

SURRY SITE DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO

A LOCA (TID-14844 SOURCE TERMS) AT REACTOR UNIT # 1

| SITE | Control Room | | | | | S A S | | | | | C A S | | | | | Technical Support Center | | | | | Office Bldg | | | | |
|---------------------|------------------------|--------------------------|--|-------------------------|-------------------|------------------------|--------------------------|--|-------------------------|-------------------|------------------------|--------------------------|--|-------------------------|-------------------|--------------------------|--------------------------|--|-------------------------|-------------------|------------------------|--------------------------|--|-------------------------|-------------------|
| SOURCE TIME (HR) | Cont. Dome shine | Cont. R.S. headers | Cont. Shine thru main stm line penetr. | Aux. Bldg sources | Total | Cont. Dome shine | Cont. R.S. headers | Cont. Shine thru main stm line penetr. | Aux. Bldg sources | Total | Cont. Dome shine | Cont. R.S. headers | Cont. Shine thru main stm line penetr. | Aux. Bldg sources | Total | Cont. Dome shine | Cont. R.S. headers | Cont. Shine thru main stm line penetr. | Aux. Bldg sources | Total | Cont. Dome shine | Cont. R.S. headers | Cont. Shine thru main stm line penetr. | Aux. Bldg sources | Total |
| 0 | 1.3 ⁺² | 2.2 ⁻² | - ⁽²⁾ | - | 1.3 ⁺² | 1.0 ⁺⁴ | 2.9 ⁺⁰ | - | - | 1.0 ⁺⁴ | 8.6 ⁺³ | 3.1 ⁺⁰ | - | - | 8.6 ⁺³ | 1.3 ⁺⁴ | 2.2 ⁺⁰ | - | - | 1.3 ⁺⁴ | 1.1 ⁺⁴ | 2.6 ⁺⁰ | - | - | 1.1 ⁺⁴ |
| 1 | 1.9 ⁺¹ | 1.5 ⁻¹ | - | - | 1.9 ⁺¹ | 1.6 ⁺³ | 1.8 ⁺¹ | - | - | 1.6 ⁺³ | 1.3 ⁺³ | 2.0 ⁺¹ | - | - | 1.3 ⁺³ | 1.9 ⁺³ | 1.5 ⁺¹ | - | - | 1.9 ⁺³ | 1.7 ⁺³ | 1.7 ⁺¹ | - | - | 1.7 ⁺³ |
| 2 | 1.4 ⁺¹ | 8.8 ⁻² | - | - | 1.4 ⁺¹ | 1.2 ⁺³ | 1.2 ⁺¹ | - | - | 1.2 ⁺³ | 9.7 ⁺² | 1.2 ⁺¹ | - | - | 9.8 ⁺² | 1.4 ⁺³ | 8.8 ⁺⁰ | - | - | 1.4 ⁺³ | 1.2 ⁺³ | 1.1 ⁺¹ | - | - | 1.2 ⁺³ |
| 8 | 2.9 ⁺⁰ | - | - | - | 2.9 ⁺⁰ | 2.4 ⁺² | 2.9 ⁺⁰ | - | - | 2.4 ⁺² | 2.0 ⁺² | 3.1 ⁺⁰ | - | - | 2.0 ⁺² | 2.9 ⁺² | 2.1 ⁺⁰ | - | - | 2.9 ⁺² | 2.6 ⁺² | 2.6 ⁺⁰ | - | - | 2.6 ⁺² |
| 24 | 2.1 ⁻¹ | - | - | - | 2.1 ⁻¹ | 1.8 ⁺¹ | 6.2 ⁻¹ | - | - | 1.8 ⁺¹ | 1.5 ⁺¹ | 7.2 ⁻¹ | - | - | 1.5 ⁺¹ | 2.1 ⁺¹ | 4.5 ⁻¹ | - | - | 2.1 ⁺¹ | 2.0 ⁺¹ | 5.5 ⁻¹ | - | - | 2.1 ⁺¹ |
| 96 | - | - | - | - | - | 8.5 ⁻¹ | - | - | - | 8.5 ⁻¹ | 7.2 ⁻¹ | - | - | - | 7.2 ⁻¹ | 9.7 ⁻¹ | - | - | - | 9.7 ⁻¹ | 9.2 ⁻¹ | - | - | - | 9.2 ⁻¹ |

(1) 1.3⁺² reads 1.3 x 10⁻²

(2) - means dose rate is small (< 1 mR/hr) and thus negligible.

| SITE | Health physics & Labs | | | | | Machine shops | | | | | Heating Boiler Room | | | | | Emerg. Swgr & Relay Rms | | | | | Operational Support Center | | | | |
|---------------------|------------------------|--------------------------|--|-------------------------|-------------------|------------------------|--------------------------|--|--|--|------------------------|--------------------------|--|-------------------------|-------------------|-------------------------|--------------------------|--|-------------------------|-------------------|----------------------------|--------------------------|--|-------------------------|-------------------|
| SOURCE TIME (HR) | Cont. Dome shine | Cont. R.S. headers | Cont. Shine thru main stm line penetr. | Aux. Bldg sources | Total | Cont. Dome shine | Cont. R.S. headers | Cont. Shine thru main stm line penetr. | S I LINES (WYARD AREA) | Total | Cont. Dome shine | Cont. R.S. headers | Cont. Shine thru main stm line penetr. | Aux. Bldg sources | Total | Cont. Dome shine | Cont. R.S. headers | Cont. Shine thru main stm line penetr. | Aux. Bldg sources | Total | Cont. Dome shine | Cont. R.S. headers | Cont. Shine thru main stm line penetr. | Aux. Bldg sources | Total |
| 0 | 9.4 ⁺³ | 3.0 ⁺⁰ | - | - | 9.4 ⁺³ | 8.5 ⁺³ | 5.7 ⁻¹ | 5.7 ⁺¹ | 8.9 ⁺³ 1.8 ⁺² | 1.7 ⁺⁴ 1.8 ⁺² | 7.2 ⁺³ | 2.9 ⁺⁰ | - | - | 7.2 ⁺³ | 2.9 ⁺¹ | - | - | 9.1 ⁺⁰ | 3.2 ⁺¹ | 1.8 ⁺³ | 7.0 ⁻¹ | - | - | 1.8 ⁺³ |
| 1 | 1.5 ⁺³ | 1.9 ⁺¹ | - | - | 1.5 ⁺³ | 1.3 ⁺³ | 8.8 ⁺⁰ | 7.2 ⁺⁰ | 5.4 ⁺³ 1.1 ⁺² | 6.7 ⁺³ 1.1 ⁺² | 1.0 ⁺³ | 1.8 ⁺¹ | - | - | 1.0 ⁺³ | 3.5 ⁺⁰ | - | - | 5.2 ⁺⁰ | 8.7 ⁺⁰ | 2.8 ⁺² | 4.4 ⁺⁰ | - | - | 2.8 ⁺² |
| 2 | 1.1 ⁺³ | 1.2 ⁺¹ | - | - | 1.1 ⁺³ | 9.2 ⁺² | 4.8 ⁺⁰ | 5.3 ⁺⁰ | 3.8 ⁺³ 5.2 ⁺¹ | 4.7 ⁺³ 5.2 ⁺¹ | 7.3 ⁺² | 1.1 ⁺¹ | - | - | 7.4 ⁺² | 2.6 ⁺⁰ | - | - | 3.6 ⁺⁰ | 6.2 ⁺⁰ | 2.1 ⁺² | 2.7 ⁺⁰ | - | - | 2.1 ⁺² |
| 8 | 2.2 ⁺² | 3.0 ⁺⁰ | - | - | 2.2 ⁺² | 1.8 ⁺² | 5.7 ⁻¹ | 1.0 ⁺⁰ | 1.6 ⁺³ 1.7 ⁺¹ | 1.8 ⁺³ 1.7 ⁺¹ | 1.4 ⁺² | 2.9 ⁺⁰ | - | - | 1.4 ⁺² | 5.2 ⁻¹ | - | - | 1.4 ⁺⁰ | 1.9 ⁺⁰ | 4.2 ⁺¹ | 7.1 ⁻¹ | - | - | 4.3 ⁺¹ |
| 24 | 1.7 ⁺¹ | 6.6 ⁻¹ | - | - | 1.8 ⁺¹ | 1.3 ⁺¹ | - | 6.3 ⁻² | 7.1 ⁺² 7.5 ⁺⁰ | 7.2 ⁺² 7.5 ⁺⁰ | 1.1 ⁺¹ | 7.0 ⁻¹ | - | - | 1.2 ⁺¹ | - | - | - | 6.0 ⁻¹ | 6.0 ⁻¹ | 3.2 ⁺⁰ | - | - | - | 2.2 ⁺⁰ |
| 96 | 7.8 ⁻¹ | - | - | - | 7.8 ⁻¹ | 5.4 ⁻¹ | - | - | 2.6 ⁺² | 2.6 ⁺² | 5.2 ⁻¹ | - | - | - | 5.2 ⁻¹ | - | - | - | - | - | 1.5 ⁻¹ | - | - | - | 1.5 ⁻¹ |

(3) Values under the diagonal are for 192 hrs, 360 hrs, 720 hrs, 2160 hrs, 4320 hrs.

(15) Aux bldg sources do not include waste drain tanks.

(4) All dose rates are evaluated at 3 feet above the ground floor.

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Control # 8005090455
Date 7/22/80 of Document
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800 5090455

SURRY SITE DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO

A LOCA (TID-14844 SOURCE TERMS) AT REACTOR UNIT # 2

| SITE | Control Room | | | | | S A S | | | | | C A S | | | | | Technical Support Center | | | | | Office Bldg | | | | |
|---------------------|------------------------|--------------------------|--|------------------------|-------------------|------------------------|--------------------------|--|------------------------|-------------------|------------------------|--------------------------|--|------------------------|-------------------|--------------------------|--------------------------|--|------------------------|-------------------|------------------------|--------------------------|--|------------------------|-------------------|
| SOURCE TIME (hr) | Cont. Dome Shine | Cont. R.S. headers | Cont. shine thru main stm line penetr. | Aux Bldg sources | Total | Cont. Dome Shine | Cont. R.S. headers | Cont. shine thru main stm line penetr. | Aux Bldg sources | Total | Cont. Dome Shine | Cont. R.S. headers | Cont. shine thru main stm line penetr. | Aux Bldg sources | Total | Cont. Dome Shine | Cont. R.S. headers | Cont. shine thru main stm line penetr. | Aux Bldg sources | Total | Cont. Dome Shine | Cont. R.S. headers | Cont. shine thru main stm line penetr. | Aux Bldg sources | Total |
| 0 | 1.1 ⁺² | 2.6 ⁻² | - | - | 1.1 ⁺² | 6.2 ⁺³ | 1.9 ⁺⁰ | - | - | 6.2 ⁺³ | 6.8 ⁺³ | 1.8 ⁺⁰ | - | - | 6.8 ⁺³ | 7.2 ⁺³ | 2.9 ⁺⁰ | - | - | 7.2 ⁺³ | 7.2 ⁺³ | 2.9 ⁺⁰ | - | - | 7.2 ⁺³ |
| 1 | 1.7 ⁺¹ | 1.7 ⁻¹ | - | - | 1.7 ⁻¹ | 6.1 ⁺² | 1.2 ⁺¹ | - | - | 6.2 ⁺² | 8.5 ⁺² | 1.1 ⁺¹ | - | - | 8.6 ⁺² | 1.0 ⁺³ | 1.8 ⁺¹ | - | - | 1.0 ⁺³ | 1.0 ⁺³ | 1.8 ⁺¹ | - | - | 1.0 ⁺³ |
| 2 | 1.2 ⁺¹ | 1.1 ⁻¹ | - | - | 1.2 ⁺¹ | 4.5 ⁺² | 7.9 ⁺⁰ | - | - | 4.6 ⁺² | 6.2 ⁺² | 7.7 ⁺⁰ | - | - | 6.3 ⁺² | 7.3 ⁺² | 1.1 ⁺¹ | - | - | 7.4 ⁺² | 7.3 ⁺² | 1.1 ⁺¹ | - | - | 7.4 ⁺² |
| 8 | 2.6 ⁺⁰ | - | - | - | 2.6 ⁺⁰ | 1.0 ⁺² | 1.9 ⁺⁰ | - | - | 1.0 ⁺² | 1.2 ⁺² | 1.8 ⁺⁰ | - | - | 1.2 ⁺² | 1.4 ⁺² | 2.9 ⁺⁰ | - | - | 1.4 ⁺² | 1.4 ⁺² | 2.9 ⁺⁰ | - | - | 1.4 ⁺² |
| 24 | 2.0 ⁻¹ | - | - | - | 2.0 ⁻¹ | 7.7 ⁺⁰ | 4.4 ⁻¹ | - | - | 8.1 ⁺⁰ | 1.0 ⁺¹ | 4.2 ⁻¹ | - | - | 1.0 ⁺¹ | 1.1 ⁺¹ | 7.0 ⁻¹ | - | - | 1.2 ⁺¹ | 1.1 ⁺¹ | 7.0 ⁻¹ | - | - | 1.2 ⁺¹ |
| 96 | - | - | - | - | - | 3.0 ⁻¹ | - | - | - | 3.0 ⁻¹ | 4.1 ⁻¹ | - | - | - | 4.1 ⁻¹ | 5.2 ⁻¹ | - | - | - | 5.2 ⁻¹ | 5.2 ⁻¹ | - | - | - | 5.2 ⁻¹ |

(1) 1.1⁺² = 1.1 x 10⁻²

(2) - means dose rate is small and thus negligible (< 1 mR/hr)

| SITE | Health Physics & Labs | | | | | Machine Shops | | | | | Heating Boiler Room | | | | | Emerg. Swgr & Relay Rms | | | | | Operational Support Center | | | | |
|---------------------|------------------------|--------------------------|--|---------------------------------|-------------------|------------------------|--------------------------|--|------------------------|-------------------|------------------------|--------------------------|--|------------------------|-------------------|-------------------------|--------------------------|--|------------------------|-------------------|----------------------------|--------------------------|--|------------------------|-------------------|
| SOURCE TIME (hr) | Cont. Dome Shine | Cont. R.S. headers | Cont. shine thru main stm line penetr. | S I Lines in yard area | Total | Cont. Dome Shine | Cont. R.S. headers | Cont. shine thru main stm line penetr. | Aux Bldg sources | Total | Cont. Dome Shine | Cont. R.S. headers | Cont. shine thru main stm line penetr. | Aux Bldg sources | Total | Cont. Dome Shine | Cont. R.S. headers | Cont. shine thru main stm line penetr. | Aux Bldg sources | Total | Cont. Dome Shine | Cont. R.S. headers | Cont. shine thru main stm line penetr. | Aux Bldg sources | Total |
| 0 | 2.5 ⁺³ | 5.7 ⁻¹ | 5.1 ⁺¹ | 8.9 ⁺³ | 1.7 ⁺⁴ | 1.0 ⁺⁴ | 2.9 ⁺⁰ | - | - | 1.0 ⁺⁴ | 1.3 ⁺⁴ | 2.2 ⁺⁰ | - | - | 1.3 ⁺⁴ | 1.0 ⁺¹ | - | - | 9.0 ⁺⁰ | 2.9 ⁺¹ | 1.5 ⁺³ | 5.7 ⁻¹ | - | - | 1.5 ⁺³ |
| 1 | 1.3 ⁺³ | 8.8 ⁺⁰ | 1.2 ⁺⁰ | 5.4 ⁺³ | 6.7 ⁺³ | 1.6 ⁺³ | 1.8 ⁺¹ | - | - | 1.6 ⁺³ | 1.9 ⁺³ | 1.5 ⁺¹ | - | - | 1.9 ⁺³ | 3.0 ⁺⁰ | - | - | 5.2 ⁺⁰ | 8.2 ⁺⁰ | 4.3 ⁺² | 8.8 ⁺⁰ | - | - | 2.4 ⁺² |
| 2 | 1.2 ⁺² | 4.8 ⁺⁰ | 5.3 ⁺⁰ | 3.8 ⁺³ | 4.7 ⁺³ | 1.2 ⁺³ | 1.2 ⁺¹ | - | - | 1.2 ⁺³ | 1.4 ⁺³ | 8.8 ⁺⁰ | - | - | 1.4 ⁺³ | 2.1 ⁺⁰ | - | - | 3.6 ⁺⁰ | 5.7 ⁺⁰ | 1.7 ⁺² | 4.8 ⁺⁰ | - | - | 1.7 ⁺² |
| 8 | 1.8 ⁺¹ | 5.7 ⁻¹ | 1.0 ⁺⁰ | 1.6 ⁺³ | 1.7 ⁺¹ | 2.4 ⁺² | 2.9 ⁺⁰ | - | - | 2.4 ⁺² | 2.9 ⁺² | 2.1 ⁺⁰ | - | - | 2.9 ⁺² | 4.6 ⁻¹ | - | - | 1.4 ⁺⁰ | 1.9 ⁺⁰ | 3.4 ⁺¹ | 5.7 ⁻¹ | - | - | 3.5 ⁺¹ |
| 24 | 1.3 ⁺¹ | - | 6.3 ⁻² | 7.1 ⁺² | 7.2 ⁻² | 1.8 ⁺¹ | 6.2 ⁻¹ | - | - | 1.9 ⁺¹ | 2.1 ⁺¹ | 4.5 ⁻¹ | - | - | 2.1 ⁺¹ | - | - | - | 6.0 ⁻¹ | 6.0 ⁻¹ | 2.6 ⁺⁰ | - | - | - | 2.6 ⁺⁰ |
| 96 | 5.4 ⁻¹ | - | - | 2.6 ⁺² | 2.6 ⁺² | 8.5 ⁻¹ | - | - | - | 8.5 ⁻¹ | 9.7 ⁻¹ | - | - | - | 9.7 ⁻¹ | - | - | - | - | - | 1.2 ⁻¹ | - | - | - | 1.2 ⁻¹ |

(1) Values under the diagonal are for 172 hrs, 360 hrs, 720 hrs, 2160 hrs, 4320 hrs. (2) AUX Bldg sources DO NOT include waste drain tanks.

(3) All values are estimated at 3 feet above the ground floor.

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PRELIMINARY

PRELIMINARY

SURRY AUXILIARY BLDG RADIATION ZONE AREA A @ EL. 2'

ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN P4E TUN. EL. 2' FP-14C, 7A | SAFEGUARDS SUMP DRAIN LINE IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINE IN P4E TUN. EL. 2' FP-19C | DRAIN LINE INSIDE WASTE TANK CUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' 13' & 27.5' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAP EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONAL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|---|--|---|---|---|---|---|---|--------------------------------|---|----------------------------------|----------------------|-------------------|
| 0 | 6.5 ⁺⁴ | 1.9 ⁺¹ | 3.9 ⁺¹ | 1.1 ⁺² | 1.7 ⁺⁴ | 4.4 ⁺³ | 3.7 ⁺³ | 5.9 ⁺² | 5.7 ⁺² | 46 ⁺³ | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | 9.0 ⁺⁴ | 9.5 ⁺⁴ |
| 1 | 39 ⁺⁴ | 1.1 ⁺¹ | 1.5 ⁺¹ | 6.2 ⁺¹ | 9.4 ⁺³ | 2.6 ⁺³ | 2.1 ⁺³ | 3.5 ⁺² | 3.1 ⁺² | 19 ⁺³ | | | | | | | 5.3 ⁺⁴ | 5.5 ⁺⁴ |
| 2 | 2.7 ⁺⁴ | 7.7 ⁺⁰ | 9.4 ⁺⁰ | 4.3 ⁺¹ | 6.4 ⁺³ | 1.9 ⁺³ | 1.4 ⁺³ | 2.4 ⁺² | 2.1 ⁺² | 1.3 ⁺³ | | | | | | | 3.7 ⁺⁴ | 3.9 ⁺⁴ |
| 8 | 1.1 ⁺⁴ | 3.1 ⁺⁰ | 3.1 ⁺⁰ | 1.7 ⁺¹ | 2.4 ⁺³ | 7.9 ⁺² | 5.3 ⁺² | 9.7 ⁺¹ | 8.0 ⁺¹ | 5.1 ⁺² | | | | | | | 1.5 ⁺⁴ | 1.6 ⁺⁴ |
| 24 | 4.6 ⁺³ | 1.3 ⁺⁰ | 7.6 ⁻¹ | 5.5 ⁺⁰ | 8.0 ⁺² | 3.5 ⁺² | 1.9 ⁺² | 4.1 ⁺¹ | 2.7 ⁺¹ | 2.0 ⁺² | | | | | | | 5.9 ⁺³ | 6.2 ⁺³ |
| 96 | 1.6 ⁺³ | 4.4 ⁻¹ | NEG. | 1.5 ⁺⁰ | 2.2 ⁺² | 1.3 ⁺² | 4.8 ⁺¹ | 1.4 ⁺¹ | 7.3 ⁺⁰ | 7.7 ⁺¹ | | | | | | | 2.1 ⁺³ | 2.2 ⁺³ |
| 192 | 1.1 ⁺³ | NEG. | | 1.1 ⁺⁰ | 1.5 ⁺² | 8.8 ⁺¹ | 3.3 ⁺¹ | 9.5 ⁺⁰ | 5.1 ⁺⁰ | 4.8 ⁺¹ | | | | | | | 1.4 ⁺³ | 1.5 ⁺³ |
| 360 | 6.9 ⁺² | ↓ | | 7.0 ⁻¹ | 1.0 ⁺² | 5.5 ⁺¹ | 2.2 ⁺¹ | 5.9 ⁺⁰ | 3.4 ⁺⁰ | 2.6 ⁺¹ | | | | | | | 8.8 ⁺² | 9.1 ⁺² |
| 720 | 3.3 ⁺² | | | NEG. | 5.3 ⁺¹ | 2.5 ⁺¹ | 1.2 ⁺¹ | 3.0 ⁺⁰ | 1.7 ⁺⁰ | 1.2 ⁺¹ | | | | | | | 4.2 ⁺² | 4.4 ⁺² |
| 2160 | 1.1 ⁺² | | | ↓ | 1.8 ⁺¹ | 8.4 ⁺⁰ | 4.0 ⁺⁰ | 9.7 ⁻¹ | 5.9 ⁻¹ | 4.6 ⁺⁰ | | | | | | | 1.4 ⁺² | 1.5 ⁺² |
| 4320 | 4.8 ⁺¹ | | ↓ | | 7.5 ⁺⁰ | 3.6 ⁺⁰ | 1.7 ⁺⁰ | NEG. | NEG. | 1.6 ⁺⁰ | | ↓ | ↓ | ↓ | ↓ | ↓ | 5.9 ⁺¹ | 6.2 ⁺¹ |

(1) Subtotal excludes contribution from Drain Lines inside waste tank cubicle, LLWDT or HLWDT, and Reactor ^{coolant} sampling lines not in penetration area.

(2) Dose rates are from either a full LLWDT or a full HLWDT.

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PRELIMINARY

SURRY AUXILIARY BLDG RADIATION ZONE AREA B @ EL. 2'

ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

| SOURCE TIME (HR) | (2) | | CHARGING PUMP CUB. el. 2' & 13' FP-10K | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN P4E TUN. el. 2' FP-MC-7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN P4E TUN. el. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. el. 2' & 13' FP-19C | LOW LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' & 13' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER MAIN TRAP el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATED el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PRESSURE HATCH | CONTAIN. DOME R.S. HEADERS | SUB- TOTAL | TOTAL |
|------------------------|--------------------------------------|--------|---|--------------------------------------|---|--|--|---|---|--|---|---|--|--|--------------------------------|---|----------------------------------|---------------|-------|
| | SI/CH LINES IN PEN AREA el. 2' | FP-10K | | | | | | | | | | | | | | | | | |
| 0 | 2.0+3 | 6.2+2 | NEG. | | 1.1+2 | 6.9+3 | 1.4+2 | 1.5+3 | 9.0+0 | 2.0+1 | 2.5+3 | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | 1.1+4 | 1.4+4 |
| 1 | 1.2+3 | 3.6+2 | | | 6.2+1 | 3.7+3 | 8.3+1 | 8.1+2 | 5.3+0 | 1.1+1 | 1.0+3 | | | | | | | 6.1+3 | 7.2+3 |
| 2 | 8.4+2 | 2.4+2 | | | 4.3+1 | 2.5+3 | 5.8+1 | 5.5+2 | 3.6+0 | 7.2+0 | 7.3+2 | | | | | | | 4.3+3 | 5.0+3 |
| 8 | 3.5+2 | 1.0+2 | | | 1.7+1 | 9.8+2 | 2.5+1 | 2.2+2 | 1.5+0 | 2.8+0 | 2.8+2 | | | | | | | 1.7+3 | 2.0+3 |
| 24 | 1.4+2 | 4.1+1 | | | 5.5+0 | 3.2+2 | 1.1+1 | 7.0+1 | 6.2-1 | 9.2-1 | 1.1+2 | | | | | | | 5.9+2 | 7.0+2 |
| 96 | 5.0+1 | 1.4+1 | | | 1.5+0 | 8.7+1 | 4.1+0 | 1.9+1 | NEG. | NEG. | 4.2+1 | | | | | | | 2.2+3 | 2.2+1 |
| 192 | 3.4+1 | 9.7+0 | | | 1.1+0 | 6.1+1 | 2.8+0 | 1.3+1 | | | 2.6+1 | | | | | | | 1.2+2 | 1.5+2 |
| 360 | 2.2+1 | 6.2+0 | | | 7.0-1 | 4.0+1 | 1.7+0 | 8.8+0 | | | 1.4+1 | | | | | | | 7.9+1 | 9.3+1 |
| 720 | 1.0+1 | 3.0+0 | | | NEG. | 2.1+1 | NEG. | 4.6+0 | | | 6.4+0 | | | | | | | 3.9+1 | 4.5+1 |
| 2160 | 3.4+0 | 1.0+0 | | | ↓ | 7.1+0 | ↓ | 1.6+0 | | | 2.5+0 | | | | | | | 1.3+0 | 1.6+1 |
| 4320 | 1.5+0 | 4.1-1 | | | | 3.0+0 | | 6.6-1 | | | 8.5-1 | | | | | | | 5.6 | 6.4 |

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PRELIMINARY

SURRY AUXILIARY BLDG RADIATION ZONE AREA C @ EL. 2'

ESTIMATED HIGHEST DIRECT T DOSE RATES ($\mu R/hr$) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT
———— MITIGATION PHASE - NO LETDOWN ————

| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PVE TUN. EL. 2' FP-14.7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PVE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS LUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' & 13' 27.5' | CONTAIN. LEAKAGE MONIT. FOR LINES EL. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | SUBTOTAL ⁽¹⁾ | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|--|---|---|---|---|--|---|---|--------------------------------|--|----------------------------------|-------------------------|-------------------|
| 0 | 2.0 ⁺⁵ | 1.6 ⁺⁶ | 5.0 ⁺⁵ | 6.4 ⁺⁵ | 1.3 ⁺⁷ | 3.0 ⁺⁴ | 2.9 ⁺⁶ | 1.5 ⁺⁴ | 6.6 ⁺⁵ | 4.9 ⁺⁶ | 9.6 ⁺² | 3.0 ⁺³ | NEG. | NEG. | NEG. | NEG. | 2.3 ⁺⁷ | 2.4 ⁺⁷ |
| 1 | 1.2 ⁺⁵ | 9.6 ⁺⁵ | 2.2 ⁺⁵ | 3.9 ⁺⁵ | 7.8 ⁺⁶ | 1.9 ⁺⁴ | 1.7 ⁺⁶ | 9.0 ⁺³ | 4.0 ⁺⁵ | 2.0 ⁺⁶ | 2.3 ⁺² | 4.9 ⁺² | | | | | 1.4 ⁺⁷ | 1.4 ⁺⁷ |
| 2 | 8.2 ⁺⁴ | 6.5 ⁺⁵ | 1.5 ⁺⁵ | 2.7 ⁺⁵ | 5.5 ⁺⁶ | 1.3 ⁺⁴ | 1.2 ⁺⁶ | 6.1 ⁺³ | 2.7 ⁺⁵ | 1.4 ⁺⁶ | 1.7 ⁺² | 3.6 ⁺² | | | | | 9.2 ⁺⁶ | 9.4 ⁺⁶ |
| 8 | 3.4 ⁺⁴ | 2.6 ⁺⁵ | 5.2 ⁺⁴ | 1.2 ⁺⁵ | 2.3 ⁺⁶ | 5.5 ⁺³ | 5.1 ⁺⁵ | 2.5 ⁺³ | 1.1 ⁺⁵ | 5.4 ⁺⁵ | 6.2 ⁺¹ | 1.5 ⁺² | | | | | 3.7 ⁺⁶ | 3.8 ⁺⁶ |
| 24 | 1.4 ⁺⁴ | 1.1 ⁺⁵ | 1.4 ⁺⁴ | 5.2 ⁺⁴ | 1.0 ⁺⁶ | 2.4 ⁺³ | 2.2 ⁺⁵ | 1.0 ⁺³ | 4.6 ⁺⁴ | 2.1 ⁺⁵ | 2.3 ⁺¹ | 3.9 ⁺¹ | | | | | 1.6 ⁺⁶ | 1.6 ⁺⁶ |
| 96 | 4.7 ⁺³ | 3.7 ⁺⁴ | 3.6 ⁺³ | 1.9 ⁺⁴ | 3.8 ⁺⁵ | 8.9 ⁺² | 8.4 ⁺⁴ | 3.6 ⁺² | 1.5 ⁺⁴ | 8.2 ⁺⁴ | 8.7 ⁺⁰ | 4.2 ⁺⁰ | | | | | 6.0 ⁺⁵ | 6.2 ⁺⁵ |
| 192 | 3.2 ⁺³ | 2.6 ⁺⁴ | 2.6 ⁺³ | 1.3 ⁺⁴ | 2.6 ⁺⁵ | 6.2 ⁺² | 5.7 ⁺⁴ | 2.4 ⁺² | 1.1 ⁺⁴ | 5.1 ⁺⁴ | 5.0 ⁺⁰ | 1.9 ⁺⁰ | | | | | 4.1 ⁺⁵ | 4.2 ⁺⁵ |
| 360 | 2.1 ⁺³ | 1.6 ⁺⁴ | 1.8 ⁺³ | 8.2 ⁺³ | 1.6 ⁺⁵ | 3.9 ⁺² | 3.5 ⁺⁴ | 1.5 ⁺² | 6.6 ⁺³ | 2.8 ⁺⁴ | 2.3 ⁺⁰ | 8.8 ⁻¹ | | | | | 2.4 ⁺⁵ | 2.4 ⁺⁵ |
| 720 | 9.9 ⁺² | 7.7 ⁺³ | 9.0 ⁺² | 3.8 ⁺³ | 7.6 ⁺⁴ | 1.8 ⁺² | 1.7 ⁺⁴ | 7.6 ⁺¹ | 3.2 ⁺³ | 1.2 ⁺⁴ | 4.7 ⁻¹ | NEG | | | | | 1.2 ⁺⁵ | 1.2 ⁺⁵ |
| 2160 | 3.4 ⁺² | 2.2 ⁺³ | 2.5 ⁺² | 1.2 ⁺³ | 2.5 ⁺⁴ | 5.8 ⁺¹ | 5.5 ⁺³ | 2.5 ⁺¹ | 1.1 ⁺³ | 4.9 ⁺³ | NEG | | | | | | 4.0 ⁺⁴ | 4.0 ⁺⁴ |
| 4320 | 1.4 ⁺² | 1.1 ⁺³ | 9.9 ⁺¹ | 5.4 ⁺² | 1.1 ⁺⁴ | 2.5 ⁺¹ | 2.4 ⁺³ | 1.0 ⁺¹ | 4.6 ⁺² | 1.7 ⁺³ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 1.8 ⁺⁴ | 1.8 ⁺⁴ |

REGULATORY DIVISION FILE COPY

NOTED FEB 14 1980

PRELIMINARY

SURRY AUXILIARY BLDG RADIATION ZONE AREA D @ EL. 2'

ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA el. 2' FP-10K | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PYE TUN. el. 2' FP-19C, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PYE TUN. el. 2' FP-19C | DRAIN LINES INSIDE WARE TANKS CUB. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' 13' & 15' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAY el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | SUB-TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|--|---|--|---|---|---|---|---|--------------------------------|--|----------------------------------|-------------------|-------------------|
| 0 | 42 ⁺⁶ | 1.1 ⁺⁴ | NEG. | 1.1 ⁺² | 1.6 ⁺⁴ | 2.1 ⁺⁵ | 3.5 ⁺³ | 3.5 ⁺⁶ | 4.2 ⁺⁷ | 4.1 ⁺⁴ | 2.0 ⁺² | 9.7 ⁺¹ | 3.1 ⁺³ | NEG. | NEG. | NEG. | 4.5 ⁺⁶ | 5.0 ⁺⁷ |
| 1 | 2.0 ⁺⁶ | 6.6 ⁺³ | | 6.2 ⁺¹ | 9.1 ⁺³ | 9.9 ⁺⁴ | 2.0 ⁺³ | 2.1 ⁺⁶ | 2.5 ⁺⁷ | 1.8 ⁺⁴ | 4.9 ⁺¹ | 1.6 ⁺¹ | 7.6 ⁺² | | | | 2.0 ⁺⁶ | 2.9 ⁺⁷ |
| 2 | 1.3 ⁺⁶ | 4.4 ⁺³ | | 4.3 ⁺¹ | 6.2 ⁺³ | 6.3 ⁺⁴ | 1.4 ⁺³ | 1.4 ⁺⁶ | 1.8 ⁺⁷ | 1.3 ⁺⁴ | 3.6 ⁺¹ | 1.2 ⁺¹ | 5.8 ⁺² | | | | 2.0 ⁺⁶ | 2.1 ⁺⁷ |
| 8 | 6.2 ⁺⁵ | 1.8 ⁺³ | | 1.7 ⁺¹ | 2.4 ⁺³ | 2.3 ⁺⁴ | 5.3 ⁺² | 5.8 ⁺⁵ | 6.9 ⁺⁶ | 4.8 ⁺³ | 1.3 ⁺¹ | 4.8 ⁺⁰ | 2.2 ⁺² | | | | 6.2 ⁺⁵ | 8.1 ⁺⁶ |
| 24 | 1.3 ⁺⁵ | 7.5 ⁺² | | 5.5 ⁺⁰ | 8.1 ⁺² | 6.3 ⁺³ | 1.8 ⁺² | 2.4 ⁺⁵ | 3.0 ⁺⁶ | 1.9 ⁺³ | 4.9 ⁺⁰ | 1.2 ⁺⁰ | 8.6 ⁺¹ | | | | 1.3 ⁺⁵ | 3.4 ⁺⁶ |
| 96 | 3.2 ⁺⁴ | 2.6 ⁺² | | 1.5 ⁺⁰ | 2.2 ⁺² | 1.6 ⁺³ | 4.8 ⁺¹ | 8.3 ⁺⁴ | 9.9 ⁺⁵ | 7.4 ⁺² | 1.8 ⁺⁰ | NEG. | 3.2 ⁺¹ | | | | 3.0 ⁺⁴ | 1.1 ⁺⁶ |
| 192 | 2.3 ⁺⁴ | 1.8 ⁺² | | 1.1 ⁺⁰ | 1.6 ⁺² | 1.2 ⁺³ | 3.5 ⁺¹ | 5.6 ⁺⁴ | 6.7 ⁺⁵ | 4.6 ⁺² | 1.0 ⁺⁰ | | 1.8 ⁺¹ | | | | 2.5 ⁺⁴ | 7.5 ⁺⁵ |
| 360 | 1.6 ⁺⁴ | 1.1 ⁺² | | 7.0 ⁻¹ | 1.0 ⁺² | 1.7 ⁺² | 2.2 ⁺¹ | 3.5 ⁺⁴ | 4.2 ⁺⁵ | 2.5 ⁺² | 4.7 ⁻¹ | | 8.6 ⁺⁰ | | | | 1.7 ⁺⁴ | 4.7 ⁺⁵ |
| 720 | 4.0 ⁺³ | 5.4 ⁺¹ | | NEG. | 5.4 ⁺¹ | 3.9 ⁺² | 1.2 ⁺¹ | 1.8 ⁺⁴ | 2.1 ⁺⁵ | 1.1 ⁺² | NEG. | | 1.8 ⁺⁰ | | | | 8.5 ⁺³ | 2.1 ⁺⁵ |
| 2160 | 2.3 ⁺³ | 1.8 ⁺¹ | | | 1.8 ⁺¹ | 1.1 ⁺² | 4.0 ⁺⁰ | 5.8 ⁺³ | 6.9 ⁺⁴ | 4.4 ⁺¹ | | | 7.7 ⁻³ | | | | 2.4 ⁺³ | 7.7 ⁺⁴ |
| 4320 | 8.9 ⁺² | 7.5 ⁺⁰ | | | 7.9 ⁺⁰ | 4.2 ⁺¹ | 1.7 ⁺⁰ | 2.4 ⁺³ | 3.0 ⁺⁴ | 1.5 ⁺¹ | | | NEG. | | | | 9.5 ⁺² | 3.3 ⁺⁴ |

