126      IF(DERR1.GT.DOSE1) GOTO 81
0127      IF(DERR2.LT.DOSE2) GOTO 81
0128      GO TO 80
0129      20 CONTINUE
0130      IF(JSTOP.NE.0) GOTO 999
0131      NUPG=MOD(ICONT,4)
0132      IF(NUPG.EQ.0) WRITE(6,119) STA
0133      GOTO 2
0134      996 CONTINUE
0135      WRITE(6,120)
0136      GOTO 20
0137      CONTINUE=
0138      GOTO 11
0139      998 CONTINUE
0140      END

```

16/23/02

DATE = 75163

CALIB

FOR TRAN IV G LEVEL 21

SUBROUTINE CALIB(FACT,UPDAT)

C
 C SURROUTINE CALIB CALCULATES DOSE RATE IN MILLI-ROENTGENS PER MIN.
 C WHEN GIVEN THE INITIAL DOSE RATE AT 75IN. AS INTERPOLATED FROM
 C DOSE RATE CALIBRATION OF 25-NOV-74. (HEALTH+SAFETY DIV. CNPR-SANTI-
 C AGU GJMEZ).

C IMPLICIT REAL*8(A-H,O-Z)
 ACT=0.0
 ACT0=0.1302
 CLAM=0.0019254
 ACTOL=DLUG(ACT0)
 ACTL=ACTOL-(CLAM*UPDAT)
 ACT=DEXP(ACTL)
 RETURN
 END

0002
 0003
 0004
 0005
 0006
 0007
 0008
 0009
 0010

```

0001 SUBROUTINE CRY5(TL1,TL2,TL3,STL,ACT,DOSE)
0002 IMPLICIT REAL*8(A-H,O-Z)
C
C CRY5 CALCULATES THE DOSE-EQUIVALENT TO A CS-137-SOURCE-EXPOSED-TLD
C CRYSTAL AFTER RETRIEVAL OF THE CRYSTAL FROM FIELD EXPOSURE. THE
C THERMOLUMINESCENCE OF THE CHIP (TL1,TL2,TL3) DUE TO CS-137 EXPO-
C SURE OF T1,T2,T3 MINUTES RESPECTIVELY AT 75 IN. IS CALIBRATION IN-
C PUT. STL IS THE THERMOLUMINESCENCE AFTER FIELD EXPOSURE. TEQ
C (TIME EQUIVALENT) IS THE CS-137 EXPOSURE TIME NECESSARY TO PRODUCE
C THE OBSERVED THERMOLUMINESCENCE ASSOCIATED WITH FIELD EXPOSURE.
C IT IS CALCULATED BY INTERPOLATION OF THE TL CALIBRATION VALUES FOR
C THE APPROPRIATE CALIBRATION TIMES. IF STL IS GREATER THAN TL3 OR
C LESS THAN TL1 A LINEAR EXTRAPOLATION OF THE CALIBRATING
C TIME-VS-TL POINTS IS MADE TO DETERMINE TEQ. ACTUAL DOSE (DOSE) IS
C CALCULATED FROM DOSE=TEQ*ACT IN WHICH ACT IS THE ACTIVITY OF THE
C CS-137 SOURCE IN MILLIROENTGENS PER MINUTE AS CALCULATED BY SUB-
C ROUTINE CALIB.
C
0003 IF(STL.GE.TL3) GOTO 65
0004 IF(STL.GE.TL2) GOTO 60
0005 IF(STL.GE.TL1) GOTO 55
0006 EM1=TL/TL1
0007 TEQ=EM1*STL
0008 GOTO 578
0009
0010 55 CONTINUE
0011 TEQ=TL1*((STL-TL1)/(TL2-TL1))*(T2-T1)
0012 GOTO 598
0013
0014 60 CONTINUE
0015 TEQ=T2+((STL-TL2)/(TL3-TL2))*(T3-T2)
0016 GOTO 998
0017
0018 65 CONTINUE
0019 EM3=(T3-T2)/(TL3-TL2)
0020 TEQ=T3+(EM3*(STL-TL3))
0021 DO5A=TEQ*ACT
0022 DCS=DO5A
0023 DO5A=0.0
0024 RETURN
0025 END

```



```

0042 MREY=MOD(NUM,12)
0043 IF(NY.NE.1Y2) GOTO 305
0044 IF(NUM.NE.M2) GOTO 305
0045 INCDA=ID2
0046 NUINC=NUINC+INCDA
0047 INTD=N/INC
0048 GOTO 1000
0049 CONTINUE
0050 IF(NUM.GT.7) GOTO 307
0051 IF(NUM.EQ.2) GOTO 310
0052 NUDE1=9-NUM
0053 NRE1=MOD(NUDE1,2)
0054 IF(NRE1.NE.0) GOTO 318
0055 CONTINUE
0056 INCDA=31
0057 GOTO 350
0058 CONTINUE
0059 NUDE2=14-NUM
0060 NRE2=MOD(NUDE2,2)
0061 IF(NRE2.NE.0) GOTO 318
0062 GOTO 316
0063 CONTINUE
0064 INCDA=30
0065 GOTO 350
0066 CONTINUE
0067 LEAP=NY-72
0068 LEAPR=MOD(LEAP,4)
0069 IF(LEAPR.EQ.0) GOTO 320
0070 INCDA=28
0071 GOTO 350
0072 CONTINUE
0073 INCDA=29
0074 CONTINUE
0075 NUINC=NUINC+INCDA
0076 IF(MREY.EQ.0) GOTO 322
0077 GOTO 17
0078 CONTINUE
0079 NY=NY+1
0080 GOTO 15
0081 CONTINUE
0082 RETURN
0083 END

```


0001 SUBROUTINE TLCOR(DOS,C10PT,C20PT,C30PT,C40PT)

C TLCOR CORRECTS THE FIELD DOSE CALCULATED IN CRYSTALS FOR: 1-EFFECTIVE
 C STOPPING POWER OF CA2 EXPOSED TO NATURAL BACKGROUND RADIATION
 C ENERGY DISTRIBUTION AS INFERRED BY LINDEKEN, JONES, AND McMILLEN
 C (UNIV. OF CALIF., JCR-72964) OR 2-FROM COMPARISON OF DOSIMETER
 C RESPONSE WITH AND WITHOUT Pb AND TA FOIL SHIELDING FOR LEVELLING
 C OF THE ENERGY DEPENDENCE AND CUTOFF BELOW 0.1MEV. ALSO, FADING
 C CORRECTIONS BASED UPON EITHER OF THE FOLLOWING DATA ARE APPLIED
 C 1-THOSE OBTAINED BY D. LEBRON(THESIS, MSC. - NUCL. ENG'G. - MAYA-
 C SUEZ A.3M.) (22% LOSS OF SIGNAL FOR 33 DAY EXPOSURE) OR 2-CAL-
 C CULATED CORRECTIONS FROM TYPICAL FADING CURVES (DENHAM, KATHREN,
 C AND CORLEY, BNWL-SA-4191, BATTELLE NORTHWEST LABORATORIES)
 C (1% OR 2% LOSS OF SIGNAL FOR A 30-35 DAY EXPOSURE PERIOD).
 C IMPLICIT REAL*8(A-H,O-Z)

0002 COMMON PBCOR

C C10PT GIVES STD LINDEKEN CORRECTION (MULTIPLIES DOSE BY 1.5) FOL-
 C LOWED BY DENHAM'S FADING CORRECTION (0.8+*ENERGY-CORRECTED-DOSE).
 C C20PT GIVES STD LINDEKEN CORRECTION FOLLOWED BY LEBRON'S COR-
 C RECTION FOR FADING (0.78*ENERGY-CORRECTED-DOSE).
 C C30PT GIVES EMPIRICAL CORRECTION USING ENERGY RESPONSE LEVELLING
 C AND CUTOFF OF RESPONSE BELOW 100 KEV (PB-TA FOIL SHIELDING)(PBCOR*
 C DOS) FOLLOWED BY DENHAM'S FADING CORRECTION.
 C C40PT GIVES EMPIRICAL FULL SHIELDING CORRECTION FOLLOWED BY THE
 C LEBRON FADING CORRECTION.

C C11DS=1.5*DOS
 C C12DS=PBCOR*DOS
 C C10PT=C11DS/0.84
 C C20PT=C11DS/0.78
 C C30PT=C12DS/0.84
 C C40PT=C12DS/0.78
 C RETURN
 C END

0004
 0005
 0006
 0007
 0008
 0009
 0010
 0011

APPENDIX II

TLD DOSIMETRY RESULTS FOR : ARECIBO

-----ARECIBO-1 ON FENCE BEHIND MARQUEZ COMMERCIAL
 GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 6/25/74 RETRIEVAL: 7/30/74 GROUP NO.: 12 CHIP A: 1 CHIP B: 2 PAIR NO.: 1
 CAL.TIME1=17.0 TLA1= 2.402 CAL.TIME2=36.0 TLA2= 2.980 TLB2= 2.495 CAL.TIME3=67.0 TLA3= 5.300 TLB3= 4.728
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.868 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.199
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 1.820 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 2.050
 AVERAGE FIELD DOSE: 1.935 MILLIRAD ESTIMATED UNCERTAINTY: +/- 30. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 4.114 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 4.430 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----ARECIBO-2 ON TREE AT ARECIBO SLAUGHTER HOUSE RTE10
 GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 6/25/74 RETRIEVAL: 7/30/74 GROUP NO.: 12 CHIP A: 3 CHIP B: 4 PAIR NO.: 2
 CAL.TIME1=17.0 TLB1= 1.387 CAL.TIME2=36.0 TLA2= 3.518 TLB2= 3.243 CAL.TIME3=67.0 TLA3= 4.698 TLB3= 4.545
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.282 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.112
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.092 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.217
 AVERAGE FIELD DOSE: 3.155 MILLIRAD ESTIMATED UNCERTAINTY: +/- 20. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 6.706 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 7.222 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----ARECIBO-3 ON FENCE ARECIBO DOCK
 GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 6/25/74 RETRIEVAL: 7/30/74 GROUP NO.: 12 CHIP A: 5 CHIP B: 6 PAIR NO.: 3
 CAL.TIME1=17.0 TLB1= 1.521 CAL.TIME2=36.0 TLA2= 2.540 TLB2= 2.885 CAL.TIME3=67.0 TLA3= 4.707 TLB3= 5.262
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.696 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.645
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 2.704 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 2.467
 AVERAGE FIELD DOSE: 2.585 MILLIRAD ESTIMATED UNCERTAINTY: +/- 23. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 5.496 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 5.919 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----ARECIBO-4 ON BARBEDWIRE RTE10 KM80.3
 GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 6/25/74 RETRIEVAL: 7/30/74 GROUP NO.: 12 CHIP A: 7 CHIP B: 8 PAIR NO.: 4
 CAL.TIME1=17.0 TLB1= 1.066 TLB2= 2.160 CAL.TIME2=36.0 TLA2= 3.042 TLB2= 3.271 CAL.TIME3=67.0 TLA3= 4.777 TLB3= 4.492
 DOSIMETER PAIR NOT RECOVERED

ARECIBO

CONTINUED

-----ARECIBO-5 ON TREE AT ENTRANCE TO ARECIBO DOCK

GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 6/25/74 RETRIEVAL: 7/30/74 GROUP NO.: 12 CHIP A: 9 CHIP B: 10 PAIR NO.: 5
CAL. TIME 1=17.0 TL A1= 1.240 TL B1= 1.690 CAL. TIME 2=36.0 TL A2= 3.113 TL B2= 2.834 CAL. TIME 3=67.0 TL A3= 5.217 TL B3= 3.995
DOSIMETER PAIR NOT RECOVERED

-----ARECIBO-6 STD. AT AFF BUILDING

GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 6/25/74 RETRIEVAL: 7/30/74 GROUP NO.: 12 CHIP A: 11 CHIP B: 12 PAIR NO.: 6
CAL. TIME 1=17.0 TL A1= 2.060 TL B1= 1.573 CAL. TIME 2=36.0 TL A2= 2.863 TL B2= 2.968 CAL. TIME 3=67.0 TL A3= 4.788 TL B3= 4.530
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 0.687 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 0.293
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 0.747 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 0.417
AVERAGE FIELD DOSE: 0.582 MILLIRAD ESTIMATED UNCERTAINTY: +/- 97. %
DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 1.237 MICRO-RAD/HR.
DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 1.333 MICRO-RAD/HR.
DOSE RATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSE RATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----ARECIBO-1 ON FENCE ARECIBO DOCK

GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 5/ 7/74 RETRIEVAL: 6/10/74 GROUP NO.: 8 CHIP A: 11 CHIP B: 12 PAIR NO.: 1
CAL. TIME 1=17.0 TL A1= 0.977 TL B1= 1.136 CAL. TIME 2=45.0 TL A2= 3.726 TL B2= 3.061 CAL. TIME 3=67.0 TL A3= 3.999 TL B3= 4.513
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.670 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.414
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.167 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 2.770
AVERAGE FIELD DOSE: 2.969 MILLIRAD ESTIMATED UNCERTAINTY: +/- 21. %
DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 6.497 MICRO-RAD/HR.
DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 6.996 MICRO-RAD/HR.
DOSE RATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSE RATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----ARECIBO-2 ON FENCE BEHIND MARQUEZ COMMERCIAL

GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 5/ 7/74 RETRIEVAL: 6/10/74 GROUP NO.: 8 CHIP A: 9 CHIP B: 10 PAIR NO.: 2
CAL. TIME 1=17.0 TL A1= 0.930 TL B1= 1.178 CAL. TIME 2=45.0 TL A2= 3.662 TL B2= 3.890 CAL. TIME 3=67.0 TL A3= 5.231 TL B3= 5.155
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.364 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 3.870
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.173 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 5.897
AVERAGE FIELD DOSE: 5.035 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
*****DOSE VALUES OF PAIR REJECTED BECAUSE AV. DOSE +/- DELTA DOSE DO NOT OVERLAP INDICATED FIELD DOSES*****

ARECIBO

CONTINUED

-----ARECIBO-3 STD. IN LEAD SHIELD IN AFF BUILDING
 GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 5/ 7/74 RETRIEVAL: 6/10/74 GROUP NO.: 8 CHIP A: 1 CHIP B: 2 PAIR NO.: 3
 CAL.TIME1=17.0 TLA1= 1.150 TLB1= 1.209 CAL.TIME2=45.0 TLA2= 3.717 TLB2= 3.442 CAL.TIME3=67.0 TLA3= 5.233 TLB3= 5.450
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 0.142 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 0.303
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 0.276 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 0.534
 AVERAGE FIELD DOSE: 0.405 MILLIRAD ESTIMATED UNCERTAINTY: +/- 10.0 %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 0.887 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEHRM FADING CORRECTION IS 0.955 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEHRM FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----ARECIBO-4 ON WALL AT 'CRISTORAL COLON' WATERFRONT PARK
 GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 5/ 7/74 RETRIEVAL: 6/10/74 GROUP NO.: 8 CHIP A: 7 CHIP B: 8 PAIR NO.: 4
 CAL.TIME1=17.0 TLA1= 1.194 TLB1= 0.863 CAL.TIME2=45.0 TLA2= 3.417 TLB2= 3.267 CAL.TIME3=67.0 TLA3= 5.007 TLB3= 4.069
 DOSIMETER PAIR NOT RECOVERED

-----ARECIBO-5 ON BARRED WIRE RTEL0 KMB2-0
 GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 5/ 7/74 RETRIEVAL: 6/10/74 GROUP NO.: 8 CHIP A: 5 CHIP B: 6 PAIR NO.: 5
 CAL.TIME1=17.0 TLA1= 1.590 TLB1= 0.848 CAL.TIME2=45.0 TLA2= 3.381 TLB2= 3.412 CAL.TIME3=67.0 TLA3= 4.903 TLB3= 5.181
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.177 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.181
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.446 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.154
 AVERAGE FIELD DOSE: 3.800 MILLIRAD ESTIMATED UNCERTAINTY: +/- 18.0 %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 8.316 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEHRM FADING CORRECTION IS 8.956 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEHRM FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----ARECIBO-6 ON FENCE RTEZ AT 'CENTRAL CAMRALACHE'
 GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 5/ 7/74 RETRIEVAL: 6/10/74 GROUP NO.: 8 CHIP A: 3 CHIP B: 4 PAIR NO.: 6
 CAL.TIME1=17.0 TLA1= 1.140 TLB1= 1.112 CAL.TIME2=45.0 TLA2= 3.410 TLB2= 3.575 CAL.TIME3=67.0 TLA3= 5.236 TLB3= 5.030
 DOSIMETER PAIR NOT RECOVERED

TLD DOSIMETRY RESULTS FOR : ARECIBU AIRPORT

-----ARECIBU AIRPORT-1 STD. AT MAIN AIRPORT FACILITY LEAD SHIELD
 GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 5/ 7/74 RETRIEVAL: 6/10/74 GROUP NO.: 6 CHIP A:11 CHIP B:12 PAIR NO.: 1
 CAL.TIME=17.0 TLAI= 1.116 TLBI= 1.057 CAL.TIME2=45.0 TLAI= 2.735 TLBI= 2.716 CAL.TIME3=67.0 TLAI= 5.280 TLBI= 6.087
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 0.761 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 0.484
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 1.526 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 1.025
 AVERAGE FIELD DOSE: 1.275 MILLIRAD ESTIMATED UNCERTAINTY: +/- 44. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 2.791 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 3.006 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----ARECIBU AIRPORT-2 ON FENCE PARKING LOT ENTRANCE
 GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 5/ 7/74 RETRIEVAL: 6/10/74 GROUP NO.: 6 CHIP A: 9 CHIP B:10 PAIR NO.: 2
 CAL.TIME=17.0 TLAI= 1.038 TLBI= 1.225 CAL.TIME2=45.0 TLAI= 4.334 TLBI= 2.921 CAL.TIME3=67.0 TLAI= 5.834 TLBI= 6.062
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.692 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.617
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 2.969 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.090
 AVERAGE FIELD DOSE: 3.030 MILLIRAD ESTIMATED UNCERTAINTY: +/- 20. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 6.630 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 7.140 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----ARECIBU AIRPORT-3 ON FENCE PARKING LOT IN FRONT OF FACILITY
 GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 5/ 7/74 RETRIEVAL: 6/10/74 GROUP NO.: 6 CHIP A: 7 CHIP B: 8 PAIR NO.: 3
 CAL.TIME=17.0 TLAI= 1.002 TLBI= 0.978 CAL.TIME2=45.0 TLAI= 3.153 TLBI= 2.675 CAL.TIME3=67.0 TLAI= 6.346 TLBI= 5.778
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.515 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.156
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.117 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 2.625
 AVERAGE FIELD DOSE: 2.871 MILLIRAD ESTIMATED UNCERTAINTY: +/- 21. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 6.282 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 6.766 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----ARECIBU AIRPORT-4 ON FENCE UNDER AIRCRAFT WARNING SIGN
 GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 5/ 7/74 RETRIEVAL: 6/10/74 GROUP NO.: 6 CHIP A: 5 CHIP B: 6 PAIR NO.: 4
 CAL.TIME=17.0 TLAI= 1.170 TLBI= 1.090 CAL.TIME2=45.0 TLAI= 3.260 TLBI= 3.550 CAL.TIME3=67.0 TLAI= 6.202 TLBI= 6.247
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.095 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.899
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.869 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.450
 AVERAGE FIELD DOSE: 3.660 MILLIRAD ESTIMATED UNCERTAINTY: +/- 18. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 8.009 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 8.625 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

ARECIBO AIRPORT CONTINUED

-----ARECIBO AIRPORT-5 ON TELEPHONE POLE AT LOT ENTRANCE
 GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 5/ 7/74 RETRIEVAL: 6/10/74 GROUP NO.: 6 CHIP A: 3 CHIP B: 4 PAIR NO.: 5
 CAL.TIME1=17.0 TLA1= 1.363 TLB1= 1.013 CAL.TIME2=45.0 TLA2= 3.181 TLB2= 3.145 CAL.TIME3=67.0 TLA3= 6.271 TLB3= 6.424
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.968 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.238
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.465 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 2.627
 AVERAGE FIELD DOSE: 3.040 MILLIRAD ESTIMATED UNCERTAINTY: +/- 20. %
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 6.665 MICRO-RAD/HR.
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 7.178 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----ARECIBO AIRPORT-6 ON TREE IN RIGHT HAND FIELD
 GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 5/ 7/74 RETRIEVAL: 6/10/74 GROUP NO.: 6 CHIP A: 1 CHIP B: 2 PAIR NO.: 6
 CAL.TIME1=17.0 TLA1= 1.219 TLB1= 1.308 CAL.TIME2=45.0 TLA2= 2.471 TLB2= 3.160 CAL.TIME3=67.0 TLA3= 6.751 TLB3= 6.191
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.492 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.952
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.042 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.520
 AVERAGE FIELD DOSE: 3.281 MILLIRAD ESTIMATED UNCERTAINTY: +/- 19. %
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 7.179 MICRO-RAD/HR.
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 7.732 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----ARECIBO AIRPORT-1 ON SECOND TELEPHONE POLE FROM AIRPORT ENTRANCE
 GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 6/25/74 RETRIEVAL: 7/30/74 GROUP NO.: 6 CHIP A: 1 CHIP B: 2 PAIR NO.: 1
 CAL.TIME1=17.0 TLA1= 1.219 TLB1= 1.308 CAL.TIME2=45.0 TLA2= 2.471 TLB2= 3.160 CAL.TIME3=67.0 TLA3= 6.751 TLB3= 6.191
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.944 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.612
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.372 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 2.843
 AVERAGE FIELD DOSE: 3.608 MILLIRAD ESTIMATED UNCERTAINTY: +/- 18. %
 *****DOSE VALUES OF PAIR REJECTED BECAUSE AV. DOSE +/- DELTA DOSE DO NOT OVERLAP INDICATED FIELD DOSES*****

-----ARECIBO AIRPORT-2 ON TREE IN RIGHT HAND FIELD
 GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 6/25/74 RETRIEVAL: 7/30/74 GROUP NO.: 6 CHIP A: 3 CHIP B: 4 PAIR NO.: 2
 CAL.TIME1=17.0 TLA1= 1.363 TLB1= 1.013 CAL.TIME2=45.0 TLA2= 3.181 TLB2= 3.145 CAL.TIME3=67.0 TLA3= 6.271 TLB3= 6.424
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 3.597 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 3.812
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 6.314 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 6.513
 AVERAGE FIELD DOSE: 6.414 MILLIRAD ESTIMATED UNCERTAINTY: +/- 15. %
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 13.634 MICRO-RAD/HR.
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 14.683 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

ARECIBO AIRPORT COUNTRINED

-----ARECIBO AIRPORT-3 ON FENCE UNDER AIRCRAFT WARNING SIGN
 GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 6/25/74 RETRIEVAL: 7/30/74 GROUP NO.: 6 CHIP A: 5 CHIP B: 6 PAIR NO.: 3
 CAL.TIME1=17.0 TLAI= 1.170 TLBI= 1.090 CAL.TIME2=45.0 TLA2= 3.260 TLR2= 2.675 CAL.TIME3=67.0 TLA3= 6.202 TLR3= 6.247
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.300 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.799
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.231 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.799
 AVERAGE FIELD DOSE: 4.315 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 9.598 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 10.336 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----ARECIBO AIRPORT-4 STD. AT MAIN AIRPORT FACILITY LEAD SHIELD
 GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 6/25/74 RETRIEVAL: 7/30/74 GROUP NO.: 6 CHIP A: 7 CHIP B: 8 PAIR NO.: 4
 CAL.TIME1=17.0 TLAI= 1.002 TLBI= 0.978 CAL.TIME2=45.0 TLA2= 3.153 TLR2= 2.675 CAL.TIME3=67.0 TLA3= 6.346 TLR3= 5.778
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 0.844 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 0.144
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 1.885 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 0.330
 AVERAGE FIELD DOSE: 1.107 MILLIRAD ESTIMATED UNCERTAINTY: +/- 51. %
 *****DOSE VALUES OF PAIR REJECTED BECAUSE AV. DOSE +/- DELTA DOSE DO NOT OVERLAP INDICATED FIELD DOSES*****

-----ARECIBO AIRPORT-5 ON TREE AT FAR RIGHT HAND FIELD
 GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 6/25/74 RETRIEVAL: 7/30/74 GROUP NO.: 6 CHIP A: 9 CHIP B: 10 PAIR NO.: 5
 CAL.TIME1=17.0 TLAI= 1.038 TLBI= 1.225 CAL.TIME2=45.0 TLA2= 4.334 TLR2= 2.921 CAL.TIME3=67.0 TLA3= 5.834 TLR3= 6.062
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.190 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.973
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 2.408 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.864
 AVERAGE FIELD DOSE: 3.136 MILLIRAD ESTIMATED UNCERTAINTY: +/- 20. %
 *****DOSE VALUES OF PAIR REJECTED BECAUSE AV. DOSE +/- DELTA DOSE DO NOT OVERLAP INDICATED FIELD DOSES*****

-----ARECIBO AIRPORT-6 ON FENCE PARKING LOT IN FRONT OF FACILITY
 GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 6/25/74 RETRIEVAL: 7/30/74 GROUP NO.: 6 CHIP A: 11 CHIP B: 12 PAIR NO.: 6
 CAL.TIME1=17.0 TLAI= 1.116 TLBI= 1.057 CAL.TIME2=45.0 TLA2= 2.735 TLR2= 2.716 CAL.TIME3=67.0 TLA3= 5.280 TLR3= 6.087
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.125 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.697
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.535 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.660
 AVERAGE FIELD DOSE: 4.099 MILLIRAD ESTIMATED UNCERTAINTY: +/- 17. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 8.711 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 9.381 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

ARECIBO AIRPORT CONTINUED

-----AI-1-ON FIRST PHONE POLE AT FIELD ENTRANCE
 GROUP CALIBRATION: 4/ 1/75 FIELD PLACEMENT: 4/ 2/75 RETRIEVAL: 5/14/75 GROUP NO.: 41 CHIP A: 1 CHIP B: 2 PAIR NO.: 1
 CAL.TIME1= 9.0 TL1A1= 0.463 TL1B1= 0.470 CAL.TIME2=18.0 TLA2= 1.085 TLB2= 1.057 CAL.TIME3=37.5 TLA3= 2.394 TLB3= 2.389
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 3.547 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.775
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 1.047 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 5.562
 AVERAGE FIELD DOSE: 6.304 MILLIRAD ESTIMATED UNCERTAINTY: +/- 15. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 11.168 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 12.027 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----AI-2-ON LARGE MANGO TREE PARALLEL TO THE THIRD PHONE POLE
 GROUP CALIBRATION: 4/ 1/75 FIELD PLACEMENT: 4/ 2/75 RETRIEVAL: 5/14/75 GROUP NO.: 41 CHIP A: 3 CHIP B: 4 PAIR NO.: 2
 CAL.TIME1= 9.0 TL1A1= 0.604 TL1B1= 0.479 CAL.TIME2=18.0 TLA2= 1.151 TLB2= 1.067 CAL.TIME3=37.5 TLA3= 2.472 TLB3= 2.499
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.703 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.615
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 5.273 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 5.037
 AVERAGE FIELD DOSE: 5.195 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 9.132 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 9.834 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----AI-3-STANDARD AT THE AIRPORT FACILITY
 GROUP CALIBRATION: 4/ 1/75 FIELD PLACEMENT: 4/ 2/75 RETRIEVAL: 5/14/75 GROUP NO.: 41 CHIP A: 5 CHIP B: 6 PAIR NO.: 3
 CAL.TIME1= 9.0 TL1A1= 0.714 TL1B1= 0.401 CAL.TIME2=18.0 TLA2= 1.063 TLB2= 1.030 CAL.TIME3=37.5 TLA3= 2.179 TLB3= 2.502
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 0.865 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 0.984
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 1.662 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 2.235
 AVERAGE FIELD DOSE: 1.948 MILLIRAD ESTIMATED UNCERTAINTY: +/- 30. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 3.452 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 3.717 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----AI-4-ON ALMOND TREE ON THE LEFT FRONT OF THE FIELD
 GROUP CALIBRATION: 4/ 1/75 FIELD PLACEMENT: 4/ 2/75 RETRIEVAL: 5/14/75 GROUP NO.: 41 CHIP A: 7 CHIP B: 8 PAIR NO.: 4
 CAL.TIME1= 9.0 TL1A1= 0.371 TL1B1= 1.233 CAL.TIME2=18.0 TLA2= 1.141 TLB2= 0.924 CAL.TIME3=37.5 TLA3= 2.211 TLB3= 2.228
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.442 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.383
 PAIR VALUES REJECTED BECAUSE OF INDICATED UNCERTAINTY IN CALIBRATION DATA

AREC18G AIRPORT CONT INUED

-----AI-5-ON THE PINE TREE TO THE RIGHT IN FRONT OF THE FIELD
 GROUP CALIBRATION: 4/ 1/75 FIELD PLACEMENT: 4/ 2/75 RETRIEVAL: 5/14/75 GROUP NO.: 41 CHIP A: 9 CHIP B:10 PAIR NO.: 5
 CAL.TIME1= 9.0 TLA1= 0.529 TLB1= 0.366 CAL.TIME2=18.0 TLA2= 0.736 TLB2= 1.080 CAL.TIME3=37.5 TLA3= 2.466 TLB3= 2.668
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.357 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.202
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.675 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.096
 AVERAGE FIELD DOSE: 4.385 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 7.769 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 8.366 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----AI-6-ON THE THIRD PHONE POLE AFTER THE FIELD ENTRANCE
 GROUP CALIBRATION: 4/ 1/75 FIELD PLACEMENT: 4/ 2/75 RETRIEVAL: 5/14/75 GROUP NO.: 41 CHIP A:11 CHIP B:12 PAIR NO.: 6
 CAL.TIME1= 9.0 TLA1= 0.414 TLB1= 0.510 CAL.TIME2=18.0 TLA2= 0.965 TLB2= 0.787 CAL.TIME3=37.5 TLA3= 2.408 TLB3= 2.534
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.510 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.525
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 5.011 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.820
 AVERAGE FIELD DOSE: 4.916 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 8.708 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 9.378 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----AI-7-ON CANARIO BUSHES IN FRONT OF THE MAIN OFFICE
 GROUP CALIBRATION: 4/ 1/75 FIELD PLACEMENT: 4/ 2/75 RETRIEVAL: 5/14/75 GROUP NO.: 43 CHIP A: 1 CHIP B: 2 PAIR NO.: 7
 CAL.TIME1=11.0 TLA1= 0.655 TLB1= 0.769 CAL.TIME2=18.0 TLA2= 1.376 TLB2= 1.627 CAL.TIME3=64.0 TLA3= 4.697 TLB3= 5.002
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.040 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.239
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.505 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.395
 AVERAGE FIELD DOSE: 3.450 MILLIRAD ESTIMATED UNCERTAINTY: +/- 19. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 6.112 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 6.582 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----AI-8-ON THE CONCRETE POST AT THE END OF THE RUNWAY
 GROUP CALIBRATION: 4/ 1/75 FIELD PLACEMENT: 4/ 2/75 RETRIEVAL: 5/14/75 GROUP NO.: 43 CHIP A: 3 CHIP B: 4 PAIR NO.: 8
 CAL.TIME1=11.0 TLA1= 0.666 TLB1= 0.628 CAL.TIME2=18.0 TLA2= 1.582 TLB2= 1.505 CAL.TIME3=64.0 TLA3= 4.783 TLB3= 4.614
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.220 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.038
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.502 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.336
 AVERAGE FIELD DOSE: 3.417 MILLIRAD ESTIMATED UNCERTAINTY: +/- 19. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 6.057 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 6.523 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

ARECIBO AIRPORT CONTINUED

-----AI-9-----ON THE PALM TO THE RIGHT IN FRONT OF THE FIELD
 GROUP CALIBRATION: 4/ 1/75 FIELD PLACEMENT: 4/ 2/75 RETRIEVAL: 5/14/75 GROUP NO.: 43 CHIP A: 5 CHIP B: 6 PAIR NO.: 9
 CAL.TIME1=11.0 TL1= 0.643 TL1= 0.729 CAL.TIME2=18.0 TL2= 1.672 TL2= 1.751 CAL.TIME3=64.0 TL3= 5.014 TL83= 4.316
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.396 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.162
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.604 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.270
 AVERAGE FIELD DOSE: 3.437 MILLIRAD ESTIMATED UNCERTAINTY: +/- 19. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 6.089 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 6.557 MICRO-RAD/HR.
 DOSERATE USING P8-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING P8-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----AI-10-----BENEATH THE WARNING SIGN ON FENCE FRONTING THE FIELD
 GROUP CALIBRATION: 4/ 1/75 FIELD PLACEMENT: 4/ 2/75 RETRIEVAL: 5/14/75 GROUP NO.: 43 CHIP A: 7 CHIP B: 8 PAIR NO.: 0
 CAL.TIME1=11.0 TL1= 0.572 TL1= 0.577 CAL.TIME2=18.0 TL2= 1.345 TL2= 1.541 CAL.TIME3=64.0 TL3= 4.737 TL83= 4.711
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.227 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.088
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.862 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.343
 AVERAGE FIELD DOSE: 3.602 MILLIRAD ESTIMATED UNCERTAINTY: +/- 18. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 6.382 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 6.872 MICRO-RAD/HR.
 DOSERATE USING P8-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING P8-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----AI-11-----ON THE FOURTH PHONE POLE FROM THE ENTRANCE
 GROUP CALIBRATION: 4/ 1/75 FIELD PLACEMENT: 4/ 2/75 RETRIEVAL: 5/14/75 GROUP NO.: 43 CHIP A: 9 CHIP B: 10 PAIR NO.: 1
 CAL.TIME1=11.0 TL1= 0.679 TL1= 0.615 CAL.TIME2=18.0 TL2= 1.786 TL2= 1.120 CAL.TIME3=64.0 TL3= 4.701 TL83= 4.495
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.217 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.967
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.197 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 5.565
 AVERAGE FIELD DOSE: 4.381 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
 ***** VALUES OF PAIR REJECTED BECAUSE AV. DOSE +/- DELTA DOSE DO NOT OVERLAP INDICATED FIELD DOSES*****

-----AI-12-----ON WIND VANE OPPOSITE MAIN BLDG. ACROSS RUNWAY
 GROUP CALIBRATION: 4/ 1/75 FIELD PLACEMENT: 4/ 2/75 RETRIEVAL: 5/14/75 GROUP NO.: 43 CHIP A: 11 CHIP B: 12 PAIR NO.: 2
 CAL.TIME1=11.0 TL1= 0.573 TL1= 0.625 CAL.TIME2=18.0 TL2= 1.449 TL2= 1.410 CAL.TIME3=64.0 TL3= 4.286 TL83= 4.668
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.563 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.354
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.648 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.038
 AVERAGE FIELD DOSE: 4.343 MILLIRAD ESTIMATED UNCERTAINTY: +/- 17. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 7.694 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 8.285 MICRO-RAD/HR.