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

PRELIMINARY

SURRY AUXILIARY BLDG RADIATION ZONE AREA E @ EL. 2'

ESTIMATED HIGHEST DIRECT P DOSE RATES ($\mu\text{R/hr}$) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

———— MITIGATION PHASE - NO LETDOWN ————

| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA el. 2' & 13' FP-10K | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PVE TUN. el. 2' FP-19L, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PVE TUN. el. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' 19, 27.5' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER MAIN TRAY el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PRESSURE HATCH | CONTAIN. DOME R.S. HEADERS | SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|--|---|---|---|---|---|--|---|--------------------------------|---|----------------------------------|-------------------|-------------------|
| 0 | 143 ⁺⁸ | 111 ⁵ | 3.9 ¹¹ | 1.1 ⁺² | 1.3 ⁺⁷ | 1.4 ⁺⁶ | 2.9 ⁺⁶ | 7.5 ⁺⁴ | 1.4 ⁺⁵ | 4.9 ⁺⁶ | 5.9 ⁺³ | 1.2 ⁺⁴ | 5.7 ⁺⁶ | NEG. | NEG. | NEG. | 1.7 ⁺⁸ | 1.7 ⁺⁸ |
| 1 | 90 ⁺⁷ | 66 ⁺⁴ | 1.5 ⁺¹ | 6.2 ⁺¹ | 78 ¹⁶ | 8.8 ⁺⁵ | 1.7 ⁺⁶ | 4.4 ⁺⁴ | 8.4 ⁺⁴ | 2.0 ⁺⁶ | 1.5 ⁺³ | 3.1 ⁺³ | 1.4 ⁺⁶ | | | | 1.0 ⁺⁸ | 1.1 ⁺⁸ |
| 2 | 63 ⁺⁷ | 44 ¹⁴ | 9.4 ⁺⁰ | 4.3 ⁺¹ | 55 ¹⁶ | 6.2 ⁺⁵ | 1.2 ⁺⁶ | 3.0 ⁺⁴ | 5.7 ⁺⁴ | 1.4 ⁺⁶ | 1.1 ⁺³ | 2.3 ⁺³ | 9.9 ⁺⁵ | | | | 7.3 ⁺⁷ | 7.3 ⁺⁷ |
| 8 | 26 ⁺⁷ | 18 ⁺⁴ | 3.1 ⁺⁰ | 1.7 ⁺¹ | 2.3 ⁺⁶ | 2.6 ⁺⁵ | 5.1 ⁺⁵ | 1.2 ⁺⁴ | 2.3 ⁺⁴ | 5.4 ⁺⁵ | 3.8 ⁺² | 1.0 ⁺³ | 3.8 ⁺⁵ | | | | 3.0 ⁺⁷ | 3.0 ⁺⁷ |
| 24 | 1.2 ⁺⁷ | 7.5 ⁺³ | NEG. | 5.5 ⁺⁰ | 1.0 ⁺⁶ | 1.2 ⁺⁵ | 2.2 ⁺⁵ | 5.1 ⁺³ | 9.5 ⁺³ | 2.1 ⁺⁵ | 1.6 ⁺² | 4.5 ⁺² | 1.4 ⁺⁵ | | | | 1.4 ⁺⁷ | 1.4 ⁺⁷ |
| 96 | 4.5 ⁺⁶ | 2.6 ⁺³ | | 1.5 ⁺⁰ | 3.8 ⁺⁵ | 4.3 ⁺⁴ | 8.4 ⁺⁴ | 1.8 ⁺³ | 3.3 ⁺³ | 8.2 ⁺⁴ | 5.4 ⁺¹ | 1.4 ⁺² | 4.9 ⁺⁴ | | | | 5.1 ⁺⁶ | 5.1 ⁺⁶ |
| 192 | 3.1 ⁺⁶ | 1.8 ⁺³ | | 1.1 ⁺⁰ | 2.6 ⁺⁵ | 3.0 ⁺⁴ | 5.7 ⁺⁴ | 1.2 ⁺³ | 2.2 ⁺³ | 5.1 ⁺⁴ | 3.1 ⁺¹ | 8.5 ⁺¹ | 3.0 ⁺⁴ | | | | 3.5 ⁺⁶ | 3.5 ⁺⁶ |
| 360 | 1.4 ⁺⁶ | 1.1 ⁺³ | | 7.0 ⁻¹ | 1.6 ⁺⁵ | 1.9 ⁺⁴ | 3.5 ⁺⁴ | 7.5 ⁺² | 1.4 ⁺³ | 2.8 ⁺⁴ | 1.4 ⁺¹ | 4.5 ⁺¹ | 1.3 ⁺⁴ | | | | 2.2 ⁺⁶ | 2.2 ⁺⁶ |
| 720 | 8.9 ⁺³ | 5.4 ⁺² | | NEG. | 7.6 ⁺⁴ | 8.6 ⁺³ | 1.7 ⁺⁴ | 3.7 ⁺² | 6.6 ⁺² | 1.2 ⁺⁴ | 2.9 ⁺⁰ | 1.2 ⁺¹ | 3.0 ⁺³ | | | | 1.0 ⁺⁶ | 1.0 ⁺⁶ |
| 2160 | 2.9 ⁺⁵ | 1.8 ⁺² | | ↓ | 2.5 ⁺⁴ | 2.9 ⁺³ | 5.5 ⁺³ | 1.2 ⁺² | 2.3 ⁺² | 4.9 ⁺³ | 1.2 ⁻² | NEG. | 1.1 ⁺¹ | | | | 3.3 ⁺⁵ | 3.3 ⁺⁵ |
| 4320 | 1.2 ⁺⁵ | 7.5 ⁺¹ | ↓ | | 1.1 ⁺⁴ | 1.2 ⁺³ | 2.4 ⁺³ | 5.1 ⁺¹ | 9.5 ⁺¹ | 1.7 ⁺³ | NEG. | ↓ | 1.1 ⁻¹ | ↓ | ↓ | ↓ | 1.4 ⁺⁵ | 1.4 ⁺⁵ |

ILLUSTRATION NUMBER 1111111

NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA F @ EL. 2'

PRELIMINARY

ESTIMATED HIGHEST DIRECT P DOSE RATES ($\mu R/hr$) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

| SOURCE TIME (HR) | SI/CH LINES IN PEN. AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 3' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PPE TUN. EL. 2' FP-14C, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PPE TUN. EL. 2' FP-19C | DRAIN LINE INSIDE WHTO TANKS CUB. EL. 2' & 13' FP-19C | (2) | | CONTAIN. LEAKAGE MONIT. FOR LINES EL. 2' & 13' | HYDROGEN ANALYZER MAIN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONAL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB - TOTAL | TOTAL |
|------------------------|---|---|--------------------------------------|---|--|--|---|---|---|---|--|--|---|--------------------------------|---|----------------------------------|-----------------------|-------------------|
| | | | | | | | | | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' 13' 27.5' | | | | | | | | |
| 0 | 4.1 ⁺⁵ | 1.4 ⁺⁸ | 5.2 ⁺⁴ | 1.4 ⁺⁴ | 4.1 ⁺⁵ | 1.3 ⁺⁴ | 9.0 ⁺⁴ | NEG. | 6.1 ⁺⁰ | 6.0 ⁺⁴ | 2.8 ⁺¹ | 1.5 ⁺⁴ | 9.6 ⁺² | NEG. | NEG. | NEG. | 1.4 ⁺⁰ | 1.4 ⁺⁰ |
| 1 | 2.1 ⁺⁵ | 9.0 ⁺⁷ | 1.7 ⁺⁴ | 8.0 ⁺³ | 2.4 ⁺⁵ | 6.9 ⁺³ | 5.3 ⁺⁴ | | 3.7 ⁺⁰ | 2.5 ⁺⁴ | 6.8 ⁺⁰ | 4.1 ⁺³ | 2.4 ⁺² | | | | 9.0 ⁺⁷ | 9.0 ⁺⁷ |
| 2 | 1.4 ⁺⁵ | 6.5 ⁺⁷ | 1.2 ⁺⁴ | 5.4 ⁺³ | 1.7 ⁺⁵ | 4.8 ⁺³ | 3.7 ⁺⁴ | | 2.5 ⁺⁰ | 1.7 ⁺⁴ | 5.0 ⁺⁰ | 3.0 ⁺³ | 1.8 ⁺² | | | | 6.5 ⁺⁷ | 6.5 ⁺⁷ |
| 8 | 5.4 ⁺⁴ | 2.6 ⁺⁷ | 3.3 ⁺³ | 2.1 ⁺³ | 7.2 ⁺⁴ | 1.9 ⁺³ | 1.6 ⁺⁴ | | 1.0 ⁺⁰ | 6.6 ⁺³ | 1.8 ⁺⁰ | 1.3 ⁺³ | 6.8 ⁺¹ | | | | 2.6 ⁺⁷ | 2.6 ⁺⁷ |
| 24 | 1.7 ⁺⁴ | 1.2 ⁺⁷ | 7.2 ⁺² | 7.0 ⁺² | 3.1 ⁺⁴ | 6.2 ⁺² | 6.8 ⁺³ | | NEG. | 2.5 ⁺³ | 6.8 ⁺¹ | 5.6 ⁺² | 2.7 ⁺¹ | | | | 1.2 ⁺⁷ | 1.2 ⁺⁷ |
| 96 | 4.4 ⁺³ | 4.5 ⁺⁶ | 1.8 ⁺² | 1.9 ⁺² | 1.2 ⁺⁴ | 1.7 ⁺² | 2.6 ⁺³ | | | 1.0 ⁺³ | NEG. | 1.8 ⁺² | 9.8 ⁺⁰ | | | | 4.5 ⁺⁶ | 4.5 ⁺⁶ |
| 192 | 3.1 ⁺³ | 3.1 ⁺⁶ | 1.3 ⁺² | 1.3 ⁺² | 8.1 ⁺³ | 1.2 ⁺² | 1.8 ⁺³ | | | 6.3 ⁺² | | 1.1 ⁺² | 5.6 ⁺⁰ | | | | 3.1 ⁺⁶ | 3.1 ⁺⁶ |
| 360 | 2.1 ⁺³ | 1.9 ⁺⁶ | 7.1 ⁺¹ | 8.8 ⁺¹ | 5.0 ⁺³ | 7.9 ⁺¹ | 1.1 ⁺³ | | | 3.4 ⁺² | | 5.8 ⁺¹ | 2.7 ⁺⁰ | | | | 1.9 ⁺⁶ | 1.9 ⁺⁶ |
| 720 | 1.1 ⁺³ | 8.9 ⁺⁵ | 4.3 ⁺¹ | 4.6 ⁺¹ | 2.4 ⁺³ | 4.1 ⁺¹ | 5.3 ⁺² | | | 1.5 ⁺² | | 1.6 ⁺¹ | 5.6 ⁺¹ | | | | 8.9 ⁺⁵ | 8.9 ⁺⁵ |
| 2160 | 3.5 ⁺² | 2.9 ⁺⁵ | 7.8 ⁺⁰ | 1.6 ⁺¹ | 7.8 ⁺² | 1.4 ⁺¹ | 1.7 ⁺² | | | 6.0 ⁺¹ | | NEG. | NEG. | | | | 2.9 ⁺⁵ | 2.9 ⁺⁵ |
| 4320 | 1.5 ⁺² | 1.2 ⁺⁵ | 2.1 ⁺⁰ | 6.6 ⁺⁰ | 3.4 ⁺² | NEG. | 7.5 ⁺¹ | | | 2.0 ⁺¹ | | | | | | | 1.2 ⁺⁵ | 1.2 ⁺⁵ |

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA G @ EL. 2'

PRELIMINARY

ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

| TIME (HR) | SOURCE SI/CH LINES IN PEN. AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PHE TUN. EL. 2' FP-14L, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PHE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' 19, 27.5' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER MAIN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PRESSURE MATCH | CONTAIN. DOME R.S. HEADERS | SUB-TOTAL (1) | TOTAL |
|--------------|---|---|--------------------------------------|---|--|--|---|---|---|---|---|--|---|--------------------------------|---|----------------------------------|------------------|-------|
| 0 | 1.28+2 | 1.6+4 | 3.2+4 | 1.4+4 | 5.6+4 | 2.8+0 | 1.2+4 | 6.2+1 | 3.8+0 | 1.4+4 | NEG. | 3.9+0 | NEG. | NEG. | NEG. | NEG. | 1.3+5 | 1.4+5 |
| 1 | 3.8+1 | 9.6+3 | 9.9+3 | 8.0+3 | 3.1+4 | NEG. | 6.8+3 | NEG. | 2.3+0 | 5.9+3 | | 1.0+0 | | | | | 6.5+4 | 7.1+4 |
| 2 | 2.3+1 | 6.5+3 | 6.2+3 | 5.4+3 | 2.1+4 | | 4.6+3 | | 1.6+0 | 4.2+3 | | 2.6+1 | | | | | 4.4+4 | 5.0+4 |
| 8 | 6.8+0 | 2.6+3 | 1.0+0 | 2.1+3 | 8.3+3 | | 1.8+3 | | 6.5+1 | 1.6+3 | | NEG. | | | | | 1.7+4 | 1.8+4 |
| 24 | 1.4+0 | 1.1+3 | 3.9+2 | 7.0+2 | 2.8+3 | | 6.2+2 | | NEG. | 6.1+2 | | | | | | | 5.6+3 | 6.2+3 |
| 96 | 3.5+1 | 3.7+2 | 9.9+1 | 1.9+2 | 7.7+2 | | 1.7+2 | | | 2.4+2 | | | | | | | 1.6+3 | 1.8+3 |
| 192 | NEG. | 2.6+2 | 7.3+1 | 1.3+2 | 5.4+2 | | 1.2+2 | | | 1.5+2 | | | | | | | 1.2+3 | 1.3+3 |
| 360 | | 1.6+2 | 5.0+1 | 8.8+1 | 3.5+2 | | 7.7+1 | | | 8.2+1 | | | | | | | 7.3+2 | 8.1+2 |
| 720 | | 7.7+1 | 2.3+1 | 4.6+1 | 1.9+2 | | 4.2+1 | | | 3.6+1 | | | | | | | 3.8+2 | 4.1+2 |
| 2160 | | 2.2+1 | 4.0+0 | 1.6+1 | 6.3+1 | | 1.4+1 | | | 1.4+1 | | | | | | | 1.2+2 | 1.3+2 |
| 4320 | ↓ | 1.1+1 | 9.7+1 | 6.6+0 | 2.7+1 | ↓ | 5.9+0 | ↓ | ↓ | 4.0+0 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 5.1+1 | 5.6+1 |

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA H @ EL. 2'

ESTIMATED HIGHEST DIRECT P DOSE RATES ($\mu R/hr$) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

———— MITIGATION PHASE - NO LETDOWN ————

PRELIMINARY

| SOURCE TIME (HR) | (2) | | | | | | | | | | | | | | | | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|---|--|---|---|---|---|---|---|--------------------------------|---|----------------------------------|----------------------|-------------------|
| | SI/CH LINES IN PEN AREA EL. 2' FP-10R | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PHE TUN. EL. 2' FP-HC.7A | SAFEGUARDS SUMP DRAIN LINE IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINE IN PHE TUN. EL. 2' FP-19C | DRAIN LINE INSIDE WHTO TANKS LUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' 13' & 27.5' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRANT EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONAL MATCH | CONTAIN. DOME R.S. HEADERS | | |
| 0 | 4.1 ⁺³ | 1.6 ⁺⁶ | 3.6 ⁺⁷ | 1.4 ⁺⁶ | 4.1 ⁺⁵ | 9.0 ⁺¹ | 9.0 ⁺⁴ | NEG. | 3.8 ⁺⁰ | 4.7 ⁺⁶ | NEG. | 1.3 ⁺² | NEG. | NEG. | NEG. | NEG. | 3.9 ⁺⁷ | 4.4 ⁺⁷ |
| 1 | 1.2 ⁺³ | 9.6 ⁺⁵ | 2.1 ⁺⁷ | 8.7 ⁺⁵ | 2.4 ⁺⁵ | 2.8 ⁺¹ | 5.3 ⁺⁴ | | 2.3 ⁺⁰ | 1.9 ⁺⁶ | | 3.2 ⁺¹ | | | | | 2.3 ⁺⁷ | 2.5 ⁺⁷ |
| 2 | 7.5 ⁺² | 6.5 ⁺⁵ | 1.5 ⁺⁷ | 6.1 ⁺⁵ | 1.7 ⁺⁵ | 1.8 ⁺¹ | 3.7 ⁺⁴ | | 1.6 ⁺⁰ | 1.4 ⁺⁶ | | 2.3 ⁺¹ | | | | | 1.7 ⁺⁷ | 1.8 ⁺⁷ |
| 8 | 2.2 ⁺² | 2.6 ⁺⁵ | 5.9 ⁺⁶ | 2.6 ⁺⁵ | 7.2 ⁺⁴ | 5.1 ⁺⁰ | 1.6 ⁺⁴ | | NEG. | 5.1 ⁺⁵ | | 1.1 ⁺¹ | | | | | 6.5 ⁺⁶ | 7.0 ⁺⁶ |
| 24 | 4.4 ⁺¹ | 1.1 ⁺⁵ | 2.3 ⁺⁶ | 1.2 ⁺⁵ | 3.1 ⁺⁴ | 1.1 ⁺⁰ | 6.8 ⁺³ | | | 2.0 ⁺⁵ | | 4.5 ⁺⁰ | | | | | 2.6 ⁺⁶ | 2.8 ⁺⁶ |
| 96 | 1.1 ⁺¹ | 3.7 ⁺⁴ | 7.9 ⁺⁵ | 4.3 ⁺⁴ | 1.2 ⁺⁴ | NEG. | 3.1 ⁺³ | | | 7.8 ⁺⁴ | | 1.4 ⁺⁰ | | | | | 8.8 ⁺⁵ | 9.6 ⁺⁵ |
| 192 | 8.6 ⁺⁰ | 2.6 ⁺⁶ | 5.3 ⁺⁵ | 2.9 ⁺⁴ | 8.1 ⁺³ | | 1.8 ⁺³ | | | 4.9 ⁺⁴ | | NEG. | | | | | 3.2 ⁺⁶ | 3.2 ⁺⁶ |
| 360 | 5.8 ⁺⁰ | 1.6 ⁺⁴ | 3.4 ⁺⁵ | 1.8 ⁺⁴ | 5.0 ⁺³ | | 1.1 ⁺³ | | | 2.7 ⁺⁴ | | | | | | | 3.8 ⁺⁵ | 4.1 ⁺⁵ |
| 720 | 2.6 ⁺⁰ | 7.7 ⁺³ | 1.7 ⁺⁵ | 8.5 ⁺³ | 2.4 ⁺³ | | 5.3 ⁺² | | | 1.2 ⁺⁶ | | | | | | | 1.9 ⁺⁵ | 2.5 ⁺⁵ |
| 2160 | 4.2 ⁻¹ | 2.2 ⁺³ | 5.7 ⁺⁴ | 2.8 ⁺³ | 7.8 ⁺² | | 1.7 ⁺² | | | 4.7 ⁺³ | | | | | | | 6.3 ⁺⁴ | 6.8 ⁺⁴ |
| 4320 | NEG. | 1.1 ⁺³ | 2.5 ⁺⁴ | 1.2 ⁺³ | 3.4 ⁺² | | 7.5 ⁺¹ | | | 1.6 ⁺³ | | | | | | | 2.8 ⁺⁴ | 2.7 ⁺⁴ |

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA I @ EL. 2'

ESTIMATED HIGHEST DIRECT P DOSE RATES ($\mu R/hr$) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

— MITIGATION PHASE - NO LETDOWN —

PRELIMINARY

| SOURCE TIME (HR) | SI/CH LINES IN PEN. AREA el. 2' FP-10R | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PVE TUN. el. 2' FP-ML, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PVE TUN. el. 2' FP-19C | DRAIN LINE INSIDE WASTE TANKS LUB. el. 2' & 13' FP-19C | LOW LEVEL ARMED LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' & 13' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER MAIN TANK el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONAL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|---|---|--------------------------------------|---|---|--|---|--|---|---|---|--|---|--------------------------------|---|----------------------------------|----------------------|-------------------|
| 0 | 6.8 ⁺⁶ | 1.1 ⁺³ | 3.9 ⁺¹ | 4.3 ⁺² | 9.5 ⁺³ | 9.5 ⁺⁴ | 2.1 ⁺³ | 1.8 ⁺³ | 6.4 ⁺³ | 2.8 ⁺⁴ | 7.7 ⁺² | 5.7 ⁺⁰ | NEG. | NEG. | NEG. | NEG. | 6.9 ⁺⁶ | 6.9 ⁺⁶ |
| 1 | 4.2 ⁺⁶ | 6.6 ⁺² | 1.5 ⁺¹ | 4.1 ⁺² | 5.2 ⁺³ | 5.7 ⁺⁴ | 1.1 ⁺³ | 1.0 ⁺³ | 3.9 ⁺³ | 1.1 ⁺⁴ | 1.9 ⁺³ | NEG. | | | | | 4.3 ⁺⁶ | 4.3 ⁺⁶ |
| 2 | 3.0 ⁺⁶ | 4.4 ⁺² | 7.4 ⁺⁰ | 2.7 ⁺² | 3.6 ⁺³ | 4.1 ⁺⁴ | 7.9 ⁺² | 7.1 ⁺² | 2.7 ⁺³ | 8.0 ⁺² | 1.4 ⁺² | | | | | | 3.0 ⁺⁶ | 3.0 ⁺⁶ |
| 8 | 1.2 ⁺⁶ | 1.9 ⁺² | 3.1 ⁺⁰ | 1.0 ⁺² | 1.4 ⁺³ | 1.8 ⁺⁴ | 3.1 ⁺² | 2.9 ⁺² | 1.1 ⁺³ | 3.0 ⁺³ | 5.0 ⁺¹ | | | | | | 1.2 ⁺⁶ | 1.2 ⁺⁶ |
| 24 | 5.5 ⁺⁵ | 7.5 ⁺¹ | 7.6 ⁻¹ | 3.1 ⁺¹ | 4.5 ⁺² | 7.6 ⁺³ | 9.9 ⁺¹ | 1.2 ⁺² | 4.5 ⁺² | 1.2 ⁺³ | 1.9 ⁺¹ | | | | | | 5.6 ⁺⁵ | 5.6 ⁺⁵ |
| 96 | 2.0 ⁺⁵ | 2.6 ⁺¹ | NEG. | 8.2 ⁺⁰ | 1.2 ⁺² | 2.9 ⁺³ | 2.6 ⁺¹ | 4.2 ⁺¹ | 1.5 ⁺² | 4.6 ⁺² | 7.0 ⁺⁰ | | | | | | 2.0 ⁺⁵ | 2.0 ⁺⁵ |
| 192 | 1.4 ⁺⁵ | 1.4 ⁺¹ | | 5.8 ⁺⁰ | 8.6 ⁺¹ | 2.0 ⁺³ | 1.9 ⁺¹ | 2.8 ⁺¹ | 1.0 ⁺² | 2.9 ⁺² | 4.0 ⁺⁰ | | | | | | 1.4 ⁺⁵ | 1.4 ⁺⁵ |
| 360 | 8.6 ⁺⁴ | 1.1 ⁺¹ | | 3.9 ⁺⁰ | 5.7 ⁺¹ | 1.2 ⁺³ | 1.3 ⁺¹ | 1.8 ⁺¹ | 6.4 ⁺¹ | 1.6 ⁺² | 1.8 ⁺⁰ | | | | | | 8.7 ⁺⁴ | 8.7 ⁺⁴ |
| 720 | 4.0 ⁺⁴ | 5.4 ⁺⁰ | | 2.0 ⁺⁰ | 3.0 ⁺¹ | 5.6 ⁺² | 6.6 ⁺⁰ | 8.8 ⁺⁰ | 3.1 ⁺¹ | 6.9 ⁺¹ | 3.8 ⁻¹ | | | | | | 4.1 ⁺⁴ | 4.1 ⁺⁴ |
| 2160 | 1.3 ⁺⁴ | 1.8 ⁺⁰ | | 6.2 ⁻¹ | 1.0 ⁺¹ | 1.9 ⁺² | 2.2 ⁺⁰ | 2.9 ⁺⁰ | 1.1 ⁺¹ | 2.8 ⁺¹ | NEG. | | | | | | 1.3 ⁺⁴ | 1.3 ⁺⁴ |
| 4320 | 5.8 ⁺³ | 7.5 ⁻¹ | ✓ | Neg. | 4.3 ⁺⁰ | 8.0 ⁺¹ | 9.5 ⁻¹ | 1.2 ⁺⁰ | 4.5 ⁺⁰ | 9.3 ⁺⁰ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 5.9 ⁺³ | 5.9 ⁺³ |

REVISIONS

NOTED FEB. 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA J @ EL. 2'

ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

— MITIGATION PHASE - NO LETDOWN —

PRELIMINARY

| SOURCE TIME (HR) | SI/CH LINES IN PEN. AREA EL. 2' FP-10K | CHARGING PUMP COB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PVE TUN. EL. 2' FP-19C, 7A | SAFEGUARDS SUMP DRAIN LINE IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINE IN PVE TUN. EL. 2' FP-19C | DRAIN LINE INSIDE WASTE TANK COB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' & 13' 27.5' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER MAIN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATOR EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | SUB- TOTAL ⁽¹⁾ | TOTAL |
|------------------------|---|---|--------------------------------------|---|--|---|--|---|---|---|---|--|--|--------------------------------|--|----------------------------------|------------------------------|-------------------|
| 0 | 4.1 ⁺³ | 1.6 ⁺⁶ | 2.9 ⁺⁴ | 3.3 ⁺³ | NEG. | 9.0 ¹¹ | NEG. | NEG. | NEG. | 2.9 ⁺⁶ | NEG. | 3.9 ⁺⁰ | NEG. | NEG. | NEG. | NEG. | 1.6 ⁺⁶ | 4.5 ⁺⁶ |
| 1 | 1.2 ⁺³ | 9.6 ⁺⁵ | 1.1 ⁺⁴ | 1.6 ⁺³ | | 2.8 ⁺¹ | | | | 1.2 ⁺⁶ | | 1.0 ⁺⁰ | | | | | 9.8 ⁺⁶ | 1.1 ⁺⁷ |
| 2 | 7.5 ⁺² | 6.5 ⁺⁵ | 6.9 ⁺³ | 1.1 ⁺³ | | 1.8 ⁺¹ | | | | 8.4 ⁺⁵ | | 2.6 ⁻¹ | | | | | 6.6 ⁺⁵ | 1.5 ⁺⁶ |
| 8 | 2.2 ⁺² | 2.6 ⁺⁵ | 2.2 ⁺³ | 4.1 ⁺² | | 5.1 ⁺⁰ | | | | 3.2 ⁺⁵ | | NEG. | | | | | 2.6 ⁺⁵ | 5.8 ⁺⁵ |
| 24 | 4.4 ⁺¹ | 1.1 ⁺⁵ | 5.3 ⁺² | 1.2 ⁺² | | 1.1 ⁺⁰ | | | | 1.2 ⁺⁵ | | | | | | | 1.1 ⁺⁵ | 2.3 ⁺⁵ |
| 96 | 1.1 ⁺¹ | 3.7 ⁺⁴ | 1.3 ⁺² | 3.3 ⁺¹ | | NEG. | | | | 4.8 ⁺⁴ | | | | | | | 3.7 ⁺⁴ | 8.5 ⁺⁴ |
| 192 | 8.6 ⁺⁰ | 2.6 ⁺⁴ | 9.6 ⁺¹ | 2.3 ⁺¹ | | | | | | 3.0 ⁺⁴ | | | | | | | 2.6 ⁺⁴ | 5.6 ⁺⁴ |
| 360 | 5.8 ⁺⁰ | 1.6 ⁺⁴ | 6.6 ⁺¹ | 1.6 ⁺¹ | | | | | | 1.7 ⁺⁴ | | | | | | | 1.6 ⁺⁴ | 3.3 ⁺⁴ |
| 720 | 2.6 ⁺⁰ | 7.7 ⁺³ | 3.2 ⁺¹ | 7.9 ⁺⁰ | | | | | | 7.3 ⁺³ | | | | | | | 7.7 ⁺³ | 1.5 ⁺⁴ |
| 2160 | 4.2 ⁻¹ | 2.2 ⁺³ | 6.7 ⁺⁰ | 2.5 ⁺⁰ | | | | | | 2.9 ⁺³ | | | | | | | 2.2 ⁺³ | 5.1 ⁺³ |
| 4320 | NEG. | 1.1 ⁺³ | 2.2 ⁺⁰ | 1.0 ⁺⁰ | ↓ | ↓ | ↓ | ↓ | ↓ | 9.8 ⁺² | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 1.1 ⁺³ | 2.1 ⁺³ |

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

PRELIMINARY

SURRY AUXILIARY BLDG RADIATION ZONE AREA K @ EL. 15'

ESTIMATED HIGHEST DIRECT P DOSE RATES ($\mu R/hr$) FROM VARIOUS SOURCES DUE TO

LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

| (2) | | | | | | | | | | | | | | | | | | |
|------------------------|--|---|--------------------------------------|---|--|--|---|---|---|---|---|---|---|--------------------------------|---|----------------------------------|----------------------|-------------------|
| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA el. 2' FP-10K | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PVE TUN. el. 2' FP-HC.7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PVE TUN. el. 2' FP-19C | DRAIN LINES INSIDE WHATE TANKS LUB. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' 13' & 15' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER MAN TRAY el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONAL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
| 0 | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | 1.8 ⁺¹ | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | 1.8 ⁺¹ |
| 1 | | | | | | | | | 9.6 ⁺⁰ | | | | | | | | | 9.6 ⁺⁰ |
| 2 | | | | | | | | | 6.6 ⁺⁰ | | | | | | | | | 6.6 ⁺⁰ |
| 8 | | | | | | | | | 2.5 ⁺⁰ | | | | | | | | | 2.5 ⁺⁰ |
| 24 | | | | | | | | | NEG. | | | | | | | | | NEG. |
| 96 | | | | | | | | | | | | | | | | | | |
| 192 | | | | | | | | | | | | | | | | | | |
| 360 | | | | | | | | | | | | | | | | | | |
| 720 | | | | | | | | | | | | | | | | | | |
| 2160 | | | | | | | | | | | | | | | | | | |
| 4320 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |

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NOTED FEB 14 1990

SURRY AUXILIARY BLDG RADIATION ZONE AREA L @ EL. 13'

ESTIMATED HIGHEST DIRECT T DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO

LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

———— MITIGATION PHASE - NO LETDOWN ————

PRELIMINARY

| SOURCE TIME (HR) | (2) | | | | | | | | | | | | | | | | (1) SUB- TOTAL | TOTAL |
|------------------------|---|---|--------------------------------------|---|--|--|---|---|--|---|---|---|---|--------------------------------|---|----------------------------------|----------------------|-------|
| | SI/CH LINES IN PEN. AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PHE TUN. EL. 2' FP-19L, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PHE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. EL. 2' & 13' FP-19C | LOW LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' & 13' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONAL HATCH | CONTAIN. DOME R.S. HEADERS | | |
| 0 | NEG. | NEG. | NEG. | 3.4+2 | NEG. | NEG. | NEG. | 4.2+0 | 2.0+1 | NEG. | NEG. | 5.1+2 | NEG. | NEG. | NEG. | NEG. | 8.5+2 | 8.7+2 |
| 1 | | | | 1.9+2 | | | | 2.5+0 | 1.1+1 | | | 1.3+2 | | | | | 3.2+2 | 3.3+2 |
| 2 | | | | 1.3+2 | | | | 1.7+0 | 7.2+0 | | | 9.9+1 | | | | | 2.3+2 | 2.4+2 |
| 8 | | | | 5.0+1 | | | | 6.8-1 | 2.8+0 | | | 4.3+1 | | | | | 9.3+1 | 9.6+1 |
| 24 | | | | 1.7+1 | | | | NEG. | 9.2-1 | | | 1.9+1 | | | | | 3.6+1 | 3.7+1 |
| 96 | | | | 4.6+0 | | | | | NEG. | | | 6.1+0 | | | | | 1.1+1 | 1.1+1 |
| 192 | | | | 3.2+0 | | | | | | | | 3.7+0 | | | | | 6.9+0 | 6.9+0 |
| 360 | | | | 2.1+0 | | | | | | | | 1.9+0 | | | | | 4.0+0 | 4.0+0 |
| 720 | | | | 1.1+0 | | | | | | | | 5.2-1 | | | | | 1.6+0 | 1.6+0 |
| 2160 | | | | 3.8-1 | | | | | | | | NEG. | | | | | 3.8-1 | 3.8-1 |
| 4320 | ↓ | ↓ | ↓ | NEG. | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | NEG. | NEG. |

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NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA M @ EL. 13'