 DOSERATE USING P8-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING P8-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

TLD DOSIMETRY RESULTS FOR : BARCELONETA

-----BARCELONETA-1 ON TREE RTE681 KMI8.6
 GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 4/25/74 RETRIEVAL: 5/29/74 GROUP NO.: 2 CHIP A:11 CHIP B:12 PAIR NO.: 1
 CAL.TIME1=17.0 TLA1= 1.573 TLB1= 2.000 CAL.TIME2=36.0 TLA2= 2.863 TLB2= 2.968 CAL.TIME3=67.0 TLA3= 4.788 TLB3= 4.530
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.742 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.225
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 2.568 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 2.695
 AVERAGE FIELD DOSE: 2.631 MILLIRAD ESTIMATED UNCERTAINTY: +/- 23. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 5.758 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LERRON FADING CORRECTION IS 6.201 MICRO-RAD/HR.
 DOSERATE USING P8-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 6.0 MICRO-RAD/HR.
 DOSERATE USING P8-TA SHIELDING CORRECTION AND LERRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----BARCELONETA-2 ON TREE RTE681 KMI9.6
 GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 4/25/74 RETRIEVAL: 5/29/74 GROUP NO.: 2 CHIP A: 9 CHIP B:10 PAIR NO.: 2
 CAL.TIME1=17.0 TLA1= 1.240 TLB1= 1.070 CAL.TIME2=36.0 TLA2= 3.113 TLB2= 2.834 CAL.TIME3=67.0 TLA3= 5.217 TLB3= 3.995
 DOSIMETER PAIR NOT RECOVERED

-----BARCELONETA-3 ON POST AT FUGRU FACILITIES
 GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 4/25/74 RETRIEVAL: 5/29/74 GROUP NO.: 2 CHIP A: 7 CHIP B: 8 PAIR NO.: 3
 CAL.TIME1=17.0 TLA1= 1.266 TLB1= 2.160 CAL.TIME2=36.0 TLA2= 3.042 TLB2= 3.271 CAL.TIME3=67.0 TLA3= 4.777 TLB3= 4.492
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.177 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.500
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.647 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.006
 AVERAGE FIELD DOSE: 3.326 MILLIRAD ESTIMATED UNCERTAINTY: +/- 19. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 7.279 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LERRON FADING CORRECTION IS 7.839 MICRO-RAD/HR.
 DOSERATE USING P8-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING P8-TA SHIELDING CORRECTION AND LERRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----BARCELONETA-4 ON SIXTH TREE RTE140 KM70.3
 GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 4/25/74 RETRIEVAL: 5/29/74 GROUP NO.: 2 CHIP A: 3 CHIP B: 4 PAIR NO.: 4
 CAL.TIME1=17.0 TLA1= 1.644 TLB1= 1.387 CAL.TIME2=36.0 TLA2= 3.518 TLB2= 3.243 CAL.TIME3=67.0 TLA3= 4.698 TLB3= 4.545
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.654 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.545
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 2.253 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 2.453
 AVERAGE FIELD DOSE: 2.393 MILLIRAD ESTIMATED UNCERTAINTY: +/- 25. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 5.149 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LERRON FADING CORRECTION IS 5.545 MICRO-RAD/HR.
 DOSERATE USING P8-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING P8-TA SHIELDING CORRECTION AND LERRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

BARCELONETA

CONTINUED

-----BARCELONETA-5 ON TREE AT RTE2 AND RTE140 INTERSECTION
 GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 4/25/74 RETRIEVAL: 5/29/74 GROUP NO.: 2 CHIP A: 5 CHIP B: 6 PAIR NO.: 5
 CAL.TIME1=17.0 TL1= 1.50% TLB1= 1.521 CAL.TIME2=36.0 TL2= 2.540 TLB2= 2.885 CAL.TIME3=67.0 TL3= 4.707 TLB3= 5.262
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.937 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.632
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.286 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 2.443
 AVERAGE FIELD DOSE: 2.865 MILLIRAD ESTIMATED UNCERTAINTY: +/- 21. %
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 6.269 MICRO-RAD/HR.
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 6.751 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----BARCELONETA-6 STD. AT FUGRO ENGINEERS OFFICE LEAD SHIELD
 GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 4/25/74 RETRIEVAL: 5/29/74 GROUP NO.: 2 CHIP A: 1 CHIP B: 2 PAIR NO.: 6
 CAL.TIME1=17.0 TL1= 2.299 TLB1= 2.402 CAL.TIME2=36.0 TL2= 2.980 TLB2= 2.495 CAL.TIME3=67.0 TL3= 5.300 TLB3= 4.728
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 0.494 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 0.515
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 0.481 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 0.480
 AVERAGE FIELD DOSE: 0.481 MILLIRAD ESTIMATED UNCERTAINTY: +/- 100. %
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 1.052 MICRO-RAD/HR.
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 1.133 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

TLD DOSIMETRY RESULTS FOR : CHAKCO HONDC

-----CH-1-RTELO LEAD SHIELDED STD. IN ASA IMPOUNDMENT STA.-----
 GROUP CALIBRATION: 5/ 5/74 FIELD PLACEMENT: 6/27/74 RETRIEVAL: 7/30/74 GROUP NO.: 7 CHIP A: 1 CHIP B: 2 PAIR NO.: 1
 CAL.TIME1=17.0 TLA1= 1.307 TLB1= 1.138 CAL.TIME2=35.0 TLA2= 1.366 TLB2= 1.697 CAL.TIME3=67.0 TLA3= 3.752 TLB3= 4.327
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 0.176 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 0.168
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 0.301 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 0.330
 AVERAGE FIELD DOSE: 0.316 MILLIRAD ESTIMATED UNCERTAINTY: +/- 100. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 0.712 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 0.767 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----CH-2-RTELO ON 4TH STUMP AFTER CROSSING DETOUR BRIDGE-----
 GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 6/27/74 RETRIEVAL: 7/30/74 GROUP NO.: 7 CHIP A: 3 CHIP B: 4 PAIR NO.: 2
 CAL.TIME1=17.0 TLA1= 0.797 TLB1= 1.131 CAL.TIME2=35.0 TLA2= 1.583 TLB2= 1.527 CAL.TIME3=67.0 TLA3= 4.374 TLB3= 4.479
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.402 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.702
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.062 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.857
 AVERAGE FIELD DOSE: 4.460 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 10.055 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 10.829 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----CH-3-RTELO ON PHONE POLE SUPPORT CABLE, FRONT OF SLAUGHTERHOUSE-----
 GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 6/27/74 RETRIEVAL: 7/30/74 GROUP NO.: 7 CHIP A: 5 CHIP B: 6 PAIR NO.: 3
 CAL.TIME1=17.0 TLA1= 0.497 TLB1= 1.163 CAL.TIME2=35.0 TLA2= 1.927 TLB2= 1.747 CAL.TIME3=67.0 TLA3= 4.870 TLB3= 4.181
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.473 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.427
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.451 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.309
 AVERAGE FIELD DOSE: 3.350 MILLIRAD ESTIMATED UNCERTAINTY: +/- 19. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 7.621 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 8.207 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----CH-4-RTELO ON TREE WITH SIGN TO PUMPING STA.-----
 GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 6/27/74 RETRIEVAL: 7/30/74 GROUP NO.: 7 CHIP A: 7 CHIP B: 8 PAIR NO.: 4
 CAL.TIME1=17.0 TLA1= 1.053 TLB1= 1.119 CAL.TIME2=35.0 TLA2= 1.314 TLB2= 1.551 CAL.TIME3=67.0 TLA3= 5.032 TLB3= 4.081
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.019 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.794
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 2.166 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 5.012
 AVERAGE FIELD DOSE: 3.589 MILLIRAD ESTIMATED UNCERTAINTY: +/- 18. %
 *****DOSE VALUES OF PAIR REJECTED BECAUSE AV. DOSE +/- DELTA DOSE DU NOT OVERLAP INDICATED FIELD DOSES*****

CHARCO HUNDU
CONTINUE)

-----CH-5-RTELO ON TREE NEXT TO HOLDING TANKS
GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 6/27/74 RETRIEVAL: 7/30/74 GROUP NO.: 7 CHIP A: 9 CHIP B: 10 PAIR NO.: 5
CAL.TIME1=17.0 TLA1= 1.123 TLB1= 0.935 CAL.TIME2=35.0 TLA2= 1.602 TLB2= 1.936 CAL.TIME3=67.0 TLA3= 4.094 TLB3= 5.373
DOSIMETER PAIR NOT RECOVERED

-----CH-6-RTELO (IN RAMBOO STAND AFTER BALL PARK
GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 6/27/74 RETRIEVAL: 7/30/74 GROUP NO.: 7 CHIP A: 11 CHIP B: 12 PAIR NO.: 6
CAL.TIME1=17.0 TLA1= 1.098 TLB1= 1.195 CAL.TIME2=35.0 TLA2= 1.665 TLB2= 1.018 CAL.TIME3=67.0 TLA3= 4.971 TLB3= 4.776
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.130 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 0.570
PAIR VALUES REJECTED BECAUSE OF INDICATED UNCERTAINTY IN CALIBRATION DATA

-----CH-1-RTELO, ASA STA. CHARCO HUNDU, LEAD SHIELDED
GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 GROUP NO.: 44 CHIP A: 1 CHIP B: 2 PAIR NO.: 1
CAL.TIME1=11.0 TLA1= 0.676 TLB1= 0.644 CAL.TIME2=18.0 TLA2= 1.323 TLB2= 2.373 CAL.TIME3=64.0 TLA3= 5.307 TLB3= 4.450
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 3.842 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 0.749
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 6.064 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 1.471
AVERAGE FIELD DOSE: 3.607 MILLIRAD ESTIMATED UNCERTAINTY: +/- 18.3 %
DOSE VALUES REJECTED BECAUSE AV. DOSE +/- DELTA DOSE (D) NOT OVERLAP INDICATED FIELD DOSES**

-----CH-2-HOLDING TANKS, ASA STA. CHARCO HUNDU
GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 GROUP NO.: 44 CHIP A: 3 CHIP B: 4 PAIR NO.: 2
CAL.TIME1=11.0 TLA1= 0.651 TLB1= 0.632 CAL.TIME2=18.0 TLA2= 1.407 TLB2= 1.308 CAL.TIME3=64.0 TLA3= 4.434 TLB3= 4.588
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.604 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.245
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 2.704 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.010
AVERAGE FIELD DOSE: 3.357 MILLIRAD ESTIMATED UNCERTAINTY: +/- 19.3 %
DOSE VALUES OF PAIR REJECTED BECAUSE AV. DOSE +/- DELTA DOSE (D) NOT OVERLAP INDICATED FIELD DOSES**

CHARC (10/2)

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-----CH-3-RTEL0,K434.5 ON BARBED WIRE NEXT TO ROAD SIGN
GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 GROUP NO.: 44 CHIP A: 5 CHIP B: 6 PAIR NO.: 3
CAL.TIME=11.0 TL#1= 0.0% TL#1= 0.612 CAL.TIME=18.0 TL#2= 1.280 TL#2= 1.317 CAL.TIME=66.0 TL#3= 4.497 TL#3= 4.251
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.357 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.102
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.231 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.903
AVERAGE FIELD DOSE: 4.102 MILLIRAD ESTIMATED UNCERTAINTY: +/- 17. %
DOSERATE USING LINDENEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 10.525 MICRO-RAD/HR.
DOSERATE USING LINDENEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 11.334 MICRO-RAD/HR.
DOSERATE USING LINDEKEY ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----CH-4-RTEL0, TL05 CHORROS
GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 GROUP NO.: 44 CHIP A: 7 CHIP B: 8 PAIR NO.: 4
CAL.TIME=11.0 TL#1= 0.652 TL#1= 0.608 CAL.TIME=18.0 TL#2= 1.354 TL#2= 1.230 CAL.TIME=64.0 TL#3= 4.801 TL#3= 4.361
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.497 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.354
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.282 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.445
AVERAGE FIELD DOSE: 4.363 MILLIRAD ESTIMATED UNCERTAINTY: +/- 17. %
DOSERATE USING LINDENEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 11.195 MICRO-RAD/HR.
DOSERATE USING LINDENEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 12.056 MICRO-RAD/HR.
DOSERATE USING LINDEKEY ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----CH-5-RTEL0,K495.4 GUARD RAIL POST
GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 GROUP NO.: 44 CHIP A: 9 CHIP B: 10 PAIR NO.: 5
CAL.TIME=11.0 TL#1= 0.636 TL#1= 0.717 CAL.TIME=18.0 TL#2= 1.245 TL#2= 1.279 CAL.TIME=64.0 TL#3= 3.944 TL#3= 4.536
DOSIMETER PAIR NOT RECOVERED

-----CH-6-RTEL0,K469.3 FRONT OF ABANDONED HOUSE
GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 GROUP NO.: 44 CHIP A: 11 CHIP B: 12 PAIR NO.: 6
CAL.TIME=11.0 TL#1= 0.591 TL#1= 0.546 CAL.TIME=18.0 TL#2= 1.335 TL#2= 1.275 CAL.TIME=64.0 TL#3= 4.283 TL#3= 4.177
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.175 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.183
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.006 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.172
AVERAGE FIELD DOSE: 4.087 MILLIRAD ESTIMATED UNCERTAINTY: +/- 17. %
DOSERATE USING LINDENEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 10.490 MICRO-RAD/HR.
DOSERATE USING LINDENEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 11.297 MICRO-RAD/HR.
DOSERATE USING LINDEKEY ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.

TLD DOSIMETRY RESULTS FOR : D05 BUCAS

-----D05 BUCAS-1 UN TREE RT146 KM2.3
 GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 5/30/74 RETRIEVAL: 6/10/74 GROUP NO.: 3 CHIP A:90 CHIP B: 0 PAIR NO.: 0
 CAL.TIME1=17.0 TL1A1= 1.680 TL1B1= 1.390 CAL.TIME2=36.0 TL2= 2.339 TLB2= 2.636 CAL.TIME3=67.0 TL3= 4.567 TLB3= 4.860
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.603 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.513
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 2.137 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 2.534
 AVERAGE FIELD DOSE: 2.336 MILLIRAD ESTIMATED UNCERTAINTY: +/- 25. %
 PAIR VALUES REJECTED FOR LACK OF SUFFICIENT EXPOSURE TIME GIVEN TO FIELD DOSIMETERS

-----D05 BUCAS-2 ON FENCE AT HYDROELECTRIC PLANT
 GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 5/30/74 RETRIEVAL: 6/10/74 GROUP NO.: 3 CHIP A:11 CHIP B:12 PAIR NO.: 2
 CAL.TIME1=17.0 TL1A1= 1.450 TL1B1= 1.690 CAL.TIME2=36.0 TL2= 2.269 TLB2= 2.668 CAL.TIME3=67.0 TL3= 4.560 TLB3= 5.411
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.785 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.062
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.264 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.253
 AVERAGE FIELD DOSE: 3.258 MILLIRAD ESTIMATED UNCERTAINTY: +/- 19. %
 PAIR VALUES REJECTED FOR LACK OF SUFFICIENT EXPOSURE TIME GIVEN TO FIELD DOSIMETERS

-----D05 BUCAS-3 STD. AT AFF HYDROELECTRIC PLANT
 GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 5/30/74 RETRIEVAL: 6/10/74 GROUP NO.: 3 CHIP A: 1 CHIP B: 2 PAIR NO.: 3
 CAL.TIME1= 7.0 TL1A1= 1.540 TL1B1= 1.323 CAL.TIME2= 6.0 TL2= 2.968 TLB2= 2.655 CAL.TIME3= 7.0 TL3= 4.496 TLB3= 4.466
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 0.883 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 0.752
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 0.529 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 0.524
 AVERAGE FIELD DOSE: 0.526 MILLIRAD ESTIMATED UNCERTAINTY: +/- 100. %
 PAIR VALUES REJECTED FOR LACK OF SUFFICIENT EXPOSURE TIME GIVEN TO FIELD DOSIMETERS

-----D05 BUCAS-4 ON TREE AT AFF PLANT NEAR PARKING
 GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 5/30/74 RETRIEVAL: 6/10/74 GROUP NO.: 3 CHIP A: 5 CHIP B: 6 PAIR NO.: 4
 CAL.TIME1=17.0 TL1A1= 1.930 TL1B1= 1.590 CAL.TIME2=36.0 TL2= 2.612 TLB2= 2.634 CAL.TIME3=67.0 TL3= 4.676 TLB3= 5.289
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.116 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.094
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 2.922 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.436
 AVERAGE FIELD DOSE: 3.179 MILLIRAD ESTIMATED UNCERTAINTY: +/- 20. %
 PAIR VALUES REJECTED FOR LACK OF SUFFICIENT EXPOSURE TIME GIVEN TO FIELD DOSIMETERS

-----DOS 80CAS-3 ON RUSH AT AFF PARKING
 GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 5/30/74 RETRIEVAL: 6/10/74 GROUP NO.: 3 CHIP A: 3 CHIP B: 4 PAIR NO.: 5
 CAL-TIME1=17.0 TLA1= 1.740 TLB1= 1.520 CAL-TIME2=36.0 TLA2= 2.529 TLB2= 2.520 CAL-TIME3=67.0 TLA3= 4.927 TLB3= 4.414
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.721 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.720
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 5.070 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 5.174
 AVERAGE FIELD DOSE: 5.122 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
 PAIR VALUES REJECTED FOR LACK OF SUFFICIENT EXPOSURE TIME GIVEN TO FIELD DOSIMETERS

-----DOS 30CAS-5 ON BARREWIRES RTE10 KM69.2
 GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 5/30/74 RETRIEVAL: 6/10/74 GROUP NO.: 3 CHIP A: 7 CHIP B: 8 PAIR NO.: 6
 CAL-TIME1=17.0 TLA1= 1.360 TLB1= 1.630 CAL-TIME2=36.0 TLA2= 2.559 TLB2= 2.126 CAL-TIME3=67.0 TLA3= 4.798 TLB3= 4.346
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.814 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.586
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.377 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 5.589
 AVERAGE FIELD DOSE: 4.483 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
 *****DOSE VALUES OF PAIR REJECTED BECAUSE AV. DOSE +/- DELTA DOSE DO NOT OVERLAP INDICATED FIELD DOSES*****

-----DOS 80CAS-1 STD. HYDROELECTRIC PLANT LEAD SHIELD
 GROUP CALIBRATION: 6/24/74 FIELD PLACEMENT: 6/25/74 RETRIEVAL: 7/30/74 GROUP NO.: 13 CHIP A: 1 CHIP B: 2 PAIR NO.: 1
 CAL-TIME1=7.0 TLA1= 1.540 TLB1= 1.323 CAL-TIME2= 6.0 TLA2= 2.968 TLB2= 2.055 CAL-TIME3= 7.0 TLA3= 4.496 TLB3= 4.466
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 0.341 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 0.714
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 0.203 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 0.496
 AVERAGE FIELD DOSE: 0.350 MILLIRAD ESTIMATED UNCERTAINTY: +/- 100. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 0.743 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 0.800 MICRO-RAD/HR.
 DOSERATE USING P8-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING P8-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----DOS 30CAS-2 ON SMALL RUSH AT AFF PARKING
 GROUP CALIBRATION: 6/24/74 FIELD PLACEMENT: 6/25/74 RETRIEVAL: 7/30/74 GROUP NO.: 13 CHIP A: 3 CHIP B: 4 PAIR NO.: 2
 CAL-TIME1=17.0 TLA1= 1.740 TLB1= 1.520 CAL-TIME2=36.0 TLA2= 2.529 TLB2= 2.520 CAL-TIME3=67.0 TLA3= 4.927 TLB3= 4.414
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.593 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.113
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.928 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.710
 AVERAGE FIELD DOSE: 4.259 MILLIRAD ESTIMATED UNCERTAINTY: +/- 17. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 9.075 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 9.773 MICRO-RAD/HR.
 DOSERATE USING P8-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING P8-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

DOS 8704S

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-----DOS 80CAS-3 ON FENCE AT AFF ENTRANCE
 GROUP CALIBRATION: 6/24/74 FIELD PLACEMENT: 6/25/74 RETRIEVAL: 7/30/74 GROUP NO.: 13 CHIP A: 5 CHIP B: 6 PAIR NO.: 3
 CAL.TIME1=17.0 TLAL= 1.930 TLB1= 1.690 CAL.TIME2=36.0 TLA2= 2.612 TLB2= 2.634 CAL.TIME3=67.0 TLA3= 4.676 TLB3= 5.289
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.074 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.709
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 1.241 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 2.494
 AVERAGE FIELD DOSE: 1.863 MILLIRAD ESTIMATED UNCERTAINTY: +/- 31. %
 *****DOSE VALUES OF PAIR REJECTED BECAUSE AV. DOSE +/- DELTA DOSE DO NOT OVERLAP INDICATED FIELD DOSES*****

-----DOS 80CAS-4 ON TREE AT ' LOS CHORROS ' RYELO
 GROUP CALIBRATION: 6/24/74 FIELD PLACEMENT: 6/25/74 RETRIEVAL: 7/30/74 GROUP NO.: 13 CHIP A: 7 CHIP B: 8 PAIR NO.: 4
 CAL.TIME1=17.0 TLAL= 1.360 TLB1= 1.630 CAL.TIME2=36.0 TLA2= 2.359 TLB2= 2.126 CAL.TIME3=67.0 TLA3= 4.798 TLB3= 4.346
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.690 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 4.330
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.055 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 8.763
 AVERAGE FIELD DOSE: 5.909 MILLIRAD ESTIMATED UNCERTAINTY: +/- 15. %
 *****DOSE VALUES OF PAIR REJECTED BECAUSE AV. DOSE +/- DELTA DOSE DO NOT OVERLAP INDICATED FIELD DOSES*****

-----DOS 80CAS-5 ON TREE RTE146 KM6.4
 GROUP CALIBRATION: 6/24/74 FIELD PLACEMENT: 6/25/74 RETRIEVAL: 7/30/74 GROUP NO.: 13 CHIP A: 9 CHIP B: 10 PAIR NO.: 5
 CAL.TIME1=17.0 TLAL= 1.980 TLB1= 1.390 CAL.TIME2=36.0 TLA2= 2.339 TLB2= 2.436 CAL.TIME3=67.0 TLA3= 4.567 TLB3= 4.860
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.970 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.547
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.328 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 2.605
 AVERAGE FIELD DOSE: 2.967 MILLIRAD ESTIMATED UNCERTAINTY: +/- 21. %
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 6.307 MICRO-RAD/HR.
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND LEHRN FADING CORRECTION IS 6.792 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND LEHRN FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----DOS 80CAS-6 ON BARBEDWIRE RTE 1J KM69.3
 GROUP CALIBRATION: 6/24/74 FIELD PLACEMENT: 6/25/74 RETRIEVAL: 7/30/74 GROUP NO.: 13 CHIP A: 11 CHIP B: 12 PAIR NO.: 6
 CAL.TIME1=17.0 TLAL= 1.450 TLB1= 1.650 CAL.TIME2=36.0 TLA2= 2.269 TLB2= 2.668 CAL.TIME3=67.0 TLA3= 4.560 TLB3= 5.411
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.805 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.699
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.312 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 2.351
 AVERAGE FIELD DOSE: 2.631 MILLIRAD ESTIMATED UNCERTAINTY: +/- 22. %
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 6.019 MICRO-RAD/HR.
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND LEHRN FADING CORRECTION IS 6.482 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND LEHRN FADING CORRECTION IS 0.0 MICRO-RAD/HR.

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-----DB-1-LEAD-SHIELDED STD., HYDROELECTRIC STA.-----
 GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 GROUP NO.: 46 CHIP A: 1 CHIP B: 2 PAIR NO.: 1
 CAL.TIME1=11.0 TLA1= 0.659 TLB1= 0.599 CAL.TIME2=18.0 TLA2= 1.164 TLB2= 1.086 CAL.TIME3=64.0 TLA3= 3.383 TLB3= 3.289
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 0.698 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 0.741
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 1.486 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 1.678
 AVERAGE FIELD DOSE: 1.532 MILLIRAD ESTIMATED UNCERTAINTY: +/- 36. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 4.060 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 4.372 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----DB-2-RTE146,KM0.4 TREE STUMP-----
 GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 GROUP NO.: 46 CHIP A: 3 CHIP B: 4 PAIR NO.: 2
 CAL.TIME1=11.0 TLA1= 0.686 TLB1= 0.601 CAL.TIME2=18.0 TLA2= 1.235 TLB2= 1.141 CAL.TIME3=64.0 TLA3= 4.044 TLB3= 4.092
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.572 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.000
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.029 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.042
 AVERAGE FIELD DOSE: 3.536 MILLIRAD ESTIMATED UNCERTAINTY: +/- 18. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 9.071 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 9.769 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----DB-3-RTE146,KM7.0 TREE NEXT TO CEMENT BLOCK-----
 GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 GROUP NO.: 46 CHIP A: 5 CHIP B: 6 PAIR NO.: 3
 CAL.TIME1=11.0 TLA1= 0.644 TLB1= 0.693 CAL.TIME2=18.0 TLA2= 1.261 TLB2= 1.224 CAL.TIME3=64.0 TLA3= 3.338 TLB3= 3.622
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.312 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.042
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 2.463 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.339
 AVERAGE FIELD DOSE: 3.401 MILLIRAD ESTIMATED UNCERTAINTY: +/- 19. %
 ***** VALUES OF PAIR REJECTED BECAUSE AV. DOSE +/- DELTA DOSE DO NOT OVERLAP INDICATED FIELD DOSES*****

-----DB-4-RTE140,KM3.3 CRACK IN ROCK CLIFF FACE-----
 GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 GROUP NO.: 46 CHIP A: 7 CHIP B: 8 PAIR NO.: 4
 CAL.TIME1=11.0 TLA1= 0.576 TLB1= 0.773 CAL.TIME2=18.0 TLA2= 1.038 TLB2= 1.099 CAL.TIME3=64.0 TLA3= 4.094 TLB3= 4.213
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.991 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.001
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.165 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.034
 AVERAGE FIELD DOSE: 4.104 MILLIRAD ESTIMATED UNCERTAINTY: +/- 17. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 10.518 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 11.327 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

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-----03-5-HYDROELECTRIC PLANT PARKING LOT - CRYSTON BUSH
GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 GROUP NO.: 46 CHIP A: 9 CHIP B: 10 PAIR NO.: 5
CAL.TIME1=11.0 TLA1= 0.619 TLB1= 0.600 CAL.TIME2=18.0 TLA2= 1.117 TLB2= 1.134 CAL.TIME3=64.0 TLA3= 3.693 TLB3= 3.985
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.857 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.234
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.020 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.604
AVERAGE FIELD DOSE: 4.312 MILLIRAD ESTIMATED UNCERTAINTY: +/- 17. %
DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 11.062 MICRO-RAD/HR.
DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND LERRON FADING CORRECTION IS 11.913 MICRO-RAD/HR.
DOSE RATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSE RATE USING PB-TA SHIELDING CORRECTION AND LERRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----04-6-HYDROELECTRIC PLANT ENTRANCE - GRAPEFRUIT TREE
GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 GROUP NO.: 46 CHIP A: 11 CHIP B: 12 PAIR NO.: 6
CAL.TIME1=11.0 TLA1= 0.356 TLB1= 0.345 CAL.TIME2=18.0 TLA2= 1.039 TLB2= 1.015 CAL.TIME3=64.0 TLA3= 3.975 TLB3= 4.096
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.280 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.463
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 2.804 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.179
AVERAGE FIELD DOSE: 2.992 MILLIRAD ESTIMATED UNCERTAINTY: +/- 21. %
DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 7.676 MICRO-RAD/HR.
DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND LERRON FADING CORRECTION IS 8.267 MICRO-RAD/HR.
DOSE RATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSE RATE USING PB-TA SHIELDING CORRECTION AND LERRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

TLD DOSIMETRY RESULTS FOR : FLORIDA ADENTRO

-----FLORIDA ADENTRO-1 ON FENCE OF AFF STATION FACILITY
 GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 4/30/74 RETRIEVAL: 6/10/74 GROUP NO.: 1 CHIP A:11 CHIP B:12 PAIR NO.: 1
 CAL.TIME1=17.0 TLA1= 1.707 TLB1= 1.546 CAL.TIME2=36.0 TLA2= 2.533 TLB2= 2.922 CAL.TIME3=67.0 TLA3= 4.446 TLB3= 4.451
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.942 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.544
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 5.616 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.055
 AVERAGE FIELD DOSE: 4.336 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
 *****DOSE VALUES OF PAIR REJECTED BECAUSE AV. DOSE +/- DELTA DOSE DO NOT OVERLAP INDICATED FIELD DOSES*****

-----FLORIDA ADENTRO-2 IN LEAD SHIELD AT AFF FACILITY STD RTE642
 GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 4/30/74 RETRIEVAL: 6/10/74 GROUP NO.: 1 CHIP A: 1 CHIP B: 2 PAIR NO.: 2
 CAL.TIME1=17.0 TLA1= 2.139 TLB1= 1.715 CAL.TIME2=36.0 TLA2= 2.160 TLB2= 2.715 CAL.TIME3=67.0 TLA3= 4.045 TLB3= 4.281
 DOSIMETER PAIR NOT RECOVERED

-----FLORIDA ADENTRO-3 ON BARBEDWIRE IN FRONT OF CEMETERY RTE642
 GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 4/30/74 RETRIEVAL: 6/10/74 GROUP NO.: 1 CHIP A: 3 CHIP B: 4 PAIR NO.: 3
 CAL.TIME1=17.0 TLA1= 1.907 TLB1= 2.156 CAL.TIME2=36.0 TLA2= 2.361 TLB2= 2.565 CAL.TIME3=67.0 TLA3= 3.968 TLB3= 4.468
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 3.984 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 4.217
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 9.262 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 8.288
 AVERAGE FIELD DOSE: 8.573 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 15.567 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 16.764 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----FLORIDA ADENTRO-4 ON BARBEDWIRE RTE140 KM53.0
 GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 4/30/74 RETRIEVAL: 6/10/74 GROUP NO.: 1 CHIP A: 9 CHIP B:10 PAIR NO.: 4
 CAL.TIME1=17.0 TLA1= 1.765 TLB1= 2.051 CAL.TIME2=36.0 TLA2= 2.458 TLB2= 2.451 CAL.TIME3=67.0 TLA3= 4.094 TLB3= 4.409
 DOSIMETER PAIR NOT RECOVERED

FLORIDA ADENTRO CONTINUED

-----FLORIDA ADENTRO-5 ON BARBEDWIRE RTE140 KM52.5
 GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 4/30/74 RETRIEVAL: 6/10/74 GROUP NO.: 1 CHIP A: 5 CHIP B: 6 PAIR NO.: 5
 CAL.TIME1=17.0 TLA1= 1.949 TLB1= 2.076 CAL.TIME2=36.0 TLA2= 2.151 TLB2= 2.259 CAL.TIME3=67.0 TLA3= 4.811 TLB3= 4.045
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 3.973 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 3.661
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 7.540 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 7.949
 AVERAGE FIELD DOSE: 7.745 MILLIRAD ESTIMATED UNCERTAINTY: +/- 15. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 14.055 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 15.136 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----FLORIDA ADENTRO-6 ON LARGE TREE RTE140 KM51.7
 GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 4/30/74 RETRIEVAL: 6/10/74 GROUP NO.: 1 CHIP A: 7 CHIP B: 8 PAIR NO.: 6
 CAL.TIME1=17.0 TLA1= 1.936 CAL.TIME2=36.0 TLA2= 2.551 TLB2= 2.321 CAL.TIME3=67.0 TLA3= 4.678 TLB3= 4.226
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 4.802 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 4.245
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 9.065 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 8.868
 AVERAGE FIELD DOSE: 8.966 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 16.272 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 17.524 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----FLORIDA ADENTRO-1 SMALL TREE RTE146 KM4.2
 GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 6/25/74 RETRIEVAL: 7/30/74 GROUP NO.: 8 CHIP A: 1 CHIP B: 2 PAIR NO.: 1
 CAL.TIME1=17.0 TLA1= 1.150 TLB1= 1.269 CAL.TIME2=45.0 TLA2= 3.717 TLB2= 3.442 CAL.TIME3=67.0 TLA3= 5.233 TLB3= 5.450
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.545 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.137
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 2.805 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.710
 AVERAGE FIELD DOSE: 3.258 MILLIRAD ESTIMATED UNCERTAINTY: +/- 19. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 6.926 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 7.458 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----FLORIDA ADENTRO-2 SMALL TREE RTE140 KM59.9
 GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 6/25/74 RETRIEVAL: 7/30/74 GROUP NO.: 8 CHIP A: 3 CHIP B: 4 PAIR NO.: 2
 CAL.TIME1=17.0 TLA1= 1.140 TLB1= 1.112 CAL.TIME2=45.0 TLA2= 3.410 TLB2= 3.575 CAL.TIME3=67.0 TLA3= 5.236 TLB3= 5.030
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.685 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.266
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.423 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.965
 AVERAGE FIELD DOSE: 3.544 MILLIRAD ESTIMATED UNCERTAINTY: +/- 18. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 7.534 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 8.114 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

FLORIDA ADENTRO CONTINUED

-----FLORIDA ADENTRO-3 ON BARBEDWIRE RTE140 KM52.5
 GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 6/25/74 RETRIEVAL: 7/30/74 GROUP NO.: 8 CHIP A: 5 CHIP B: 6 PAIR NO.: 3
 CAL.TIME1=17.0 TLA1= 1.590 TLB1= 0.848 CAL.TIME2=45.0 TLA2= 3.381 TLB2= 3.412 CAL.TIME3=67.0 TLA3= 4.903 TLB3= 5.181
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.667 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.457
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.331 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.551
 AVERAGE FIELD DOSE: 4.441 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 9.441 MICRO-RAD/HR.
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 10.167 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----FLORIDA ADENTRO-4 ON BARBEDWIRE RTE146 KM11
 GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 6/25/74 RETRIEVAL: 7/30/74 GROUP NO.: 8 CHIP A: 7 CHIP B: 8 PAIR NO.: 4
 CAL.TIME1=17.0 TLA1= 1.194 TLB1= 0.863 CAL.TIME2=45.0 TLA2= 3.417 TLB2= 3.267 CAL.TIME3=67.0 TLA3= 5.007 TLB3= 4.069
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.393 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 3.450
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.226 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 6.585
 AVERAGE FIELD DOSE: 5.405 MILLIRAD ESTIMATED UNCERTAINTY: +/- 15. %
 *****DOSE VALUES OF PAIR REJECTED BECAUSE AV. DOSE +/- DELTA DOSE DO NOT OVERLAP INDICATED FIELD DOSES*****

-----FLORIDA ADENTRO-5 ON FENCE OF AFF FACILITY FLORIDA ADENTRO
 GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 6/25/74 RETRIEVAL: 7/30/74 GROUP NO.: 8 CHIP A: 9 CHIP B: 10 PAIR NO.: 5
 CAL.TIME1=17.0 TLA1= 0.930 TLB1= 1.178 CAL.TIME2=45.0 TLA2= 3.662 TLB2= 3.890 CAL.TIME3=67.0 TLA3= 5.231 TLB3= 5.155
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.232 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.791
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 2.645 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.071
 AVERAGE FIELD DOSE: 2.858 MILLIRAD ESTIMATED UNCERTAINTY: +/- 21. %
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 6.076 MICRO-RAD/HR.