PRELIMINARY

ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

| SOURCE TIME (HR) | (2) | | | | | | | | | | | | | | | | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|---|--|---|---|--|---|---|--|---|--------------------------------|---|----------------------------------|----------------------|-------------------|
| | ST/CH LINES IN PEN AREA el. 2' FP-10K | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PYE TUN. el. 2' FP-MC, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PYE TUN. el. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS LUB. el. 2' & 13' FP-19C | LOW LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' & 13' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER MAIN TRAY el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PRESSURE HATCH | CONTAIN. DOME R.S. HEADERS | | |
| 0 | 1.1 ¹² | 5.2 ¹³ | 4.1 ¹³ | 1.9 ¹⁶ | 2.1 ¹⁴ | 3.3 ¹⁰ | 4.6 ¹³ | 1.4 ¹⁴ | 6.6 ¹⁵ | 5.2 ¹³ | 6.2 ¹² | 5.4 ¹⁵ | NEG. | NEG. | NEG. | NEG. | 2.4 ¹⁶ | 3.1 ¹⁶ |
| 1 | 2.5 ¹¹ | 3.1 ¹³ | 1.3 ¹³ | 1.2 ¹⁶ | 1.1 ¹⁴ | NEG. | 2.4 ¹³ | 8.3 ¹³ | 4.0 ¹⁵ | 2.1 ¹¹ | 1.5 ¹² | 1.4 ¹⁵ | | | | | 1.4 ¹⁶ | 1.8 ¹⁶ |
| 2 | 1.5 ¹¹ | 2.1 ¹³ | 8.2 ¹² | 8.3 ¹⁵ | 7.2 ¹³ | | 1.6 ¹³ | 5.7 ¹³ | 2.7 ¹⁵ | 1.5 ¹³ | 1.1 ¹² | 1.0 ¹⁵ | | | | | 9.3 ¹⁵ | 1.2 ¹⁶ |
| 8 | 3.4 ¹⁰ | 8.5 ¹² | 2.5 ¹² | 3.5 ¹⁵ | 2.7 ¹³ | | 5.9 ¹² | 2.3 ¹³ | 1.7 ¹⁵ | 5.7 ¹³ | 4.0 ¹¹ | 4.6 ¹⁴ | | | | | 3.9 ¹⁵ | 5.1 ¹⁵ |
| 24 | 5.0 ¹¹ | 3.6 ¹² | 5.4 ¹¹ | 1.6 ¹⁵ | 8.2 ¹² | | 1.8 ¹² | 9.6 ¹² | 4.6 ¹⁴ | 2.2 ¹² | 1.5 ¹¹ | 2.0 ¹⁴ | | | | | 1.2 ¹⁵ | 1.7 ¹⁵ |
| 96 | NEG. | 1.2 ¹² | 1.4 ¹¹ | 5.8 ¹⁴ | 2.1 ¹² | | 4.6 ¹¹ | 3.3 ¹² | 1.5 ¹⁴ | 8.7 ¹¹ | 5.6 ¹⁰ | 6.4 ¹³ | | | | | 6.5 ¹⁴ | 8.0 ¹⁴ |
| 192 | | 8.3 ¹¹ | 1.0 ¹¹ | 4.0 ¹⁴ | 1.5 ¹² | | 3.3 ¹¹ | 2.2 ¹² | 1.1 ¹⁴ | 5.5 ¹¹ | 3.2 ¹⁰ | 3.9 ¹³ | | | | | 4.4 ¹⁴ | 5.5 ¹⁴ |
| 360 | | 5.2 ¹¹ | 6.9 ¹⁰ | 2.5 ¹⁴ | 1.0 ¹² | | 2.2 ¹¹ | 1.4 ¹² | 6.6 ¹³ | 3.0 ¹¹ | 1.5 ¹⁰ | 2.1 ¹³ | | | | | 2.7 ¹⁴ | 3.4 ¹⁴ |
| 720 | | 2.5 ¹¹ | 3.3 ¹⁰ | 1.2 ¹⁴ | 5.2 ¹¹ | | 1.1 ¹¹ | 7.0 ¹¹ | 3.2 ¹³ | 1.3 ¹¹ | 3.0 ¹¹ | 5.5 ¹² | | | | | 1.3 ¹⁴ | 1.6 ¹⁴ |
| 2160 | | 7.0 ¹⁰ | NEG. | 3.8 ¹³ | 1.7 ¹¹ | | 3.7 ¹⁰ | 2.3 ¹¹ | 1.1 ¹³ | 5.2 ¹⁰ | NEG. | 3.2 ¹⁰ | | | | | 3.9 ¹³ | 5.1 ¹³ |
| 4320 | | 3.6 ¹⁰ | | 1.7 ¹³ | 6.9 ¹⁰ | | 1.5 ¹⁰ | 9.6 ¹⁰ | 4.6 ¹² | 1.8 ¹⁰ | | NEG. | | | | | 1.7 ¹³ | 2.2 ¹³ |

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SURRY AUXILIARY BLDG RADIATION ZONE AREA N @ EL. 13'

ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

———— MITIGATION PHASE - NO LETDOWN ————

PRELIMINARY

| SOURCE TIME (HR) | (2) | | | | | | | | | | | | | | | | SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|--|---|---|---|--|---|--|---|--------------------------------|---|----------------------------------|---------------|-------|
| | SI/CH LINES IN PEN AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PVE TUN. EL. 2' FP-HC-7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PVE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' 13:27.5' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER MAIN TRAP EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONAL HATCH | CONTAIN. DOME R.S. HEADERS | | |
| 0 | NEG. | 1.9+1 | NEG. | 3.4+2 | NEG. | NEG. | NEG. | 1.5+2 | 5.7+2 | 4.4+0 | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | 3.6+2 | 1.1+3 |
| 1 | | 1.1+1 | | 1.9+2 | | | | 8.8+1 | 3.0+2 | 1.8+0 | | | | | | | 2.0+2 | 5.9+2 |
| 2 | | 7.7+0 | | 1.3+2 | | | | 6.1+1 | 2.1+2 | 1.8+0 | | | | | | | 1.4+2 | 4.1+2 |
| 8 | | 3.1+0 | | 5.0+1 | | | | 2.4+1 | 7.8+1 | 4.8+1 | | | | | | | 5.3+1 | 1.6+2 |
| 24 | | 1.3+0 | | 1.7+1 | | | | 1.0+1 | 2.6+1 | NEG. | | | | | | | 1.8+1 | 5.4+1 |
| 96 | | 4.4+1 | | 4.6+0 | | | | 3.5+0 | 7.1+0 | | | | | | | | 5+0 | 1.6+1 |
| 192 | | NEG. | | 3.2+0 | | | | 2.4+0 | 5.0+0 | | | | | | | | 3.2+0 | 1.1+1 |
| 360 | | | | 2.1+0 | | | | 1.5+0 | 3.3+0 | | | | | | | | 2.1+0 | 6.9+0 |
| 720 | | | | 1.1+0 | | | | NEG. | 1.7+0 | | | | | | | | 1.1+0 | 2.8+0 |
| 2160 | | | | 3.8+1 | | | | | NEG. | | | | | | | | 3.8+1 | 3.8+1 |
| 4320 | ↓ | ↓ | ↓ | NEC. | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | NEG. | NEG. |

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SURRY AUXILIARY BLDG RADIATION ZONE AREA 0 @ EL. 13'

PRELIMINARY

ESTIMATED HIGHEST DIRECT T DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PHE TUN. EL. 2' FP-14L, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PHE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' & 13' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER MAIN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONAL MATCH | CONTAIN. DOME R.S. HEADERS | SUB TOTAL ⁽¹⁾ | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|--|---|---|---|---|---|--|---|--------------------------------|---|----------------------------------|-----------------------------|-------------------|
| 0 | 1.1 ⁺⁶ | 1.1 ⁺⁵ | NEG. | 3.4 ⁺² | 3.7 ⁺⁴ | 3.0 ⁺⁴ | 8.1 ⁺³ | 4.8 ⁺² | 1.9 ⁺⁴ | 1.1 ⁺⁸ | 2.4 ⁺⁴ | 1.1 ⁺⁸ | NEG. | NEG. | NEG. | NEG. | 1.1 ⁺⁸ | 1.1 ⁺⁸ |
| 1 | 5.2 ⁺⁵ | 6.6 ⁺⁴ | | 1.9 ⁺² | 1.9 ⁺⁴ | 1.5 ⁺⁴ | 4.2 ⁺³ | 2.9 ⁺² | 1.2 ⁺⁴ | 4.4 ⁺³ | 5.9 ⁺³ | 2.9 ⁺¹ | | | | | 3.0 ⁺⁷ | 3.0 ⁺⁷ |
| 2 | 3.5 ⁺⁵ | 4.4 ⁺⁴ | | 1.3 ⁺² | 1.3 ⁺⁴ | 1.0 ⁺⁴ | 2.9 ⁺³ | 2.0 ⁺² | 8.1 ⁺³ | 3.1 ⁺³ | 4.4 ⁺³ | 2.1 ⁺⁷ | | | | | 2.1 ⁺⁷ | 2.1 ⁺⁷ |
| 8 | 1.3 ⁺⁵ | 1.8 ⁺⁴ | | 5.0 ⁺¹ | 4.4 ⁺³ | 4.0 ⁺³ | 1.1 ⁺³ | 7.9 ⁺¹ | 3.3 ⁺³ | 1.2 ⁺³ | 1.6 ⁺³ | 2.4 ⁺⁶ | | | | | 9.6 ⁺⁶ | 9.6 ⁺⁶ |
| 24 | 3.8 ⁺⁴ | 7.5 ⁺³ | | 1.7 ⁺¹ | 1.5 ⁺³ | 1.2 ⁺³ | 3.3 ⁺² | 3.3 ⁺¹ | 1.4 ⁺³ | 4.5 ⁺² | 5.9 ⁺² | 4.0 ⁺⁶ | | | | | 4.5 ⁺⁶ | 4.5 ⁺⁶ |
| 96 | 9.6 ⁺³ | 2.6 ⁺³ | | 4.6 ⁺⁰ | 3.9 ⁺² | 3.2 ⁺² | 8.4 ⁺¹ | 1.1 ⁺¹ | 4.7 ⁺² | 1.8 ⁺² | 2.2 ⁺² | 1.3 ⁺⁶ | | | | | 1.3 ⁺⁶ | 1.3 ⁺⁶ |
| 192 | 6.8 ⁺³ | 1.8 ⁺³ | | 3.2 ⁺⁰ | 2.9 ⁺² | 2.2 ⁺² | 6.2 ⁺¹ | 7.7 ⁺⁰ | 3.1 ⁺² | 1.1 ⁺² | 1.3 ⁺² | 7.9 ⁺⁵ | | | | | 8.0 ⁺⁵ | 8.0 ⁺⁵ |
| 360 | 4.6 ⁺³ | 1.1 ⁺³ | | 2.1 ⁺⁰ | 1.8 ⁺² | 1.5 ⁺² | 4.0 ⁺¹ | 4.8 ⁺⁰ | 1.9 ⁺² | 6.1 ⁺¹ | 5.7 ⁺¹ | 4.2 ⁺⁵ | | | | | 4.3 ⁺⁵ | 4.3 ⁺⁵ |
| 720 | 2.4 ⁺³ | 5.4 ⁺² | | 1.1 ⁺⁰ | 9.3 ⁺¹ | 7.5 ⁺¹ | 2.0 ⁺¹ | 2.4 ⁺⁰ | 9.3 ⁺¹ | 2.7 ⁺¹ | 1.2 ⁺¹ | 1.1 ⁺⁵ | | | | | 1.1 ⁺⁵ | 1.1 ⁺⁵ |
| 2160 | 7.2 ⁺² | 1.8 ⁺² | | 3.8 ⁺¹ | 3.0 ⁺¹ | 2.4 ⁺¹ | 6.6 ⁺⁰ | 7.9 ⁺¹ | 3.3 ⁺¹ | 1.1 ⁺¹ | 5.1 ⁺² | 6.6 ⁺² | | | | | 1.7 ⁺³ | 1.7 ⁺³ |
| 4320 | 2.9 ⁺² | 7.5 ⁺¹ | | NEG. | 1.2 ⁺¹ | 9.9 ⁺⁰ | 2.6 ⁺⁰ | NEG. | 1.4 ⁺¹ | 3.6 ⁺⁰ | NEG. | 3.0 ⁺¹ | | | | | 3.8 ⁺² | 4.0 ⁺² |

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SURRY AUXILIARY BLDG RADIATION ZONE AREA P @ EL. 13'

ESTIMATED HIGHEST DIRECT T DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

PRELIMINARY

| (2) | | | | | | | | | | | | | | | | | | |
|------------------------|--|---|--------------------------------------|---|--|--|---|---|---|--|---|---|---|--------------------------------|--|----------------------------------|----------------------|-------------------|
| SOURCE TIME (HR) | SI/CN LINES IN PEN AREA EL. 2' FP-10R | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PHE TUN. EL. 2' FP-14L, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PHE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' 19:27.5' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
| 0 | 4.1 ⁺⁵ | 1.1 ⁺³ | NEG | 7.9 ⁺¹ | NEG. | 1.3 ⁺⁰ | NEG. | NEG. | 1.1 ⁺³ | 9.2 ⁺² | 8.0 ⁺² | 1.3 ⁺⁵ | NEG. | NEG. | NEG. | NEG. | 5.4 ⁺⁵ | 5.4 ⁺⁵ |
| 1 | 2.0 ⁺⁵ | 6.6 ⁺² | | 3.9 ⁺¹ | | NEG. | | | 6.7 ⁺² | 3.8 ⁺² | 1.0 ⁺² | 3.2 ⁺⁴ | | | | | 2.3 ⁺⁵ | 2.3 ⁺⁵ |
| 2 | 1.4 ⁺⁵ | 4.4 ⁺² | | 2.6 ⁺¹ | | | | | 4.5 ⁺² | 2.7 ⁺² | 7.6 ⁺¹ | 2.3 ⁺⁴ | | | | | 1.6 ⁺⁵ | 1.6 ⁺⁵ |
| 8 | 5.0 ⁺⁴ | 1.8 ⁺² | | 9.6 ⁺⁰ | | | | | 1.9 ⁺² | 1.0 ⁺² | 2.7 ⁺¹ | 1.1 ⁺⁴ | | | | | 6.1 ⁺⁴ | 6.1 ⁺⁴ |
| 24 | 1.5 ⁺⁴ | 7.5 ⁺¹ | | 2.9 ⁺⁰ | | | | | 7.6 ⁺¹ | 3.9 ⁺¹ | 1.0 ⁺¹ | 4.5 ⁺³ | | | | | 2.0 ⁺⁴ | 2.0 ⁺⁴ |
| 96 | 3.8 ⁺³ | 2.6 ⁺¹ | | 7.8 ⁻¹ | | | | | 2.6 ⁺¹ | 1.5 ⁺¹ | 3.8 ⁺⁰ | 1.4 ⁺³ | | | | | 6.2 ⁺³ | 5.3 ⁺³ |
| 192 | 2.7 ⁺³ | 1.8 ⁺¹ | | NEG. | | | | | 1.8 ⁺¹ | 9.7 ⁺⁰ | 2.2 ⁺⁰ | 8.7 ⁺² | | | | | 3.6 ⁺³ | 3.6 ⁺³ |
| 360 | 1.8 ⁺³ | 1.1 ⁺¹ | | ↓ | | | | | 1.1 ⁺¹ | 5.3 ⁺⁰ | 9.9 ⁻¹ | 4.7 ⁺² | | | | | 2.3 ⁺³ | 2.3 ⁺³ |
| 720 | 9.4 ⁺² | 5.4 ⁺⁰ | | ↓ | | | | | 5.2 ⁺⁰ | 2.3 ⁺⁰ | NEG. | 1.3 ⁺² | | | | | 1.1 ⁺³ | 1.1 ⁺³ |
| 2160 | 2.8 ⁺² | 1.8 ⁺⁰ | | ↓ | | | | | 1.9 ⁺⁰ | 9.2 ⁻¹ | ↓ | 7.3 ⁻¹ | | | | | 2.8 ⁺² | 2.8 ⁺² |
| 4320 | 1.2 ⁺² | 7.5 ⁻¹ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 7.6 ⁻¹ | NEG. | ↓ | NEG. | ↓ | ↓ | ↓ | ↓ | 1.2 ⁺² | 1.2 ⁺² |

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SURRY AUXILIARY BLDG RADIATION ZONE AREA Q @ EL. 13'

ESTIMATED HIGHEST DIRECT P DOSE RATES ($\mu R/hr$) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

PRELIMINARY

| TIME (HR) | SOURCE SI/CH LINES IN PEN AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PVE TUN. EL. 2' FP-19C, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PVE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS LUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINE EL. 2' & 13' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER MAIN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRANT EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | SUB- TOTAL ⁽¹⁾ | TOTAL |
|--------------|--|---|--------------------------------------|---|--|--|---|---|---|--|---|--|---|--------------------------------|--|----------------------------------|------------------------------|-------------------|
| 0 | 4.4 ⁺⁴ | NEG. | NEG. | 3.4 ⁺² | 1.7 ⁺⁴ | 2.0 ⁺⁴ | 3.7 ⁺³ | 5.7 ⁺⁶ | 4.2 ⁺⁷ | 1.9 ⁺⁴ | 4.6 ⁺¹ | 6.0 ⁺³ | NEG. | NEG. | NEG. | NEG. | 1.1 ⁺⁵ | 4.8 ⁺⁷ |
| 1 | 1.7 ⁺⁴ | | | 1.9 ⁺² | 6.6 ⁺³ | 9.3 ⁺³ | 1.5 ⁺³ | 3.4 ⁺⁶ | 2.5 ⁺⁷ | 7.9 ⁺³ | 1.1 ⁺¹ | 1.5 ⁺³ | | | | | 4.4 ⁺⁴ | 2.8 ⁺⁷ |
| 2 | 1.1 ⁺⁴ | | | 1.3 ⁺² | 4.7 ⁺³ | 6.1 ⁺³ | 1.0 ⁺³ | 2.3 ⁺⁶ | 1.8 ⁺⁷ | 5.6 ⁺³ | 8.4 ⁺⁰ | 1.1 ⁺³ | | | | | 3.0 ⁺⁴ | 2.0 ⁺⁷ |
| 8 | 3.8 ⁺³ | | | 5.0 ⁺¹ | 1.6 ⁺³ | 2.2 ⁺³ | 3.5 ⁺² | 9.4 ⁺⁵ | 6.9 ⁺⁶ | 2.1 ⁺³ | 3.0 ⁺⁰ | 2.1 ⁺² | | | | | 1.6 ⁺⁴ | 7.9 ⁺⁶ |
| 24 | 9.6 ⁺² | | | 1.7 ⁺¹ | 4.3 ⁺² | 6.3 ⁺² | 9.3 ⁺¹ | 3.9 ⁺⁵ | 3.0 ⁺⁶ | 8.2 ⁺² | 1.1 ⁺⁰ | 6.9 ⁺¹ | | | | | 3.0 ⁺³ | 3.4 ⁺⁶ |
| 96 | 2.4 ⁺² | | | 4.6 ⁺⁰ | 1.0 ⁺² | 1.5 ⁺² | 2.2 ⁺¹ | 1.4 ⁺⁵ | 9.9 ⁺⁵ | 3.2 ⁺² | 4.2 ⁺¹ | 4.2 ⁺¹ | | | | | 8.8 ⁺² | 1.1 ⁺⁶ |
| 192 | 1.7 ⁺² | | | 3.2 ⁺⁰ | 7.6 ⁺¹ | 1.1 ⁺² | 1.7 ⁺¹ | 9.1 ⁺¹ | 6.7 ⁺⁵ | 2.0 ⁺² | NEG. | 2.2 ⁺¹ | | | | | 6.0 ⁺² | 7.6 ⁺⁵ |
| 360 | 1.2 ⁺² | | | 2.1 ⁺⁰ | 5.2 ⁺¹ | 7.5 ⁺¹ | 1.1 ⁺¹ | 5.7 ⁺⁴ | 4.2 ⁺⁵ | 1.1 ⁺² | | 6.0 ⁺⁰ | | | | | 3.8 ⁺² | 4.8 ⁺⁵ |
| 720 | 5.8 ⁺¹ | | | 1.1 ⁺⁰ | 2.6 ⁺¹ | 3.8 ⁺¹ | 5.7 ⁺⁰ | 2.7 ⁺⁴ | 2.1 ⁺⁵ | 4.9 ⁺¹ | | NEG. | | | | | 1.8 ⁺² | 2.4 ⁺⁵ |
| 2160 | 1.4 ⁺¹ | | | 3.8 ⁺¹ | 6.6 ⁺⁰ | 1.1 ⁺¹ | 1.5 ⁺⁰ | 9.4 ⁺³ | 6.9 ⁺⁴ | 1.9 ⁺¹ | | | | | | | 5.2 ⁺¹ | 7.8 ⁺⁴ |
| 4320 | 5.0 ⁺⁰ | Y | Y | NEG. | 2.5 ⁺⁰ | 4.4 ⁺⁰ | 5.5 ⁺¹ | 3.9 ⁺³ | 3.0 ⁺⁴ | 6.5 ⁺⁰ | Y | Y | Y | Y | Y | Y | 1.9 ⁺¹ | 3.4 ⁺⁴ |

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SURRY AUXILIARY BLDG RADIATION ZONE AREA R @ EL. 15'

ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

PRELIMINARY

(2)

| SOURCE TIME (HR) | SE/CH LINES IN PEN AREA el. 2' FP-10K | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PPE TUN. el. 2' FP-19L, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PPE TUN. el. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS LUB. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' 13:27.5' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAP el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU DOORWAY HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|--|---|---|---|--|---|---|---|--------------------------------|--|----------------------------------|----------------------|-------------------|
| 0 | 4.6 ⁺⁵ | 1.1 ⁺³ | NEG. | NEG. | 1.7 ⁺⁴ | 1.2 ⁺⁴ | 3.7 ⁺³ | 1.5 ⁺³ | 1.4 ⁺⁵ | 3.4 ⁺⁴ | 1.2 ⁺³ | 1.7 ⁺⁴ | NEG. | NEG. | NEG. | NEG. | 5.4 ⁺⁵ | 6.8 ⁺⁵ |
| 1 | 2.1 ⁺⁵ | 6.5 ⁺² | | | 6.6 ⁺³ | 5.7 ⁺³ | 1.5 ⁺³ | 9.1 ⁺² | 8.4 ⁺⁴ | 1.4 ⁺⁶ | 3.0 ⁺² | 4.4 ⁺³ | | | | | 2.5 ⁺⁵ | 3.3 ⁺⁵ |
| 2 | 1.4 ⁺⁵ | 4.4 ⁺² | | | 4.7 ⁺³ | 4.0 ⁺³ | 1.0 ⁺³ | 6.2 ⁺² | 5.7 ⁺⁴ | 9.8 ⁺³ | 2.2 ⁺² | 3.3 ⁺³ | | | | | 1.6 ⁺⁵ | 2.2 ⁺⁵ |
| 8 | 5.2 ⁺⁴ | 1.8 ⁺² | | | 1.6 ⁺³ | 1.4 ⁺³ | 3.5 ⁺² | 2.5 ⁺² | 2.3 ⁺⁴ | 3.7 ⁺³ | 7.8 ⁺¹ | 1.4 ⁺³ | | | | | 5.2 ⁺⁴ | 7.5 ⁺⁴ |
| 24 | 1.5 ⁺⁴ | 7.5 ⁺¹ | | | 4.3 ⁺² | 4.2 ⁺² | 9.5 ⁺¹ | 1.1 ⁺² | 9.5 ⁺³ | 1.4 ⁺³ | 3.0 ⁺¹ | 6.1 ⁺² | | | | | 1.6 ⁺⁴ | 2.6 ⁺⁴ |
| 96 | 3.8 ⁺³ | 2.6 ⁺¹ | | | 1.0 ⁺² | 1.0 ⁺² | 2.2 ⁺¹ | 3.6 ⁺¹ | 3.3 ⁺³ | 5.6 ⁺² | 1.1 ⁺¹ | 2.0 ⁺² | | | | | 4.8 ⁺³ | 8.1 ⁺³ |
| 192 | 2.7 ⁺³ | 1.8 ⁺¹ | | | 7.6 ⁺¹ | 7.5 ⁺¹ | 1.7 ⁺¹ | 2.5 ⁺¹ | 2.2 ⁺³ | 3.5 ⁺² | 6.3 ⁺⁰ | 1.2 ⁺² | | | | | 3.2 ⁺³ | 5.4 ⁺³ |
| 360 | 1.8 ⁺³ | 1.1 ⁺¹ | | | 5.2 ⁺¹ | 5.0 ⁺¹ | 1.1 ⁺¹ | 1.5 ⁺¹ | 1.4 ⁺³ | 1.9 ⁺² | 2.9 ⁺⁰ | 6.4 ⁺¹ | | | | | 1.8 ⁺³ | 3.2 ⁺³ |
| 720 | 9.2 ⁺² | 5.4 ⁺⁰ | | | 2.6 ⁺¹ | 2.6 ⁺¹ | 5.7 ⁺⁰ | 2.7 ⁺⁰ | 6.6 ⁺² | 8.5 ⁺¹ | 5.9 ⁺¹ | 1.7 ⁺² | | | | | 1.2 ⁺² | 1.9 ⁺² |
| 2160 | 2.7 ⁺² | 1.8 ⁺⁰ | | | 6.6 ⁺⁰ | 7.7 ⁺⁰ | 1.5 ⁺⁰ | 2.5 ⁺⁰ | 2.3 ⁺² | 3.4 ⁺¹ | NEG. | 1.0 ⁺¹ | | | | | 3.0 ⁺² | 5.3 ⁺² |
| 4320 | 1.1 ⁺² | 7.5 ⁺¹ | | | 2.5 ⁺⁰ | 3.2 ⁺⁰ | 5.5 ⁺¹ | 1.1 ⁺⁰ | 9.5 ⁺¹ | 1.1 ⁺¹ | ↓ | NEG. | ↓ | ↓ | ↓ | ↓ | 1.2 ⁺² | 2.2 ⁺² |

(1) Subtotal exclusive contribution from drain lines inside waste tank, charging, LLWDT or HLLWDT, and reactor sump. It is not a point source.

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SURRY AUXILIARY BLDG RADIATION ZONE AREA S @ EL. 13'

ESTIMATED HIGHEST DIRECT P DOSE RATES ($\mu\text{R/hr}$) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

PRELIMINARY

(2)

| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA el. 2' FP-10R | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PYE TUN. el. 2' FP-14C, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PYE TUN. el. 2' FP-19C | DRAIN LINES INSIDE WARE TANKS CUB. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' & 13' 27.5' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAN el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATING el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|--|---|--|---|---|---|---|---|--------------------------------|--|----------------------------------|----------------------|-------------------|
| 0 | 1.3 ⁺² | 1.0 ⁺⁴ | 3.5 ⁺⁰ | 4.4 ⁺⁴ | 1.0 ⁺³ | 2.8 ⁺¹ | 2.2 ⁺² | NEG. | 3.8 ⁺⁰ | 1.2 ⁺⁴ | NEG. | 3.9 ⁺⁰ | NEG. | NEG. | NEG. | NEG. | 5.5 ⁺⁴ | 6.7 ⁺⁴ |
| 1 | 3.8 ⁺¹ | 6.2 ⁺³ | 6.2 ⁻¹ | 2.4 ⁺⁴ | 5.7 ⁺² | 8.6 ⁺⁰ | 1.3 ⁺² | | 2.3 ⁺⁰ | 4.8 ⁺³ | | 1.0 ⁺⁰ | | | | | 3.1 ⁺⁴ | 3.6 ⁺⁴ |
| 2 | 2.3 ⁺¹ | 4.2 ⁺³ | NEG. | 1.7 ⁺⁴ | 3.9 ⁺² | 5.5 ⁺⁰ | 8.6 ⁺¹ | | 1.6 ⁺⁰ | 3.4 ⁺³ | | 2.6 ⁻¹ | | | | | 2.2 ⁺⁴ | 2.5 ⁺⁴ |
| 8 | 6.8 ⁺⁰ | 1.7 ⁺³ | | 6.4 ⁺³ | 1.5 ⁺² | 1.6 ⁺⁰ | 3.3 ⁺¹ | | 6.5 ⁻¹ | 1.3 ⁺³ | | NEG. | | | | | 8.3 ⁺³ | 9.6 ⁺³ |
| 24 | 1.4 ⁺⁰ | 7.2 ⁺² | | 2.1 ⁺³ | 5.1 ⁺¹ | NEG. | 1.1 ⁺¹ | | NEG. | 5.0 ⁺² | | | | | | | 2.9 ⁺³ | 3.4 ⁺³ |
| 96 | 3.5 ⁻¹ | 2.4 ⁺² | | 5.8 ⁺² | 1.4 ⁺¹ | | 3.1 ⁺⁰ | | | 2.0 ⁺² | | | | | | | 8.3 ⁺² | 1.0 ⁺³ |
| 192 | NEG. | 1.7 ⁺² | | 4.0 ⁺² | 9.9 ⁺⁰ | | 2.2 ⁺⁰ | | | 1.2 ⁺² | | | | | | | 5.8 ⁺² | 7.0 ⁺² |
| 360 | | 1.0 ⁺² | | 2.7 ⁺² | 6.4 ⁺⁰ | | 1.4 ⁺⁰ | | | 6.7 ⁺¹ | | | | | | | 3.8 ⁺² | 4.4 ⁺² |
| 720 | | 5.0 ⁺¹ | | 1.4 ⁺² | 3.4 ⁺⁰ | | 7.5 ⁻¹ | | | 3.0 ⁺¹ | | | | | | | 1.9 ⁺² | 2.2 ⁺² |
| 2160 | | 1.4 ⁺¹ | | 4.7 ⁺¹ | 1.2 ⁺⁰ | | NEG. | | | 1.2 ⁺¹ | | | | | | | 6.2 ⁺¹ | 7.4 ⁺¹ |
| 4320 | ↓ | 7.2 ⁺⁰ | ↓ | 2.0 ⁺⁰ | 4.9 ⁻¹ | ↓ | ↓ | ↓ | ↓ | 4.0 ⁺⁰ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 9.7 ⁺⁰ | 1.4 ⁺¹ |

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REGULATORY DOCKET FILE COPY

SURRY AUXILIARY BLDG RADIATION ZONE AREA T @ EL. 13'

ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO

LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

PRELIMINARY

| SOURCE TIME (HR) | (2) | | | | | | | | | | | | | | | | (1) SUB- TOTAL | TOTAL |
|------------------------|---|---|--------------------------------------|---|---|--|--|---|---|---|---|--|---|--------------------------------|--|----------------------------------|----------------------|-------------------|
| | ST/CH LINES IN PEN. AREA EL. 2' FP-10R | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PIPE TUN. EL. 2' FP-19C, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PIPE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' 13, 27.5' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER MAIN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | | |
| 0 | 4.1 ⁺⁵ | 9.6 ⁺⁶ | 3.5 ⁺⁰ | 4.4 ⁺⁴ | 7.2 ⁺⁴ | 1.3 ⁺⁴ | 1.6 ⁺⁴ | NEG. | 6.1 ⁺⁰ | 1.2 ⁺⁴ | 2.1 ⁺¹ | 1.7 ⁺⁴ | NEG. | NEG. | NEG. | NEG. | 1.0 ⁺⁷ | 1.0 ⁺⁷ |
| 1 | 2.1 ⁺⁵ | 6.8 ⁺⁶ | 6.2 ⁻¹ | 2.4 ⁺⁴ | 4.4 ⁺⁴ | 6.9 ⁺³ | 4.7 ⁺³ | | 3.7 ⁺⁰ | 6.0 ⁺³ | 5.1 ⁺⁰ | 4.4 ⁺³ | | | | | 6.1 ⁺⁶ | 6.1 ⁺⁶ |
| 2 | 1.4 ⁺⁵ | 4.0 ⁺⁶ | NEG. | 1.7 ⁺⁴ | 3.1 ⁺⁴ | 4.8 ⁺³ | 6.8 ⁺³ | | 2.5 ⁺⁰ | 3.5 ⁺³ | 3.8 ⁺⁰ | 3.3 ⁺³ | | | | | 4.2 ⁺⁶ | 4.2 ⁺⁶ |
| 8 | 5.4 ⁺⁴ | 1.6 ⁺⁶ | | 6.4 ⁺³ | 1.3 ⁺⁴ | 1.9 ⁺³ | 2.9 ⁺³ | | 1.0 ⁺⁰ | 1.3 ⁺³ | 1.3 ⁺⁰ | 1.4 ⁺³ | | | | | 1.7 ⁺⁶ | 1.7 ⁺⁶ |
| 24 | 1.7 ⁺⁴ | 6.8 ⁺⁵ | | 2.1 ⁺³ | 5.9 ⁺³ | 6.2 ⁺² | 1.3 ⁺³ | | 4.2 ⁻¹ | 5.2 ⁺² | 5.1 ⁻¹ | 6.1 ⁺² | | | | | 7.1 ⁺⁵ | 7.1 ⁺⁵ |
| 96 | 4.4 ⁺³ | 2.2 ⁺⁵ | | 5.8 ⁺² | 2.2 ⁺³ | 1.7 ⁺² | 4.8 ⁺² | | NEG. | 2.0 ⁺² | NEG. | 2.0 ⁺² | | | | | 2.3 ⁺⁵ | 2.3 ⁺⁵ |
| 192 | 3.1 ⁺³ | 1.5 ⁺⁵ | | 4.0 ⁺² | 1.5 ⁺³ | 1.2 ⁺² | 3.3 ⁺² | | | 1.3 ⁺² | | 1.2 ⁺² | | | | | 1.5 ⁺⁵ | 1.5 ⁺⁵ |
| 360 | 2.1 ⁺³ | 9.6 ⁺⁴ | | 2.7 ⁺² | 9.3 ⁺² | 7.9 ⁺¹ | 2.0 ⁺² | | | 7.0 ⁺¹ | | 6.4 ⁺¹ | | | | | 1.0 ⁺⁵ | 1.0 ⁺⁵ |
| 720 | 1.1 ⁺³ | 4.8 ⁺⁴ | | 1.4 ⁺² | 4.3 ⁺² | 4.1 ⁺¹ | 9.5 ⁺² | | | 3.1 ⁺² | | 1.7 ⁺² | | | | | 5.1 ⁺⁴ | 5.1 ⁺⁴ |
| 2160 | 3.5 ⁺² | 1.3 ⁺⁴ | | 4.7 ⁺¹ | 1.4 ⁺² | 1.4 ⁺¹ | 3.1 ⁺² | | | 1.2 ⁺¹ | | 1.0 ⁻¹ | | | | | 1.4 ⁺⁴ | 1.4 ⁺⁴ |
| 4320 | 1.5 ⁺² | 6.8 ⁺³ | | 2.0 ⁺⁰ | 6.2 ⁺¹ | NEG. | 1.4 ⁺¹ | | | 4.1 ⁺⁰ | | NEG. | | | | | 7.0 ⁺³ | 7.0 ⁺³ |

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SURRY AUXILIARY BLDG RADIATION ZONE AREA U @ EL. 13'

ESTIMATED HIGHEST DIRECT T DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