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 6.544 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----FLORIDA ADENTRO-6 ON TREE RTE140 KM48.4
 GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 6/25/74 RETRIEVAL: 7/30/74 GROUP NO.: 8 CHIP A: 11 CHIP B: 12 PAIR NO.: 6
 CAL.TIME1=17.0 TLA1= 0.977 TLB1= 1.136 CAL.TIME2=45.0 TLA2= 3.726 TLB2= 3.061 CAL.TIME3= 7.0 TLA3= 3.999 TLB3= 4.514
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.219 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.615
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.903 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 5.070
 AVERAGE FIELD DOSE: 4.437 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 9.538 MICRO-RAD/HR.
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 10.272 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

FLORIDA ADENTKO CONTINUED

-----FA-1-RTE#146, KM10.9 TREE RIGHTHAND SIDE TOWARD D05 80CAS GROUP NO.: 45 CHIP A: 1 CHIP B: 2 PAIR NO.: 1
 CAL. TIME1=11.0 TLAI= 0.638 TLBI= 0.709 CAL. TIME2=18.0 TLAZ= 1.184 TLBZ= 1.350 CAL. TIME3=64.0 TLA3= 4.574 TLB3= 5.018
 DOSIMETER PAIR NOT RECOVERED

-----FA-2-RTE#140, KM50.0 TREE AFTER MARKER TOWARD D05 80CAS GROUP NO.: 45 CHIP A: 3 CHIP B: 4 PAIR NO.: 2
 GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 CAL. TIME3=64.0 TLA3= 4.413 TLB3= 3.958
 CAL. TIME1=11.0 TLAI= 0.665 TLBI= 0.649 CAL. TIME2=18.0 TLAZ= 1.229 TLBZ= 1.116 CAL. TIME3=64.0 TLA3= 4.413 TLB3= 3.958
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.448 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.835
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.586 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 5.901
 AVERAGE FIELD DOSE: 5.244 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 13.453 MICRO-RAD/HR.
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 14.488 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----FA-3-RTE#140, KM48.4 TREE NEXT TO KM MARKER TOWARD D05 80CAS GROUP NO.: 45 CHIP A: 5 CHIP B: 6 PAIR NO.: 3
 GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 CAL. TIME3=64.0 TLA3= 4.404 TLB3= 4.690
 CAL. TIME1=11.0 TLAI= 0.694 TLBI= 0.615 CAL. TIME2=18.0 TLAZ= 1.164 TLBZ= 1.240 CAL. TIME3=64.0 TLA3= 4.404 TLB3= 4.690
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.139 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.995
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.075 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.614
 AVERAGE FIELD DOSE: 3.845 MILLIRAD ESTIMATED UNCERTAINTY: +/- 18. %
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 9.864 MICRO-RAD/HR.
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 10.623 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----FA-4-RTE#140, KM53.4 TOP STRAND OF BARBED WIRE AT MARKER GROUP NO.: 45 CHIP A: 7 CHIP B: 8 PAIR NO.: 4
 GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 CAL. TIME3=64.0 TLA3= 3.787 TLB3= 3.855
 CAL. TIME1=11.0 TLAI= 0.734 TLBI= 0.700 CAL. TIME2=18.0 TLAZ= 1.186 TLBZ= 1.100 CAL. TIME3=64.0 TLA3= 3.787 TLB3= 3.855
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.691 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.934
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 5.746 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 6.262
 AVERAGE FIELD DOSE: 6.034 MILLIRAD ESTIMATED UNCERTAINTY: +/- 15. %
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 15.403 MICRO-RAD/HR.
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 16.588 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

FLORIDA ADETRU CONTINUED

-----FA-5-RTER#14J,KM452.3 TOP STRAND OF BARRED WIRE OVER CROSS MONUMENT
 GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 GROUP NO.: 45 CHIP A: 9 CHIP B: 10 PAIR NO.: 5
 CAL.TIME1=11.0 TLA1= 0.624 TLB1= 0.681 CAL.TIME2=18.0 TLA2= 1.214 TLB2= 1.164 CAL.TIME3=64.0 TLA3= 4.186 TLB3= 4.246
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.834 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.549
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 5.547 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.980
 AVERAGE FIELD DOSE: 5.264 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 13.505 MICRO-RAD/HR.
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND LERRON FADING CORRECTION IS 14.543 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND LERRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----FA-6-RTER#14J,KM46.8 THIRD TREE FROM MARKER TOWARD DUS BOGAS
 GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 GROUP NO.: 45 CHIP A: 11 CHIP B: 12 PAIR NO.: 6
 CAL.TIME1=11.0 TLA1= 0.662 TLB1= 0.891 CAL.TIME2=18.0 TLA2= 1.062 TLB2= 1.185 CAL.TIME3=64.0 TLA3= 4.097 TLB3= 4.246
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.040 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.684
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.227 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.284
 AVERAGE FIELD DOSE: 3.755 MILLIRAD ESTIMATED UNCERTAINTY: +/- 18. %
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 9.635 MICRO-RAD/HR.
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND LERRON FADING CORRECTION IS 10.376 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND LERRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

TLD DOSIMETRY RESULTS FOR : ISLCTE

-----ISLOTE-1 CITRUS TREE BEHIND FACILITY EAST TRANSECT
GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 4/25/74 RETRIEVAL: 5/29/74 GROUP NO.: 4 CHIP A: 9 CHIP B: 10 PAIR NO.: 1
CAL. TIME=17.0 TL#1= 1.350 TL#1= 1.435 CAL. TIME2=35.0 TL#2= 2.315 TL#2= 2.170 CAL. TIME3=42.0 TL#3= 3.296 TL#3= 3.017
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.656 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.309
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.932 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.762
AVERAGE FIELD DOSE: 4.847 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 10.607 MICRO-RAD/HR.
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 11.423 MICRO-RAD/HR.
DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----ISLOTE-2 TREE SOUTH WEST OF FACILITY EAST TRANSECT
GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 4/25/74 RETRIEVAL: 5/29/74 GROUP NO.: 4 CHIP A: 11 CHIP B: 12 PAIR NO.: 2
CAL. TIME=17.0 TL#1= 0.891 TL#1= 1.492 CAL. TIME2=35.0 TL#2= 1.969 TL#2= 2.123 CAL. TIME3=42.0 TL#3= 3.398 TL#3= 3.367
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.774 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.949
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.182 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.957
AVERAGE FIELD DOSE: 4.070 MILLIRAD ESTIMATED UNCERTAINTY: +/- 17. %
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 8.906 MICRO-RAD/HR.
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 9.591 MICRO-RAD/HR.
DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----ISLOTE-3 MAYA PLANT WEST NORTH WEST OF FACILITY EAST TRANSECT
GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 4/25/74 RETRIEVAL: 5/29/74 GROUP NO.: 4 CHIP A: 3 CHIP B: 4 PAIR NO.: 3
CAL. TIME=17.0 TL#1= 1.708 TL#1= 1.697 CAL. TIME2=35.0 TL#2= 2.348 TL#2= 2.216 CAL. TIME3=42.0 TL#3= 5.907 TL#3= 3.449
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 3.739 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.973
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.972 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.501
AVERAGE FIELD DOSE: 4.236 MILLIRAD ESTIMATED UNCERTAINTY: +/- 17. %
*****DOSE VALUES OF PAIR REJECTED BECAUSE AV. DOSE +/- DELTA DOSE DO NOT OVERLAP INDICATED FIELD DOSES*****

-----ISLOTE-4 POST NORTH OF MAYA PLANT EAST TRANSECT
GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 4/25/74 RETRIEVAL: 5/29/74 GROUP NO.: 4 CHIP A: 5 CHIP B: 6 PAIR NO.: 4
CAL. TIME=17.0 TL#1= 1.524 TL#1= 2.012 CAL. TIME2=35.0 TL#2= 2.238 TL#2= 2.334 CAL. TIME3=42.0 TL#3= 3.548 TL#3= 3.982
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.050 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.803
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.120 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 2.007
AVERAGE FIELD DOSE: 3.063 MILLIRAD ESTIMATED UNCERTAINTY: +/- 20. %
*****DOSE VALUES OF PAIR REJECTED BECAUSE AV. DOSE +/- DELTA DOSE DO NOT OVERLAP INDICATED FIELD DOSES*****

ISLOTE CONTINUED

-----ISLOTE-5 AT DRIVEWAY FROM RTE681 CN BARBED WIRE FENCE EAST TRANSECT
 GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 4/25/74 RETRIEVAL: 5/29/74 GROUP NO.: 4 CHIP A: 1 CHIP B: 2 PAIR NO.: 5
 CAL.TIME1=17.0 TL1A= 1.466 TLB1= 1.596 CAL.TIME2=35.0 TLA2= 2.193 TLB2= 2.504 CAL.TIME3=42.0 TLA3= 3.655 TLB3= 7.459
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.457 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.302
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.778 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.084
 AVERAGE FIELD DOSE: 4.431 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 9.696 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 10.442 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----ISLOTE-6STD IN LEAD BLOCK IN RENTED FACILITY ON RTE681 EAST TRANSECT
 GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 4/25/74 RETRIEVAL: 5/29/74 GROUP NO.: 4 CHIP A: 7 CHIP B: 8 PAIR NO.: 6
 CAL.TIME1=17.0 TL1A= 1.308 TLB1= 1.839 CAL.TIME2=35.0 TLA2= 2.285 TLB2= 2.914 CAL.TIME3=42.0 TLA3= 2.736 TLB3= 3.112
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 0.794 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 0.696
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 0.984 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 0.825
 AVERAGE FIELD DOSE: 0.904 MILLIRAD ESTIMATED UNCERTAINTY: +/- 62. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 1.979 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 2.131 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----ISLOTE-1 FENCE AT BASE OF TOWER MET. TOWER TRANSECT
 GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 6/ 5/74 RETRIEVAL: 7/18/74 GROUP NO.: 4 CHIP A: 3 CHIP B: 4 PAIR NO.: 1
 CAL.TIME1=17.0 TL1A= 1.708 TLB1= 1.657 CAL.TIME2=35.0 TLA2= 2.346 TLB2= 2.216 CAL.TIME3=42.0 TLA3= 5.907 TLB3= 3.449
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.329 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.761
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.541 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 5.019
 AVERAGE FIELD DOSE: 4.730 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 8.271 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 8.907 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----ISLOTE-2 ON BARBED WIRE EAST GUY MET. TOWER TRANSECT
 GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 6/ 5/74 RETRIEVAL: 7/18/74 GROUP NO.: 4 CHIP A: 5 CHIP B: 6 PAIR NO.: 2
 CAL.TIME1=17.0 TL1A= 1.524 TLB1= 2.012 CAL.TIME2=35.0 TLA2= 2.238 TLB2= 2.334 CAL.TIME3=42.0 TLA3= 3.548 TLB3= 3.982
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.168 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.432
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.379 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.666
 AVERAGE FIELD DOSE: 4.522 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 7.825 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 8.427 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

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-----ISLOTE-3 ON BARBEDWIRE WEST GUY MET. TOWER TRANSECT
GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 6/ 5/74 RETRIEVAL: 7/18/74 GROUP NO.: 4 CHIP A: 7 CHIP B: 8 PAIR NO.: 3
CAL.TIME1=17.0 TLA1= 1.808 TLB1= 1.889 CAL.TIME2=35.0 TLA2= 2.285 TLB2= 2.914 CAL.TIME3=42.0 TLA3= 2.736 TLB3= 3.112
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.387 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.334
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.820 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.269
AVERAGE FIELD DOSE: 4.044 MILLIRAD ESTIMATED UNCERTAINTY: +/- 17. %
*****DOSE VALUES OF PAIR REJECTED BECAUSE AV. DOSE +/- DELTA DOSE DO NOT OVERLAP INDICATED FIELD DOSES*****

-----ISLOTE-4 ON REAR FENCE MET. TOWER TRANSECT
GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 6/ 5/74 RETRIEVAL: 7/18/74 GROUP NO.: 4 CHIP A: 9 CHIP B: 10 PAIR NO.: 4
CAL.TIME1=17.0 TLA1= 1.350 TLB1= 1.435 CAL.TIME2=35.0 TLA2= 2.315 TLB2= 2.170 CAL.TIME3=42.0 TLA3= 3.296 TLB3= 3.017
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.340 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.358
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.635 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.816
AVERAGE FIELD DOSE: 4.725 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 8.176 MICRO-RAD/HR.
DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 8.805 MICRO-RAD/HR.
DOSE RATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSE RATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----ISLOTE-5 ON SMALL PALM-ENTRANCE-MET. TOWER TRANSECT
GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 6/ 5/74 RETRIEVAL: 7/18/74 GROUP NO.: 4 CHIP A: 11 CHIP B: 12 PAIR NO.: 5
CAL.TIME1=17.0 TLA1= 0.891 TLB1= 1.492 CAL.TIME2=35.0 TLA2= 1.969 TLB2= 2.123 CAL.TIME3=42.0 TLA3= 3.398 TLB3= 3.367
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.216 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.346
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.771 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.776
AVERAGE FIELD DOSE: 4.773 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 8.260 MICRO-RAD/HR.
DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 8.895 MICRO-RAD/HR.
DOSE RATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSE RATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----ISLOTE-6 ON STJ. ISLUTE FACILITY MET. TOWER TRANSECT
GROUP CALIBRATION: 4/24/74 FIELD PLACEMENT: 6/ 5/74 RETRIEVAL: 7/18/74 GROUP NO.: 4 CHIP A: 1 CHIP B: 2 PAIR NO.: 6
CAL.TIME1=17.0 TLA1= 1.460 TLB1= 1.596 CAL.TIME2=35.0 TLA2= 2.193 TLB2= 2.504 CAL.TIME3=42.0 TLA3= 3.655 TLB3= 7.459
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.402 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.680
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 2.142 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 2.459
AVERAGE FIELD DOSE: 2.300 MILLIRAD ESTIMATED UNCERTAINTY: +/- 26. %
DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 3.981 MICRO-RAD/HR.
DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 4.287 MICRO-RAD/HR.
DOSE RATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSE RATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

ISLOTE

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-----IS-1-PHONE POLE SUPPORT CABLE NEXT TO FIELD STA.
GROUP CALIBRATION:12/ 6/74 FIELD PLACEMENT:12/ 9/74 RETRIEVAL: 1/14/75 GROUP NO.: 35 CHIP A: 1 CHIP B: 2 PAIR NO.: 1
CAL.TIME1=18.0 TL1= 1.359 TLB1= 1.417 CAL.TIME2=36.0 TLA2= 2.673 TLB2= 2.746 CAL.TIME3=64.0 TLA3= 4.771 TLB3= 4.532
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.424 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.337
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.232 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.955
AVERAGE FIELD DOSE: 4.093 MILLIRAD ESTIMATED UNCERTAINTY: +/- 17. %
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 8.460 MICRO-RAD/HR.
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 9.111 MICRO-RAD/HR.
DOSERATE USING P3-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSERATE USING P3-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----IS-2-THORN BUSH 20M SOUTH OF RENTED FIELD STA.
GROUP CALIBRATION:12/ 6/74 FIELD PLACEMENT:12/ 9/74 RETRIEVAL: 1/14/75 GROUP NO.: 35 CHIP A: 3 CHIP B: 4 PAIR NO.: 2
CAL.TIME1=18.0 TL1= 1.508 TLB1= 1.359 CAL.TIME2=36.0 TLA2= 2.841 TLB2= 2.635 CAL.TIME3=64.0 TLA3= 4.637 TLB3= 4.862
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.679 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.671
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.391 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.733
AVERAGE FIELD DOSE: 4.562 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 9.429 MICRO-RAD/HR.
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 10.154 MICRO-RAD/HR.
DOSERATE USING P3-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSERATE USING P3-TA SHIELDING CORRECTION AND LEBRON FACING CORRECTION IS 0.0 MICRO-RAD/HR.

-----IS-3-TREE BETWEEN THE 4TH AND 5TH PALM, ENTRANCE TO FIELD STA.
GROUP CALIBRATION:12/ 6/74 FIELD PLACEMENT:12/ 9/74 RETRIEVAL: 1/14/75 GROUP NO.: 35 CHIP A: 5 CHIP B: 6 PAIR NO.: 3
CAL.TIME1=18.0 TL1= 1.122 TLB1= 1.528 CAL.TIME2=36.0 TLA2= 2.583 TLB2= 2.752 CAL.TIME3=64.0 TLA3= 4.927 TLB3= 5.002
DOSIMETER PAIR NOT RECOVERED

-----IS-4-PSEUDO-ALMOND TREE FRONT FENCE OF STA. OPPOSITE GATE
GROUP CALIBRATION:12/ 6/74 FIELD PLACEMENT:12/ 9/74 RETRIEVAL: 1/14/75 GROUP NO.: 35 CHIP A: 7 CHIP B: 8 PAIR NO.: 4
CAL.TIME1=18.0 TL1= 1.516 TLB1= 1.192 CAL.TIME2=36.0 TLA2= 2.495 TLB2= 2.780 CAL.TIME3=64.0 TLA3= 4.624 TLB3= 5.183
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.536 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.447
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.745 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.184
AVERAGE FIELD DOSE: 4.465 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 9.227 MICRO-RAD/HR.
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 9.937 MICRO-RAD/HR.
DOSERATE USING P3-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSERATE USING P3-TA SHIELDING CORRECTION AND LEBRON FACING CORRECTION IS 0.0 MICRO-RAD/HR.