PRELIMINARY

(2)

| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PVE TUN. EL. 2' FP-19L, 7A | SAFEGUARDS SUMP DRAIN LINE IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINE IN PVE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WHTD TANKS CUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' & 13' 27.5' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONAL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|---|--|--|---|---|---|---|---|--------------------------------|---|----------------------------------|----------------------|-------------------|
| 0 | 1.3 ⁺² | 1.0 ⁺⁴ | 1.9 ⁺⁵ | 4.4 ⁺⁶ | 2.3 ⁺³ | 2.8 ⁺⁰ | 6.1 ⁺² | NEG. | 3.8 ⁺⁰ | 5.3 ⁺⁴ | NEG. | 1.3 ⁺² | NEG. | NEG. | NEG. | NEG. | 4.6 ⁺⁶ | 4.7 ⁺⁶ |
| 1 | 3.9 ⁺¹ | 6.2 ⁺³ | 8.2 ⁺⁴ | 2.7 ⁺⁶ | 1.4 ⁺³ | NEG. | 3.1 ⁺² | | 2.8 ⁺⁰ | 2.2 ⁺⁴ | | 3.2 ⁺¹ | | | | | 2.8 ⁺⁶ | 2.8 ⁺⁶ |
| 2 | 2.3 ⁺¹ | 4.2 ⁺³ | 5.4 ⁺⁴ | 1.9 ⁺⁶ | 1.0 ⁺³ | | 2.2 ⁺² | | 1.6 ⁺⁰ | 1.5 ⁺⁴ | | 2.3 ⁺¹ | | | | | 2.0 ⁺⁶ | 2.0 ⁺⁶ |
| 8 | 6.8 ⁺⁰ | 1.7 ⁺³ | 1.9 ⁺⁴ | 8.0 ⁺⁵ | 4.2 ⁺² | | 9.2 ⁺¹ | | 6.5 ⁺¹ | 5.8 ⁺³ | | 1.1 ⁺¹ | | | | | 8.2 ⁺⁵ | 8.3 ⁺⁵ |
| 24 | 1.4 ⁺⁰ | 7.2 ⁺² | 4.8 ⁺³ | 3.5 ⁺⁵ | 1.9 ⁺² | | 4.2 ⁺¹ | | NEG. | 2.2 ⁺³ | | 4.5 ⁺⁰ | | | | | 3.5 ⁺⁵ | 3.6 ⁺⁵ |
| 96 | 3.5 ⁻¹ | 2.4 ⁺² | 1.2 ⁺³ | 1.3 ⁺⁵ | 7.0 ⁺¹ | | 1.5 ⁺¹ | | | 8.0 ⁺² | | 1.4 ⁺⁰ | | | | | 1.3 ⁺⁵ | 1.3 ⁺⁵ |
| 192 | NEG. | 1.7 ⁺² | 8.5 ⁺² | 8.9 ⁺⁴ | 4.8 ⁺¹ | | 1.1 ⁺¹ | | | 5.5 ⁺² | | 8.7 ⁻¹ | | | | | 9.0 ⁺⁴ | 9.1 ⁺⁴ |
| 360 | | 1.0 ⁺² | 5.9 ⁺² | 5.6 ⁺⁴ | 2.98 ⁺¹ | | 6.6 ⁺⁰ | | | 3.0 ⁺² | | | | | | | 5.7 ⁺⁴ | 5.7 ⁺⁴ |
| 720 | | 5.0 ⁺¹ | 3.0 ⁺² | 2.6 ⁺⁴ | 1.4 ⁺¹ | | 3.1 ⁺⁰ | | | 1.3 ⁺² | | | | | | | 2.6 ⁺⁴ | 2.6 ⁺⁴ |
| 2160 | | 1.4 ⁺¹ | 7.4 ⁺¹ | 8.5 ⁺³ | 4.5 ⁺⁰ | | 9.9 ⁻¹ | | | 5.2 ⁺¹ | | | | | | | 8.6 ⁺³ | 8.6 ⁺³ |
| 4320 | | 7.2 ⁺⁰ | 2.7 ⁺¹ | 3.7 ⁺³ | 2.0 ⁺⁰ | | NEG. | | | 1.8 ⁺¹ | | | | | | | 3.7 ⁺³ | 3.7 ⁺³ |

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SURRY AUXILIARY BLDG RADIATION ZONE AREA V @ EL. 13'

ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO

LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

PRELIMINARY

| SOURCE TIME (HR) | (2) | | | | | | | | | | | | | | | | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|---|--|---|---|---|--|---|---|--------------------------------|--|----------------------------------|----------------------|-------------------|
| | SI/CN LINES IN PEN AREA el. 2' FP-10K | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PYE TUN. el. 2' FP-MC-7A | SAFEGUARDS SUMP DRAIN LINE IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINE IN PYE TUN. el. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS LUB. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' & 13' | CONTAIN. LEAKAGE MONI FOR LINES el. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAY el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | | |
| 0 | 41 ⁺³ | 3.2 ⁺⁵ | 1.1 ⁺² | 1.0 ⁺⁴ | NEG. | 9.0 ⁺¹ | NEG. | NEG. | NEG. | 3.3 ⁺⁶ | NEG. | 3.9 ⁺⁰ | NEG. | NEG. | NEG. | NEG. | 3.3 ⁺⁵ | 3.6 ⁺⁶ |
| 1 | 1.2 ⁺³ | 1.9 ⁺⁵ | 2.1 ⁺¹ | 5.0 ⁺³ | | 2.8 ⁺¹ | | | | 1.4 ⁺⁶ | | 1.0 ⁺⁰ | | | | | 2.0 ⁺⁵ | 1.6 ⁺⁶ |
| 2 | 7.5 ⁺² | 1.3 ⁺⁵ | 1.2 ⁺¹ | 3.3 ⁺³ | | 1.8 ⁺¹ | | | | 9.7 ⁺⁵ | | 2.6 ⁺¹ | | | | | 1.3 ⁺⁵ | 1.1 ⁺⁶ |
| 8 | 2.2 ⁺² | 5.3 ⁺⁴ | 2.6 ⁺⁰ | 1.2 ⁺³ | | 5.1 ⁺⁰ | | | | 3.7 ⁺⁵ | | NEG. | | | | | 5.4 ⁺⁴ | 4.2 ⁺⁵ |
| 24 | 4.4 ⁺¹ | 2.2 ⁺⁴ | 2.7 ⁺¹ | 3.8 ⁺² | | 1.1 ⁺⁰ | | | | 1.4 ⁺⁵ | | | | | | | 2.2 ⁺⁴ | 1.6 ⁺⁵ |
| 96 | 1.1 ⁺¹ | 7.4 ⁺³ | NEG. | 1.0 ⁺² | | NEG. | | | | 5.6 ⁺⁴ | | | | | | | 7.5 ⁺³ | 6.4 ⁺⁴ |
| 192 | 8.6 ⁺⁰ | 5.1 ⁺³ | | 7.1 ⁺¹ | | | | | | 3.5 ⁺⁴ | | | | | | | 5.2 ⁺³ | 4.0 ⁺⁴ |
| 360 | 5.8 ⁺⁰ | 3.2 ⁺³ | | 4.7 ⁺¹ | | | | | | 1.9 ⁺⁴ | | | | | | | 3.3 ⁺³ | 2.2 ⁺⁴ |
| 720 | 2.6 ⁺⁰ | 1.5 ⁺³ | | 2.4 ⁺¹ | | | | | | 8.4 ⁺³ | | | | | | | 1.5 ⁺³ | 9.9 ⁺³ |
| 2160 | 4.2 ⁺¹ | 4.3 ⁺² | | 7.5 ⁺⁰ | | | | | | 3.3 ⁺³ | | | | | | | 4.4 ⁺² | 3.7 ⁺³ |
| 4320 | NEG. | 2.2 ⁺² | | 3.1 ⁺⁰ | | | | | | 1.1 ⁺² | | | | | | | 2.2 ⁺² | 1.3 ⁺³ |

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA W @ EL. 27'-6"

ESTIMATED HIGHEST DIRECT P DOSE RATES (μ R/hr) FROM VARIOUS SOURCES DUE TO

LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

———— MITIGATION PHASE - NO LETDOWN ————

PRELIMINARY

| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA el. 2' FP-10R | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 3' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PVE TUN. el. 2' FP-19L, 7A | SAFEGUARDS SUMP DRAIN LINE IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINE IN PVE TUN. el. 2' FP-19C | DRAIN LINES INSIDE WEST TANKS CUB. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' & 13', 27.5' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER MAIN TRAY el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | SUB- ⁽¹⁾ TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|---|--|--|---|--|---|--|---|--------------------------------|--|----------------------------------|------------------------------|-------------------|
| 0 | 2.5 ⁺² | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | 1.5 ⁺¹ | NEG. | 2.1 ⁺³ | 4.0 ⁺² | 4.3 ⁻¹ | 2.8 ⁺³ | 2.8 ⁺³ |
| 1 | 6.1 ⁺¹ | | | | | | | | | | | NEG. | | 5.5 ⁺² | 1.1 ⁺² | 2.0 ⁺⁰ | 5.2 ⁺² | 5.2 ⁺² |
| 2 | 3.6 ⁺¹ | | | | | | | | | | | | | 2.6 ⁺² | 8.0 ⁺¹ | 1.0 ⁺⁰ | 3.8 ⁺² | 3.8 ⁺² |
| 8 | 9.2 ⁺⁰ | | | | | | | | | | | | | 5.2 ⁺¹ | 3.0 ⁺¹ | 4.3 ⁻¹ | 9.2 ⁺¹ | 9.2 ⁺¹ |
| 24 | 1.4 ⁺⁰ | | | | | | | | | | | | | 3.6 ⁺⁰ | 1.6 ⁺¹ | NEG. | 2.1 ⁺¹ | 2.1 ⁺¹ |
| 96 | 4.1 ⁻¹ | | | | | | | | | | | | | 1.7 ⁻¹ | 6.0 ⁺⁰ | | 6.6 ⁺⁰ | 6.6 ⁺⁰ |
| 192 | NEG. | | | | | | | | | | | | | NEG. | 4.0 ⁺⁰ | | 4.0 ⁺⁰ | 4.0 ⁺⁰ |
| 360 | | | | | | | | | | | | | | | 2.0 ⁺⁰ | | 2.0 ⁺⁰ | 2.0 ⁺⁰ |
| 720 | | | | | | | | | | | | | | | 6.0 ⁻¹ | | 6.0 ⁻¹ | 6.0 ⁻¹ |
| 2160 | | | | | | | | | | | | | | | NEG. | | NEG. | NEG. |
| 4320 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | | ↓ | ↓ | ↓ | ↓ |

NOTED FEB 14 1980

REGULATORY DOCKET FILE COPY

SURRY AUXILIARY BLDG. RADIATION ZONE AREA X @ EL. 27'-6"

PRELIMINARY

ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT 1 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

| | | (2) | | | | | | | | | | | | | | | (1) | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|--|---|---|---|---|--|--|---|--------------------------------|---|----------------------------------|-------------------|-------------------|
| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA EL. 2' FP-10R | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 3' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PHE TUN. EL. 2' FP-19C, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PHE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' & 13' | CONTAIN. LEAKAGE MONITORING LINES EL. 2' & 13' | HYDROGEN ANALYZER MAIN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRANT EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONAL HATCH | CONTAIN. DOME R.S. HEADERS | SUB- TOTAL | |
| 0 | NEG. | 4.7 ⁺⁴ | 5.5 ⁺² | 2.2 ⁺³ | NEG. | NEG. | NEG. | NEG. | NEG. | 6.1 ⁺² | NEG. | 2.4 ⁺⁰ | NEG. | 1.1 ⁺⁰ | NEG. | 4.3 ⁻⁵ | 5.0 ⁺⁴ | 5.0 ⁺⁴ |
| 1 | | 1.7 ⁺⁴ | 2.3 ⁺² | 9.4 ⁺² | | | | | | 2.5 ⁺² | | NEG. | | 1.9 ⁻¹ | | 1.0 ⁻³ | 1.8 ⁺⁴ | 1.8 ⁺⁴ |
| 2 | | 1.2 ⁺⁴ | 1.5 ⁺² | 6.2 ⁺² | | | | | | 1.8 ⁺² | | | | NEG. | | NEG. | 1.3 ⁺⁴ | 1.3 ⁺⁴ |
| 8 | | 4.7 ⁺³ | 5.3 ⁺¹ | 2.2 ⁺² | | | | | | 6.6 ⁺¹ | | | | | | | 5.0 ⁺³ | 5.0 ⁺³ |
| 24 | | 2.0 ⁺³ | 1.4 ⁺¹ | 5.7 ⁺¹ | | | | | | 2.6 ⁺¹ | | | | | | | 2.1 ⁺³ | 2.1 ⁺³ |
| 96 | | 6.7 ⁺² | 3.4 ⁺⁰ | 1.4 ⁺¹ | | | | | | 1.0 ⁺¹ | | | | | | | 6.9 ⁺² | 7.0 ⁺² |
| 192 | | 4.5 ⁺² | 2.4 ⁺⁰ | 1.0 ⁺¹ | | | | | | 6.4 ⁺⁰ | | | | | | | 4.6 ⁺² | 4.7 ⁺² |
| 360 | | 2.9 ⁺² | 1.7 ⁺⁰ | 6.9 ⁺⁰ | | | | | | 3.5 ⁺⁰ | | | | | | | 2.9 ⁺² | 2.9 ⁺² |
| 720 | | 1.4 ⁺² | NEG. | 3.4 ⁺⁰ | | | | | | 1.5 ⁺⁰ | | | | | | | 1.4 ⁺² | 1.4 ⁺² |
| 2160 | | 4.7 ⁺¹ | | 8.8 ⁻¹ | | | | | | 6.1 ⁻¹ | | | | | | | 4.8 ⁺¹ | 4.8 ⁺¹ |
| 4320 | ↓ | 2.0 ⁺¹ | ↓ | NEG. | ↓ | ↓ | ↓ | ↓ | ↓ | NEG. | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 2.0 ⁺¹ | 2.0 ⁺¹ |

in updated values contribution from drain lines inside Waste Tanks (CUB), LLWDT or HLWDT, and reactor sampling lines not in protection area.

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NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA Y @ EL. 27'-6"

ESTIMATED HIGHEST DIRECT T DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

PRELIMINARY

| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PYE TUN. EL. 2' FP-14L, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PIPE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' & 13' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONAL MATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|--|--|---|---|---|---|---|---|--------------------------------|---|----------------------------------|----------------------|-------------------|
| 0 | NEG. | 4.7 ⁺⁴ | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | 1.3 ⁺⁷ | NEG. | 2.4 ⁺⁰ | NEG. | 1.4 ⁺⁰ | NEG. | 4.3 ⁻⁵ | 4.7 ⁺⁴ | 1.3 ⁺⁷ |
| 1 | | 1.7 ⁺⁴ | | | | | | | | 5.3 ⁺⁶ | | | | 1.9 ⁻¹ | | 1.0 ⁻³ | 1.7 ⁺⁴ | 5.3 ⁺⁶ |
| 2 | | 1.2 ⁺⁴ | | | | | | | | 3.7 ⁺⁶ | | | | NEG. | | NEG. | 1.2 ⁺⁴ | 3.7 ⁺⁶ |
| 8 | | 4.7 ⁺³ | | | | | | | | 1.4 ⁺⁶ | | | | | | | 4.7 ⁺³ | 1.4 ⁺⁶ |
| 24 | | 2.0 ⁺³ | | | | | | | | 5.4 ⁺⁵ | | | | | | | 2.0 ⁺³ | 5.4 ⁺⁵ |
| 96 | | 6.7 ⁺² | | | | | | | | 2.1 ⁺⁵ | | | | | | | 6.7 ⁺² | 2.1 ⁺⁵ |
| 192 | | 4.5 ⁺² | | | | | | | | 1.3 ⁺⁵ | | | | | | | 4.5 ⁺² | 1.3 ⁺⁵ |
| 360 | | 2.8 ⁺² | | | | | | | | 7.3 ⁺⁴ | | | | | | | 2.8 ⁺² | 7.3 ⁺⁴ |
| 720 | | 1.4 ⁺² | | | | | | | | 3.2 ⁺⁴ | | | | | | | 1.4 ⁺² | 3.2 ⁺⁴ |
| 2160 | | 4.7 ⁺¹ | | | | | | | | 1.3 ⁺⁴ | | | | | | | 4.7 ⁺¹ | 1.3 ⁺⁴ |
| 4320 | Y | 2.0 ⁺¹ | Y | Y | Y | Y | Y | Y | Y | 4.3 ⁺³ | Y | Y | Y | Y | Y | Y | 2.0 ⁺¹ | 4.3 ⁺³ |

NOTED FEB 14 1980

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SURRY AUXILIARY BLDG RADIATION ZONE AREA 2 @ EL. 27'-6"

ESTIMATED HIGHEST DIRECT T¹ DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO

LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

| SOURCE TIME (HR) | SI/CH LINES IN PEN. AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PHE TUN. EL. 2' FP-MC.7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PHE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' 13' & 27.5' | CONTAIN. LEAKAGE MONITORING LINES EL. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAP EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONAL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|---|---|--------------------------------------|---|--|--|---|---|---|---|--|---|---|--------------------------------|---|----------------------------------|----------------------|-------------------|
| 0 | NEG. | 3.6 ⁺¹ | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | 3.3 ⁺³ | NEG. | NEG. | NEG. | 1.1 ⁺³ | 4.2 ⁺² | 3.2 ⁻² | 1.6 ⁺³ | 4.9 ⁺³ |
| 1 | | 2.1 ⁺¹ | | | | | | | | 1.4 ⁺³ | | | | 1.4 ⁺² | 1.1 ⁺² | 7.5 ⁻¹ | 2.7 ⁺² | 1.7 ⁺³ |
| 2 | | 1.4 ⁺¹ | | | | | | | | 9.7 ⁺² | | | | 1.0 ⁺² | 8.0 ⁺⁸ | NEG. | 1.9 ⁺² | 1.2 ⁺³ |
| 8 | | 5.8 ⁺⁰ | | | | | | | | 3.7 ⁺² | | | | 2.1 ⁺¹ | 3.0 ⁺¹ | | 5.7 ⁺¹ | 4.3 ⁺² |
| 24 | | 2.5 ⁺⁰ | | | | | | | | 1.4 ⁺² | | | | 1.5 ⁺⁰ | 1.6 ⁺¹ | | 2.0 ⁺¹ | 1.6 ⁺² |
| 96 | | 8.2 ⁻¹ | | | | | | | | 5.6 ⁺¹ | | | | 6.0 ⁻² | 6.0 ⁺⁰ | | 6.8 ⁺⁰ | 6.3 ⁺¹ |
| 192 | | NEG. | | | | | | | | 3.5 ⁺¹ | | | | NEG. | 4.0 ⁺⁰ | | 4.0 ⁺⁰ | 3.9 ⁺¹ |
| 360 | | | | | | | | | | 1.9 ⁺¹ | | | | | 2.0 ⁺⁰ | | 2.0 ⁺⁰ | 2.1 ⁺¹ |
| 720 | | | | | | | | | | 8.4 ⁺⁰ | | | | | 6.0 ⁻¹ | | 6.0 ⁻¹ | 9.0 ⁺⁰ |
| 2160 | | | | | | | | | | 3.3 ⁺⁰ | | | | | NEG. | | NEG. | 9.3 ⁺⁰ |
| 4320 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 1.1 ⁺⁰ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | NEG. | 1.1 ⁺⁰ |

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SURRY AUXILIARY BLDG RADIATION ZONE AREA AA @ EL. 27'-6"

ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

— MITIGATION PHASE - NO LETDOWN —

PRELIMINARY

| SOURCE TIME (HR) | SE/CH LINES IN PEN AREA el. 2' FP-10K | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PYE TUN. el. 2' FP-MC.7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PYE TUN. el. 2' FP-19C | DRAIN LINES INSIDE WARE TANKS CUB. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' & 13' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAP el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONAL HATCH | CONTAIN. DOME R.S. HEADERS | SUB- TOTAL ⁽¹⁾ | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|--|---|--|---|---|---|---|---|--------------------------------|---|----------------------------------|------------------------------|-------------------|
| 0 | 7.7 ⁺² | 4.7 ⁺⁴ | NEG. | NEG. | 4.4 ⁺¹ | 2.2 ⁺¹ | 9.7 ⁺⁰ | NEG. | NEG. | 2.6 ⁺³ | 1.3 ⁺² | 1.7 ⁺⁴ | NEG. | 4.0 ⁺² | 4.0 ⁺² | 8.6 ⁻⁴ | 6.6 ⁺⁴ | 6.8 ⁺⁴ |
| 1 | 1.9 ⁺² | 1.7 ⁺⁴ | | | 1.2 ⁺¹ | 5.9 ⁺⁰ | 2.6 ⁺⁰ | | | 1.1 ⁺³ | 3.2 ⁺¹ | 2.1 ⁺³ | | 5.2 ⁺¹ | 1.1 ⁺² | 9.1 ⁻¹ | 3.0 ⁺⁴ | 3.1 ⁺⁴ |
| 2 | 1.1 ⁺² | 1.2 ⁺⁴ | | | 7.6 ⁺⁰ | 3.6 ⁺⁰ | 1.7 ⁺⁰ | | | 7.6 ⁺² | 2.4 ⁺¹ | 1.5 ⁺³ | | 3.8 ⁺¹ | 8.0 ⁺¹ | NEG. | 1.2 ⁺⁴ | 1.3 ⁺⁴ |
| 8 | 3.0 ⁺¹ | 4.7 ⁺³ | | | 2.2 ⁺⁰ | NEG. | 4.8 ⁻¹ | | | 2.7 ⁺² | 8.5 ⁺⁰ | 6.4 ⁺² | | 7.2 ⁺⁰ | 3.0 ⁺¹ | | 5.4 ⁺³ | 5.7 ⁺³ |
| 24 | 5.2 ⁺⁰ | 2.0 ⁺³ | | | 4.2 ⁻¹ | | NEG. | | | 1.1 ⁺² | 3.2 ⁺⁰ | 1.5 ⁺² | | 4.3 ⁻¹ | 1.6 ⁺¹ | | 2.2 ⁺³ | 2.3 ⁺³ |
| 96 | 1.3 ⁺⁰ | 6.7 ⁺² | | | NEG. | | | | | 4.4 ⁺¹ | 1.2 ⁺⁰ | 1.2 ⁺¹ | | NEG. | 6.0 ⁺⁰ | | 6.9 ⁺² | 7.3 ⁺² |
| 192 | 1.1 ⁺⁰ | 4.5 ⁺² | | | | | | | | 2.8 ⁺¹ | 6.8 ⁻¹ | 4.9 ⁺⁰ | | | 4.0 ⁺⁰ | | 4.5 ⁺² | 4.9 ⁺² |
| 360 | 7.0 ⁻¹ | 2.8 ⁺² | | | | | | | | 1.5 ⁺¹ | NEG. | 2.1 ⁺⁰ | | | 2.0 ⁺⁰ | | 2.9 ⁺² | 3.0 ⁺² |
| 720 | NEG. | 1.4 ⁺² | | | | | | | | 6.6 ⁺⁰ | | NEG. | | | 6.0 ⁻¹ | | 1.4 ⁺² | 1.5 ⁺² |
| 2160 | | 4.7 ⁺¹ | | | | | | | | 2.6 ⁺⁰ | | | | | NEG. | | 4.7 ⁺¹ | 5.0 ⁺¹ |
| 4320 | | 2.0 ⁺¹ | | | | | | | | 8.9 ⁻¹ | | | | | | | 2.0 ⁺¹ | 2.1 ⁺¹ |

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NOTED FEB 14, 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA BB @ EL. 27'-6"

**ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT**

———— MITIGATION PHASE - NO LETDOWN ————

PRELIMINARY

| SOURCE TIME (HR) | (2) | | | | | | | | | | | | | | | | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|---|--|--|---|---|---|--|---|--------------------------------|--|----------------------------------|----------------------|-------------------|
| | SI/CN LINES IN PEN AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PYE TUN. EL. 2' FP-19C, 7A | SAFEGUARDS SUMP DRAIN LINE IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINE IN PYE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WARE TANKS CUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' 13' & 27.5' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER MAIN TRAP EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRANT EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | | |
| 0 | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | 2.1 ⁺³ | 4.0 ⁺² | 4.3 ⁻¹ | 2.5 ⁺³ | 2.5 ⁺³ |
| 1 | | | | | | | | | | | | | | 3.5 ⁺² | 1.1 ⁺² | 2.8 ⁺⁰ | 4.6 ⁺² | 4.6 ⁺² |
| 2 | | | | | | | | | | | | | | 2.6 ⁺² | 8.0 ⁺¹ | 1.8 ⁺⁰ | 3.4 ⁺² | 3.4 ⁺² |
| 8 | | | | | | | | | | | | | | 5.2 ⁺¹ | 3.0 ⁺¹ | 4.3 ⁻¹ | 8.2 ⁺¹ | 8.2 ⁺¹ |
| 24 | | | | | | | | | | | | | | 3.6 ⁺⁰ | 1.6 ⁺¹ | NEG. | 2.0 ⁺¹ | 2.0 ⁺¹ |
| 96 | | | | | | | | | | | | | | 1.7 ⁻¹ | 6.0 ⁺⁰ | | 6.2 ⁺⁰ | 6.2 ⁺⁰ |
| 192 | | | | | | | | | | | | | | NEG. | 4.0 ⁺⁰ | | 4.0 ⁺⁰ | 4.0 ⁺⁰ |
| 360 | | | | | | | | | | | | | | | 2.0 ⁺⁰ | | 2.0 ⁺⁰ | 2.0 ⁺⁰ |
| 720 | | | | | | | | | | | | | | | 6.0 ⁻¹ | | 6.0 ⁻¹ | 6.0 ⁻¹ |
| 2160 | | | | | | | | | | | | | | | NEG. | | NEG. | NEG. |
| 4320 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | | ↓ | ↓ | ↓ | ↓ |

NOTED FEB 14 1980

REGULATORY DOCKET FILE COPY

SURRY AUXILIARY BLDG RADIATION ZONE AREA CC @ EL. 27'-6"

ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

———— MITIGATION PHASE - NO LETDOWN ————

PRELIMINARY

| SOURCE TIME (HR) | SI/CH LINES IN PEN. AREA EL. 2' FP-10R | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PHE TUN. EL. 2' FP-14C, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PHE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' & 13' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAP EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|---|---|--------------------------------------|---|--|--|---|---|---|---|---|---|---|--------------------------------|--|----------------------------------|----------------------|-------------------|
| 0 | 2.3 ⁺³ | 3.5 ⁺³ | NEG. | NEG. | 4.5 ⁺² | 5.7 ⁺¹ | 9.9 ⁺¹ | 4.0 ⁺³ | 3.9 ⁺³ | NEG. | 2.3 ⁺² | 1.7 ⁺⁴ | NEG. | 1.1 ⁺³ | 4.0 ⁺² | 3.2 ⁻² | 2.4 ⁺⁴ | 3.2 ⁺⁴ |
| 1 | 5.8 ⁺² | 2.1 ⁺³ | | | 1.3 ⁺² | 1.5 ⁺¹ | 2.9 ⁺¹ | 2.3 ⁺³ | 1.0 ⁺³ | | 5.7 ⁺¹ | 2.1 ⁺³ | | 1.4 ⁺² | 1.1 ⁺² | 7.5 ⁻¹ | 5.3 ⁺³ | 8.6 ⁺³ |
| 2 | 3.5 ⁺² | 1.4 ⁺³ | | | 7.9 ⁺¹ | 9.3 ⁺⁰ | 1.7 ⁺¹ | 1.6 ⁺³ | 6.2 ⁺² | | 4.2 ⁺¹ | 1.5 ⁺³ | | 1.0 ⁺² | 8.0 ⁺¹ | NEG. | 3.6 ⁺³ | 5.8 ⁺³ |
| 8 | 4.2 ⁺¹ | 5.8 ⁺² | | | 2.2 ⁺¹ | 2.6 ⁺⁰ | 4.8 ⁺⁰ | 6.5 ⁺² | 1.7 ⁺² | | 1.5 ⁺¹ | 6.4 ⁺² | | 2.1 ⁺¹ | 3.0 ⁺¹ | | 1.4 ⁺³ | 2.2 ⁺³ |
| 24 | 1.6 ⁺¹ | 2.4 ⁺² | | | 4.4 ⁺⁰ | NEG. | 9.6 ⁻¹ | 2.7 ⁺² | 3.1 ⁺¹ | | 5.7 ⁺⁰ | 1.5 ⁺² | | 1.5 ⁺⁰ | 1.6 ⁺¹ | | 4.3 ⁺² | 7.3 ⁺² |
| 96 | 4.3 ⁺⁰ | 8.4 ⁺¹ | | | 1.1 ⁺⁰ | | NEG. | 9.4 ⁺¹ | 7.9 ⁺⁰ | | 2.1 ⁺⁰ | 1.2 ⁺¹ | | 6.0 ⁻² | 6.0 ⁺⁰ | | 1.1 ⁺² | 2.1 ⁺² |
| 192 | 3.3 ⁺⁰ | 5.8 ⁺¹ | | | 8.5 ⁻¹ | | | 6.3 ⁺¹ | 6.1 ⁺⁰ | | 1.2 ⁺⁰ | 4.9 ⁺⁰ | | NEG. | 4.0 ⁺⁰ | | 7.4 ⁺¹ | 1.4 ⁺² |
| 360 | 2.2 ⁺⁰ | 3.5 ⁺¹ | | | NEG. | | | 4.0 ⁺¹ | 4.1 ⁺⁰ | | 5.5 ⁻¹ | 2.1 ⁺⁰ | | | 2.0 ⁺⁰ | | 4.2 ⁺¹ | 8.6 ⁺¹ |
| 720 | 9.9 ⁻¹ | 1.7 ⁺¹ | | | | | | 2.0 ⁺¹ | 1.8 ⁺⁰ | | NEG. | NEG. | | | 6.0 ⁻¹ | | 1.9 ⁺¹ | 4.1 ⁺¹ |
| 2160 | NEG. | 5.8 ⁺⁰ | | | | | | 6.5 ⁺⁰ | 2.9 ⁻¹ | | | | | | NEG. | | 5.8 ⁺⁰ | 1.3 ⁺¹ |
| 4320 | ↓ | 2.4 ⁺⁰ | ↓ | ↓ | ↓ | ↓ | ↓ | 2.7 ⁺⁰ | NEG. | ↓ | ↓ | ↓ | ↓ | | ↓ | ↓ | 2.4 ⁺⁰ | 5.1 ⁺⁰ |

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NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA DD @ EL. 27'-6"

ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

PRELIMINARY

| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PVE TUN. EL. 2' FP-14C, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PVE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. EL. 2' & 13' FP-19C | LOW LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' & 13' | CONTAIN. LEAKAGE MONITORING LINES EL. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PRESSURE HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|--|---|---|--|---|--|---|---|--------------------------------|---|----------------------------------|----------------------|-------------------|
| 0 | NEG. | 1.8 ⁺² | NEG. | 2.2 ⁺³ | 4.4 ⁺¹ | NEG. | 9.7 ⁺⁰ | NEG. | 3.9 ⁺³ | NEG. | 7.7 ⁺¹ | 1.7 ⁺⁴ | NEG. | 2.1 ⁺³ | 4.0 ⁺² | 4.3 ⁻¹ | 2.2 ⁺⁴ | 2.6 ⁺⁴ |
| 1 | | 1.1 ⁺² | | 9.4 ⁺² | 1.2 ⁺¹ | | 2.6 ⁺⁰ | | 1.0 ⁺³ | | 1.9 ⁺¹ | 2.1 ⁺³ | | 3.5 ⁺² | 1.1 ⁺² | 2.8 ⁺⁰ | 3.6 ⁺³ | 4.6 ⁺³ |
| 2 | | 7.2 ⁺¹ | | 6.2 ⁺² | 7.6 ⁺⁰ | | 1.7 ⁺⁰ | | 6.2 ⁺² | | 1.4 ⁺¹ | 1.5 ⁺³ | | 2.6 ⁺² | 8.0 ⁺¹ | 1.8 ⁺⁰ | 2.6 ⁺³ | 3.2 ⁺³ |
| 8 | | 2.9 ⁺¹ | | 2.2 ⁺² | 2.2 ⁺⁰ | | 4.8 ⁻¹ | | 1.7 ⁺² | | 5.0 ⁺⁰ | 6.4 ⁺² | | 5.2 ⁺¹ | 3.0 ⁺¹ | 4.3 ⁻¹ | 9.5 ⁺² | 1.1 ⁺³ |
| 24 | | 1.2 ⁺¹ | | 5.7 ⁺¹ | 4.2 ⁻¹ | | NEG. | | 3.1 ⁺¹ | | 1.9 ⁺⁰ | 1.5 ⁺² | | 3.6 ⁺⁰ | 1.6 ⁺¹ | NEG. | 2.4 ⁺² | 5.5 ⁺² |
| 96 | | 4.1 ⁺⁰ | | 1.4 ⁺¹ | NEG. | | | | 7.7 ⁺⁰ | | 7.0 ⁻¹ | 1.2 ⁺¹ | | 1.7 ⁻¹ | 6.0 ⁺⁰ | | 3.6 ⁺¹ | 4.4 ⁺¹ |
| 192 | | 2.9 ⁺⁰ | | 1.0 ⁺¹ | | | | | 6.1 ⁺⁰ | | NEG. | 4.9 ⁺⁰ | | NEG. | 4.0 ⁺⁰ | | 2.2 ⁺¹ | 2.6 ⁺¹ |
| 360 | | 1.8 ⁺⁰ | | 6.9 ⁺⁰ | | | | | 4.1 ⁺⁰ | | | 2.1 ⁺⁰ | | | 2.0 ⁺⁰ | | 1.3 ⁺¹ | 1.7 ⁺¹ |
| 720 | | 8.6 ⁻¹ | | 3.4 ⁺⁰ | | | | | 1.8 ⁺⁰ | | | NEG. | | | 6.0 ⁻¹ | | 5.0 ⁺⁰ | 6.8 ⁺⁰ |
| 2160 | | NEG. | | 8.8 ⁻¹ | | | | | 2.9 ⁻¹ | | | | | | NEG. | | NEG. | 1.2 ⁺⁰ |
| 4320 | | | | NEG. | | | | | NEG. | | | | | | | | | NEG. |

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NOTED FEB 14 1990

SURRY AUXILIARY BLDG RADIATION ZONE AREA EE @ EL. 27'-6"

ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

— MITIGATION PHASE - NO LETDOWN —

PRELIMINARY

| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PYE TUN. EL. 2' FP-19L, 7A | SAFEGUARDS SUMP DRAIN LINE IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINE IN PYE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WARE TANKS CUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' & 13' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAP EL. 2' | CONTAIN. ATMOSP. THRU PIPE PENETRATION EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONAL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|---|--|--|---|---|---|--|---|--------------------------------|---|----------------------------------|----------------------|--------------------|
| 0 | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | 4.0 ⁺³ | 6.3 ⁺⁴ | NEG. | NEG. | 1.5 ⁺¹ | NEG. | 2.1 ⁺³ | 4.0 ⁺² | 4.3 ⁻¹ | 2.5 ⁺³ | 7.0 ⁺⁴ |
| 1 | | | | | | | | 2.3 ⁺³ | 2.1 ⁺⁴ | | | 4.5 ⁻¹ | | 3.5 ⁺² | 1.1 ⁺² | 2.8 ⁺⁰ | 4.6 ⁺² | 2.4 ⁺⁴ |
| 2 | | | | | | | | 1.6 ⁺³ | 1.3 ⁺⁴ | | | NEG. | | 2.6 ⁺² | 8.0 ⁺¹ | 1.8 ⁺⁰ | 3.4 ⁺² | 1.5 ⁺⁴ |
| 8 | | | | | | | | 6.5 ⁺² | 4.2 ⁺³ | | | | | 5.2 ⁺¹ | 3.0 ⁺¹ | 4.3 ⁻¹ | 8.2 ⁺¹ | 4.9 ⁺³ |
| 24 | | | | | | | | 2.7 ⁺² | 9.5 ⁺² | | | | | 3.6 ⁺⁰ | 1.6 ⁺¹ | NEG. | 2.0 ⁺¹ | 1.2 ⁺³ |
| 96 | | | | | | | | 9.4 ⁺¹ | 2.4 ⁺² | | | | | 1.7 ⁻¹ | 6.0 ⁺⁰ | | 6.0 ⁺⁰ | 3.4 ⁺² |
| 192 | | | | | | | | 6.3 ⁺¹ | 1.8 ⁺² | | | | | NEG. | 4.0 ⁺⁰ | | 4.0 ⁺⁰ | 2.5 ⁺² |
| 360 | | | | | | | | 4.0 ⁺¹ | 1.2 ⁺² | | | | | | 2.0 ⁺⁰ | | 2.0 ⁺⁰ | 1.6 ⁺² |
| 720 | | | | | | | | 2.0 ⁺¹ | 5.6 ⁺¹ | | | | | | 6.0 ⁻¹ | | 6.0 ⁻¹ | 5.9 ⁺¹ |
| 2160 | | | | | | | | 6.5 ⁺⁰ | 1.1 ⁺¹ | | | | | | NEG. | | NEG. | 1.75 ⁺¹ |
| 4320 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 2.7 ⁺⁰ | 3.1 ⁺⁰ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 5.8 ⁺⁰ |

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA FF @ EL. 45'-10"

PRELIMINARY

ESTIMATED HIGHEST DIRECT T DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO

LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

| SOURCE TIME (HR) | (2) | | | | | | | | | | | | | | | | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|---|---|--|---|---|---|---|--|---|--------------------------------|---|----------------------------------|----------------------|--------------------|
| | SI/CH LINES IN PEN AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PHE TUN. EL. 2' FP-14, 7A | SAFEGUARDS SUMP DRAIN LINE IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINE IN PHE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' & 13' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAY EL. 2' | CONTAIN. ATMOSP. THRU PIPE PENETRATION EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PRESSURE HATCH | CONTAIN. DOME R.S. HEADERS | | |
| 0 | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | 2.2 ⁺⁴ | 1.0 ⁺¹ | 4.2 ⁺⁰ | 2.2 ⁺⁴ | 2.2 ⁺⁴ |
| 1 | | | | | | | | | | | | | | 3.5 ⁺³ | 4.0 ⁺⁰ | 2.8 ⁺¹ | 3.5 ⁺³ | 3.5 ⁺³ |
| 2 | | | | | | | | | | | | | | 2.6 ⁺³ | 2.9 ⁺⁰ | 1.7 ⁺¹ | 2.6 ⁺³ | 2.6 ⁺³ |
| 8 | | | | | | | | | | | | | | 5.3 ⁺² | 1.0 ⁺⁰ | 4.2 ⁺⁰ | 5.4 ⁺² | 5.4 ⁺² |
| 24 | | | | | | | | | | | | | | 3.7 ⁺¹ | 5.0 ⁻¹ | 9.9 ⁻¹ | 3.85 ⁺¹ | 3.85 ⁺¹ |
| 96 | | | | | | | | | | | | | | 1.7 ⁺⁰ | NEG. | NEG. | 1.7 ⁺⁰ | 1.7 ⁺⁰ |
| 192 | | | | | | | | | | | | | | 6.9 ⁻¹ | | | 6.9 ⁻¹ | 6.9 ⁻¹ |
| 360 | | | | | | | | | | | | | | NEG. | | | NEG. | NEG. |
| 720 | | | | | | | | | | | | | | | | | | |
| 2160 | | | | | | | | | | | | | | | | | | |
| 4320 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA GG @ EL. 45'-10"

ESTIMATED HIGHEST DIRECT P DOSE RATES ($\mu\text{R/hr}$) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

— MITIGATION PHASE - NO LETDOWN —

PRELIMINARY

(2)

| SOURCE TIME (HR) | SI/CH LINES IN PEN. AREA el. 2' FP-10K | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 3' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PHE TUN. el. 2' FP-14C, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PHE TUN. el. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' 13' & 27.5' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER MAIN TRAY el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONAL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|---|---|--------------------------------------|---|--|--|---|---|---|---|---|--|---|--------------------------------|---|----------------------------------|----------------------|-------------------|
| 0 | 5.5 ⁺¹ | NEG. | NEG. | NEG. | NEG. | 1.1 ⁺⁰ | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | 1.6 ⁺⁷ | NEG. | 1.6 ⁺⁷ | 1.6 ⁺⁷ |
| 1 | 1.4 ⁺¹ | | | | | NEG. | | | | | | | | | 3.8 ⁺⁶ | | 3.8 ⁺⁶ | 3.8 ⁺⁶ |
| 2 | 8.5 ⁺⁰ | | | | | | | | | | | | | | 2.8 ⁺⁶ | | 2.8 ⁺⁶ | 2.8 ⁺⁶ |
| 8 | 2.2 ⁺⁰ | | | | | | | | | | | | | | 9.8 ⁺⁵ | | 9.8 ⁺⁵ | 9.8 ⁺⁵ |
| 24 | 4.0 ⁺¹ | | | | | | | | | | | | | | 3.5 ⁺⁵ | | 3.5 ⁺⁵ | 3.5 ⁺⁵ |
| 96 | NEG. | | | | | | | | | | | | | | 1.1 ⁺⁵ | | 1.1 ⁺⁵ | 1.1 ⁺⁵ |
| 192 | | | | | | | | | | | | | | | 6.9 ⁺⁴ | | 6.9 ⁺⁴ | 6.9 ⁺⁴ |
| 360 | | | | | | | | | | | | | | | 3.1 ⁺⁴ | | 3.1 ⁺⁴ | 3.1 ⁺⁴ |
| 720 | | | | | | | | | | | | | | | 6.5 ⁺³ | | 6.5 ⁺³ | 6.5 ⁺³ |
| 2160 | | | | | | | | | | | | | | | 2.9 ⁺¹ | | 2.9 ⁺¹ | 2.9 ⁺¹ |
| 4320 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 2.8 ⁻² | ↓ | 2.8 ⁻² | 2.8 ⁻² |

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA HH @ EL. 45'-10"

ESTIMATED HIGHEST DIRECT P DOSE RATES (μ R/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

— MITIGATION PHASE - NO LETDOWN —

PP-11111111

(2)

| SOURCE TIME (HR) | SI/CH LINES IN PEN. AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PVE TUN. EL. 2' FP-19L, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PVE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' 13' & 13' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONAL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|---|---|--------------------------------------|---|--|--|---|---|---|---|---|---|---|--------------------------------|---|----------------------------------|----------------------|-------------------|
| 0 | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | 5.5 ⁺⁴ | NEG. | NEG. | NEG. | 2.2 ⁺⁴ | 4.0 ⁺⁰ | 4.2 ⁺⁰ | 2.2 ⁺⁴ | 7.7 ⁺⁴ |
| 1 | | | | | | | | | | 2.2 ⁺⁴ | | | | 3.5 ⁺³ | 1.1 ⁺⁰ | 2.8 ⁺¹ | 3.5 ⁺³ | 2.6 ⁺⁴ |
| 2 | | | | | | | | | | 1.6 ⁺⁴ | | | | 2.6 ⁺³ | 8.0 ⁻¹ | 1.7 ⁺¹ | 2.6 ⁺³ | 1.9 ⁺⁴ |
| 8 | | | | | | | | | | 6.0 ⁺³ | | | | 5.3 ⁺² | NEG. | 4.2 ⁺⁰ | 5.3 ⁺² | 6.5 ⁺³ |
| 24 | | | | | | | | | | 2.3 ⁺³ | | | | 3.7 ⁺¹ | | 9.9 ⁻¹ | 3.8 ⁺¹ | 2.3 ⁺³ |
| 96 | | | | | | | | | | 9.1 ⁺² | | | | 1.7 ⁺⁰ | | NEG. | 1.7 ⁺⁰ | 9.1 ⁺² |
| 192 | | | | | | | | | | 5.7 ⁺² | | | | 6.9 ⁻¹ | | | 6.9 ⁻¹ | 5.7 ⁺² |
| 360 | | | | | | | | | | 3.1 ⁺² | | | | NEG. | | | NEG. | 3.1 ⁺² |
| 720 | | | | | | | | | | 1.4 ⁺² | | | | | | | | 1.4 ⁺² |
| 2160 | | | | | | | | | | 5.5 ⁺¹ | | | | | | | | 5.5 ⁺¹ |
| 4320 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 1.9 ⁺¹ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 1.9 ⁺¹ |

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA II @ EL. 45'-10"

ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

— MITIGATION PHASE - NO LETDOWN —

PRELIMINARY

| SOURCE TIME (HR) | (2) | | | | | | | | | | CONTAIN. LEAKAGE MONI FOR LINES @ 2' & 13' | HYDROGEN ANALYZER MAN TRAP @ 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION @ 2' | CONTAIN. SHINE THRU DOME HATCH | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|------------------------------------|-------------------------------------|---------------------------|---|------------------------------------|---|---|--|---|---|--|---|---|---|--|----------------------------------|----------------------|-------------------|
| | SI/CH LINES IN PEN AREA @ 2' | CHARGING PUMP CUB. @ 2' & 13' | AUX. BLDG SUMP @ 2' | DRAIN LINES IN SUMP AREA @ 2' & 13' | DRAIN LINES IN PYE TUN. @ 2' | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA @ 2' | SAFEGUARDS SUMP DRAIN LINES IN PYE TUN. @ 2' | DRAIN LINES INSIDE WARE TANKS CUB. @ 2' & 13' | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK @ 2' & 13' | REACTOR COOLANT SAMPLING LINES @ 2' & 13' | | | | | | | | |
| 0 | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | 8.0 ⁺⁴ | NEG. | NEG. | NEG. | 1.1 ⁺⁴ | 2.5 ⁺² | 1.2 ⁺⁰ | 1.1 ⁺⁴ | 9.1 ⁺⁴ |
| 1 | | | | | | | | | | 3.3 ⁺⁴ | | | | 1.5 ⁺³ | 6.5 ⁺¹ | 8.3 ⁺⁰ | 1.6 ⁺³ | 3.5 ⁺⁴ |
| 2 | | | | | | | | | | 2.3 ⁺⁴ | | | | 1.1 ⁺³ | 4.7 ⁺¹ | 5.0 ⁺⁰ | 1.2 ⁺³ | 2.4 ⁺⁴ |
| 8 | | | | | | | | | | 8.8 ⁺³ | | | | 2.3 ⁺² | 1.9 ⁺¹ | 1.2 ⁺⁰ | 2.5 ⁺² | 9.1 ⁺³ |
| 24 | | | | | | | | | | 3.4 ⁺³ | | | | 1.6 ⁺¹ | 7.6 ⁺⁰ | 1.8 ⁻¹ | 2.4 ⁺¹ | 3.4 ⁺³ |
| 96 | | | | | | | | | | 1.3 ⁺³ | | | | 6.2 ⁻¹ | 2.8 ⁺⁰ | NEG. | 3.2 ⁺⁰ | 1.3 ⁺³ |
| 192 | | | | | | | | | | 8.4 ⁺² | | | | NEG. | 1.6 ⁺⁰ | | 1.6 ⁺⁰ | 8.4 ⁺² |
| 360 | | | | | | | | | | 4.6 ⁺² | | | | | 7.9 ⁻¹ | | 7.9 ⁻¹ | 4.6 ⁺² |
| 720 | | | | | | | | | | 2.0 ⁺² | | | | | NEG. | | NEG. | 2.0 ⁺² |
| 2160 | | | | | | | | | | 8.0 ⁺¹ | | | | | | | | 8.0 ⁺¹ |
| 4320 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 2.7 ⁺¹ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 2.7 ⁺¹ |

REGULATORY DOCUMENT WILL BE OUT

NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA JT @ EL. 45'-10"

ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

PRELIMINARY

(2)

| SOURCE TIME (HR) | SE/CH LINES IN PEN. AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 3' FB-9A | DRAIN LINES IN SWAMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PPE TUN. EL. 2' FP-ML-7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PPE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DEW TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' & 13' 27.5' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER MAIN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRANT EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|---|---|--------------------------------------|--|--|--|---|---|---|---|---|--|---|--------------------------------|--|----------------------------------|----------------------|-------------------|
| 0 | 5.6 ⁺² | NEG. | NEG. | NEG. | NEG. | 1.3 ⁺⁰ | NEG. | NEG. | 1.5 ⁺⁰ | 5.5 ⁺⁴ | 5.5 ⁺⁰ | 8.4 ⁺² | NEG. | 5.3 ⁺³ | 1.8 ⁺⁴ | 1.8 ⁺⁰ | 2.4 ⁺⁴ | 7.9 ⁺⁴ |
| 1 | 1.4 ⁺² | | | | | NEG. | | | NEG. | 2.2 ⁺⁴ | 1.4 ⁺⁰ | 1.0 ⁺² | | 6.9 ⁺² | 7.2 ⁺³ | 1.2 ⁺¹ | 8.0 ⁺³ | 3.0 ⁺⁴ |
| 2 | 8.6 ⁺¹ | | | | | | | | | 1.6 ⁺⁴ | 1.0 ⁺⁰ | 7.5 ⁺¹ | | 5.0 ⁺² | 5.3 ⁺³ | 7.2 ⁺⁰ | 6.0 ⁺³ | 2.2 ⁺⁴ |
| 8 | 2.3 ⁺¹ | | | | | | | | | 6.0 ⁺³ | 3.6 ⁻¹ | 3.1 ⁺¹ | | 9.7 ⁺¹ | 2.3 ⁺³ | 1.7 ⁺⁰ | 2.4 ⁺³ | 8.4 ⁺³ |
| 24 | 4.1 ⁺⁰ | | | | | | | | | 2.3 ⁺³ | NEG. | 7.3 ⁺⁰ | | 5.7 ⁺⁰ | 8.0 ⁺² | 7.1 ⁻¹ | 8.2 ⁺² | 3.1 ⁺³ |
| 96 | 1.1 ⁺⁰ | | | | | | | | | 9.1 ⁺² | | NEG. | | 1.9 ⁻¹ | 3.0 ⁺² | NEG. | 3.0 ⁺² | 1.2 ⁺³ |
| 192 | 7.4 ⁻¹ | | | | | | | | | 5.7 ⁺² | | | | NEG. | 1.6 ⁺² | | 1.6 ⁺² | 7.3 ⁺² |
| 360 | NEG. | | | | | | | | | 3.1 ⁺² | | | | | 7.0 ⁺¹ | | 7.0 ⁺¹ | 3.8 ⁺² |
| 720 | | | | | | | | | | 1.4 ⁺² | | | | | 1.6 ⁺¹ | | 1.6 ⁺¹ | 1.6 ⁺² |
| 2160 | | | | | | | | | | 5.5 ⁺¹ | | | | | 6.0 ⁻² | | NEG. | 5.5 ⁺¹ |
| 4320 | | | | | | | | | | 1.9 ⁺¹ | | | | | NEG. | | | 1.9 ⁺¹ |

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA KK @ EL. 45'-10"

ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

PRELIMINARY

| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA el. 2' FP-10R | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PYE TUN. el. 2' FP-11C, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PYE TUN. el. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. el. 2' & 13' FP-19C | LOW LEVEL DRAINAGE WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' & 13' | CONTAIN. LEAKAGE MONITORING LINES el. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAP el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | SUB- TOTAL (1) | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|--|---|---|--|---|--|---|---|--------------------------------|--|----------------------------------|----------------------|-------------------|
| 0 | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | 1.6 ⁺² | 8.4 ⁺² | NEG. | NEG. | 0.4 ⁺² | NEG. | 2.2 ⁺⁴ | 4.0 ⁺³ | 4.2 ⁺⁰ | 2.6 ⁺⁴ | 2.7 ⁺⁴ |
| 1 | | | | | | | | 9.4 ⁺¹ | 2.8 ⁺² | | | 1.0 ⁺² | | 3.5 ⁺³ | 1.1 ⁺³ | 2.8 ⁺¹ | 4.6 ⁺³ | 5.0 ⁺³ |
| 2 | | | | | | | | 6.4 ⁺¹ | 1.8 ⁺² | | | 7.5 ⁺¹ | | 2.6 ⁺³ | 8.0 ⁺² | 1.7 ⁺¹ | 3.4 ⁺³ | 3.6 ⁺³ |
| 8 | | | | | | | | 2.6 ⁺¹ | 5.6 ⁺¹ | | | 3.1 ⁺¹ | | 5.3 ⁺² | 3.0 ⁺² | 4.2 ⁺⁰ | 8.3 ⁺² | 9.1 ⁺² |
| 24 | | | | | | | | 1.1 ⁺¹ | 1.3 ⁺¹ | | | 7.3 ⁺⁰ | | 3.7 ⁺¹ | 1.4 ⁺² | 9.9 ⁻¹ | 1.8 ⁺² | 2.0 ⁺² |
| 96 | | | | | | | | 3.7 ⁺⁰ | 3.1 ⁺⁰ | | | NEG. | | 1.7 ⁺⁰ | 5.0 ⁺¹ | NEG. | 5.2 ⁺¹ | 5.9 ⁺¹ |
| 192 | | | | | | | | 2.5 ⁺⁰ | 2.4 ⁺⁰ | | | | | 6.7 ⁻¹ | 3.0 ⁺¹ | | 3.1 ⁺¹ | 3.6 ⁺¹ |
| 360 | | | | | | | | 1.6 ⁺⁰ | 1.6 ⁺⁰ | | | | | NEG. | 1.6 ⁺¹ | | 1.6 ⁺¹ | 1.9 ⁺¹ |
| 720 | | | | | | | | NEG. | NEG. | | | | | | 4.0 ⁺⁰ | | 4.0 ⁺⁰ | 4.0 ⁺⁰ |
| 2160 | | | | | | | | | | | | | | | 1.0 ⁻² | | 1.0 ⁻² | 1.0 ⁻² |
| 4320 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | NEG. | ↓ | NEG. | NEG. |

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA LL @ EL. 45'-10"

ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 1 CONTAINMENT

———— MITIGATION PHASE - NO LETDOWN ————

PRELIMINARY

(2)

| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA el. 2' FP-10K | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PHE TUN. el. 2' FP-19L, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PHE TUN. el. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' 13' & 27.5' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER MAIN TRAY el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRANT el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONAL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|--|---|---|---|---|---|--|---|--------------------------------|---|----------------------------------|----------------------|-------------------|
| 0 | 5.5 ⁺¹ | NEG. | NEG. | NEG. | NEG. | 1.1 ⁺⁰ | NEG. | NEG. | NEG. | 2.1 ⁺⁴ | NEG. | NEG. | NEG. | 1.8 ⁺⁴ | 1.8 ⁺⁴ | 3.3 ⁺⁰ | 3.6 ⁺⁴ | 5.7 ⁺⁴ |
| 1 | 1.4 ⁺¹ | | | | | NEG. | | | | 8.5 ⁺³ | | | | 2.6 ⁺³ | 7.2 ⁺³ | 2.3 ⁺¹ | 9.8 ⁺³ | 1.8 ⁺⁴ |
| 2 | 8.5 ⁺⁰ | | | | | | | | | 6.0 ⁺³ | | | | 1.9 ⁺³ | 5.3 ⁺³ | 1.3 ⁺¹ | 7.2 ⁺³ | 1.3 ⁺⁴ |
| 8 | 2.2 ⁺⁰ | | | | | | | | | 2.3 ⁺³ | | | | 4.1 ⁺² | 2.3 ⁺³ | 3.3 ⁺⁰ | 2.7 ⁺³ | 5.0 ⁺³ |
| 24 | 4.0 ⁻¹ | | | | | | | | | 8.8 ⁺² | | | | 3.0 ⁺¹ | 8.0 ⁺² | 7.0 ⁻¹ | 8.3 ⁺² | 1.7 ⁺³ |
| 96 | NEG. | | | | | | | | | 3.4 ⁺² | | | | 1.2 ⁺⁰ | 3.0 ⁺² | NEG. | 3.0 ⁺² | 6.4 ⁺² |
| 192 | | | | | | | | | | 2.2 ⁺² | | | | 4.8 ⁻¹ | 1.6 ⁺² | | 1.6 ⁺² | 3.8 ⁺² |
| 360 | | | | | | | | | | 1.2 ⁺² | | | | NEG. | 7.0 ⁺¹ | | 7.0 ⁺¹ | 1.9 ⁺² |
| 720 | | | | | | | | | | 5.2 ⁺¹ | | | | | 1.6 ⁺¹ | | 1.6 ⁺¹ | 6.8 ⁺¹ |
| 2160 | | | | | | | | | | 2.1 ⁺¹ | | | | | 6.0 ⁻² | | NEG. | 2.1 ⁺¹ |
| 4320 | | | | | | | | | | 7.0 ⁺⁰ | | | | | NEG. | | | 7.0 ⁺⁰ |

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NOTED FEB 14 1980

PROVIDED TO THE PUBLIC
BY THE U.S. NUCLEAR REGULATORY COMMISSION

SURRY AUXILIARY BLDG RADIATION ZONE AREA A @ EL. 2'

ESTIMATED HIGHEST DIRECT T DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA el. 2' FP-10K | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PVE TUN. el. 2' FP-HC.7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PVE TUN. el. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' & 13' | CONTAIN. LEAKAGE MONITORING LINES el. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAP el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|--|---|---|---|---|--|---|---|--------------------------------|--|----------------------------------|----------------------|-------------------|
| 0 | 1.4 ⁺⁸ | 1.1 ⁺⁵ | 3.9 ⁺¹ | 1.1 ⁺² | 1.7 ⁺⁴ | 1.4 ⁺⁶ | 2.9 ⁺⁰ | 5.9 ⁺² | 5.7 ⁺² | 4.9 ⁺⁰ | 5.9 ⁺³ | 1.2 ⁺⁴ | 5.9 ⁺⁶ | NEG. | NEG. | NEG. | 1.5 ⁺⁸ | 1.5 ⁺⁸ |
| 1 | 9.0 ⁺⁷ | 6.6 ⁺⁴ | 1.5 ⁺¹ | 6.2 ⁺¹ | 9.4 ⁺³ | 8.8 ⁺⁵ | 1.7 ⁺⁶ | 3.5 ⁺² | 3.1 ⁺² | 2.0 ⁺⁶ | 1.5 | 3.1 ⁺³ | 1.4 ⁺⁶ | | | | 9.6 ⁺⁷ | 9.6 ⁺⁷ |
| 2 | 6.3 ⁺⁷ | 4.4 ⁺⁴ | 9.4 ⁺⁰ | 4.3 ⁺¹ | 6.4 ⁺³ | 6.2 ⁺⁵ | 1.2 ⁺⁶ | 2.4 ⁺² | 2.1 ⁺² | 1.4 ⁺⁶ | 1.1 ⁺³ | 2.3 ⁺³ | 9.9 ⁺⁵ | | | | 6.7 ⁺⁷ | 6.7 ⁺⁷ |
| 8 | 2.6 ⁺¹ | 1.8 ⁺⁴ | 3.1 ⁺⁰ | 1.7 ⁺¹ | 2.4 ⁺³ | 2.6 ⁺⁵ | 5.1 ⁺⁵ | 9.7 ⁺¹ | 8.0 ⁺¹ | 5.4 ⁺⁵ | 3.8 ⁺² | 1.0 ⁺³ | 3.8 ⁺⁵ | | | | 2.8 ⁺⁷ | 2.8 ⁺⁷ |
| 24 | 1.2 ⁺⁷ | 7.5 ⁺³ | NEG. | 5.5 ⁺⁰ | 8.0 ⁺² | 1.2 ⁺⁵ | 2.2 ⁺⁵ | 4.1 ⁺¹ | 2.7 ⁺¹ | 2.1 ⁺⁵ | 1.6 ⁺² | 4.5 ⁺² | 1.4 ⁺⁵ | | | | 1.3 ⁺⁷ | 1.3 ⁺⁷ |
| 96 | 4.5 ⁺⁶ | 2.6 ⁺³ | | 1.5 ⁺⁰ | 2.2 ⁺² | 4.3 ⁺⁴ | 8.7 ⁺⁴ | 1.4 ⁺¹ | 7.3 ⁺⁰ | 8.2 ⁺⁴ | 5.4 ⁺¹ | 1.4 ⁺² | 4.9 ⁺⁴ | | | | 4.8 ⁺⁶ | 4.8 ⁺⁶ |
| 192 | 3.1 ⁺⁶ | 1.8 ⁺³ | | 1.1 ⁺⁰ | 1.5 ⁺² | 3.0 ⁺⁴ | 5.7 ⁺⁴ | 9.5 ⁺⁰ | 5.1 ⁺⁰ | 5.1 ⁺⁴ | 3.1 ⁺¹ | 8.5 ⁺¹ | 3.0 ⁺⁴ | | | | 3.3 ⁺⁶ | 3.3 ⁺⁶ |
| 360 | 1.9 ⁺⁶ | 1.1 ⁺³ | | NEG. | 1.0 ⁺² | 1.9 ⁺⁴ | 3.5 ⁺⁴ | 5.7 ⁺⁰ | 3.4 ⁺⁰ | 2.8 ⁺⁴ | 1.4 ⁺¹ | 4.5 ⁺¹ | 1.3 ⁺⁴ | | | | 2.0 ⁺⁶ | 2.0 ⁺⁶ |
| 720 | 8.9 ⁺⁵ | 5.4 ⁺² | | | 5.3 ⁺¹ | 8.6 ⁺³ | 1.7 ⁺⁴ | 3.0 ⁺⁰ | 1.7 ⁺⁰ | 1.2 ⁺⁴ | 2.9 ⁺⁰ | 1.2 ⁺¹ | 3.0 ⁺³ | | | | 9.2 ⁺⁵ | 9.2 ⁺⁵ |
| 2160 | 2.9 ⁺⁵ | 1.8 ⁺² | | | 1.8 ⁺¹ | 2.9 ⁺³ | 5.5 ⁺³ | NEG. | NEG. | 4.9 ⁺³ | NEG. | NEG. | 1.1 ⁺¹ | | | | 3.0 ⁺⁵ | 3.0 ⁺⁵ |
| 4320 | 1.2 ⁺⁵ | 7.5 ⁺¹ | | | 7.5 ⁺⁰ | 1.2 ⁺³ | 2.4 ⁺³ | | | 1.7 ⁺³ | | | NEG. | | | | 1.3 ⁺⁵ | 1.3 ⁺⁵ |

- (1) Subtotal excludes contribution from Drain Lines inside waste tank cubicle, LLNDT or HLNDT, and reactor coolant sampling lines not in penetration area.
(2) Dose rates are from either a full LLNDT or a full HLNDT.

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SURRY AUXILIARY BLDG RADIATION ZONE AREA B @ EL. 2'

ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO

LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

———— MITIGATION PHASE - NO LETDOWN ————

PRELIMINARY

| SOURCE TIME (HR) | (2) | | | | | | | | | | | | | | | | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|--|---|---|---|---|---|---|---|--------------------------------|---|----------------------------------|----------------------|-------------------|
| | SI/CH LINES IN PEN AREA el. 2' FP-10K | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PHE TUN. el. 2' FP-MC-7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PHE TUN. el. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' & 13' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAY el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PRESSURE HATCH | CONTAIN. DOME R.S. HEADERS | | |
| 0 | 4.2 ⁺⁶ | 1.1 ⁺⁶ | NEG. | 1.1 ⁺² | 6.9 ⁺³ | 2.1 ⁺⁵ | 3.5 ⁺³ | 9.0 ⁺⁰ | 2.0 ⁺¹ | 4.4 ⁺⁴ | 2.0 ⁺² | 9.7 ⁺¹ | 3.1 ⁺³ | NEG. | NEG. | NEG. | 4.5 ⁺⁶ | 4.5 ⁺⁶ |
| 1 | 2.0 ⁺⁶ | 6.6 ⁺³ | | 6.2 ⁺¹ | 3.7 ⁺³ | 9.9 ⁺⁴ | 2.0 ⁺³ | 5.3 ⁺⁰ | 1.1 ⁺¹ | 1.8 ⁺⁴ | 4.9 ⁺¹ | 1.6 ⁺¹ | 7.6 ⁺² | | | | 2.1 ⁺⁶ | 2.1 ⁺⁶ |
| 2 | 1.3 ⁺⁶ | 4.1 ⁺³ | | 4.3 ⁺¹ | 2.5 ⁺³ | 6.3 ⁺⁴ | 1.4 ⁺³ | 3.6 ⁺⁰ | 7.2 ⁺⁰ | 1.3 ⁺⁶ | 3.6 ⁺¹ | 1.2 ⁺¹ | 5.8 ⁺² | | | | 1.4 ⁺⁶ | 1.4 ⁺⁶ |
| 8 | 6.2 ⁺⁵ | 1.8 ⁺³ | | 1.7 ⁺¹ | 9.8 ⁺² | 2.3 ⁺⁴ | 5.3 ⁺² | 1.5 ⁺⁰ | 2.8 ⁺⁰ | 4.8 ⁺³ | 1.3 ⁺¹ | 4.8 ⁺⁰ | 2.2 ⁺² | | | | 6.5 ⁺⁵ | 6.5 ⁺⁵ |
| 24 | 1.3 ⁺⁵ | 7.5 ⁺² | | 5.5 ⁺⁰ | 3.2 ⁺² | 6.3 ⁺³ | 1.8 ⁺² | 6.2 ⁻¹ | 9.2 ⁻¹ | 1.9 ⁺³ | 4.9 ⁺⁰ | 1.2 ⁺⁰ | 8.6 ⁺¹ | | | | 1.4 ⁺⁵ | 1.4 ⁺⁵ |
| 96 | 3.2 ⁺⁴ | 2.6 ⁺² | | 1.5 ⁺⁰ | 8.7 ⁺¹ | 1.6 ⁺³ | 4.8 ⁺¹ | NEG. | NEG. | 7.4 ⁺² | 1.8 ⁺⁰ | NEG. | 3.2 ⁺¹ | | | | 3.5 ⁺⁴ | 3.5 ⁺⁴ |
| 192 | 2.3 ⁺⁴ | 1.8 ⁺² | | 1.1 ⁺⁰ | 6.1 ⁺¹ | 1.2 ⁺³ | 3.5 ⁺¹ | | | 4.6 ⁺² | 1.0 ⁺⁰ | | 1.8 ⁺¹ | | | | 2.5 ⁺⁴ | 2.5 ⁺⁴ |
| 360 | 1.6 ⁺⁴ | 1.1 ⁺² | | 7.0 ⁻¹ | 4.0 ⁺¹ | 7.7 ⁺² | 2.2 ⁺¹ | | | 2.5 ⁺² | 4.7 ⁻¹ | | 8.6 ⁺⁰ | | | | 1.7 ⁺⁴ | 1.7 ⁺⁴ |
| 720 | 8.0 ⁺³ | 5.4 ⁺¹ | | NEG. | 2.1 ⁺¹ | 3.9 ⁺² | 1.2 ⁺¹ | | | 1.1 ⁺² | NEG. | | 1.8 ⁺⁰ | | | | 8.6 ⁺³ | 8.6 ⁺³ |
| 2160 | 2.3 ⁺³ | 1.8 ⁺¹ | | | 7.1 ⁺⁰ | 1.1 ⁺² | 4.0 ⁺⁰ | | | 4.4 ⁺¹ | | | 7.7 ⁻³ | | | | 2.5 ⁺³ | 2.5 ⁺³ |
| 4320 | 8.9 ⁺² | 7.5 ⁺⁰ | ↓ | ↓ | 3.0 ⁺⁰ | 4.2 ⁺¹ | 1.7 ⁺⁰ | ↓ | ↓ | 1.5 ⁺¹ | ↓ | ↓ | NEG. | ↓ | ↓ | ↓ | 9.6 ⁺² | 9.6 ⁺² |

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1

SURRY AUXILIARY BLDG RADIATION ZONE AREA C @ EL. 2'

ESTIMATED HIGHEST DIRECT P DOSE RATES ($\mu R/hr$) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 - CONTAINMENT

— MITIGATION PHASE - NO LETDOWN —

PRELIMINARY

(2)

| SOURCE TIME (HR) | SI/CN LINES IN PEN AREA EL. 2' FP-10R | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PYE TUN. EL. 2' FP-14L, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PYE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE UNIT TANKS CUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' & 13' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAP EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL MATCH | CONTAIN. DOME R.S. HEADERS | SUBTOTAL ⁽¹⁾ | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|--|---|--|---|---|---|---|---|--------------------------------|--|----------------------------------|-------------------------|-------------------|
| 0 | 2.0 ⁺⁵ | 1.6 ⁺⁶ | 5.0 ⁺⁵ | 6.4 ⁺⁵ | 1.3 ⁺⁷ | 3.0 ⁺⁴ | 2.9 ⁺⁶ | 1.5 ⁺⁴ | 6.6 ⁺⁵ | 4.9 ⁺⁶ | 9.6 ⁺² | 3.0 ⁺³ | NEG. | NEG. | NEG. | NEG. | 2.3 ⁺⁷ | 2.4 ⁺⁷ |
| 1 | 1.2 ⁺⁵ | 9.6 ⁺⁵ | 2.2 ⁺⁵ | 3.9 ⁺⁵ | 7.8 ⁺⁶ | 1.9 ⁺⁴ | 1.7 ⁺⁶ | 9.0 ⁺³ | 4.0 ⁺⁵ | 2.0 ⁺⁶ | 2.3 ⁺² | 4.9 ⁺² | | | | | 1.4 ⁺⁷ | 1.4 ⁺⁷ |
| 2 | 8.2 ⁺⁴ | 6.5 ⁺⁵ | 1.5 ⁺⁵ | 2.7 ⁺⁵ | 5.5 ⁺⁶ | 1.3 ⁺⁴ | 1.2 ⁺⁶ | 6.1 ⁺³ | 2.7 ⁺⁵ | 1.4 ⁺⁶ | 1.7 ⁺² | 3.6 ⁺² | | | | | 9.2 ⁺⁶ | 9.4 ⁺⁶ |
| 8 | 3.4 ⁺⁴ | 2.6 ⁺⁵ | 5.2 ⁺⁴ | 1.2 ⁺⁵ | 2.3 ⁺⁶ | 5.5 ⁺³ | 5.1 ⁺⁵ | 2.5 ⁺³ | 1.1 ⁺⁵ | 5.4 ⁺⁵ | 6.2 ⁺¹ | 1.5 ⁺² | | | | | 3.7 ⁺⁶ | 3.8 ⁺⁶ |
| 24 | 1.4 ⁺⁴ | 1.1 ⁺⁵ | 1.4 ⁺⁴ | 5.2 ⁺⁴ | 1.0 ⁺⁶ | 2.4 ⁺³ | 2.2 ⁺⁵ | 1.0 ⁺³ | 4.6 ⁺⁴ | 2.1 ⁺⁵ | 2.3 ⁺¹ | 3.9 ⁺¹ | | | | | 1.6 ⁺⁶ | 1.6 ⁺⁶ |
| 96 | 4.7 ⁺³ | 3.7 ⁺⁴ | 3.6 ⁺³ | 1.9 ⁺⁴ | 3.8 ⁺⁵ | 8.9 ⁺² | 8.4 ⁺⁴ | 3.6 ⁺² | 1.5 ⁺⁴ | 8.2 ⁺⁴ | 8.7 ⁺⁰ | 4.2 ⁺⁰ | | | | | 6.0 ⁺⁵ | 6.2 ⁺⁵ |
| 192 | 3.2 ⁺³ | 2.6 ⁺⁴ | 2.6 ⁺³ | 1.3 ⁺⁴ | 2.6 ⁺⁵ | 6.2 ⁺² | 5.7 ⁺⁴ | 2.4 ⁺² | 1.1 ⁺⁴ | 5.1 ⁺⁴ | 5.0 ⁺⁰ | 1.9 ⁺⁰ | | | | | 4.1 ⁺⁵ | 4.2 ⁺⁵ |
| 360 | 2.1 ⁺³ | 1.6 ⁺⁴ | 1.8 ⁺³ | 8.2 ⁺³ | 1.6 ⁺⁵ | 3.9 ⁺² | 3.5 ⁺⁴ | 1.5 ⁺² | 6.6 ⁺³ | 2.8 ⁺⁴ | 2.5 ⁺⁰ | 8.8 ⁺¹ | | | | | 2.4 ⁺⁵ | 2.4 ⁺⁵ |
| 720 | 9.9 ⁺² | 7.7 ⁺³ | 9.0 ⁺² | 3.8 ⁺³ | 7.6 ⁺⁴ | 1.8 ⁺² | 1.7 ⁺⁴ | 7.6 ⁺¹ | 3.2 ⁺³ | 1.2 ⁺⁴ | 4.7 ⁺¹ | NEG. | | | | | 1.2 ⁺⁵ | 1.2 ⁺⁵ |
| 2160 | 3.4 ⁺² | 2.2 ⁺³ | 2.5 ⁺² | 1.2 ⁺³ | 2.5 ⁺⁴ | 5.8 ⁺¹ | 5.5 ⁺³ | 2.5 ⁺¹ | 1.1 ⁺³ | 4.9 ⁺³ | NEG. | | | | | | 4.0 ⁺⁴ | 4.0 ⁺⁴ |
| 4320 | 1.4 ⁺² | 1.1 ⁺³ | 9.9 ⁺¹ | 5.4 ⁺² | 1.1 ⁺⁴ | 2.5 ⁺¹ | 2.4 ⁺³ | 1.0 ⁺¹ | 4.6 ⁺² | 1.7 ⁺³ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 1.8 ⁺⁴ | 1.8 ⁺⁴ |

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SURRY AUXILIARY BLDG RADIATION ZONE AREA D @ EL. 2'

PRELIMINARY

ESTIMATED HIGHEST DIRECT P DOSE RATES ($\mu R/hr$) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

| SOURCE TIME (HR) | (2) | | | | | | | | | | | | | | | | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|--|---|---|--|---|--|---|---|------------------------------|---|----------------------------------|----------------------|-------------------|
| | SI/CH LINES IN PER AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PPE TUN. EL. 2' FP-14C, 7A | SAFEGUARDS SUMP DRAIN LINES IN PER AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PPE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS LUB. EL. 2' & 13' FP-19C | LOW LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' & 13' & 27.5' | CONTAIN. LEAKAGE MONITORING LINES EL. 2' & 13' | HYDROGEN ANALYZER MAN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRANT EL. 2' | CONTAIN. SHINE MA DOME | CONTAIN. SHINE MA PERSONAL HATCH | CONTAIN. DOME R.S. HEADERS | | |
| 0 | 2.0 ⁺³ | 6.2 ⁺² | NEG. | 1.1 ⁺² | 1.6 ⁺⁴ | 1.4 ⁺² | 1.5 ⁺³ | 3.5 ⁺⁶ | 4.2 ⁺⁷ | 2.5 ⁺³ | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | 2.0 ⁺⁴ | 46 ⁺⁷ |
| 1 | 1.2 ⁺³ | 3.6 ⁺² | | 6.2 ⁺¹ | 9.1 ⁺³ | 8.3 ⁺¹ | 8.1 ⁺² | 2.1 ⁺⁶ | 2.5 ⁺⁷ | 1.0 ⁺² | | | | | | | 1.2 ⁺⁴ | 2.7 ⁺⁷ |
| 2 | 8.4 ⁺² | 2.4 ⁺² | | 4.3 ⁺¹ | 6.2 ⁺³ | 5.8 ⁺¹ | 5.5 ⁺² | 1.4 ⁺⁶ | 1.8 ⁺⁷ | 7.3 ⁺² | | | | | | | 7.9 ⁺³ | 2.0 ⁺⁷ |
| 8 | 3.5 ⁺² | 1.0 ⁺² | | 1.7 ⁺¹ | 2.4 ⁺³ | 2.5 ⁺¹ | 2.2 ⁺² | 5.8 ⁺⁵ | 6.9 ⁺⁶ | 2.8 ⁺² | | | | | | | 3.1 ⁺³ | 7.5 ⁺⁶ |
| 24 | 1.4 ⁺² | 4.1 ⁺¹ | | 5.5 ⁺⁰ | 8.1 ⁺² | 1.1 ⁺¹ | 7.0 ⁺¹ | 2.4 ⁺⁵ | 3.0 ⁺⁶ | 1.1 ⁺² | | | | | | | 1.1 ⁺³ | 3.3 ⁺⁶ |
| 96 | 5.0 ⁺¹ | 1.4 ⁺¹ | | 1.5 ⁺⁰ | 2.2 ⁺² | 4.1 ⁺⁰ | 1.9 ⁺¹ | 8.3 ⁺⁴ | 9.9 ⁺⁵ | 4.2 ⁺¹ | | | | | | | 3.1 ⁺² | 1.1 ⁺⁶ |
| 192 | 3.4 ⁺¹ | 9.7 ⁺⁰ | | 1.1 ⁺⁰ | 1.6 ⁺² | 2.8 ⁺⁰ | 1.3 ⁺¹ | 5.6 ⁺⁴ | 6.7 ⁺⁵ | 2.6 ⁺¹ | | | | | | | 2.2 ⁺² | 7.3 ⁺⁵ |
| 360 | 2.2 ⁺¹ | 6.2 ⁺⁰ | | 7.0 ⁻¹ | 1.0 ⁺² | 1.7 ⁺⁰ | 8.8 ⁺⁰ | 3.5 ⁺⁴ | 4.2 ⁺⁵ | 1.4 ⁺¹ | | | | | | | 1.4 ⁺² | 46 ⁺⁵ |
| 720 | 1.0 ⁺¹ | 3.0 ⁺⁰ | | NEG. | 5.4 ⁺¹ | NEG. | 4.6 ⁺⁰ | 1.8 ⁺⁴ | 2.1 ⁺⁵ | 6.4 ⁺⁰ | | | | | | | 7.2 ⁺¹ | 2.3 ⁺⁵ |
| 2160 | 3.4 ⁺⁰ | 1.0 ⁺⁰ | | ↓ | 1.8 ⁺¹ | ↓ | 1.6 ⁺⁰ | 5.8 ⁺³ | 6.9 ⁺⁶ | 2.5 ⁺⁰ | | | | | | | 2.4 ⁺¹ | 7.5 ⁺⁴ |
| 4320 | 1.5 ⁺⁰ | 4.1 ⁻¹ | ↓ | ↓ | 7.9 ⁺⁰ | ↓ | 6.6 ⁻¹ | 2.4 ⁺³ | 3.0 ⁺⁴ | 8.5 ⁻¹ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 1.0 ⁺¹ | 3.3 ⁺⁴ |

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NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA E @ EL. 2'

ESTIMATED HIGHEST DIRECT T DOSE RATES ($\mu R/hr$) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

———— MITIGATION PHASE - NO LETDOWN ————

PRELIMINARY

| TIME (HR) | SOURCE SI/CH LINES IN PEN. AREA EL. 2' | CHARGING PUMP CUB. EL. 2' & 13' | AUX. BLDG SUMP EL. 2' | DRAIN LINES IN SUMP AREA EL. 2' & 13' | DRAIN LINES IN PHE TUN. EL. 2' | SAFEGUARDS SUMP DRAIN LINE IN PEN AREA EL. 2' | SAFEGUARDS SUMP DRAIN LINE IN PHE TUN. EL. 2' | DRAIN LINES INSIDE WHATE TANKS CUB. EL. 2' & 13' | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' & 13' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PRESSURE MATCH | CONTAIN. DOME R.S. HEADINGS | (1) SUB- TOTAL | TOTAL |
|--------------|---|---------------------------------------|-----------------------------|---|--------------------------------------|--|--|---|---|---|---|---|---|--------------------------------|---|-----------------------------------|----------------------|-------------------|
| 0 | 6.5 ⁺¹ | 1.9 ⁺¹ | 3.9 ⁺¹ | 1.1 ⁺² | 1.3 ⁺⁷ | 4.4 ⁺³ | 3.7 ⁺³ | 7.5 ⁺¹ | 1.4 ⁺⁵ | 4.6 ⁺³ | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | 1.3 ⁺⁷ | 1.3 ⁺⁷ |
| 1 | 3.9 ⁺⁴ | 1.1 ⁺¹ | 1.5 ⁺¹ | 6.2 ⁺¹ | 7.8 ⁺⁶ | 2.6 ⁺³ | 2.1 ⁺³ | 4.4 ⁺⁴ | 8.4 ⁺⁴ | 1.9 ⁺³ | | | | | | | 7.8 ⁺⁶ | 7.9 ⁺⁶ |
| 2 | 2.7 ⁺⁴ | 7.7 ⁺⁰ | 9.4 ⁺⁰ | 4.3 ⁺¹ | 5.5 ⁺⁶ | 1.9 ⁺³ | 1.4 ⁺³ | 3.0 ⁺⁴ | 5.7 ⁺⁴ | 1.3 ⁺³ | | | | | | | 5.5 ⁺⁶ | 5.6 ⁺⁶ |
| 8 | 1.1 ⁺⁴ | 3.1 ⁺⁰ | 3.1 ⁺⁰ | 1.7 ⁺¹ | 2.3 ⁺⁶ | 7.9 ⁺² | 5.3 ⁺² | 1.2 ⁺⁴ | 2.3 ⁺⁴ | 5.1 ⁺² | | | | | | | 2.3 ⁺⁶ | 2.3 ⁺⁶ |
| 24 | 4.6 ⁺³ | 1.3 ⁺⁰ | NEG. | 5.5 ⁺⁰ | 1.0 ⁺⁶ | 3.5 ⁺² | 1.8 ⁺² | 5.1 ⁺³ | 9.5 ⁺³ | 2.0 ⁺² | | | | | | | 1.0 ⁺⁶ | 1.0 ⁺⁶ |
| 96 | 1.6 ⁺³ | 4.4 ⁺¹ | | 1.5 ⁺⁰ | 3.8 ⁺⁵ | 1.3 ⁺² | 4.8 ⁺¹ | 1.8 ⁺³ | 3.3 ⁺³ | 7.7 ⁺¹ | | | | | | | 3.8 ⁺⁵ | 3.8 ⁺⁵ |
| 192 | | NEG. | | 1.1 ⁺⁰ | 2.6 ⁺⁵ | 8.8 ⁺¹ | 3.3 ⁺¹ | 1.2 ⁺³ | 2.2 ⁺³ | 4.8 ⁺¹ | | | | | | | 2.6 ⁺⁵ | 2.6 ⁺⁵ |
| 360 | | | | NEG. | 1.6 ⁺⁵ | 5.5 ⁺¹ | 2.2 ⁺¹ | 7.5 ⁺² | 1.4 ⁺³ | 2.6 ⁺¹ | | | | | | | 1.6 ⁺⁵ | 1.6 ⁺⁵ |
| 720 | | | | | 7.6 ⁺⁴ | 2.5 ⁺¹ | 1.2 ⁺¹ | 3.7 ⁺² | 6.6 ⁺² | 1.2 ⁺¹ | | | | | | | 7.6 ⁺⁴ | 7.7 ⁺⁴ |
| 2160 | | | | | 2.5 ⁺⁴ | 8.4 ⁺⁰ | 4.0 ⁺⁰ | 1.2 ⁺² | 2.3 ⁺² | 4.6 ⁺⁰ | | | | | | | 2.5 ⁺⁴ | 2.5 ⁺⁴ |
| 4320 | | | | | 1.1 ⁺⁴ | 3.6 ⁺⁰ | 1.7 ⁺⁰ | 5.1 ⁺¹ | 9.5 ⁺¹ | 1.6 ⁺⁰ | | | | | | | 1.1 ⁺⁴ | 1.1 ⁺⁴ |

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NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA F @ EL. 2'

**ESTIMATED HIGHEST DIRECT P DOSE RATES (μ R/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT**

PRELIMINARY

———— MITIGATION PHASE - NO LETDOWN ————

(2)

| SOURCE TIME (HR) | SI/CH LINES IN PEN. AREA el. 2' FP-10K | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PYE TANK el. 2' FP-14L, 7A | SAFEGUARDS SUMP DRAIN LINE IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINE IN PYE TANK el. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR CONSTANT SAMPLING LINES el. 2' & 13' | CONTAIN. LEAKAGE MON. FOR LINES el. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAP el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | SUB TOTAL | TOTAL |
|------------------------|---|---|--------------------------------------|---|--|---|--|---|---|--|--|---|---|--------------------------------|--|----------------------------------|-------------------|-------------------|
| 0 | 1.3 ⁺² | 1.6 ⁺⁴ | 5.2 ⁺⁴ | 1.4 ⁺⁴ | 4.1 ⁺⁵ | 2.8 ⁺⁰ | 1.2 ⁺⁴ | NEG. | 6.1 ⁺⁰ | 1.4 ⁺⁴ | NEG. | 3.9 ⁺⁰ | NEG. | NEG. | NEG. | NEG. | 5.2 ⁺⁵ | 5.2 ⁺⁵ |
| 1 | 3.8 ⁺¹ | 9.6 ⁺³ | 1.7 ⁺⁴ | 8.0 ⁺³ | 2.4 ⁺⁵ | NEG. | 6.8 ⁺³ | | 3.7 ⁺⁰ | 5.9 ⁺³ | | 1.0 ⁺⁰ | | | | | 2.9 ⁺⁵ | 2.9 ⁺⁵ |
| 2 | 2.3 ⁺¹ | 6.5 ⁺³ | 1.2 ⁺⁴ | 5.4 ⁺³ | 1.7 ⁺⁵ | | 4.6 ⁺³ | | 2.5 ⁺⁰ | 4.2 ⁺³ | | 2.6 ⁻¹ | | | | | 2.0 ⁺⁵ | 2.0 ⁺⁵ |
| 8 | 6.8 ⁺⁰ | 2.6 ⁺³ | 3.3 ⁺³ | 2.1 ⁺³ | 7.2 ⁺⁴ | | 1.8 ⁺³ | | 1.0 ⁺⁰ | 1.6 ⁺³ | | NEG. | | | | | 8.3 ⁺⁴ | 8.3 ⁺⁴ |
| 24 | 1.4 ⁺⁰ | 1.1 ⁺³ | 7.2 ⁺² | 7.0 ⁺² | 3.1 ⁺⁴ | | 6.2 ⁺² | | NEG. | 6.1 ⁺³ | | | | | | | 4.0 ⁺⁴ | 4.0 ⁺⁴ |
| 96 | 3.5 ⁻¹ | 3.7 ⁺² | 1.5 ⁺² | 1.9 ⁺² | 1.2 ⁺⁴ | | 1.7 ⁺² | | | 2.4 ⁺² | | | | | | | 1.3 ⁺⁴ | 1.3 ⁺⁴ |
| 192 | NEG. | 2.6 ⁺² | 1.3 ⁺² | 1.3 ⁺² | 8.1 ⁺³ | | 1.2 ⁺² | | | 1.5 ⁺² | | | | | | | 8.9 ⁺³ | 8.9 ⁺³ |
| 360 | | 1.6 ⁺² | 9.1 ⁺¹ | 8.8 ⁺¹ | 5.0 ⁺³ | | 7.7 ⁺¹ | | | 8.2 ⁺¹ | | | | | | | 5.5 ⁺³ | 5.5 ⁺³ |
| 720 | | 7.7 ⁺¹ | 4.3 ⁺¹ | 4.6 ⁺¹ | 2.4 ⁺³ | | 4.2 ⁺¹ | | | 3.6 ⁺¹ | | | | | | | 2.6 ⁺³ | 2.6 ⁺³ |
| 2160 | | 2.2 ⁺¹ | 7.8 ⁺⁰ | 1.6 ⁺¹ | 7.8 ⁺² | | 1.4 ⁺¹ | | | 1.4 ⁺¹ | | | | | | | 8.5 ⁺² | 8.5 ⁺² |
| 4320 | | 1.1 ⁺² | 2.1 ⁺⁰ | 6.6 ⁺⁰ | 3.4 ⁺² | | 5.9 ⁺⁰ | | | 4.8 ⁺⁰ | | | | | | | 4.7 ⁺² | 4.7 ⁺² |

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SURRY AUXILIARY BLDG RADIATION ZONE AREA G @ EL. 2'

ESTIMATED HIGHEST DIRECT P DOSE RATES ($\mu R/hr$) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

———— MITIGATION PHASE - NO LETDOWN ————

PRELIMINARY

| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 15' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 15' FP-19N | DRAIN LINES IN PYE TUN. EL. 2' FP-MC-7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PYE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. EL. 2' & 15' FP-19C | (2) | | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 15' | HYDROGEN ANALYZER DRAIN TRAY EL. 15' | CONTAIN. ATMOSP. THRU PIPES PENETRATING EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PORTHOLE HATCH | CONTAIN. DOME R.S. HEADERS | (1) | |
|------------------------|--|---|--------------------------------------|---|--|--|---|---|---|---|---|---|--|--------------------------------|---|----------------------------------|-------------------|-------------------|
| | | | | | | | | | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 15' | REACTOR COOLANT SAMPLING LINES EL. 2' & 15' | | | | | | | SUB TOTAL | TOTAL |
| 0 | 4.1 ⁺⁵ | 1.4 ⁺⁸ | 3.2 ⁺⁹ | 1.4 ⁺⁴ | 5.6 ⁺⁴ | 1.3 ⁺⁴ | 9.0 ⁺⁴ | 6.2 ⁻¹ | 3.8 ⁺⁰ | 6.0 ⁺⁴ | 2.8 ⁺¹ | 1.5 ⁺⁴ | 9.6 ⁺² | NEG. | NEG. | NEG. | 1.1 ⁺⁸ | 1.4 ⁺⁸ |
| 1 | 2.1 ⁺⁵ | 9.0 ⁺⁷ | 9.9 ⁺³ | 8.0 ⁺³ | 3.1 ⁺⁴ | 6.9 ⁺³ | 5.3 ⁺⁴ | NEG. | 2.3 ⁺⁰ | 2.5 ⁺⁴ | 6.8 ⁺⁰ | 4.1 ⁺³ | 2.4 ⁺² | | | | 9.0 ⁺⁷ | 9.0 ⁺⁷ |
| 2 | 1.4 ⁺⁵ | 6.5 ⁺⁷ | 6.2 ⁺³ | 5.4 ⁺³ | 2.1 ⁺⁴ | 4.8 ⁺³ | 3.7 ⁺⁴ | | 1.6 ⁺⁰ | 1.7 ⁺⁴ | 5.0 ⁺⁰ | 3.0 ⁺³ | 1.8 ⁺² | | | | 6.5 ⁺⁷ | 6.5 ⁺⁷ |
| 8 | 5.4 ⁺⁴ | 2.6 ⁺⁷ | 1.8 ⁺³ | 2.1 ⁺³ | 8.3 ⁺³ | 1.9 ⁺³ | 1.6 ⁺⁴ | | 6.5 ⁻¹ | 6.6 ⁺³ | 1.8 ⁺⁰ | 1.3 ⁺³ | 6.8 ⁺¹ | | | | 2.6 ⁺⁷ | 2.6 ⁺⁷ |
| 24 | 1.7 ⁺⁴ | 1.2 ⁺⁷ | 3.9 ⁺² | 7.0 ⁺² | 2.8 ⁺³ | 6.2 ⁺² | 6.8 ⁺³ | | NEG. | 2.5 ⁺³ | 6.8 ⁻¹ | 5.6 ⁺² | 2.7 ⁺¹ | | | | 1.2 ⁺⁷ | 1.2 ⁺⁷ |
| 96 | 4.4 ⁺³ | 4.5 ⁺⁶ | 9.9 ⁺¹ | 1.9 ⁺² | 7.7 ⁺² | 1.7 ⁺² | 2.6 ⁺³ | | | 1.0 ⁺³ | NEG. | 1.8 ⁺² | 9.8 ⁺⁰ | | | | 4.5 ⁺⁶ | 4.5 ⁺⁶ |
| 192 | 3.1 ⁺³ | 3.1 ⁺⁶ | 7.3 ⁺¹ | 1.3 ⁺² | 5.4 ⁺² | 1.2 ⁺² | 1.8 ⁺³ | | | 6.3 ⁺² | | 1.1 ⁺² | 5.6 ⁺⁰ | | | | 3.1 ⁺⁶ | 3.1 ⁺⁶ |
| 360 | 2.1 ⁺³ | 1.9 ⁺⁶ | 5.0 ⁺¹ | 8.8 ⁺¹ | 3.5 ⁺² | 7.9 ⁺¹ | 1.1 ⁺³ | | | 3.4 ⁺² | | 5.8 ⁺¹ | 2.7 ⁺⁰ | | | | 1.9 ⁺⁶ | 1.9 ⁺⁶ |
| 720 | 1.1 ⁺³ | 8.9 ⁺⁵ | 2.3 ⁺¹ | 4.6 ⁺¹ | 1.9 ⁺² | 4.1 ⁺¹ | 5.3 ⁺² | | | 1.5 ⁺² | | 1.6 ⁺¹ | 5.6 ⁻¹ | | | | 8.9 ⁺⁵ | 8.9 ⁺⁵ |
| 2160 | 3.5 ⁺² | 2.9 ⁺⁵ | 4.0 ⁺⁰ | 1.6 ⁺¹ | 6.3 ⁺¹ | 1.4 ⁺¹ | 1.7 ⁺² | | | 6.0 ⁺¹ | | NEG. | NEG. | | | | 2.9 ⁺⁵ | 2.9 ⁺⁵ |
| 4320 | 1.5 ⁺² | 1.2 ⁺⁵ | 9.7 ⁻¹ | 6.6 ⁺⁰ | 2.7 ⁺¹ | NEG. | 7.5 ⁺¹ | ↓ | ↓ | 2.0 ⁺¹ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 1.2 ⁺⁵ | 1.2 ⁺⁵ |

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NOTED FEB 14 1980

1
SURRY AUXILIARY BLDG RADIATION ZONE AREA H @ EL. 2'

PRELIMINARY

ESTIMATED HIGHEST DIRECT Γ DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

— MITIGATION PHASE - NO LETDOWN —

| SOURCE TIME (HR) | (2) | | | | | | | | | | | | | | | | (1) SUB- TOTAL | TOTAL |
|------------------------|---|---|--------------------------------------|---|--|--|---|--|---|---|---|--|--|--------------------------------|--|----------------------------------|----------------------|-------------------|
| | SI/CH LINES IN PEN. AREA el. 2' FP-10K | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PHE TUN. el. 2' FP-19L, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PHE TUN. el. 2' FP-19C | DRAIN LINE INSIDE WASTE TANKS LUG. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' & 13' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER DEAN TRAP el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATOR el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | | |
| 0 | 4.1 ⁺³ | 1.6 ⁺⁶ | 3.6 ⁺⁷ | 1.4 ⁺⁶ | 4.1 ⁺⁵ | 9.0 ⁺¹ | 9.0 ⁺⁴ | NEG. | 3.8 ⁺⁰ | 4.7 ⁺⁶ | NEG. | 1.3 ⁺² | NEG. | NEG. | NEG. | NEG. | 3.9 ⁺⁷ | 4.4 ⁺⁷ |
| 1 | 1.2 ⁺³ | 9.6 ⁺⁵ | 2.1 ⁺⁷ | 8.7 ⁺⁵ | 2.4 ⁺⁵ | 2.8 ⁺¹ | 5.3 ⁺⁴ | | 2.3 ⁺⁰ | 1.9 ⁺⁶ | | 3.2 ⁺¹ | | | | | 2.3 ⁺⁷ | 2.5 ⁺⁷ |
| 2 | 7.5 ⁺² | 6.5 ⁺⁵ | 1.5 ⁺⁷ | 6.1 ⁺⁵ | 1.7 ⁺⁵ | 1.8 ⁺¹ | 3.7 ⁺⁴ | | 1.6 ⁺⁰ | 1.4 ⁺⁶ | | 2.3 ⁺¹ | | | | | 1.7 ⁺⁷ | 1.8 ⁺⁷ |
| 8 | 2.2 ⁺² | 2.6 ⁺⁵ | 5.9 ⁺⁶ | 2.6 ⁺⁵ | 7.2 ⁺⁴ | 5.1 ⁺⁰ | 1.6 ⁺⁴ | | NEG. | 5.1 ⁺⁸ | | 1.1 ⁺¹ | | | | | 6.5 ⁺⁶ | 7.0 ⁺⁶ |
| 24 | 4.4 ⁺¹ | 1.1 ⁺⁵ | 2.3 ⁺⁶ | 1.2 ⁺⁵ | 3.1 ⁺⁴ | 1.1 ⁺⁰ | 6.8 ⁺³ | | | 2.0 ⁺⁸ | | 4.5 ⁺⁰ | | | | | 2.6 ⁺⁶ | 2.8 ⁺⁶ |
| 96 | 1.1 ⁺¹ | 3.7 ⁺⁴ | 7.9 ⁺⁵ | 4.3 ⁺⁴ | 1.2 ⁺⁴ | NEG. | 3.1 ⁺³ | | | 7.8 ⁺⁶ | | 1.4 ⁺⁰ | | | | | 8.8 ⁺⁵ | 9.6 ⁺⁵ |
| 192 | 8.6 ⁺⁰ | 2.6 ⁺⁶ | 5.3 ⁺⁵ | 2.9 ⁺⁴ | 8.1 ⁺³ | | 1.8 ⁺³ | | | 4.9 ⁺⁴ | | NEG. | | | | | 3.2 ⁺⁶ | 3.2 ⁺⁶ |
| 360 | 5.8 ⁺⁰ | 1.6 ⁺⁴ | 3.4 ⁺⁵ | 1.8 ⁺⁴ | 5.0 ⁺³ | | 1.1 ⁺³ | | | 2.7 ⁺⁴ | | | | | | | 3.8 ⁺⁵ | 4.1 ⁺⁵ |
| 720 | 2.6 ⁺⁰ | 7.7 ⁺³ | 1.7 ⁺⁵ | 8.5 ⁺³ | 2.4 ⁺³ | | 5.3 ⁺² | | | 1.2 ⁺⁴ | | | | | | | 1.9 ⁺⁵ | 2.0 ⁺⁵ |
| 2160 | 4.2 ⁺¹ | 2.2 ⁺³ | 5.7 ⁺⁴ | 2.8 ⁺³ | 7.8 ⁺² | | 1.7 ⁺² | | | 4.7 ⁺³ | | | | | | | 6.3 ⁺⁴ | 6.8 ⁺⁴ |
| 4320 | NEG. | 1.1 ⁺³ | 2.5 ⁺⁴ | 1.2 ⁺³ | 3.4 ⁺² | | 7.5 ⁺¹ | | | 1.6 ⁺³ | | | | | | | 2.8 ⁺⁴ | 2.9 ⁺⁴ |

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NOTED FEB 14 1980

1

SURRY AUXILIARY BLDG RADIATION ZONE AREA I @ EL. 2'

ESTIMATED HIGHEST DIRECT P DOSE RATES ($\mu\text{R/hr}$) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

———— MITIGATION PHASE - NO LETDOWN ————

PRELIMINARY

| (2) | | | | | | | | | | | | | | | | | | |
|------------------------|--|---|--------------------------------------|---|--|--|---|--|---|---|---|---|---|--------------------------------|--|----------------------------------|----------------------|-------------------|
| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PHE TUN. EL. 2' FP-19L, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PHE TUN. EL. 2' FP-19C | DRAIN LINE INSIDE WASTE TANKS CUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' & 13' 27.5' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
| 0 | 6.8 ⁺⁶ | 1.1 ⁺³ | 3.9 ⁺¹ | 4.3 ⁺² | 9.5 ⁺³ | 9.5 ⁺⁴ | 2.1 ⁺³ | 1.8 ⁺³ | 6.4 ⁺³ | 2.8 ⁺⁴ | 7.7 ⁺² | 5.7 ⁺⁰ | NEG. | NEG. | NEG. | NEG. | 6.9 ⁺⁶ | 6.9 ⁺⁶ |
| 1 | 4.2 ⁺⁶ | 6.6 ⁺² | 1.5 ⁺¹ | 4.1 ⁺² | 5.2 ⁺³ | 5.7 ⁺⁴ | 1.1 ⁺³ | 1.0 ⁺³ | 3.9 ⁺³ | 1.1 ⁺⁴ | 1.9 ⁺² | NEG. | | | | | 4.3 ⁺⁶ | 4.3 ⁺⁶ |
| 2 | 3.0 ⁺⁶ | 4.4 ⁺² | 7.4 ⁺⁰ | 2.7 ⁺² | 3.6 ⁺³ | 4.1 ⁺⁴ | 7.9 ⁺² | 7.1 ⁺² | 2.7 ⁺³ | 8.0 ⁺² | 1.4 ⁺² | | | | | | 3.0 ⁺⁶ | 3.0 ⁺⁶ |
| 8 | 1.2 ⁺⁶ | 1.9 ⁺² | 3.1 ⁺⁰ | 1.0 ⁺² | 1.4 ⁺³ | 1.8 ⁺⁴ | 3.1 ⁺² | 2.9 ⁺² | 1.1 ⁺³ | 3.0 ⁺² | 5.0 ⁺¹ | | | | | | 1.2 ⁺⁶ | 1.2 ⁺⁶ |
| 24 | 5.5 ⁺⁵ | 7.5 ⁺¹ | 7.6 ⁻¹ | 2.1 ⁺¹ | 4.5 ⁺² | 7.6 ⁺³ | 9.9 ⁺¹ | 1.2 ⁺² | 4.5 ⁺² | 1.2 ⁺² | 1.9 ⁺¹ | | | | | | 5.6 ⁺⁵ | 5.6 ⁺⁵ |
| 96 | 2.0 ⁺⁵ | 2.6 ⁺¹ | NEG. | 8.2 ⁺⁰ | 1.2 ⁺² | 2.9 ⁺³ | 2.6 ⁺¹ | 4.2 ⁺¹ | 1.5 ⁺² | 4.6 ⁺² | 7.0 ⁺⁰ | | | | | | 2.0 ⁺⁵ | 2.0 ⁺⁵ |
| 192 | 1.4 ⁺⁵ | 1.4 ⁺¹ | | 5.8 ⁺⁰ | 8.6 ⁺¹ | 2.0 ⁺³ | 1.9 ⁺¹ | 2.8 ⁺¹ | 1.0 ⁺² | 2.9 ⁺² | 4.0 ⁺⁰ | | | | | | 1.4 ⁺⁵ | 1.4 ⁺⁵ |
| 360 | 8.6 ⁺⁴ | 1.1 ⁺¹ | | 3.9 ⁺⁰ | 5.7 ⁺¹ | 1.2 ⁺³ | 1.3 ⁺¹ | 1.8 ⁺¹ | 6.4 ⁺¹ | 1.6 ⁺² | 1.8 ⁺⁰ | | | | | | 8.7 ⁺⁴ | 8.7 ⁺⁴ |
| 720 | 4.0 ⁺⁴ | 5.4 ⁺⁰ | | 2.0 ⁺⁰ | 3.0 ⁺¹ | 5.6 ⁺² | 6.6 ⁺⁰ | 8.8 ⁺⁰ | 3.1 ⁺¹ | 6.9 ⁺¹ | 3.8 ⁻¹ | | | | | | 4.1 ⁺⁴ | 4.1 ⁺⁴ |
| 2160 | 1.3 ⁺⁴ | 1.8 ⁺⁰ | | 6.2 ⁻¹ | 1.0 ⁺¹ | 1.9 ⁺² | 2.2 ⁺⁰ | 2.9 ⁺⁰ | 1.1 ⁺¹ | 2.8 ⁺¹ | NEG. | | | | | | 1.3 ⁺⁴ | 1.3 ⁺⁴ |
| 4320 | 5.8 ⁺³ | 7.5 ⁻¹ | ↓ | Neg. | 4.3 ⁺⁰ | 8.0 ⁺¹ | 9.5 ⁻¹ | 1.2 ⁺⁰ | 4.5 ⁺⁰ | 9.3 ⁺⁰ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 5.9 ⁺³ | 5.9 ⁺³ |

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NOTED FEB 14 1980

1

SURREY AUXILIARY BLDG RADIATION ZONE AREA J @ EL. 2'

ESTIMATED HIGHEST DIRECT T DOSE RATES ($\mu R/hr$) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