ISLOTE

CONTINUED

-----IS-5--EMBED WIRE NEXT TO GATE
GROUP CALIBRATION: 12/ 9/74 FIELD PLACEMENT: 12/ 9/74 RETRIEVAL: 1/14/75 GROUP NO.: 35 CHIP A: 9 CHIP B: 10 PAIR NO.: 5
CAL.TIME1=18.0 TLA1= 1.415 TLB1= 1.605 CAL.TIME2=36.0 TLA2= 2.745 TLB2= 2.562 CAL.TIME3=64.0 TLA3= 4.800 TLB3= 4.285
DOSIMETER PAIR NET RECOVERED

-----IS-6--LEAD SHIELDED STD. AT FIELD STA.
GROUP CALIBRATION: 12/ 6/74 FIELD PLACEMENT: 12/ 9/74 RETRIEVAL: 1/14/75 GROUP NO.: 35 CHIP A: 11 CHIP B: 12 PAIR NO.: 6
CAL.TIME1=18.0 TLA1= 1.543 TLB1= 1.233 CAL.TIME2=36.0 TLA2= 2.427 TLB2= 2.483 CAL.TIME3=64.0 TLA3= 5.112 TLB3= 4.786
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.273 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.088
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 1.928 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 2.062
AVERAGE FIELD DOSE: 1.995 MILLIRAD ESTIMATED UNCERTAINTY: +/- 29. %
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 4.124 MICRO-RAD/HR.
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 4.441 MICRO-RAD/HR.
DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----ISL-1--LEAD SHIELDED EAST TRANSECT RENTED FACILITY
GROUP CALIBRATION: 4/ 1/75 FIELD PLACEMENT: 4/ 2/75 RETRIEVAL: 5/14/75 GROUP NO.: 42 CHIP A: 1 CHIP B: 2 PAIR NO.: 1
CAL.TIME1=18.0 TLA1= 1.599 TLB1= 1.993 CAL.TIME2=64.0 TLA2= 3.627 TLB2= 4.148 CAL.TIME3=72.0 TLA3= 3.840 TLB3= 4.432
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.152 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.306
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 1.671 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 1.520
AVERAGE FIELD DOSE: 1.596 MILLIRAD ESTIMATED UNCERTAINTY: +/- 36. %
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 2.827 MICRO-RAD/HR.
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 3.045 MICRO-RAD/HR.
DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----ISL-2--PALM 32M EAST OF RENTED FIELD STA.
GROUP CALIBRATION: 4/ 1/75 FIELD PLACEMENT: 4/ 2/75 RETRIEVAL: 5/14/75 GROUP NO.: 42 CHIP A: 3 CHIP B: 4 PAIR NO.: 2
CAL.TIME1=18.0 TLA1= 2.530 TLB1= 2.332 CAL.TIME2=64.0 TLA2= 3.923 TLB2= 3.890 CAL.TIME3=72.0 TLA3= 4.023 TLB3= 3.884
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.579 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.423
PAIR VALUES REJECTED BECAUSE OF INDICATED UNCERTAINTY IN CALIBRATION DATA

ISLOTE

CONTINUED

-----ISL-3-TREE 55M NORTH OF RENTEC FIELD STA.-----
 GROUP CALIBRATION: 4/ 1/75 FIELD PLACEMENT: 4/ 2/75 RETRIEVAL: 5/14/75 GROUP NO.: 42 CHIP A: 5 CHIP B: 6 PAIR NO.: 3
 CAL.TIME1=18.0 TLA1= 2.093 TLB1= 2.305 CAL.TIME2=64.0 TLA2= 4.114 TLB2= 3.338 CAL.TIME3=72.0 TLA3= 4.464 TLB3= 3.703
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 3.484 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 3.049
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 6.401 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 6.590
 AVERAGE FIELD DOSE: 6.495 MILLIRAD ESTIMATED UNCERTAINTY: +/- 15. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 11.507 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 12.392 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----ISL-4-TREE NEXT TO HOUSE WEST SIDE-----
 GROUP CALIBRATION: 4/ 1/75 FIELD PLACEMENT: 4/ 2/75 RETRIEVAL: 5/14/75 GROUP NO.: 42 CHIP A: 7 CHIP B: 8 PAIR NO.: 4
 CAL.TIME1=18.0 TLA1= 1.843 TLB1= 2.668 CAL.TIME2=64.0 TLA2= 3.982 TLB2= 4.039 CAL.TIME3=72.0 TLA3= 4.227 TLB3= 4.109
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.488 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.335
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.108 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 2.030
 AVERAGE FIELD DOSE: 3.069 MILLIRAD ESTIMATED UNCERTAINTY: +/- 20. %
 *****DOSE VALUES OF PAIR REJECTED BECAUSE AV. DOSE +/- DELTA DOSE DO NOT OVERLAP INDICATED FIELD DOSES*****

-----ISL-5-THORN BUSH 22.8M ESE FROM HOUSE-----
 GROUP CALIBRATION: 4/ 1/75 FIELD PLACEMENT: 4/ 2/75 RETRIEVAL: 5/14/75 GROUP NO.: 42 CHIP A: 9 CHIP B: 10 PAIR NO.: 5
 CAL.TIME1=18.0 TLA1= 3.013 TLB1= 2.529 CAL.TIME2=64.0 TLA2= 3.838 TLB2= 4.229 CAL.TIME3=72.0 TLA3= 4.313 TLB3= 4.543
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.582 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.661
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 1.4985 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 2.780
 AVERAGE FIELD DOSE: 2.383 MILLIRAD ESTIMATED UNCERTAINTY: +/- 25. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 4.221 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 4.545 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----ISL-6-ON PSEUDO-ALMOND TREE NEXT TO NORTH FENCE EAST TRANSECT-----
 GROUP CALIBRATION: 4/ 1/75 FIELD PLACEMENT: 4/ 2/75 RETRIEVAL: 5/14/75 GROUP NO.: 42 CHIP A: 11 CHIP B: 12 PAIR NO.: 6
 CAL.TIME1=18.0 TLA1= 1.306 TLB1= 1.439 CAL.TIME2=64.0 TLA2= 4.110 TLB2= 3.952 CAL.TIME3=72.0 TLA3= 4.117 TLB3= 3.854
 DOSIMETER PAIR NOT RECOVERED

TLD DOSIMETRY RESULTS FOR : LARFS

-----LA-1-RTE111,KM32.2 3RD TREE PAST MARKER
 GROUP CALIBRATION:11/ 8/74 FIELD PLACEMENT:11/11/74 RETRIEVAL: 12/12/74 GROUP NO.: 31 CHIP A: 1 CHIP B: 2 PAIR NO.: 1
 CAL.TIME1=11.0 TLAI= 1.141 TLBI= 0.699 CAL.TIME2=36.0 TLA2= 2.797 TLB2= 2.939 CAL.TIME3=64.0 TLA3= 5.688 TLB3= 5.240
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.072 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.807
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.255 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.040
 AVERAGE FIELD DOSE: 3.149 MILLIRAD ESTIMATED UNCERTAINTY: +/- 20. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 7.559 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 8.140 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FACING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FACING CORRECTION IS 0.0 MICRO-RAD/HR.

-----LA-2-RTE129,KM32.4 CN KM MARKER
 GROUP CALIBRATION:11/ 8/74 FIELD PLACEMENT:11/11/74 RETRIEVAL: 12/12/74 GROUP NO.: 31 CHIP A: 3 CHIP B: 4 PAIR NO.: 2
 CAL.TIME1=11.0 TLAI= 1.063 TLBI= 0.814 CAL.TIME2=36.0 TLA2= 3.017 TLB2= 3.007 CAL.TIME3=64.0 TLA3= 5.507 TLB3= 4.844
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.388 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.228
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.633 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.528
 AVERAGE FIELD DOSE: 3.581 MILLIRAD ESTIMATED UNCERTAINTY: +/- 18. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 8.594 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 9.255 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FACING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FACING CORRECTION IS 0.0 MICRO-RAD/HR.

-----LA-3-RTE129,KM19.6 DN KM MARKER
 GROUP CALIBRATION:11/ 8/74 FIELD PLACEMENT:11/11/74 RETRIEVAL: 12/12/74 GROUP NO.: 31 CHIP A: 5 CHIP B: 6 PAIR NO.: 3
 CAL.TIME1=11.0 TLAI= 1.083 TLBI= 1.044 CAL.TIME2=36.0 TLA2= 2.976 TLB2= 2.997 CAL.TIME3=64.0 TLA3= 5.209 TLB3= 4.988
 DOSIMETER PAIR NOT RECOVERED*

-----LA-4-RTE129,KM2.8 FIRST FENCE-POST PAST MARKER
 GROUP CALIBRATION:11/ 8/74 FIELD PLACEMENT:11/11/74 RETRIEVAL: 12/12/74 GROUP NO.: 31 CHIP A: 7 CHIP B: 8 PAIR NO.: 4
 CAL.TIME1=11.0 TLAI= 1.055 TLBI= 3.992 CAL.TIME2=36.0 TLA2= 2.898 TLB2= 2.062 CAL.TIME3=64.0 TLA3= 5.171 TLB3= 4.782
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.210 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.882
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.465 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.164
 AVERAGE FIELD DOSE: 3.317 MILLIRAD ESTIMATED UNCERTAINTY: +/- 19. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 7.960 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 8.572 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FACING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FACING CORRECTION IS 0.0 MICRO-RAD/HR.

LARES CONTINUED

LARES

-----LA-3-RTE111,KM1.0 TREE TRUNK PAST DITCH
 GROUP CALIBRATION:11/ 8/74 FIELD PLACEMENT:11/11/74 RETRIEVAL: 12/12/74 GROUP NO.: 31 CHIP A: 9 CHIP B:10 PAIR NO.: 5
 CAL.TIME1=11.0 TLA1= 1.271 TLB1= 0.850 CAL.TIME2=36.0 TLA2= 2.878 TLB2= 2.345 CAL.TIME3=64.0 TLA3= 5.098 TLB3= 4.283
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.879 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.367
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.685 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.724
 AVERAGE FIELD DOSE: 4.704 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 11.291 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 12.160 MICRO-RAD/HR.
 DOSERATE USING P8-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING P8-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----LA-6-RTE129,KM20.9 ON KM MARKER
 GROUP CALIBRATION:11/ 8/74 FIELD PLACEMENT:11/11/74 RETRIEVAL: 12/12/74 GROUP NO.: 31 CHIP A:11 CHIP B:12 PAIR NO.: 6
 CAL.TIME1=11.0 TLA1= 1.419 TLB1= 1.206 CAL.TIME2=36.0 TLA2= 2.769 TLB2= 3.178 CAL.TIME3=64.0 TLA3= 4.850 TLB3= 5.181
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.358 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.057
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.693 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 2.834
 AVERAGE FIELD DOSE: 3.264 MILLIRAD ESTIMATED UNCERTAINTY: +/- 19. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 7.833 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 8.436 MICRO-RAD/HR.
 DOSERATE USING P8-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING P8-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----LA-1-RTE129,KM32.4 ON MARKER
 GROUP CALIBRATION:12/16/74 FIELD PLACEMENT:12/17/74 RETRIEVAL: 1/20/75 GROUP NO.: 34 CHIP A: 1 CHIP B: 2 PAIR NO.: 1
 CAL.TIME1=11.0 TLA1= 1.085 TLB1= 1.615 CAL.TIME2=18.0 TLA2= 1.386 TLB2= 1.279 CAL.TIME3=36.0 TLA3= 2.824 TLB3= 2.202
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 4.383 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 3.479
 PAIR VALUES REJECTED BECAUSE OF INDICATED UNCERTAINTY IN CALIBRATION DATA

-----LA-2-RTE129,KM16.0 ON MARKER
 GROUP CALIBRATION:12/16/74 FIELD PLACEMENT:12/17/74 RETRIEVAL: 1/20/74 GROUP NO.: 34 CHIP A: 3 CHIP B: 4 PAIR NO.: 2
 CAL.TIME1=11.0 TLA1= 1.054 TLB1= 1.186 CAL.TIME2=18.0 TLA2= 1.498 TLB2= 1.008 CAL.TIME3=36.0 TLA3= 2.339 TLB3= 2.161
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 3.546 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.801
 PAIR VALUES REJECTED BECAUSE OF INDICATED UNCERTAINTY IN CALIBRATION DATA

LARES CONTINUED

-----LA-3-RTEL29, KM19.2 GN MARKER
GROUP CALIBRATION: 12/16/74 FIELD PLACEMENT: 12/17/74 RETRIEVAL: 1/20/75 GROUP NO.: 34 CHIP A: 5 CHIP B: 6 PAIR NO.: 3
CAL.TIME1=11.0 TLA1= 1.035 TLR1= 1.143 CAL.TIME2=18.0 TLA2= 1.311 TLR2= 1.602 CAL.TIME3=36.0 TLA3= 2.653 TLR3= 2.581
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.577 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 3.233
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.535 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 5.963
AVERAGE FIELD DOSE: 5.251 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 11.492 MICRO-RAD/HR.
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 12.376 MICRO-RAD/HR.
DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----LA-4-RTEL29, KM21.6 GN MARKER
GROUP CALIBRATION: 12/16/74 FIELD PLACEMENT: 12/17/74 RETRIEVAL: 1/20/75 GROUP NO.: 34 CHIP A: 7 CHIP B: 8 PAIR NO.: 4
CAL.TIME1=11.0 TLA1= 0.999 TLR1= 1.096 CAL.TIME2=18.0 TLA2= 1.296 TLR2= 1.300 CAL.TIME3=36.0 TLA3= 2.856 TLR3= 3.337
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 3.746 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 3.235
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 6.004 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.555
AVERAGE FIELD DOSE: 5.279 MILLIRAD ESTIMATED UNCERTAINTY: +/- 15. %
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 11.553 MICRO-RAD/HR.
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 12.442 MICRO-RAD/HR.
DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----LA-5-RTE11, KM1.0 GN 'ROAD CLOSED' SIGN
GROUP CALIBRATION: 12/16/74 FIELD PLACEMENT: 12/17/74 RETRIEVAL: 1/20/75 GROUP NO.: 34 CHIP A: 9 CHIP B: 10 PAIR NO.: 5
CAL.TIME1=11.0 TLA1= 1.537 TLR1= 1.213 CAL.TIME2=18.0 TLA2= 1.182 TLR2= 0.964 CAL.TIME3=36.0 TLA3= 2.552 TLR3= 2.781
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.317 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.196
PAIR VALUES REJECTED BECAUSE OF INDICATED UNCERTAINTY IN CALIBRATION DATA

-----LA-6-RTE11, KM32.2 TOP STRAND OF BARBED WIRE
GROUP CALIBRATION: 12/16/74 FIELD PLACEMENT: 12/17/74 RETRIEVAL: 1/20/75 GROUP NO.: 34 CHIP A: 11 CHIP B: 12 PAIR NO.: 6
CAL.TIME1=11.0 TLA1= 1.008 TLR1= 0.722 CAL.TIME2=18.0 TLA2= 1.086 TLR2= 1.096 CAL.TIME3=36.0 TLA3= 2.416 TLR3= 2.100
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 3.050 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 3.060
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 5.785 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 6.190
AVERAGE FIELD DOSE: 6.345 MILLIRAD ESTIMATED UNCERTAINTY: +/- 15. %
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 13.885 MICRO-RAD/HR.
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 14.953 MICRO-RAD/HR.
DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

LARES CONTINUED

-----LARES-1-RTEL29, KM16
 GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 GROUP NO.: 47 CHIP A: 1 CHIP B: 2 PAIR NO.: 1
 CAL.TIME1=11.0 TLA1= 0.048 TLB1= 0.577 CAL.TIME2=18.0 TLA2= 1.050 TLB2= 1.042 CAL.TIME3=64.0 TLA3= 3.708 TLB3= 4.002
 DOSIMETER PAIR NOT RECOVERED

-----LARES-2-RTEL29, KM18.2
 GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 GROUP NO.: 47 CHIP A: 3 CHIP B: 4 PAIR NO.: 2
 CAL.TIME1=11.0 TLA1= 0.692 TLB1= 0.671 CAL.TIME2=18.0 TLA2= 1.107 TLB2= 1.298 CAL.TIME3=64.0 TLA3= 4.285 TLB3= 4.207
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.089 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.138
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.148 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.029
 AVERAGE FIELD DOSE: 4.089 MILLIRAD ESTIMATED UNCERTAINTY: +/- 17. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 10.490 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 11.297 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----LARES-3-RTEL29, KM20.0
 GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 GROUP NO.: 47 CHIP A: 5 CHIP B: 6 PAIR NO.: 3
 CAL.TIME1=11.0 TLA1= 0.870 TLB1= 0.843 CAL.TIME2=18.0 TLA2= 1.298 TLB2= 1.241 CAL.TIME3=64.0 TLA3= 3.993 TLB3= 4.327
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.343 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.553
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.615 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.837
 AVERAGE FIELD DOSE: 4.726 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 12.125 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 13.057 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----LARES-4-RTEL11, KM1.0 SIGN ON TREE WITH TRIPLE TRUNK
 GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 GROUP NO.: 47 CHIP A: 7 CHIP B: 8 PAIR NO.: 4
 CAL.TIME1=11.0 TLA1= 0.635 TLB1= 0.667 CAL.TIME2=18.0 TLA2= 1.056 TLB2= 1.104 CAL.TIME3=64.0 TLA3= 4.113 TLB3= 4.140
 DOSIMETER PAIR NOT RECOVERED

LARES CONTINUED

-----LARES-5-RTE11,KM3.8 PHONE POLE
 GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 GROUP NO.: 47 CHIP A: 9 CHIP B: 10 PAIR NO.: 5
 CAL.TIME1=11.0 TL1= 0.811 TLB1= 1.097 CAL.TIME2=18.0 TL2= 1.274 TLB2= 1.289 CAL.TIME3=64.0 TL3= 4.195 TLB3= 3.660
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.930 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.728
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.648 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.415
 AVERAGE FIELD DOSE: 3.532 MILLIRAD ESTIMATED UNCERTAINTY: +/- 18. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 9.061 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 9.758 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----LARES-6-RTE11,KM2.9 ON RIGHT, 1ST INTERSECTION TOWARD SAN SEBASTIAN
 GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 GROUP NO.: 47 CHIP A: 11 CHIP B: 12 PAIR NO.: 6
 CAL.TIME1=11.0 TL1= 0.567 TLB1= 0.813 CAL.TIME2=18.0 TL2= 0.998 TLB2= 1.060 CAL.TIME3=64.0 TL3= 3.533 TLB3= 4.432
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 3.026 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 3.263
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 7.057 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 6.188
 AVERAGE FIELD DOSE: 6.623 MILLIRAD ESTIMATED UNCERTAINTY: +/- 15. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 16.992 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 18.299 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

TLD DOSIMETRY RESULTS FOR : MAYAGUEZ

MAYAGUEZ

-----MAY-1-PRNC, MAYAGUEZ GROUNDS, 3' LEVEL

GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 6/ 5/74 RETRIEVAL: 7/ 5/74 GROUP NO.: 5 CHIP A: 1 CHIP B: 2 PAIR NO.: 3
 CAL.TIME1=17.0 TLAI= 1.372 TLBI= 0.939 CAL.TIME2=45.0 TLA2= 4.311 TLB2= 3.926 CAL.TIME3=67.0 TLA3= 6.033 TLB3= 5.965
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.988 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.333
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.011 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.958
 AVERAGE FIELD DOSE: 3.484 MILLIRAD ESTIMATED UNCERTAINTY: +/- 19. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 8.642 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 9.307 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----MAY-2-PRNC, MAYAGUEZ GROUNDS, 3' LEVEL

GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 6/ 5/74 RETRIEVAL: 7/ 5/74 GROUP NO.: 5 CHIP A: 3 CHIP B: 4 PAIR NO.: 4
 CAL.TIME1=17.0 TLAI= 1.515 TLBI= 1.809 CAL.TIME2=45.0 TLA2= 3.487 TLB2= 4.010 CAL.TIME3=67.0 TLA3= 6.496 TLB3= 6.352
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.819 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.281
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 2.806 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.028
 AVERAGE FIELD DOSE: 2.917 MILLIRAD ESTIMATED UNCERTAINTY: +/- 21. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 7.235 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 7.792 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----MAY-3-PRNC, MAYAGUEZ GROUNDS, 3' LEVEL

GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 6/ 5/74 RETRIEVAL: 7/ 5/74 GROUP NO.: 5 CHIP A: 5 CHIP B: 6 PAIR NO.: 6
 CAL.TIME1=17.0 TLAI= 1.298 TLBI= 0.894 CAL.TIME2=45.0 TLA2= 4.180 TLB2= 2.704 CAL.TIME3=67.0 TLA3= 6.452 TLB3= 6.012
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.941 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.072
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.100 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.637
 AVERAGE FIELD DOSE: 3.868 MILLIRAD ESTIMATED UNCERTAINTY: +/- 18. %
 *****DOSE VALUES OF PAIR REJECTED BECAUSE AV. DOSE +/- DELTA DOSE DO NOT OVERLAP INDICATED FIELD DOSES*****

-----MAY-4-PRNC, MAYAGUEZ GROUNDS, 3' LEVEL

GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 6/ 5/74 RETRIEVAL: 7/ 5/74 GROUP NO.: 5 CHIP A: 7 CHIP B: 8 PAIR NO.: 2
 CAL.TIME1=17.0 TLAI= 1.294 TLBI= 1.181 CAL.TIME2=45.0 TLA2= 3.382 TLB2= 3.505 CAL.TIME3=67.0 TLA3= 5.992 TLB3= 5.592
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.633 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.858
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 2.836 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.312
 AVERAGE FIELD DOSE: 3.074 MILLIRAD ESTIMATED UNCERTAINTY: +/- 20. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 7.624 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 8.211 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

MAYAGUEZ

CONTINUED

-----MAY-5-PRNC, MAYAGUEZ GROUNDS, 3' LEVEL
GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 6/ 5/74 RETRIEVAL: 7/ 5/74 GROUP NO.: 5 CHIP A: 9 CHIP B:10 PAIR NO.: 1
CAL.TIME1=17.0 TLA1= 1.242 TLB1= 1.285 CAL.TIME2=45.0 TLA2= 3.957 TLB2= 2.866 CAL.TIME3=67.0 TLA3= 6.017 TLB3= 5.468
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.042 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.880
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.512 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.625
AVERAGE FIELD DOSE: 3.568 MILLIRAD ESTIMATED UNCERTAINTY: +/- 18. %
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 8.850 MICRO-RAD/HR.
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 9.531 MICRO-RAD/HR.
DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----MAY-6-PRNC, MAYAGUEZ GROUNDS, 3' LEVEL
GROUP CALIBRATION: 5/ 6/74 FIELD PLACEMENT: 6/ 5/74 RETRIEVAL: 7/ 5/74 GROUP NO.: 5 CHIP A:11 CHIP B:12 PAIR NO.: 5
CAL.TIME1=17.0 TLA1= 0.863 TLB1= 1.071 CAL.TIME2=45.0 TLA2= 3.081 TLB2= 4.629 CAL.TIME3=67.0 TLA3= 6.209 TLB3= 5.447
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.995 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.600
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.119 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 2.786
AVERAGE FIELD DOSE: 3.453 MILLIRAD ESTIMATED UNCERTAINTY: +/- 19. %
*****DOSE VALUES OF PAIR REJECTED BECAUSE AV. DOSE +/- DELTA DOSE DO NOT OVERLAP INDICATED FIELD DOSES*****

-----MAY-1-PRNC GROUNDS, CAMPUS CAAM, MAYAGUEZ, 3' LEVEL
GROUP CALIBRATION: 11/10/74 FIELD PLACEMENT: 12/ 7/74 RETRIEVAL: 1/ 7/75 GROUP NO.: 32 CHIP A: 1 CHIP B: 2 PAIR NO.: 1
CAL.TIME1=11.0 TLA1= 0.700 TLB1= 1.184 CAL.TIME2=36.0 TLA2= 2.804 TLB2= 2.988 CAL.TIME3=64.0 TLA3= 4.917 TLB3= 5.153
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 4.635 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.593
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 7.838 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.970
AVERAGE FIELD DOSE: 5.904 MILLIRAD ESTIMATED UNCERTAINTY: +/- 15. %
*****DOSE VALUES OF PAIR REJECTED BECAUSE AV. DOSE +/- DELTA DOSE DO NOT OVERLAP INDICATED FIELD DOSES*****

-----MAY-2-PRNC GROUNDS, CAMPUS CAAM, MAYAGUEZ, 3' LEVEL
GROUP CALIBRATION: 11/10/74 FIELD PLACEMENT: 12/ 7/74 RETRIEVAL: 1/ 7/75 GROUP NO.: 32 CHIP A: 3 CHIP B: 4 PAIR NO.: 2
CAL.TIME1=11.0 TLA1= 1.005 TLB1= 1.332 CAL.TIME2=36.0 TLA2= 2.841 TLB2= 2.535 CAL.TIME3=64.0 TLA3= 5.361 TLB3= 4.757
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 3.112 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.416
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 5.674 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.361
AVERAGE FIELD DOSE: 4.717 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 11.322 MICRO-RAD/HR.
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 12.193 MICRO-RAD/HR.
DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

MAYAGUEZ

CONTINUED

-----MAY-3-PRNC GROUNDS, CAMPUS CAAM, MAYAGUEZ, 3rd LEVEL
GROUP CALIBRATION: 11/10/74 FIELD PLACEMENT: 12/7/74 RETRIEVAL: 1/7/75 GROUP NO.: 32 CHIP A: 5 CHIP B: 6 PAIR NO.: 3
CAL.TIME=11.0 TLBI= 0.882 TLBI= 0.858 CAL.TIME2=36.0 TLBI= 2.639 TLBI= 2.616 CAL.TIME3=64.0 TLBI= 4.359 TLBI= 3.926
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.322 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.557
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.096 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.573
AVERAGE FIELD DOSE: 4.334 MILLIRAD ESTIMATED UNCERTAINTY: +/- 17. %
DOSE-RATE USING LINDENEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 11.403 MICRO-RAD/HR.
DOSE-RATE USING LINDENEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 11.204 MICRO-RAD/HR.
DOSE-RATE USING P3-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSE-RATE USING P3-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----MAY-4-PRNC GROUNDS, CAMPUS CAAM, MAYAGUEZ, 3rd LEVEL
GROUP CALIBRATION: 11/10/74 FIELD PLACEMENT: 12/7/74 RETRIEVAL: 1/7/75 GROUP NO.: 32 CHIP A: 7 CHIP B: 8 PAIR NO.: 4
CAL.TIME=11.0 TLBI= 0.912 TLBI= 0.771 CAL.TIME2=36.0 TLBI= 2.548 TLBI= 2.630 CAL.TIME3=64.0 TLBI= 4.436 TLBI= 4.548
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.096 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.431
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.968 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.334
AVERAGE FIELD DOSE: 4.651 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
DOSE-RATE USING LINDENEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 11.163 MICRO-RAD/HR.
DOSE-RATE USING LINDENEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 12.022 MICRO-RAD/HR.
DOSE-RATE USING P3-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSE-RATE USING P3-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----MAY-5-PRNC GROUNDS, CAMPUS CAAM, MAYAGUEZ, 3rd LEVEL
GROUP CALIBRATION: 11/10/74 FIELD PLACEMENT: 12/7/74 RETRIEVAL: 1/7/75 GROUP NO.: 32 CHIP A: 9 CHIP B: 10 PAIR NO.: 5
CAL.TIME=11.0 TLBI= 0.920 TLBI= 0.941 CAL.TIME2=36.0 TLBI= 2.266 TLBI= 2.730 CAL.TIME3=64.0 TLBI= 4.122 TLBI= 5.065
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.891 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.233
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 5.909 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.799
AVERAGE FIELD DOSE: 4.857 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
*****DOSE VALUES OF PAIR REJECTED BECAUSE AV. DOSE +/- DELTA DOSE DO NOT OVERLAP INDICATED FIELD DOSES*****

-----MAY-6-PRNC GROUNDS, CAMPUS CAAM, MAYAGUEZ, 3rd LEVEL
GROUP CALIBRATION: 11/10/74 FIELD PLACEMENT: 12/7/74 RETRIEVAL: 1/7/75 GROUP NO.: 32 CHIP A: 11 CHIP B: 12 PAIR NO.: 6
CAL.TIME=11.0 TLBI= 3.905 TLBI= 1.112 CAL.TIME2=36.0 TLBI= 2.820 TLBI= 2.561 CAL.TIME3=64.0 TLBI= 5.129 TLBI= 5.232
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 0.762 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 3.493
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 1.205 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 5.953
AVERAGE FIELD DOSE: 3.979 MILLIRAD ESTIMATED UNCERTAINTY: +/- 18. %
*****DOSE VALUES OF PAIR REJECTED BECAUSE AV. DOSE +/- DELTA DOSE DO NOT OVERLAP INDICATED FIELD DOSES*****

TLD DOSIMETRY RESULTS FOR : QUEBRADILLAS

-----QB-1-RTE2, KM96.8 HOLE IN TREE NEXT TO MARKER
 GROUP CALIBRATION: 11/ 9/74 FIELD PLACEMENT: 11/11/74 RETRIEVAL: 12/17/74 GROUP NO.: 33 CHIP A: 1 CHIP B: 2 PAIR NO.: 1
 CAL.TIME1=11.0 TLA1= 1.044 TLB1= 0.824 CAL.TIME2=36.0 TLA2= 2.396 TLB2= 2.294 CAL.TIME3=64.0 TLA3= 4.854 TLB3= 4.674
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.849 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 3.007
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 5.354 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 5.774
 AVERAGE FIELD DOSE: 5.564 MILLIRAD ESTIMATED UNCERTAINTY: +/- 15. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 11.499 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 12.384 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----QB-2-RTE2, KM96.1 GUAVA TREE 2M FROM KM MARKER
 GROUP CALIBRATION: 11/ 9/74 FIELD PLACEMENT: 11/11/74 RETRIEVAL: 12/17/74 GROUP NO.: 33 CHIP A: 3 CHIP B: 4 PAIR NO.: 2
 CAL.TIME1=11.0 TLA1= 1.090 TLB1= 1.210 CAL.TIME2=36.0 TLA2= 2.413 TLB2= 2.494 CAL.TIME3=64.0 TLA3= 4.559 TLB3= 4.562
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 3.366 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 3.215
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 6.300 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 5.952
 AVERAGE FIELD DOSE: 6.126 MILLIRAD ESTIMATED UNCERTAINTY: +/- 15. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 12.662 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 13.636 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----QB-3-RTE2, KM89.1 TREE HOLLOW BEHIND ROADSIDE ROW 3M FROM MARKER
 GROUP CALIBRATION: 11/ 9/74 FIELD PLACEMENT: 11/11/74 RETRIEVAL: 12/17/74 GROUP NO.: 33 CHIP A: 5 CHIP B: 6 PAIR NO.: 3
 CAL.TIME1=11.0 TLA1= 0.978 TLB1= 0.869 CAL.TIME2=36.0 TLA2= 2.509 TLB2= 2.692 CAL.TIME3=64.0 TLA3= 4.789 TLB3= 5.003
 DOSIMETER PAIR NOT RECOVERED

-----QB-4-RTE2, KM82.3 VERY LARGE PSEUDO-ALMOND TREE JUST PAST MARKER
 GROUP CALIBRATION: 11/ 9/74 FIELD PLACEMENT: 11/11/74 RETRIEVAL: 12/17/74 GROUP NO.: 33 CHIP A: 7 CHIP B: 8 PAIR NO.: 4
 CAL.TIME1=11.0 TLA1= 0.902 TLB1= 0.967 CAL.TIME2=36.0 TLA2= 2.431 TLB2= 2.581 CAL.TIME3=64.0 TLA3= 4.212 TLB3= 6.677
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.875 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.183
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.500 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.881
 AVERAGE FIELD DOSE: 3.699 MILLIRAD ESTIMATED UNCERTAINTY: +/- 18. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 7.628 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 8.214 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

QUEBRADILLAS

CONTINUED

-----QB-5-#81 SOGORRO ST., AFF FACILITY, TELEPHONE POLE BEHIND BLDG.
GROUP CALIBRATION: 11/9/74 FIELD PLACEMENT: 11/11/74 RETRIEVAL: 12/17/74 GROUP NO.: 33 CHIP A: 9 CHIP B: 10 PAIR NO.: 5
CAL.TIME1=11.0 TLA1= 0.410 TLB1= 0.522 CAL.TIME2=36.0 TLA2= 2.335 TLB2= 2.066 CAL.TIME3=64.0 TLA3= 4.672 TLB3= 4.343
DOSIMETER PAIR NOT RECOVERED

-----QB-6-RTE2, KM64.8 SMALL TREE NEXT TO POWER POLE JUST PAST MARKER
GROUP CALIBRATION: 11/9/74 FIELD PLACEMENT: 11/11/74 RETRIEVAL: 12/17/74 GROUP NO.: 33 CHIP A: 11 CHIP B: 12 PAIR NO.: 6
CAL.TIME1=11.0 TLA1= 1.029 TLB1= 1.161 CAL.TIME2=36.0 TLA2= 2.274 TLB2= 2.348 CAL.TIME3=64.0 TLA3= 4.215 TLB3= 4.042
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.077 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.563
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.168 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 5.145
AVERAGE FIELD DOSE: 4.657 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 9.624 MICRO-RAD/HR.
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 10.364 MICRO-RAD/HR.
DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

TLD DOSIMETRY RESULTS FOR : SAN SEBASTIAN

-----SAN SEBASTIAN-1 STD. IN LEAD SHIELD IN DRIVEWAY
 GROUP CALIBRATION: 5/15/74 FIELD PLACEMENT: 5/15/74 RETRIEVAL: 6/17/74 GROUP NO.: 9 CHIP A: 9 CHIP B: 10 PAIR NO.: 1
 CAL.TIME1=17.0 TL1= 0.911 TLB1= 0.855 CAL.TIME2=45.0 TL2= 3.201 TLB2= 2.321 CAL.TIME3=67.0 TL3= 4.880 TLB3= 3.906
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 0.616 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 0.545
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 1.512 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 1.426
 AVERAGE FIELD DOSE: 1.469 MILLIRAD ESTIMATED UNCERTAINTY: +/- 39. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 3.312 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 3.567 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----SAN SEBASTIAN-2 ON BUSH IN FRGNT OF DRIVEWAY
 GROUP CALIBRATION: 5/15/74 FIELD PLACEMENT: 5/15/74 RETRIEVAL: 6/17/74 GROUP NO.: 9 CHIP A: 7 CHIP B: 8 PAIR NO.: 2
 CAL.TIME1=17.0 TL1= 1.503 TLB1= 1.146 CAL.TIME2=45.0 TL2= 2.888 TLB2= 2.628 CAL.TIME3=67.0 TL3= 4.645 TLB3= 4.412
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.956 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.900
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.442 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.111
 AVERAGE FIELD DOSE: 3.776 MILLIRAD ESTIMATED UNCERTAINTY: +/- 18. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 8.514 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 9.169 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----SAN SEBASTIAN -3 ON BUSH ACROSS STREET FROM STD.