———— MITIGATION PHASE - NO LETDOWN ————

PRELIMINARY

(2)

| SOURCE TIME (HR) | SE/CN LINES IN PEN AREA el. 2' FP-10K | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PHE TUN. el. 2' FP-MC.7A | SAFEGUARDS SUMP DRAIN LINE IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINE IN PHE TUN. el. 2' FP-19C | DRAIN LINE INSIDE WASTE TANKS CUB. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINE el. 2' & 13' 27.5' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER DRAW TRAY el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PRESSURE MATCH | CONTAIN. DOME R.S. HEADERS | SUB- ⁽¹⁾ TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|---|--|--|---|--|---|--|---|--------------------------------|---|----------------------------------|------------------------------|-------------------|
| 0 | 4.1 ⁺³ | 1.6 ⁺⁶ | 2.9 ⁺⁴ | 3.3 ⁺³ | NEG. | 9.0 ⁺⁺ | NEG. | NEG. | NEG. | 2.9 ⁺⁶ | NEG. | 3.9 ⁺⁰ | NEG. | NEG. | NEG. | NEG. | 1.6 ⁺⁶ | 4.5 ⁺⁶ |
| 1 | 1.2 ⁺³ | 9.6 ⁺⁵ | 1.1 ⁺⁴ | 1.6 ⁺³ | | 2.8 ⁺¹ | | | | 1.2 ⁺⁶ | | 1.0 ⁺⁰ | | | | | 9.8 ⁺⁶ | 1.1 ⁺⁷ |
| 2 | 7.5 ⁺² | 6.5 ⁺⁵ | 6.9 ⁺³ | 1.1 ⁺³ | | 1.8 ⁺¹ | | | | 8.4 ⁺⁵ | | 2.6 ⁻¹ | | | | | 6.6 ⁺⁵ | 1.5 ⁺⁶ |
| 8 | 2.2 ⁺² | 2.6 ⁺⁵ | 2.2 ⁺³ | 4.1 ⁺² | | 5.1 ⁺⁰ | | | | 3.2 ⁺⁵ | | NEG. | | | | | 2.6 ⁺⁵ | 5.8 ⁺⁵ |
| 24 | 4.4 ⁺¹ | 1.1 ⁺⁵ | 5.3 ⁺² | 1.2 ⁺² | | 1.1 ⁺⁰ | | | | 1.2 ⁺⁵ | | | | | | | 1.1 ⁺⁵ | 2.3 ⁺⁵ |
| 96 | 1.1 ⁺¹ | 3.7 ⁺⁴ | 1.3 ⁺² | 3.3 ⁺¹ | | NEG. | | | | 4.8 ⁺⁴ | | | | | | | 3.7 ⁺⁴ | 8.5 ⁺⁴ |
| 192 | 8.6 ⁺⁰ | 2.6 ⁺⁴ | 9.6 ⁺¹ | 2.3 ⁺¹ | | | | | | 3.0 ⁺⁴ | | | | | | | 2.6 ⁺⁴ | 5.6 ⁺⁴ |
| 360 | 5.8 ⁺⁰ | 1.6 ⁺⁴ | 6.6 ⁺¹ | 1.6 ⁺¹ | | | | | | 1.7 ⁺⁴ | | | | | | | 1.6 ⁺⁴ | 3.3 ⁺⁴ |
| 720 | 2.6 ⁺⁰ | 7.7 ⁺³ | 3.2 ⁺¹ | 7.9 ⁺⁰ | | | | | | 7.3 ⁺³ | | | | | | | 7.7 ⁺³ | 1.5 ⁺⁴ |
| 2160 | 4.2 ⁻¹ | 2.2 ⁺³ | 6.7 ⁺⁰ | 2.5 ⁺⁰ | | | | | | 2.9 ⁺³ | | | | | | | 2.2 ⁺³ | 5.1 ⁺³ |
| 4320 | NEG. | 1.1 ⁺³ | 2.2 ⁺⁰ | 1.0 ⁺⁰ | ↓ | ↓ | ↓ | ↓ | ↓ | 9.8 ⁺² | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 1.1 ⁺³ | 2.1 ⁺³ |

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA K @ EL. 15'

**ESTIMATED HIGHEST DIRECT P DOSE RATES (μ R/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT**

———— MITIGATION PHASE - NO LETDOWN ————

PRELIMINARY

| SOURCE TIME (HR) | SI/CH LINES IN PEN. AREA el. 2' FP-10R | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PVE TUN. el. 2' FP-14C, 7A | SAFEGUARDS SUMP DRAIN LINE IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINE IN PVE TUN. el. 2' FP-19C | DRAIN LINES INSIDE WARE TANKS CUB. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' & 13' 27.5' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER MAIN TRAP el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONAL HATCH | CONTAIN. DOME R.S. HEADERS | SUB- TOTAL ⁽¹⁾ | TOTAL |
|------------------------|---|---|--------------------------------------|---|--|---|--|--|---|---|---|--|---|--------------------------------|---|----------------------------------|------------------------------|-------------------|
| 0 | 4.6 ⁺⁵ | 1.1 ⁺³ | NEG. | NEG. | NEG. | 1.2 ⁺⁴ | 3.7 ⁺³ | NEG. | 1.8 ⁺¹ | 3.4 ⁺⁴ | 1.2 ⁺³ | 1.7 ⁺⁴ | NEG. | NEG. | NEG. | NEG. | 5.3 ⁺⁵ | 5.3 ⁺⁵ |
| 1 | 2.1 ⁺⁵ | 6.5 ⁺² | | | | 5.7 ⁺³ | 1.5 ⁺³ | | 9.6 ⁺⁰ | 1.4 ⁺⁴ | 3.0 ⁺² | 4.4 ⁺³ | | | | | 2.4 ⁺⁵ | 2.4 ⁺⁵ |
| 2 | 1.4 ⁺⁵ | 4.4 ⁺² | | | | 4.0 ⁺³ | 1.0 ⁺³ | | 6.6 ⁺⁰ | 9.8 ⁺³ | 2.2 ⁺² | 3.3 ⁺³ | | | | | 1.6 ⁺⁵ | 1.6 ⁺⁵ |
| 8 | 5.2 ⁺⁴ | 1.8 ⁺² | | | | 1.4 ⁺³ | 3.5 ⁺² | | 2.5 ⁺⁰ | 3.7 ⁺³ | 7.8 ⁺¹ | 1.4 ⁺³ | | | | | 5.9 ⁺⁴ | 5.9 ⁺⁴ |
| 24 | 1.5 ⁺⁴ | 7.5 ⁺¹ | | | | 4.2 ⁺² | 9.5 ⁺¹ | | NEG. | 1.4 ⁺³ | 3.0 ⁺¹ | 6.1 ⁺² | | | | | 1.7 ⁺⁴ | 1.7 ⁺⁴ |
| 96 | 3.8 ⁺³ | 2.6 ⁺¹ | | | | 1.0 ⁺² | 2.2 ⁺¹ | | | 5.6 ⁺² | 1.1 ⁺¹ | 2.0 ⁺² | | | | | 4.7 ⁺³ | 4.7 ⁺³ |
| 192 | 2.7 ⁺³ | 1.8 ⁺¹ | | | | 7.5 ⁺¹ | 1.7 ⁺¹ | | | 3.5 ⁺² | 6.3 ⁺⁰ | 1.2 ⁺² | | | | | 3.2 ⁺³ | 3.2 ⁺³ |
| 360 | 1.8 ⁺³ | 1.1 ⁺¹ | | | | 5.0 ⁺¹ | 1.1 ⁺¹ | | | 1.9 ⁺² | 2.9 ⁺⁰ | 6.4 ⁺¹ | | | | | 2.1 ⁺³ | 2.1 ⁺³ |
| 720 | 7.2 ⁺² | 5.4 ⁺⁰ | | | | 2.6 ⁺¹ | 5.7 ⁺⁰ | | | 8.5 ⁺¹ | 5.9 ⁺¹ | 1.7 ⁺² | | | | | 1.2 ⁺³ | 1.2 ⁺³ |
| 2160 | 2.7 ⁺² | 1.8 ⁺⁰ | | | | 7.7 ⁺⁰ | 1.5 ⁺⁰ | | | 3.4 ⁺¹ | NEG. | 1.0 ⁻¹ | | | | | 3.1 ⁺² | 3.1 ⁺² |
| 4320 | 1.1 ⁺² | 7.5 ⁻¹ | ↓ | ↓ | ↓ | 3.2 ⁺⁰ | 5.5 ⁻¹ | ↓ | ↓ | 1.1 ⁺¹ | ↓ | NEG. | ↓ | ↓ | ↓ | ↓ | 1.2 ⁺² | 1.2 ⁺² |

NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA L @ EL. 13'

ESTIMATED HIGHEST DIRECT γ DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

———— MITIGATION PHASE - NO LETDOWN ————

PRELIMINARY

(2)

| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PVE TUN. EL. 2' FP-M4.7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PVE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' & 13' 27.5' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER MAIN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | SUB- TOTAL (1) | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|--|---|---|---|---|---|--|---|--------------------------------|--|----------------------------------|----------------------|-------------------|
| 0 | 4.4 ⁺⁴ | NEG. | NEG. | 3.4 ⁺² | NEG. | 2.0 ⁺⁴ | 3.7 ⁺³ | 4.2 ⁺⁰ | 2.0 ⁺¹ | 1.9 ⁺⁴ | 4.6 ⁺¹ | 6.0 ⁺³ | NEG. | NEG. | NEG. | NEG. | 9.5 ⁺⁴ | 9.3 ⁺⁴ |
| 1 | 1.7 ⁺⁴ | | | 1.9 ⁺² | | 9.3 ⁺³ | 1.5 ⁺³ | 2.5 ⁺⁰ | 1.1 ⁺¹ | 7.9 ⁺³ | 1.1 ⁺¹ | 1.5 ⁺³ | | | | | 3.7 ⁺⁴ | 3.7 ⁺⁴ |
| 2 | 1.1 ⁺⁴ | | | 1.3 ⁺² | | 6.1 ⁺³ | 1.0 ⁺³ | 1.7 ⁺⁰ | 7.2 ⁺⁰ | 5.6 ⁺³ | 8.4 ⁺⁰ | 1.1 ⁺³ | | | | | 2.5 ⁺⁴ | 2.5 ⁺⁴ |
| 8 | 3.8 ⁺³ | | | 5.0 ⁺¹ | | 2.2 ⁺³ | 3.5 ⁺² | 6.8 ⁻¹ | 2.0 ⁺⁰ | 2.1 ⁺³ | 3.0 ⁺⁰ | 2.1 ⁺² | | | | | 8.7 ⁺³ | 8.7 ⁺³ |
| 24 | 9.6 ⁺² | | | 1.7 ⁺¹ | | 6.3 ⁺² | 9.3 ⁺¹ | NEG. | 9.2 ⁻¹ | 8.2 ⁺² | 1.1 ⁺⁰ | 6.9 ⁺¹ | | | | | 2.6 ⁺³ | 2.6 ⁺³ |
| 96 | 2.4 ⁺² | | | 4.6 ⁺⁰ | | 1.5 ⁺² | 2.2 ⁺¹ | | NEG. | 3.2 ⁺² | 4.2 ⁻¹ | 4.2 ⁺¹ | | | | | 7.7 ⁺² | 7.7 ⁺² |
| 192 | 1.7 ⁺² | | | 3.2 ⁺⁰ | | 1.1 ⁺² | 1.7 ⁺¹ | | | 2.0 ⁺² | NEG. | 2.2 ⁺¹ | | | | | 5.2 ⁺² | 5.2 ⁺² |
| 360 | 1.2 ⁺² | | | 2.1 ⁺⁰ | | 7.5 ⁺¹ | 1.1 ⁺¹ | | | 1.1 ⁺² | | 6.0 ⁺⁰ | | | | | 3.2 ⁺² | 3.2 ⁺² |
| 720 | 5.8 ⁺¹ | | | 1.1 ⁺⁰ | | 3.8 ⁺¹ | 5.7 ⁺⁰ | | | 4.9 ⁺¹ | | NEG. | | | | | 1.5 ⁺² | 1.5 ⁺² |
| 2160 | 1.4 ⁺¹ | | | 3.8 ⁻¹ | | 1.1 ⁺¹ | 1.5 ⁺⁰ | | | 1.9 ⁺¹ | | | | | | | 4.6 ⁺¹ | 4.6 ⁺¹ |
| 4320 | 5.0 ⁺⁰ | ↓ | ↓ | NEG. | ↓ | 4.4 ⁺⁰ | 5.5 ⁻¹ | ↓ | ↓ | 6.5 ⁺⁰ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 1.7 ⁺¹ | 1.7 ⁺¹ |

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NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA M @ EL. 13'

ESTIMATED HIGHEST DIRECT T DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

— MITIGATION PHASE - NO LETDOWN —

PRELIMINARY

| SOURCE TIME (HR) | (2) | | | | | | | | | | | | | | | | (1) SUB- TOTAL | TOTAL |
|------------------------|---|---|--------------------------------------|---|--|---|--|---|---|---|---|---|---|-------------------------------|---|----------------------------------|----------------------|-------------------|
| | SI/CH LINES IN PEN. AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PVE TUN. EL. 2' FP-14L, 7A | SAFEGUARDS SUMP DRAIN LINE IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINE IN PVE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WHATE TUNKS CUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' 13' & 27.5' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRANT EL. 2' | CONTAIN. SHINE TRA DOME | CONTAIN. SHINE TRA PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | | |
| 0 | 1.1 ⁺² | 5.2 ⁺³ | 4.1 ⁺³ | 1.9 ⁺⁶ | 2.1 ⁺⁴ | 3.3 ⁺⁰ | 4.6 ⁺³ | 1.4 ⁺⁴ | 6.6 ⁺⁵ | 5.2 ⁺³ | 6.2 ⁺² | 5.4 ⁺⁵ | NEG | NEG. | NEG. | NEG. | 2.1 ⁺⁶ | 3.1 ⁺⁶ |
| 1 | 2.5 ⁺¹ | 3.1 ⁺³ | 1.5 ⁺³ | 1.2 ⁺⁶ | 1.1 ⁺⁴ | NEG. | 2.4 ⁺³ | 8.3 ⁺³ | 4.0 ⁺⁵ | 2.1 ⁺³ | 1.5 ⁺² | 1.4 ⁺⁵ | | | | | 1.4 ⁺⁶ | 1.8 ⁺⁶ |
| 2 | 1.5 ⁺¹ | 2.1 ⁺³ | 8.2 ⁺² | 8.3 ⁺⁵ | 7.2 ⁺³ | | 1.6 ⁺³ | 5.7 ⁺³ | 2.7 ⁺⁵ | 1.5 ⁺³ | 1.1 ⁺² | 1.0 ⁺⁵ | | | | | 9.3 ⁺⁵ | 1.2 ⁺⁶ |
| 8 | 3.4 ⁺⁰ | 8.5 ⁺² | 2.5 ⁺² | 3.5 ⁺⁵ | 2.7 ⁺³ | | 5.9 ⁺² | 2.3 ⁺³ | 1.1 ⁺⁵ | 5.7 ⁺² | 4.0 ⁺¹ | 4.6 ⁺⁴ | | | | | 3.9 ⁺⁵ | 5.0 ⁺⁵ |
| 24 | 5.0 ⁺¹ | 3.6 ⁺² | 5.4 ⁺¹ | 1.6 ⁺⁵ | 8.2 ⁺² | | 1.8 ⁺² | 9.6 ⁺² | 4.6 ⁺⁴ | 2.2 ⁺² | 1.5 ⁺¹ | 2.0 ⁺⁴ | | | | | 1.2 ⁺⁵ | 1.7 ⁺⁵ |
| 96 | NEG. | 1.2 ⁺² | 1.4 ⁺¹ | 5.8 ⁺⁴ | 2.1 ⁺² | | 4.6 ⁺¹ | 3.3 ⁺² | 1.5 ⁺⁴ | 8.7 ⁺¹ | 5.6 ⁺⁰ | 6.4 ⁺³ | | | | | 6.5 ⁺⁴ | 8.0 ⁺⁴ |
| 192 | | 8.3 ⁺¹ | 1.0 ⁺¹ | 4.0 ⁺⁴ | 1.5 ⁺² | | 3.3 ⁺¹ | 2.2 ⁺² | 1.1 ⁺⁴ | 5.5 ⁺¹ | 3.2 ⁺⁰ | 3.9 ⁺³ | | | | | 4.4 ⁺⁴ | 5.5 ⁺⁴ |
| 360 | | 5.2 ⁺¹ | 6.9 ⁺⁰ | 2.5 ⁺⁶ | 1.0 ⁺² | | 2.2 ⁺¹ | 1.4 ⁺² | 6.6 ⁺³ | 3.0 ⁺¹ | 1.5 ⁺⁰ | 2.1 ⁺³ | | | | | 2.7 ⁺⁴ | 3.4 ⁺⁴ |
| 720 | | 2.5 ⁺¹ | 3.3 ⁺⁰ | 1.2 ⁺⁴ | 5.2 ⁺¹ | | 1.1 ⁺¹ | 7.0 ⁺¹ | 3.2 ⁺³ | 1.3 ⁺¹ | 3.0 ⁺¹ | 5.5 ⁺² | | | | | 1.3 ⁺⁴ | 1.6 ⁺⁴ |
| 2160 | | 7.0 ⁺⁰ | NEG. | 3.8 ⁺³ | 1.7 ⁺¹ | | 3.7 ⁺⁰ | 2.3 ⁺¹ | 1.1 ⁺³ | 5.2 ⁺⁰ | NEG. | 3.2 ⁺⁰ | | | | | 3.9 ⁺³ | 5.0 ⁺³ |
| 4320 | ↓ | 3.6 ⁺⁰ | ↓ | 1.7 ⁺³ | 6.9 ⁺⁰ | ↓ | 1.5 ⁺⁰ | 9.6 ⁺⁰ | 4.6 ⁺² | 1.8 ⁺⁰ | ↓ | NEG. | ↓ | ↓ | ↓ | ↓ | 1.7 ⁺³ | 2.2 ⁺³ |

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NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA N @ EL. 13'

ESTIMATED HIGHEST DIRECT P DOSE RATES ($\mu R/hr$) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

PRELIMINARY

MITIGATION PHASE - NO LETDOWN

| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PYE TUN. EL. 2' FP-14L, 7A | SAFEGUARDS SUMP DRAIN LINE IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINE IN PYE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' 15:275' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|---|--|---|---|---|---|---|---|--------------------------------|--|----------------------------------|---------------------|-------------------|
| 0 | 1.1 ⁺⁶ | 1.1 ⁺⁵ | NEG. | 3.4 ⁺² | NEG. | 3.3 ⁺⁴ | 8.1 ⁺³ | 1.5 ⁺² | 5.7 ⁺² | 1.1 ⁺⁴ | 2.4 ⁺⁴ | 1.1 ⁺⁸ | NEG. | NEG. | NEG. | NEG. | 1.1 ⁺⁸ | 1.1 ⁺⁸ |
| 1 | 5.2 ⁺⁵ | 6.6 ⁺⁴ | | 1.9 ⁺² | | 1.5 ⁺⁴ | 4.2 ⁺³ | 8.8 ⁺¹ | 3.0 ⁺² | 4.4 ⁺³ | 5.7 ⁺³ | 2.9 ⁺⁷ | | | | | 3.0 ⁺⁷ | 3.0 ⁺⁷ |
| 2 | 3.5 ⁺⁵ | 4.4 ⁺⁴ | | 1.3 ⁺² | | 1.0 ⁺⁴ | 2.9 ⁺³ | 6.1 ⁺¹ | 2.1 ⁺² | 3.1 ⁺³ | 4.4 ⁺³ | 2.1 ⁺⁷ | | | | | 2.1 ⁺⁷ | 2.1 ⁺⁷ |
| 8 | 1.3 ⁺⁵ | 1.8 ⁺⁴ | | 5.0 ⁺¹ | | 4.0 ⁺³ | 1.1 ⁺³ | 2.4 ⁺¹ | 7.8 ⁺¹ | 1.2 ⁺³ | 1.6 ⁺³ | 9.4 ⁺⁰ | | | | | 9.5 ⁺⁶ | 9.5 ⁺⁶ |
| 24 | 3.8 ⁺⁴ | 7.5 ⁺³ | | 1.7 ⁺¹ | | 1.2 ⁺³ | 3.3 ⁺² | 1.0 ⁺¹ | 2.6 | 4.5 ⁺² | 5.9 ⁺¹ | 4.0 ⁺⁶ | | | | | 4.0 ⁺⁶ | 4.0 ⁺⁶ |
| 96 | 9.6 ⁺³ | 2.6 ⁺³ | | 4.6 ⁺⁰ | | 3.2 ⁺² | 8.4 ⁺¹ | 3.5 ⁺⁰ | 7.1 ⁺⁰ | 1.8 ⁺² | 2.2 ⁺² | 1.3 ⁺⁶ | | | | | 1.3 ⁺⁶ | 1.3 ⁺⁶ |
| 192 | 6.8 ⁺³ | 1.8 ⁺³ | | 3.2 ⁺⁰ | | 2.2 ⁺² | 6.2 ⁺¹ | 2.4 ⁺⁰ | 5.0 ⁺⁰ | 1.1 ⁺² | 1.3 ⁺² | 7.9 ⁺⁵ | | | | | 8.0 ⁺⁵ | 8.0 ⁺⁵ |
| 360 | 4.6 ⁺³ | 1.1 ⁺³ | | 2.1 ⁺⁰ | | 1.5 ⁺² | 4.0 ⁺¹ | 1.5 ⁺⁰ | 3.3 ⁺⁰ | 6.1 ⁺¹ | 5.7 ⁺¹ | 4.2 ⁺⁵ | | | | | 4.3 ⁺⁵ | 4.3 ⁺⁵ |
| 720 | 2.4 ⁺³ | 5.4 ⁺² | | 1.1 ⁺⁰ | | 7.5 ⁺¹ | 2.0 ⁺¹ | NEG. | 1.7 ⁺⁰ | 2.7 ⁺¹ | 1.2 ⁺¹ | 1.1 ⁺⁵ | | | | | 1.1 ⁺⁵ | 1.1 ⁺⁵ |
| 2160 | 7.2 ⁺² | 1.8 ⁺² | | 3.8 ⁺¹ | | 2.4 ⁺¹ | 6.6 ⁺⁰ | | NEG. | 1.1 ⁺¹ | NEG. | 6.6 ⁺² | | | | | 1.6 ⁺³ | 1.6 ⁺³ |
| 4320 | 2.9 ⁺² | 7.5 ⁺¹ | | NEG. | | 9.9 ⁺⁰ | 2.6 ⁺⁰ | | | 3.6 ⁺⁰ | | 3.0 ⁺¹ | | | | | 3.3 ⁺² | 3.3 ⁺² |

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NOTED FEB 14 1990

SURRY AUXILIARY BLDG RADIATION ZONE AREA 0 @ EL. 13'

ESTIMATED HIGHEST DIRECT P DOSE RATES (μ R/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

PRELIMINARY

| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA el. 2' FP-10K | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PYE TUN. el. 2' FP-14L, 7A | SAFEGUARDS SUMP DRAIN LINE IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINE IN PYE TUN. el. 2' FP-19C | DRAIN LINE INSIDE WASTE TANK CUB. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' & 13' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER MAIN TRAP el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATING el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONAL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|---|--|---|---|---|---|--|---|--------------------------------|---|----------------------------------|----------------------|-------------------|
| 0 | NEG. | 1.9 ⁺¹ | NEG. | 3.4 ⁺² | 3.7 ⁺⁴ | NEG. | NEG. | 4.8 ⁺² | 1.9 ⁺⁴ | 4.4 ⁺⁰ | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | 3.8 ⁺⁴ | 5.7 ⁺⁴ |
| 1 | | 1.1 ⁺¹ | | 1.9 ⁺² | 1.9 ⁺⁴ | | | 2.9 ⁺² | 1.2 ⁺⁴ | 1.8 ⁺⁰ | | | | | | | 1.9 ⁺⁴ | 3.1 ⁺⁴ |
| 2 | | 7.7 ⁺⁰ | | 1.3 ⁺² | 1.3 ⁺⁴ | | | 2.0 ⁺² | 8.1 ⁺³ | 1.3 ⁺⁰ | | | | | | | 1.3 ⁺⁴ | 2.1 ⁺⁴ |
| 8 | | 3.1 ⁺⁰ | | 5.0 ⁺¹ | 4.8 ⁺³ | | | 7.9 ⁺¹ | 3.3 ⁺³ | 4.8 ⁻¹ | | | | | | | 4.8 ⁺³ | 8.2 ⁺³ |
| 24 | | 1.3 ⁺⁰ | | 1.7 ⁺¹ | 1.5 ⁺³ | | | 3.3 ⁺¹ | 1.4 ⁺³ | NEG. | | | | | | | 1.6 ⁺³ | 3.0 ⁺³ |
| 96 | | 4.4 ⁻¹ | | 4.6 ⁺⁰ | 3.8 ⁺² | | | 1.1 ⁺¹ | 4.7 ⁺² | | | | | | | | 3.9 ⁺² | 8.7 ⁺² |
| 192 | | NEG. | | 3.2 ⁺⁰ | 2.8 ⁺² | | | 7.7 ⁺⁰ | 3.1 ⁺² | | | | | | | | 2.8 ⁺² | 6.0 ⁺² |
| 360 | | | | 2.1 ⁺⁰ | 1.8 ⁺² | | | 4.8 ⁺⁰ | 1.9 ⁺² | | | | | | | | 1.8 ⁺² | 3.8 ⁺² |
| 720 | | | | 1.1 ⁺⁰ | 9.3 ⁺¹ | | | 2.4 ⁺⁰ | 9.3 ⁺¹ | | | | | | | | 9.4 ⁺¹ | 1.9 ⁺² |
| 2160 | | | | 3.8 ⁻¹ | 3.0 ⁺¹ | | | 7.9 ⁻¹ | 3.3 ⁺¹ | | | | | | | | 3.0 ⁺¹ | 6.3 ⁺¹ |
| 4320 | | | | | 1.2 ⁺¹ | | | NEG. | 1.4 ⁺¹ | | | | | | | | 1.2 ⁺¹ | 2.6 ⁺¹ |

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA P @ EL. 13'

ESTIMATED HIGHEST DIRECT P DOSE RATES ($\mu R/hr$) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14944 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

PRELIMINARY

| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA el. 2' FP-10K | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PPE TUN. el. 2' FP-HL-7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PPE TUN. el. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. el. 2' & 13' FP-19C | (2) | | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER MAIN TRAY el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|--|---|---|---|---|---|--|---|--------------------------------|--|----------------------------------|----------------------|-------------------|
| | | | | | | | | | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' & 13' | | | | | | | | |
| 0 | 4.1 ⁺⁵ | 1.1 ⁺³ | NEG | 7.9 ⁺¹ | NEG. | 1.3 ⁺⁰ | NEG. | NEG. | 1.1 ⁺³ | 9.2 ⁺² | 8.0 ⁺² | 1.3 ⁺⁵ | NEG. | NEG. | NEG. | NEG. | 5.1 ⁺⁵ | 5.1 ⁺⁵ |
| 1 | 2.0 ⁺⁵ | 6.6 ⁺² | | 3.9 ⁺¹ | | NEG. | | | 6.7 ⁺² | 3.8 ⁺² | 1.0 ⁺² | 3.2 ⁺⁴ | | | | | 2.3 ⁺⁵ | 2.3 ⁺⁵ |
| 2 | 1.4 ⁺⁵ | 4.4 ⁺² | | 2.6 ⁺¹ | | | | | 4.5 ⁺² | 2.7 ⁺² | 7.6 ⁺¹ | 2.3 ⁺⁴ | | | | | 1.6 ⁺⁵ | 1.6 ⁺⁵ |
| 8 | 5.0 ⁺⁴ | 1.8 ⁺² | | 9.6 ⁺⁰ | | | | | 1.9 ⁺² | 1.0 ⁺² | 2.7 ⁺¹ | 1.1 ⁺⁴ | | | | | 6.1 ⁺⁴ | 6.1 ⁺⁴ |
| 24 | 1.5 ⁺⁴ | 7.5 ⁺¹ | | 2.9 ⁺⁰ | | | | | 7.6 ⁺¹ | 3.9 ⁺¹ | 1.0 ⁺¹ | 4.5 ⁺³ | | | | | 2.0 ⁺⁴ | 2.0 ⁺⁴ |
| 96 | 3.8 ⁺³ | 2.6 ⁺¹ | | 7.8 ⁻¹ | | | | | 2.6 ⁺¹ | 1.5 ⁺¹ | 3.8 ⁺⁰ | 1.4 ⁺³ | | | | | 5.2 ⁺³ | 5.3 ⁺³ |
| 192 | 2.7 ⁺³ | 1.8 ⁺¹ | | NEG. | | | | | 1.8 ⁺¹ | 9.7 ⁺⁰ | 2.2 ⁺⁰ | 8.7 ⁺² | | | | | 3.6 ⁺³ | 3.6 ⁺³ |
| 360 | 1.8 ⁺³ | 1.1 ⁺¹ | | ↓ | | | | | 1.1 ⁺¹ | 5.3 ⁺⁰ | 9.9 ⁻¹ | 4.7 ⁺² | | | | | 2.3 ⁺³ | 2.3 ⁺³ |
| 720 | 9.4 ⁺² | 5.4 ⁺⁰ | | ↓ | | | | | 5.2 ⁺⁰ | 2.3 ⁺⁰ | NEG. | 1.3 ⁺² | | | | | 1.1 ⁺³ | 1.1 ⁺³ |
| 2160 | 2.8 ⁺² | 1.8 ⁺⁰ | | ↓ | | | | | 1.9 ⁺⁰ | 9.2 ⁻¹ | ↓ | NEG. | | | | | 2.8 ⁺² | 2.8 ⁺² |
| 4320 | 1.2 ⁺² | 7.5 ⁻¹ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 7.6 ⁻¹ | NEG. | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 1.2 ⁺² | 1.2 ⁺² |

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REPLACEMENT DOCKET FILE COPY

SURRY AUXILIARY BLDG RADIATION ZONE AREA Q @ EL. 13'

ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

— MITIGATION PHASE - NO LETDOWN —

PRELIMINARY

| SOURCE TIME (HR) | (2) | | | | | | | | | | | | | | | | (1) SUB- TOTAL | TOTAL |
|------------------------|---|---|--------------------------------------|---|--|--|---|---|---|---|---|---|--|--------------------------------|---|----------------------------------|----------------------|-------------------|
| | SE/CH LINES IN PEN. AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PPE TUN. EL. 2' FP-19L, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PPE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WHATE TANKS CUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' & 13' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATOR EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PORTAL HATCH | CONTAIN. DOME R.S. HEADERS | | |
| 0 | NEG. | NEG. | NEG. | 3.4 ⁺² | 1.7 ⁺⁴ | NEG. | NEG. | 5.7 ⁺⁶ | 4.2 ⁺⁷ | NEG. | NEG. | 5.1 ⁺² | NEG. | NEG. | NEG. | NEG. | 1.8 ⁺⁴ | 4.8 ⁺⁷ |
| 1 | | | | 1.9 ⁺² | 6.6 ⁺² | | | 3.4 ⁺⁶ | 2.5 ⁺⁷ | | | 1.3 ⁺² | | | | | 6.9 ⁺³ | 2.8 ⁺⁷ |
| 2 | | | | 1.3 ⁺² | 4.7 ⁺² | | | 2.3 ⁺⁶ | 1.8 ⁺⁷ | | | 9.9 ⁺¹ | | | | | 4.9 ⁺³ | 2.0 ⁺⁷ |
| 8 | | | | 5.0 ⁺¹ | 1.6 ⁺² | | | 7.4 ⁺⁵ | 6.9 ⁺⁶ | | | 4.3 ⁺¹ | | | | | 1.7 ⁺³ | 7.8 ⁺⁶ |
| 24 | | | | 1.7 ⁺¹ | 4.3 ⁺² | | | 3.9 ⁺⁵ | 3.0 ⁺⁶ | | | 1.9 ⁺¹ | | | | | 4.7 ⁺² | 3.4 ⁺⁶ |
| 96 | | | | 4.6 ⁺⁰ | 1.0 ⁺² | | | 1.4 ⁺⁵ | 9.9 ⁺⁵ | | | 6.1 ⁺⁰ | | | | | 1.1 ⁺² | 11 ⁺⁶ |
| 192 | | | | 3.2 ⁺⁰ | 7.6 ⁺¹ | | | 9.1 ⁺⁴ | 6.7 ⁺⁵ | | | 3.7 ⁺⁰ | | | | | 8.3 ⁺¹ | 7.6 ⁺⁵ |
| 360 | | | | 2.1 ⁺⁰ | 5.2 ⁺¹ | | | 5.7 ⁺⁴ | 4.2 ⁺⁵ | | | 1.9 ⁺⁰ | | | | | 5.6 ⁺¹ | 4.8 ⁺⁵ |
| 720 | | | | 1.1 ⁺⁰ | 2.6 ⁺¹ | | | 2.9 ⁺⁴ | 2.1 ⁺⁵ | | | 5.2 ⁻¹ | | | | | 2.8 ⁺¹ | 2.4 ⁺⁵ |
| 2160 | | | | 3.8 ⁻¹ | 6.6 ⁺⁰ | | | 9.4 ⁺³ | 6.9 ⁺⁴ | | | NEG. | | | | | 7.0 ⁺⁰ | 7.8 ⁺⁴ |
| 4320 | ↓ | ↓ | ↓ | NEG. | 2.5 ⁺⁰ | ↓ | ↓ | 3.9 ⁺³ | 3.0 ⁺⁴ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 2.5 ⁺⁰ | 3.4 ⁺⁵ |

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NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA R @ EL. 15'

PRELIMINARY

ESTIMATED HIGHEST DIRECT P DOSE RATES ($\mu R/hr$) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

(2)

| SOURCE TIME (HR) | SI/CH LINES IN PEN. AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PHE TUN. EL. 2' FP-14L, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PIPE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS LUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTION COOLANT SAMPLING LINES EL. 2' 13' & 27.5' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER MAIN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|---|---|--------------------------------------|---|--|--|--|---|---|--|---|--|---|--------------------------------|--|----------------------------------|----------------------|-------------------|
| 0 | NEG. | NEG. | NEG. | NEG. | 1.7 ⁺⁴ | NEG. | NEG. | 1.5 ⁺³ | 1.4 ⁺⁵ | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | 1.7 ⁺⁴ | 1.6 ⁺⁵ |
| 1 | | | | | 6.6 ⁺³ | | | 9.1 ⁺² | 8.4 ⁺⁴ | | | | | | | | 6.6 ⁺³ | 9.2 ⁺⁴ |
| 2 | | | | | 4.7 ⁺³ | | | 6.2 ⁺² | 5.7 ⁺⁴ | | | | | | | | 4.7 ⁺³ | 6.2 ⁺⁴ |
| 8 | | | | | 1.6 ⁺² | | | 2.5 ⁺² | 2.3 ⁺⁴ | | | | | | | | 1.6 ⁺³ | 2.5 ⁺⁴ |
| 24 | | | | | 4.3 ⁺² | | | 1.1 ⁺² | 9.5 ⁺³ | | | | | | | | 4.3 ⁺² | 1.0 ⁺⁴ |
| 96 | | | | | 1.0 ⁺² | | | 3.6 ⁺¹ | 3.3 ⁺³ | | | | | | | | 1.0 ⁺² | 3.4 ⁺³ |
| 192 | | | | | 7.6 ⁺¹ | | | 2.5 ⁺¹ | 2.2 ⁺³ | | | | | | | | 7.6 ⁺¹ | 2.3 ⁺³ |
| 360 | | | | | 5.2 ⁺¹ | | | 1.5 ⁺¹ | 1.4 ⁺³ | | | | | | | | 5.2 ⁺¹ | 1.5 ⁺³ |
| 720 | | | | | 2.6 ⁺¹ | | | 7.7 ⁺⁰ | 6.6 ⁺² | | | | | | | | 2.6 ⁺¹ | 6.9 ⁺² |
| 2160 | | | | | 6.6 ⁺⁰ | | | 2.5 ⁺⁰ | 2.3 ⁺² | | | | | | | | 6.6 ⁺⁰ | 2.4 ⁺² |
| 4320 | ↓ | ↓ | ↓ | ↓ | 2.5 ⁺⁰ | ↓ | ↓ | 1.1 ⁺⁰ | 9.5 ⁺¹ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 2.5 ⁺⁰ | 9.9 ⁺¹ |