 GROUP CALIBRATION: 5/15/74 FIELD PLACEMENT: 5/15/74 RETRIEVAL: 6/17/74 GROUP NO.: 9 CHIP A: 1 CHIP B: 2 PAIR NO.: 3
 CAL.TIME1=17.0 TL1= 0.530 TLB1= 0.648 CAL.TIME2=45.0 TL2= 2.942 TLB2= 2.825 CAL.TIME3=67.0 TL3= 5.398 TLB3= 4.939
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.152 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 4.977
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.187 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 8.867
 AVERAGE FIELD DOSE: 6.027 MILLIRAD ESTIMATED UNCERTAINTY: +/- 15. %
 DOSE VALUES OF PAIR REJECTED BECAUSE AV. DOSE +/- DELTA DOSE DO NOT OVERLAP INDICATED FIELD DOSES**

-----SAN SEBASTIAN-4 ON PALM AT ENTRANCE
 GROUP CALIBRATION: 5/15/74 FIELD PLACEMENT: 5/15/74 RETRIEVAL: 6/17/74 GROUP NO.: 9 CHIP A: 11 CHIP B: 12 PAIR NO.: 4
 CAL.TIME1=17.0 TL1= 0.922 TLB1= 0.947 CAL.TIME2=45.0 TL2= 2.757 TLB2= 2.968 CAL.TIME3=67.0 TL3= 4.338 TLB3= 4.275
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.710 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.747
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.819 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.695
 AVERAGE FIELD DOSE: 3.757 MILLIRAD ESTIMATED UNCERTAINTY: +/- 18. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 8.470 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 9.122 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

SAN SEBASTIAN CONTINUED

-----SAN SEBASTIAN-5 ON RUSH AT STREET CORNER
 GROUP CALIBRATION: 5/15/74 FIELD PLACEMENT: 5/15/74 RETRIEVAL: 6/17/74 GROUP NO.: 9 CHIP A: 5 CHIP B: 6 PAIR NO.: 5
 CAL.TIME1=17.0 TLA1= 0.849 TLB1= 0.382 CAL.TIME2=45.0 TLA2= 3.210 TLB2= 2.941 CAL.TIME3=67.0 TLA3= 4.516 TLB3= 4.546
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.151 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.703
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.268 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.138
 AVERAGE FIELD DOSE: 4.203 MILLIRAD ESTIMATED UNCERTAINTY: +/- 17. %
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 9.477 MICRO-RAD/HR.
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 10.206 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----SAN SEBASTIAN-6 ON TREE IN BACK YARD
 GROUP CALIBRATION: 5/15/74 FIELD PLACEMENT: 5/15/74 RETRIEVAL: 6/17/74 GROUP NO.: 9 CHIP A: 3 CHIP B: 4 PAIR NO.: 6
 CAL.TIME1=17.0 TLA1= 1.198 TLB1= 0.626 CAL.TIME2=45.0 TLA2= 2.462 TLB2= 2.863 CAL.TIME3=67.0 TLA3= 5.312 TLB3= 4.954
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.891 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.591
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 6.356 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 5.473
 AVERAGE FIELD DOSE: 5.914 MILLIRAD ESTIMATED UNCERTAINTY: +/- 15. %
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 13.335 MICRO-RAD/HR.
 DOSE RATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 14.361 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSE RATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----SS-1-RTEL19,KM25.3 TREE BEHIND MARKER CN LEFT
 GROUP CALIBRATION: 11/22/74 FIELD PLACEMENT: 11/25/74 RETRIEVAL: 12/11/74 GROUP NO.: 34 CHIP A: 1 CHIP B: 2 PAIR NO.: 1
 CAL.TIME1=11.0 TLA1= 1.085 TLB1= 1.615 CAL.TIME2=18.0 TLA2= 1.386 TLB2= 1.279 CAL.TIME3=64.0 TLA3= 5.162 TLB3= 4.781
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.221 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.349
 PAIR VALUES REJECTED BECAUSE OF INDICATED UNCERTAINTY IN CALIBRATION DATA

-----SS-2-RTEL19,KM33.0 LARGE MANGO TREE REFUGE MARKER ON RIGHT
 GROUP CALIBRATION: 11/22/74 FIELD PLACEMENT: 11/25/74 RETRIEVAL: 12/11/74 GROUP NO.: 34 CHIP A: 3 CHIP B: 4 PAIR NO.: 2
 CAL.TIME1=11.0 TLA1= 1.054 TLB1= 1.196 CAL.TIME2=18.0 TLA2= 1.498 TLB2= 1.008 CAL.TIME3=64.0 TLA3= 5.264 TLB3= 4.704
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.096 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 0.998
 PAIR VALUES REJECTED BECAUSE OF INDICATED UNCERTAINTY IN CALIBRATION DATA

SAN SEBASTIAN CONTINUED

-----SS-3-RTEL11,KM25.8 6TH TREE BEFORE MARKER IN HOLLOW - ON RIGHT
GROUP CALIBRATION:11/25/74 FIELD PLACEMENT:11/25/74 RETRIEVAL: 12/11/74 GROUP NO.: 34 CHIP A: 5 CHIP B: 6 PAIR NO.: 3
CAL.TIME1=11.0 TLA1= 1.035 TLB1= 1.143 CAL.TIME2=18.0 TLA2= 1.311 TLB2= 1.402 CAL.TIME3=64.0 TLA3= 4.809 TLB3= 5.147
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.140 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.279
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 1.776 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 1.907
AVERAGE FIELD DOSE: 1.842 MILLIRAD ESTIMATED UNCERTAINTY: +/- 31. %
PAIR VALUES REJECTED FOR LACK OF SUFFICIENT EXPOSURE TIME GIVEN TO FIELD DOSIMETERS

-----SS-4-RTEL19,KM31.5 FENCE BEHIND MARKER ON LEFT
GROUP CALIBRATION:11/22/74 FIELD PLACEMENT:11/25/74 RETRIEVAL: 12/11/74 GROUP NO.: 34 CHIP A: 7 CHIP B: 8 PAIR NO.: 4
CAL.TIME1=11.0 TLA1= 0.999 TLB1= 1.090 CAL.TIME2=18.0 TLA2= 1.296 TLB2= 1.300 CAL.TIME3=64.0 TLA3= 4.304 TLB3= 4.939
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.970 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.279
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.679 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 2.248
AVERAGE FIELD DOSE: 2.964 MILLIRAD ESTIMATED UNCERTAINTY: +/- 21. %
*****DOSE VALUES OF PAIR REJECTED BECAUSE AV. DOSE +/- DELTA DOSE DO NOT OVERLAP INDICATED FIELD DOSES*****

-----SS-5-RTEL19,KM21.0 SMALL TREE BEHIND KM MARKER ON LEFT
GROUP CALIBRATION:11/22/74 FIELD PLACEMENT:11/25/74 RETRIEVAL: 12/11/74 GROUP NO.: 34 CHIP A: 9 CHIP B:10 PAIR NO.: 5
CAL.TIME1=11.0 TLA1= 1.537 TLB1= 1.213 CAL.TIME2=18.0 TLA2= 1.182 TLB2= 0.964 CAL.TIME3=64.0 TLA3= 4.852 TLB3= 4.608
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.727 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.288
PAIR VALUES REJECTED BECAUSE OF INDICATED UNCERTAINTY IN CALIBRATION DATA

-----SS-6-RTEL19,KM19.4 2ND SMALL TREE PAST MARKER ON RIGHT
GROUP CALIBRATION:11/22/74 FIELD PLACEMENT:11/25/74 RETRIEVAL: 12/11/74 GROUP NO.: 34 CHIP A:11 CHIP B:12 PAIR NO.: 6
CAL.TIME1=11.0 TLA1= 1.008 TLB1= 0.722 CAL.TIME2=18.0 TLA2= 1.386 TLB2= 1.096 CAL.TIME3=64.0 TLA3= 4.410 TLB3= 4.435
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.639 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.390
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.334 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 2.866
AVERAGE FIELD DOSE: 3.100 MILLIRAD ESTIMATED UNCERTAINTY: +/- 20. %
PAIR VALUES REJECTED FOR LACK OF SUFFICIENT EXPOSURE TIME GIVEN TO FIELD DOSIMETERS

SAN SEBASTIAN CONTINUED

-----SS-1-RTE119,KM33.0 ON BARBED WIRE BEHIND MANGO TREE
 GROUP CALIBRATION:12/16/74 FIELD PLACEMENT:12/17/74 RETRIEVAL: 1/20/75 GROUP NO.: 36 CHIP A: 1 CHIP B: 2 PAIR NO.: 1
 CAL.TIME1=11.0 TLA1= 0.848 TLB1= 0.727 CAL.TIME2=36.0 TLA2= 2.631 TLB2= 2.703 CAL.TIME3=64.0 TLA3= 4.833 TLB3= 4.829
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.165 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.663
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.824 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.606
 AVERAGE FIELD DOSE: 4.215 MILLIRAD ESTIMATED UNCERTAINTY: +/- 17. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 9.224 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 9.933 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----SS-2-RTE119,KM27.1 ON BARBED WIRE BEHIND MARKER
 GROUP CALIBRATION:12/16/74 FIELD PLACEMENT:12/17/74 RETRIEVAL: 1/20/75 GROUP NO.: 36 CHIP A: 3 CHIP B: 4 PAIR NO.: 2
 CAL.TIME1=11.0 TLA1= 0.781 TLB1= 0.730 CAL.TIME2=36.0 TLA2= 2.490 TLB2= 2.307 CAL.TIME3=64.0 TLA3= 3.882 TLB3= 4.232
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.325 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.135
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.358 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.318
 AVERAGE FIELD DOSE: 4.338 MILLIRAD ESTIMATED UNCERTAINTY: +/- 17. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 9.493 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 10.224 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----SS-3-RTE119,KM24.9 ON BARBED WIRE BEHIND MARKER
 GROUP CALIBRATION:12/16/74 FIELD PLACEMENT:12/17/74 RETRIEVAL: 1/20/75 GROUP NO.: 36 CHIP A: 5 CHIP B: 6 PAIR NO.: 3
 CAL.TIME1=11.0 TLA1= 0.639 TLB1= 0.758 CAL.TIME2=36.0 TLA2= 2.671 TLB2= 2.482 CAL.TIME3=64.0 TLA3= 4.858 TLB3= 4.728
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 3.796 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 5.201
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 6.541 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 9.070
 AVERAGE FIELD DOSE: 7.805 MILLIRAD ESTIMATED UNCERTAINTY: +/- 15. %
 *****DOSE VALUES OF PAIR REJECTED BECAUSE AV. DOSE +/- DELTA DOSE DO NOT OVERLAP INDICATED FIELD DOSES*****

-----SS-4-RTE119,KM31.5 ON BARBED WIRE BEHIND MARKER
 GROUP CALIBRATION:12/16/74 FIELD PLACEMENT:12/17/74 RETRIEVAL: 1/20/75 GROUP NO.: 36 CHIP A: 7 CHIP B: 8 PAIR NO.: 4
 CAL.TIME1=11.0 TLA1= 0.806 TLB1= 0.743 CAL.TIME2=36.0 TLA2= 2.455 TLB2= 2.314 CAL.TIME3=64.0 TLA3= 4.481 TLB3= 4.884
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.501 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 1.966
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.754 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 3.953
 AVERAGE FIELD DOSE: 4.354-MILLIRAD ESTIMATED UNCERTAINTY: +/- 17. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 9.527 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 10.260 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

SAN SEBASTIAN CONTINUED

-----SS-5-RTEL19,KM23.6 ON SMALL TREE BEHIND MARKER
 GROUP CALIBRATION: 12/16/74 FIELD PLACEMENT: 12/17/74 RETRIEVAL: 1/20/75 GROUP NO.: 36 CHIP A: 9 CHIP B: 10 PAIR NO.: 5
 CAL.TIME=11.0 TLA1= 0.829 TLB1= 0.797 CAL.TIME2=36.0 TLA2= 2.661 TLB2= 2.540 CAL.TIME3=64.0 TLA3= 4.946 TLB3= 4.779
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 3.144 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 3.142
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 5.440 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 5.649
 AVERAGE FIELD DOSE: 5.544 MILLIRAD ESTIMATED UNCERTAINTY: +/- 15. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 12.132 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 13.066 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----SS-6-RTEL19,KM19.4 ON SMALL POINCIANA BEHIND MARKER
 GROUP CALIBRATION: 12/16/74 FIELD PLACEMENT: 12/17/74 RETRIEVAL: 1/20/75 GROUP NO.: 36 CHIP A: 11 CHIP B: 12 PAIR NO.: 6
 CAL.TIME=11.0 TLA1= 0.804 TLB1= 1.385 CAL.TIME2=36.0 TLA2= 2.613 TLB2= 2.481 CAL.TIME3=64.0 TLA3= 4.932 TLB3= 3.820
 TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.957 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.783
 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 5.211 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 5.491
 AVERAGE FIELD DOSE: 5.351 MILLIRAD ESTIMATED UNCERTAINTY: +/- 15. %
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 11.710 MICRO-RAD/HR.
 DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 12.610 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
 DOSERATE USING PB-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----SS-1-RTEL11,KM27.2 ON PHONE POLE
 GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 GROUP NO.: 48 CHIP A: 1 CHIP B: 2 PAIR NO.: 1
 CAL.TIME=11.0 TLA1= 0.848 TLB1= 0.727 CAL.TIME2=18.0 TLA2= 1.368 TLB2= 1.318 CAL.TIME3=64.0 TLA3= 4.833 TLB3= 4.829
 DOSIMETER PAIR NOT RECOVERED

-----SS-2-CN COUP BEHIND CENTRAL MARKET IN SAN SEBASTIAN
 GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 GROUP NO.: 48 CHIP A: 3 CHIP B: 4 PAIR NO.: 2
 CAL.TIME=11.0 TLA1= 0.731 TLB1= 0.730 CAL.TIME2=18.0 TLA2= 1.235 TLB2= 1.229 CAL.TIME3=64.0 TLA3= 3.882 TLB3= 4.232
 DOSIMETER PAIR NOT RECOVERED

SAN SEBASTIAN CONTINUED

-----SS-3-RTE111,KM25.3 TREE NEXT TO MARKER
GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 GROUP NO.: 48 CHIP A: 5 CHIP B: 6 PAIR NO.: 3
CAL.TIME1=11.0 TLA1= 0.439 TLB1= 0.758 CAL.TIME2=18.0 TLA2= 1.213 TLB2= 1.189 CAL.TIME3=64.0 TLA3= 4.858 TLB3= 4.728
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.822 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.614
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 4.933 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.703
AVERAGE FIELD DOSE: 4.818 MILLIRAD ESTIMATED UNCERTAINTY: +/- 16. %
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 12.362 MICRO-RAD/HR.
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 13.313 MICRO-RAD/HR.
DOSERATE USING P8-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSERATE USING P8-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----SS-4-RTE111,KM24.9 BARBED WIRE STRAND
GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 GROUP NO.: 48 CHIP A: 7 CHIP B: 8 PAIR NO.: 4
CAL.TIME1=11.0 TLA1= 0.806 TLB1= 0.743 CAL.TIME2=18.0 TLA2= 1.285 TLB2= 1.159 CAL.TIME3=64.0 TLA3= 4.481 TLB3= 4.884
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 3.011 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.962
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 5.517 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 5.185
AVERAGE FIELD DOSE: 5.351 MILLIRAD ESTIMATED UNCERTAINTY: +/- 15. %
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 13.730 MICRO-RAD/HR.
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 14.786 MICRO-RAD/HR.
DOSERATE USING P8-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSERATE USING P8-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----SS-5-RTE111,KM27.1 BARBED WIRE STRAND
GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 GROUP NO.: 48 CHIP A: 9 CHIP B: 10 PAIR NO.: 5
CAL.TIME1=11.0 TLA1= 0.829 TLB1= 0.797 CAL.TIME2=18.0 TLA2= 1.309 TLB2= 1.285 CAL.TIME3=64.0 TLA3= 4.936 TLB3= 4.779
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 2.121 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.380
DOSE AFTER FIELD EXPOSURE FOR DOSIMETER A: 3.644 DOSE AFTER FIELD EXPOSURE FOR DOSIMETER B: 4.175
AVERAGE FIELD DOSE: 3.909 MILLIRAD ESTIMATED UNCERTAINTY: +/- 17. %
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND DENHAM FADING CORRECTION IS 10.030 MICRO-RAD/HR.
DOSERATE USING LINDEKEN ENERGY DISTRIBUTION AND LEBRON FADING CORRECTION IS 10.802 MICRO-RAD/HR.
DOSERATE USING P8-TA SHIELDING CORRECTION AND DENHAM FADING CORRECTION IS 0.0 MICRO-RAD/HR.
DOSERATE USING P8-TA SHIELDING CORRECTION AND LEBRON FADING CORRECTION IS 0.0 MICRO-RAD/HR.

-----SS-6-RTE111,KM33.0 ON MANGO TREE
GROUP CALIBRATION: 4/14/75 FIELD PLACEMENT: 4/15/75 RETRIEVAL: 5/14/75 GROUP NO.: 48 CHIP A: 11 CHIP B: 12 PAIR NO.: 6
CAL.TIME1=11.0 TLA1= 0.704 TLB1= 1.395 CAL.TIME2=18.0 TLA2= 1.284 TLB2= 1.254 CAL.TIME3=64.0 TLA3= 4.932 TLB3= 3.820
TL-RESPONSE AFTER FIELD EXPOSURE FOR A: 1.111 TL-RESPONSE AFTER FIELD EXPOSURE FOR B: 2.243
PAIR VALUES REJECTED BECAUSE OF INDICATED UNCERTAINTY IN CALIBRATION DATA

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