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NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA S @ EL. 19'

ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

PRELIMINARY

| SOURCE TIME (HR) | SE/CH LINES IN PEN. AREA | CHARGING PUMP CUB. | AUX. BLDG SUMP | DRAIN LINES IN SUMP AREA | DRAIN LINES IN PHE TUN. | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA EL. 2' | SAFEGUARDS SUMP DRAIN LINES IN PHE TUN. EL. 2' | DRAIN LINES INSIDE WASTE TANKS CUB. | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' 13:27.5' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER MAIN TRAP EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATOR EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|-----------------------------|------------------------|-------------------|-----------------------------|----------------------------|---|---|---|---|--|---|--|--|--------------------------------|--|----------------------------------|----------------------|-------------------|
| | EL. 2' FP-10K | EL. 2' & 13' FP-10C | EL. 2' FB-9A | EL. 2' & 13' FP-19N | EL. 2' FP-14L, 7A | FP-7A | FP-19C | EL. 2' & 13' FP-19C | | | | | | | | | | |
| 0 | 4.1 ⁺⁵ | 9.6 ⁺⁶ | 3.5 ⁺⁰ | 4.4 ⁺⁴ | 1.0 ⁺² | 1.3 ⁺⁴ | 1.6 ⁺⁴ | NEG. | 3.8 ⁺⁰ | 1.2 ⁺⁴ | 2.1 ⁺¹ | 1.7 ⁺⁴ | NEG. | NEG. | NEG. | NEG. | 1.0 ⁺⁷ | 1.0 ⁺⁷ |
| 1 | 2.1 ⁺⁵ | 5.8 ⁺⁶ | 6.2 ⁻¹ | 2.4 ⁺⁴ | 5.7 ⁺² | 6.9 ⁺³ | 9.7 ⁺³ | | 2.3 ⁺⁰ | 5.0 ⁺³ | 5.1 ⁺⁰ | 4.4 ⁺³ | | | | | 6.1 ⁺⁶ | 6.1 ⁺⁶ |
| 2 | 1.4 ⁺⁵ | 4.0 ⁺⁶ | NEG. | 1.7 ⁺⁴ | 3.9 ⁺² | 4.8 ⁺³ | 6.8 ⁺³ | | 1.6 ⁺⁰ | 3.5 ⁺³ | 3.8 ⁺⁰ | 3.3 ⁺³ | | | | | 4.2 ⁺⁶ | 4.2 ⁺⁶ |
| 8 | 5.4 ⁺⁴ | 1.6 ⁺⁶ | | 6.4 ⁺³ | 1.5 ⁺² | 1.9 ⁺³ | 2.9 ⁺³ | | 6.5 ⁻¹ | 1.3 ⁺² | 1.3 ⁺⁰ | 1.4 ⁺³ | | | | | 1.7 ⁺⁶ | 1.7 ⁺⁶ |
| 24 | 1.7 ⁺⁴ | 6.8 ⁺⁵ | | 2.1 ⁺³ | 5.1 ⁺¹ | 6.2 ⁺² | 1.3 ⁺³ | | NEG. | 5.2 ⁺² | 5.1 ⁻¹ | 6.1 ⁺² | | | | | 7.1 ⁺⁵ | 7.1 ⁺⁵ |
| 96 | 4.4 ⁺³ | 2.2 ⁺⁵ | | 5.8 ⁺² | 1.4 ⁺¹ | 1.7 ⁺² | 4.8 ⁺² | | | 2.0 ⁺² | NEG. | 2.0 ⁺² | | | | | 2.3 ⁺⁵ | 2.3 ⁺⁵ |
| 192 | 3.1 ⁺³ | 1.5 ⁺⁵ | | 4.0 ⁺² | 9.8 ⁺⁰ | 1.2 ⁺² | 3.3 ⁺² | | | 1.3 ⁺² | | 1.2 ⁺² | | | | | 1.5 ⁺⁵ | 1.5 ⁺⁵ |
| 360 | 2.1 ⁺³ | 2.6 ⁺⁴ | | 2.7 ⁺² | 6.4 ⁺⁰ | 7.9 ⁺¹ | 2.0 ⁺² | | | 7.0 ⁺¹ | | 6.4 ⁺¹ | | | | | 1.0 ⁺⁵ | 1.0 ⁺⁵ |
| 720 | 1.1 ⁺³ | 4.8 ⁺⁴ | | 1.4 ⁺² | 3.4 ⁺⁰ | 4.1 ⁺¹ | 9.5 ⁺² | | | 3.1 ⁺² | | 1.7 ⁺² | | | | | 5.1 ⁺⁴ | 5.1 ⁺⁴ |
| 2160 | 3.5 ⁺² | 1.3 ⁺⁴ | | 4.7 ⁺¹ | 1.2 ⁺⁰ | 1.4 ⁺¹ | 3.1 ⁺² | | | 1.2 ⁺¹ | | 1.0 ⁻¹ | | | | | 1.4 ⁺⁴ | 1.4 ⁺⁴ |
| 4320 | 1.5 ⁺² | 6.8 ⁺³ | ✓ | 2.0 ⁺⁰ | 4.9 ⁻¹ | NEG. | 1.4 ⁺¹ | ✓ | ✓ | 4.1 ⁺⁰ | ✓ | NEG. | ✓ | ✓ | ✓ | ✓ | 7.0 ⁺³ | 7.0 ⁺³ |

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NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA T @ EL. 13'

ESTIMATED HIGHEST DIRECT P DOSE RATES ($\mu R/hr$) FROM VARIOUS SOURCES DUE TO
 LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

———— MITIGATION PHASE - NO LETDOWN ————

PRELIMINARY

| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PHE TUN. EL. 2' FP-14L, 7A | SAFEGUARDS SUMP DRAIN LINE IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINE IN PHE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINE EL. 2' 13' 27.5' | CONTAIN. LEAKAGE MONITORING LINES EL. 2' & 13' | HYDROGEN ANALYZER MAIN TRAP EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRANT EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PRESSURE MATCH | CONTAIN. DOME R.S. HEADERS | SUB- TOTAL ⁽¹⁾ | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|---|--|---|---|--|--|--|---|--------------------------------|---|----------------------------------|------------------------------|-------------------|
| 0 | 1.3 ⁺² | 1.0 ⁺⁴ | 3.5 ⁺⁰ | 4.1 ⁺⁴ | 7.2 ⁺⁴ | 2.0 ⁺¹ | 2.2 ⁺² | NEG. | 6.1 ⁺⁰ | 1.2 ⁺⁴ | NEG. | 3.9 ⁺⁰ | NEG. | NEG. | NEG. | NEG. | 1.3 ⁺⁵ | 1.4 ⁺⁵ |
| 1 | 3.8 ⁺¹ | 6.2 ⁺³ | 6.2 ⁻¹ | 2.4 ⁺⁴ | 4.4 ⁺⁴ | 8.6 ⁺⁰ | 1.3 ⁺² | | 3.7 ⁺⁰ | 4.8 ⁺² | | 1.0 ⁺⁰ | | | | | 7.4 ⁺⁴ | 7.9 ⁺⁴ |
| 2 | 2.3 ⁺¹ | 4.2 ⁺³ | NEG. | 1.7 ⁺⁴ | 3.1 ⁺⁴ | 5.5 ⁺⁰ | 8.6 ⁺¹ | | 2.5 ⁺⁰ | 3.9 ⁺³ | | 2.6 ⁻¹ | | | | | 5.2 ⁺⁴ | 5.6 ⁺⁴ |
| 8 | 6.8 ⁺⁰ | 1.7 ⁺³ | | 6.4 ⁺³ | 1.3 ⁺⁴ | 1.6 ⁺⁰ | 3.3 ⁺¹ | | 1.0 ⁺⁰ | 1.3 ⁺³ | | NEG. | | | | | 2.1 ⁺⁴ | 2.2 ⁺⁴ |
| 24 | 1.4 ⁺⁰ | 7.2 ⁺² | | 2.1 ⁺³ | 5.9 ⁺³ | NEG. | 1.1 ⁺¹ | | 4.2 ⁻¹ | 5.0 ⁺² | | | | | | | 8.7 ⁺³ | 9.2 ⁺³ |
| 96 | 3.5 ⁻¹ | 2.4 ⁺² | | 5.8 ⁺² | 2.2 ⁺³ | | 3.1 ⁺⁰ | | NEG. | 2.0 ⁺² | | | | | | | 3.0 ⁺³ | 3.2 ⁺³ |
| 192 | NEG. | 1.7 ⁺² | | 4.0 ⁺² | 1.5 ⁺³ | | 2.2 ⁺⁰ | | | 1.2 ⁺² | | | | | | | 2.1 ⁺³ | 2.2 ⁺³ |
| 360 | | 1.0 ⁺² | | 2.7 ⁺² | 9.3 ⁺² | | 1.4 ⁺⁰ | | | 6.7 ⁺¹ | | | | | | | 1.3 ⁺³ | 1.4 ⁺³ |
| 720 | | 5.0 ⁺¹ | | 1.4 ⁺² | 4.3 ⁺² | | 7.5 ⁻¹ | | | 3.0 ⁺¹ | | | | | | | 6.2 ⁺² | 6.5 ⁺² |
| 2160 | | 1.4 ⁺¹ | | 4.7 ⁺¹ | 1.4 ⁺² | | NEG. | | | 1.2 ⁺¹ | | | | | | | 2.0 ⁺² | 2.1 ⁺² |
| 4320 | ↓ | 7.2 ⁺⁰ | ↓ | 2.0 ⁺⁰ | 6.2 ⁺¹ | ↓ | ↓ | ↓ | ↓ | 4.0 ⁺⁰ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 7.1 ⁺¹ | 7.5 ⁺¹ |

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NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA LI @ EL. 13'

ESTIMATED HIGHEST DIRECT γ DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

———— MITIGATION PHASE - NO LETDOWN ————

PRELIMINARY

| SOURCE TIME (HR) | (1) | | | | | | | | | | | | | | | | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|---|---|---|---|--|---|--|---|--------------------------------|---|----------------------------------|----------------------|-------------------|
| | SE/CH LINES IN PEN AREA el. 2' FP-10R | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PYE TUN. el. 2' FP-19L, 7A | SAFEGUARDS SUMP DRAIN LINE IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINE IN PIPE TUN. el. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINE el. 2' & 13' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER MAIN TRAY el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONAL MATCH | CONTAIN. DOME R.S. HEADERS | | |
| 0 | 1.3 ⁺² | 1.0 ⁺⁴ | 1.9 ⁺⁵ | 4.4 ⁺⁶ | 2.3 ⁺³ | 2.8 ⁺⁰ | 6.1 ⁺² | NEG. | 9.8 ⁺⁰ | 5.3 ⁺⁴ | NEG. | 1.3 ⁺² | NEG. | NEG. | NEG. | NEG. | 4.6 ⁺⁶ | 4.7 ⁺⁶ |
| 1 | 3.8 ⁺¹ | 6.2 ⁺³ | 8.2 ⁺⁴ | 2.7 ⁺⁶ | 1.4 ⁺³ | NEG. | 3.1 ⁺² | | 2.8 ⁺⁰ | 2.2 ⁺⁴ | | 3.2 ⁺¹ | | | | | 2.8 ⁺⁶ | 2.8 ⁺⁶ |
| 2 | 2.3 ⁺¹ | 4.2 ⁺³ | 5.4 ⁺⁴ | 1.9 ⁺⁶ | 1.0 ⁺³ | | 2.2 ⁺² | | 1.6 ⁺⁰ | 1.5 ⁺⁴ | | 2.3 ⁺¹ | | | | | 2.0 ⁺⁶ | 2.0 ⁺⁶ |
| 8 | 6.8 ⁺⁰ | 1.7 ⁺³ | 1.9 ⁺⁴ | 8.0 ⁺⁵ | 4.2 ⁺² | | 9.2 ⁺¹ | | 6.5 ⁺¹ | 5.8 ⁺³ | | 1.1 ⁺¹ | | | | | 8.2 ⁺⁵ | 8.3 ⁺⁵ |
| 24 | 1.4 ⁺⁰ | 7.2 ⁺² | 4.8 ⁺³ | 3.5 ⁺⁵ | 1.9 ⁺² | | 4.2 ⁺¹ | | NEG. | 2.2 ⁺³ | | 4.5 ⁺⁰ | | | | | 3.5 ⁺⁵ | 3.6 ⁺⁵ |
| 96 | 35 ⁻¹ | 2.4 ⁺² | 1.2 ⁺³ | 1.3 ⁺⁵ | 7.0 ⁺¹ | | 1.5 ⁺¹ | | | 8.8 ⁺² | | 1.4 ⁺⁰ | | | | | 1.3 ⁺⁵ | 1.3 ⁺⁵ |
| 192 | NEG. | 1.7 ⁺² | 8.5 ⁺² | 8.9 ⁺⁴ | 4.8 ⁺¹ | | 1.1 ⁺¹ | | | 5.5 ⁺² | | 8.7 ⁻¹ | | | | | 9.0 ⁺⁴ | 9.1 ⁺⁴ |
| 360 | | 1.0 ⁺² | 5.9 ⁺² | 5.6 ⁺⁴ | 2.98 ⁺¹ | | 6.6 ⁺⁰ | | | 3.0 ⁺² | | | | | | | 5.7 ⁺⁴ | 5.7 ⁺⁴ |
| 720 | | 5.0 ⁺¹ | 3.0 ⁺² | 2.6 ⁺⁴ | 1.4 ⁺¹ | | 3.1 ⁺⁰ | | | 1.3 ⁺² | | | | | | | 2.6 ⁺⁴ | 2.6 ⁺⁴ |
| 2160 | | 1.4 ⁺¹ | 7.4 ⁺¹ | 8.5 ⁺³ | 4.5 ⁺⁰ | | 9.9 ⁻¹ | | | 5.2 ⁺¹ | | | | | | | 8.6 ⁺³ | 8.6 ⁺³ |
| 4320 | ↓ | 7.2 ⁺⁰ | 2.7 ⁺¹ | 3.7 ⁺³ | 2.0 ⁺⁰ | | NEG. | ↓ | ↓ | 1.8 ⁺¹ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 3.7 ⁺³ | 3.7 ⁺³ |

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

PRELIMINARY

SURRY AUXILIARY BLDG RADIATION ZONE AREA V @ EL. 13'

ESTIMATED HIGHEST DIRECT P DOSE RATES ($\mu R/hr$) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

| SOURCE TIME (HR) | SE/CN LINES IN PEN AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 3' FB-9A | DRAIN LINES IN SWAMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PHE TUN. EL. 2' FP-19L, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PHE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS LUG. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' & 13', 27.5' | CONTAIN. LEAKAGE MONS FOR LINES EL. 2' & 13' | HYDROGEN ANALYZER MAN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION EL. 2' | CONTAIN. SHINE THRU DOVE | CONTAIN. SHINE THRU PERSONNEL MATCH | CONTAIN. DOVE R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|--|--|--|---|---|---|--|--|---|---|--------------------------------|--|----------------------------------|----------------------|-------------------|
| 0 | 4.1 ⁺³ | 3.2 ⁺⁵ | 1.1 ⁺² | 1.0 ⁺⁴ | NEG. | 9.0 ⁺¹ | NEG. | NEG. | NEG. | 5.3 ⁺⁶ | NEG. | 9.9 ⁺⁰ | NEG. | NEG. | NEG. | NEG. | 3.3 ⁺⁵ | 3.6 ⁺⁶ |
| 1 | 1.2 ⁺³ | 1.9 ⁺⁵ | 2.1 ⁺¹ | 5.0 ⁺³ | | 2.8 ⁺¹ | | | | 1.4 ⁺⁶ | | 1.0 ⁺⁰ | | | | | 2.0 ⁺⁵ | 1.6 ⁺⁶ |
| 2 | 7.5 ⁺² | 1.3 ⁺⁵ | 1.2 ⁺¹ | 3.3 ⁺³ | | 1.8 ⁺¹ | | | | 9.7 ⁺⁵ | | 2.6 ⁻¹ | | | | | 1.3 ⁺⁵ | 1.1 ⁺⁶ |
| 8 | 2.2 ⁺² | 5.3 ⁺⁴ | 2.6 ⁺⁰ | 1.2 ⁺³ | | 5.1 ⁺⁰ | | | | 3.7 ⁺⁵ | | NEG. | | | | | 5.1 ⁺⁴ | 4.2 ⁺⁵ |
| 24 | 4.4 ⁺¹ | 2.2 ⁺⁴ | 2.9 ⁻¹ | 3.8 ⁺² | | 1.1 ⁺⁰ | | | | 1.4 ⁺⁵ | | | | | | | 2.2 ⁺⁴ | 1.6 ⁺⁵ |
| 96 | 1.1 ⁺¹ | 7.4 ⁺³ | NEG. | 1.0 ⁺² | | NEG. | | | | 5.6 ⁺⁴ | | | | | | | 7.5 ⁺³ | 6.4 ⁺⁴ |
| 192 | 8.6 ⁺⁰ | 5.1 ⁺³ | | 7.1 ⁺¹ | | | | | | 3.5 ⁺⁴ | | | | | | | 5.2 ⁺³ | 4.0 ⁺⁴ |
| 360 | 5.8 ⁺⁰ | 3.2 ⁺³ | | 4.7 ⁺¹ | | | | | | 1.9 ⁺⁴ | | | | | | | 3.3 ⁺³ | 2.2 ⁺⁴ |
| 720 | 2.6 ⁺⁰ | 1.5 ⁺³ | | 2.4 ⁺¹ | | | | | | 8.4 ⁺³ | | | | | | | 1.5 ⁺³ | 9.9 ⁺³ |
| 2160 | 4.2 ⁻¹ | 4.3 ⁺² | | 7.5 ⁺⁰ | | | | | | 3.3 ⁺³ | | | | | | | 4.4 ⁺² | 3.7 ⁺³ |
| 4320 | NEG. | 2.2 ⁺² | | 3.1 ⁺⁰ | | | | | | 1.1 ⁺³ | | | | | | | 2.2 ⁺² | 1.3 ⁺³ |

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

1

SURRY AUXILIARY BLDG RADIATION ZONE AREA W @ EL. 27'-6"

ESTIMATED HIGHEST DIRECT P DOSE RATES (μ R/hr) FROM VARIOUS SOURCES DUE TO

LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

PRELIMINARY

———— MITIGATION PHASE - NO LETDOWN ————

(2)

| SOURCE TIME (HR) | ST/CH LINES IN PEN. AREA el. 2' FP-10K | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PIPE TUN. el. 2' FP-14L, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PIPE TUN. el. 2' FP-19C | DRAIN LINES INSIDE WHARF TANKS CUB. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' & 13' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER MAN TRAY el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONAL HATCH | CONTAIN. SHINE THRU DOME R.L. HEADERS | SUB- ⁽¹⁾ TOTAL | TOTAL |
|------------------------|---|---|--------------------------------------|---|---|--|--|---|---|---|---|---|---|--------------------------------|---|--|------------------------------|-------------------|
| 0 | 2.5 ⁺² | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | 1.5 ⁺¹ | NEG. | 2.1 ⁺³ | 4.0 ⁺² | 4.3 ⁻¹ | 2.8 ⁺³ | 2.8 ⁺³ |
| 1 | 6.1 ⁺¹ | | | | | | | | | | | NEG. | | 3.5 ⁺² | 1.1 ⁺² | 2.8 ⁺⁰ | 5.2 ⁺² | 5.2 ⁺² |
| 2 | 3.6 ⁺¹ | | | | | | | | | | | | | 2.6 ⁺² | 8.0 ⁺¹ | 1.8 ⁺⁰ | 3.8 ⁺² | 3.8 ⁺² |
| 8 | 9.2 ⁺⁰ | | | | | | | | | | | | | 5.2 ⁺¹ | 3.0 ⁺¹ | 4.3 ⁻¹ | 9.2 ⁺¹ | 9.2 ⁺¹ |
| 24 | 1.4 ⁺⁰ | | | | | | | | | | | | | 3.6 ⁺⁰ | 1.6 ⁺¹ | NEG. | 2.1 ⁺¹ | 2.1 ⁺¹ |
| 96 | 4.1 ⁻¹ | | | | | | | | | | | | | 1.7 ⁻¹ | 6.0 ⁺⁰ | | 6.6 ⁺⁰ | 6.6 ⁺⁰ |
| 192 | NEG. | | | | | | | | | | | | | NEG. | 4.0 ⁺⁰ | | 4.0 ⁺⁰ | 4.0 ⁺⁰ |
| 360 | | | | | | | | | | | | | | | 2.0 ⁺⁰ | | 2.0 ⁺⁰ | 2.0 ⁺⁰ |
| 720 | | | | | | | | | | | | | | | 6.0 ⁻¹ | | 6.0 ⁻¹ | 6.0 ⁻¹ |
| 2160 | | | | | | | | | | | | | | | NEG. | | NEG. | NEG. |
| 4320 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

SURRY AUXILIARY BLDG. RADIATION ZONE AREA X @ EL. 27'-6"

ESTIMATED HIGHEST DIRECT P DOSE RATES ($\mu R/hr$) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

PRELIMINARY

MITIGATION PHASE - NO LETDOWN

| SOURCE TIME (HR) | ST/CH LINES IN PEN. AREA EL. 2' FP-10R | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN P4E TUN. EL. 2' FP-MC, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN P4E TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WHRT TANKS CUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' & 13' | CONTAIN. LEAKAGE MONITORING LINES EL. 2' & 13' | HYDROGEN ANALYZER MAN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU DOORWAY MATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|---|---|--------------------------------------|---|---|--|---|--|---|---|--|---|---|--------------------------------|--|----------------------------------|----------------------|-------------------|
| 0 | NEG. | 4.7 ⁺⁴ | 5.5 ⁺² | 2.2 ⁺³ | NEG. | NEG. | NEG. | NEG. | NEG. | 6.1 ⁺² | NEG. | 2.4 ⁺⁰ | NEG. | 1.4 ⁺⁰ | NEG. | 4.3 ⁻⁵ | 5.0 ⁺⁴ | 5.0 ⁺⁴ |
| 1 | | 1.7 ⁺⁴ | 2.3 ⁺² | 9.4 ⁺² | | | | | | 2.5 ⁺² | | NEG. | | 1.9 ⁻¹ | | 1.0 ⁻³ | 1.8 ⁺⁴ | 1.8 ⁺⁴ |
| 2 | | 1.2 ⁺⁴ | 1.5 ⁺² | 6.2 ⁺² | | | | | | 1.8 ⁺² | | | | NEG. | | NEG. | 1.3 ⁺⁴ | 1.3 ⁺⁴ |
| 8 | | 4.7 ⁺³ | 5.3 ⁺¹ | 2.2 ⁺² | | | | | | 6.6 ⁺¹ | | | | | | | 5.0 ⁺³ | 5.0 ⁺³ |
| 24 | | 2.0 ⁺³ | 1.4 ⁺¹ | 5.7 ⁺¹ | | | | | | 2.6 ⁺¹ | | | | | | | 2.1 ⁺³ | 2.1 ⁺³ |
| 96 | | 6.7 ⁺² | 3.4 ⁺⁰ | 1.4 ⁺¹ | | | | | | 1.0 ⁺¹ | | | | | | | 6.9 ⁺² | 7.0 ⁺² |
| 192 | | 4.5 ⁺² | 2.4 ⁺⁰ | 1.0 ⁺¹ | | | | | | 6.4 ⁺⁰ | | | | | | | 4.6 ⁺² | 4.7 ⁺² |
| 360 | | 2.8 ⁺² | 1.7 ⁺⁰ | 6.9 ⁺⁰ | | | | | | 3.5 ⁺⁰ | | | | | | | 2.9 ⁺² | 2.9 ⁺² |
| 720 | | 1.4 ⁺² | NEG. | 3.4 ⁺⁰ | | | | | | 1.5 ⁺⁰ | | | | | | | 1.4 ⁺² | 1.4 ⁺² |
| 2160 | | 4.7 ⁺¹ | | 8.8 ⁻¹ | | | | | | 6.1 ⁻¹ | | | | | | | 4.8 ⁺¹ | 4.8 ⁺¹ |
| 4320 | | 2.0 ⁺¹ | | NEG. | | | | | | NEG. | | | | | | | 2.0 ⁺¹ | 2.0 ⁺¹ |

(1) SUB-TOTALS ARE CONTROLS FOR THE SURRY AUXILIARY BLDG. TANKS CUB. EL. 2' & 13' AND EL. 2' & 13' REACTOR COOLANT LINES NOT IN PENETRATION AREA

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

1

SURRY AUXILIARY BLDG RADIATION ZONE AREA Y @ EL. 27'-6"

ESTIMATED HIGHEST DIRECT T DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

PRELIMINARY

———— MITIGATION PHASE - NO LETDOWN ————

| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA el. 2' FP-10R | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PYE TUN. el. 2' FP-14L, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PYE TUN. el. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS LUB. el. 2' & 13' FP-19C | (2) LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' & 13' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAY el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONAL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|--|---|---|--|---|---|---|---|--------------------------------|---|----------------------------------|----------------------|-------------------|
| | | | | | | | | | | | | | | | | | | |
| 0 | NEG. | 4.7 ⁺⁴ | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | 1.3 ⁺⁷ | NEG. | 2.4 ⁺⁰ | NEG. | 1.4 ⁺⁰ | NEG. | 4.3 ⁺⁵ | 4.7 ⁺⁴ | 1.3 ⁺⁷ |
| 1 | | 1.7 ⁺⁴ | | | | | | | | 5.3 ⁺⁶ | | | | 1.9 ⁺¹ | | 1.0 ⁺³ | 1.7 ⁺⁴ | 5.3 ⁺⁶ |
| 2 | | 1.2 ⁺⁴ | | | | | | | | 3.7 ⁺⁶ | | | | NEG. | | NEG. | 1.2 ⁺⁴ | 3.7 ⁺⁶ |
| 8 | | 4.7 ⁺³ | | | | | | | | 1.4 ⁺⁶ | | | | | | | 4.7 ⁺³ | 1.4 ⁺⁶ |
| 24 | | 2.0 ⁺³ | | | | | | | | 5.4 ⁺⁵ | | | | | | | 2.0 ⁺³ | 5.4 ⁺⁵ |
| 96 | | 6.7 ⁺² | | | | | | | | 2.1 ⁺⁵ | | | | | | | 6.7 ⁺² | 2.1 ⁺⁵ |
| 192 | | 4.5 ⁺² | | | | | | | | 1.3 ⁺⁵ | | | | | | | 4.5 ⁺² | 1.3 ⁺⁵ |
| 360 | | 2.8 ⁺² | | | | | | | | 7.3 ⁺⁴ | | | | | | | 2.8 ⁺² | 7.3 ⁺⁴ |
| 720 | | 1.4 ⁺² | | | | | | | | 3.2 ⁺⁴ | | | | | | | 1.4 ⁺² | 3.2 ⁺⁴ |
| 2160 | | 4.7 ⁺¹ | | | | | | | | 1.3 ⁺⁴ | | | | | | | 4.7 ⁺¹ | 1.3 ⁺⁴ |
| 4320 | Y | 2.0 ⁺¹ | Y | Y | Y | Y | Y | Y | Y | 4.3 ⁺³ | Y | Y | Y | Y | Y | Y | 2.0 ⁺¹ | 4.3 ⁺³ |

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA Z @ EL. 27'-6"

ESTIMATED HIGHEST DIRECT T DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO

LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

PRELIMINARY

MITIGATION PHASE - NO LETDOWN

| SOURCE TIME (HR) | (2) | | AUX. BLDG SUMP el. 2' | DRAIN LINES IN SUMP AREA el. 2' & 13' | DRAIN LINES IN PIPE TUN. el. 2' | SAFEGUARDS SUMP DRAIN LINES IN PER AREA el. 2' | SAFEGUARDS SUMP DRAIN LINES IN PIPE TUN. el. 2' | DRAIN LINES INSIDE WASTE TANKS el. 2' & 13' | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' & 13' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER MAN TRAY el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATOR el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONAL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|---------------------------------------|---------------------------------------|-----------------------------|---|---------------------------------------|---|--|---|--|--|--|---|--|--------------------------------|---|----------------------------------|----------------------|-------------------|
| | SI/CH LINES IN PER. AREA el. 2' | CHARGING PUMP CUB. el. 2' & 13' | | | | | | | | | | | | | | | | |
| 0 | 7.7 ⁺² | 4.7 ⁺⁴ | NEG. | NEG. | NEG. | 2.2 ⁺¹ | 9.7 ⁺⁰ | NEG. | NEG. | 2.6 ⁺³ | 1.3 ⁺² | 1.7 ⁺⁴ | NEG. | 4.0 ⁺² | 4.0 ⁺² | NEG. | 6.6 ⁺⁴ | 6.8 ⁺⁴ |
| 1 | 1.9 ⁺² | 1.7 ⁺⁴ | | | | 5.9 ⁺⁰ | 2.6 ⁺⁰ | | | 1.1 ⁺³ | 3.2 ⁺¹ | 2.1 ⁺³ | | 5.2 ⁺¹ | 1.1 ⁺² | | 3.0 ⁺⁴ | 3.1 ⁺⁴ |
| 2 | 1.1 ⁺² | 1.2 ⁺¹ | | | | 3.6 ⁺⁰ | 1.7 ⁺⁰ | | | 7.6 ⁺² | 2.4 ⁺¹ | 1.5 ⁺³ | | 3.8 ⁺¹ | 8.0 ⁺¹ | | 1.2 ⁺⁴ | 1.3 ⁺⁴ |
| 8 | 3.0 ⁺¹ | 4.7 ⁺³ | | | | NEG. | NEG. | | | 2.9 ⁺² | 8.5 ⁺⁰ | 6.4 ⁺² | | 7.2 ⁺⁰ | 3.0 ⁺¹ | | 5.1 ⁺³ | 5.7 ⁺³ |
| 24 | 5.2 ⁺⁰ | 2.0 ⁺³ | | | | | | | | 1.1 ⁺² | 3.2 ⁺⁰ | 1.5 ⁺² | | NEG. | 1.6 ⁺¹ | | 2.2 ⁺³ | 2.3 ⁺³ |
| 96 | 1.3 ⁺⁰ | 6.7 ⁺² | | | | | | | | 4.4 ⁺¹ | 1.2 ⁺⁰ | 1.2 ⁺¹ | | | 6.0 ⁺⁰ | | 6.9 ⁺² | 7.3 ⁺² |
| 192 | 1.1 ⁺⁰ | 4.5 ⁺² | | | | | | | | 2.8 ⁺¹ | NEG. | 4.9 ⁺⁰ | | | 4.0 ⁺⁰ | | 4.5 ⁺² | 4.9 ⁺² |
| 360 | NEG. | 2.8 ⁺² | | | | | | | | 1.5 ⁺¹ | | 2.1 ⁺⁰ | | | 2.0 ⁺⁰ | | 2.9 ⁺² | 3.0 ⁺² |
| 720 | | 1.4 ⁺² | | | | | | | | 6.6 ⁺⁰ | | NEG. | | | NEG. | | 1.4 ⁺² | 1.5 ⁺² |
| 2160 | | 4.7 ⁺¹ | | | | | | | | 2.6 ⁺⁰ | | | | | | | 4.7 ⁺¹ | 5.0 ⁺¹ |
| 4320 | | 2.0 ⁺¹ | | | | | | | | NEG. | | | | | | | 2.0 ⁺¹ | 2.1 ⁺¹ |

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA AA @ EL. 27'-6"

ESTIMATED HIGHEST DIRECT T DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

PRELIMINARY

MITIGATION PHASE - NO LETDOWN

| SOURCE TIME (HR) | SE/CH LINES IN PEN AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PPE TUN. EL. 2' FP-14L, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PPE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' & 13' 27.5' | CONTAIN. LEAKAGE MONITORING LINES EL. 2' & 13' | HYDROGEN ANALYZER DEAN TRAY EL. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONAL HATCH | CONTAIN. DOME R.S. HEADS | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|--|---|---|---|---|--|--|---|--------------------------------|---|--------------------------------|----------------------|-------------------|
| 0 | NEG. | 3.6 ⁺¹ | NEG. | NEG. | 4.4 ⁺¹ | NEG. | NEG. | NEG. | NEG. | 3.3 ⁺³ | NEG. | NEG. | NEG. | 1.1 ⁺³ | 4.2 ⁺² | 3.2 ⁻² | 1.6 ⁺³ | 4.9 ⁺³ |
| 1 | | 2.1 ⁺¹ | | | 1.2 ⁺¹ | | | | | 1.4 ⁺³ | | | | 1.4 ⁺² | 1.1 ⁺² | 7.5 ⁻¹ | 2.7 ⁺² | 1.7 ⁺³ |
| 2 | | 1.4 ⁺¹ | | | 7.6 ⁺⁰ | | | | | 9.7 ⁺² | | | | 2.1 ⁻¹ | 8.0 ⁺¹ | NEG. | 1.9 ⁺² | 1.2 ⁺³ |
| 8 | | 5.8 ⁺⁰ | | | 2.2 ⁺⁰ | | | | | 3.7 ⁺² | | | | 1.5 ⁺⁰ | 3.0 ⁺¹ | | 5.7 ⁺¹ | 4.3 ⁺² |
| 24 | | 2.5 ⁺⁰ | | | 4.2 ⁻¹ | | | | | 1.4 ⁺² | | | | NEG. | 1.6 ⁺¹ | | 2.0 ⁺¹ | 1.6 ⁺² |
| 96 | | NEG. | | | NEG. | | | | | 5.6 ⁺¹ | | | | | 6.0 ⁺⁰ | | 6.8 ⁺⁰ | 6.3 ⁺¹ |
| 192 | | | | | | | | | | 3.5 ⁺¹ | | | | | 4.0 ⁺⁰ | | 4.0 ⁺⁰ | 3.9 ⁺¹ |
| 360 | | | | | | | | | | 1.7 ⁺¹ | | | | | 2.0 ⁺⁰ | | 2.0 ⁺⁰ | 2.1 ⁺¹ |
| 720 | | | | | | | | | | 8.4 ⁺⁰ | | | | | 6.0 ⁻¹ | | 6.0 ⁻¹ | 9.0 ⁺⁰ |
| 2160 | | | | | | | | | | 3.3 ⁺⁰ | | | | | NEG. | | | |
| 4320 | | | | | | | | | | 1.1 ⁺⁰ | | | | | | | | |

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA BB @ EL. 27'-6"

PRELIMINARY

ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA el. 2' FP-10K | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PYE TUN. el. 2' FP-HL-7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PYE TUN. el. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' 13' & 27.5' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER MAIN TRAY el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE THRU DOVE | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOVE R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|--|---|---|---|---|---|--|---|--------------------------------|--|----------------------------------|----------------------|-------------------|
| | | | | | | | | | | | | | | | | | | |
| 0 | 2.3 ⁺³ | 3.5 ⁺³ | NEG. | NEG. | NEG. | 5.7 ⁺¹ | 9.9 ⁺¹ | NEG. | NEG. | NEG. | 2.3 ⁺² | 1.7 ⁺⁴ | NEG. | 1.1 ⁺³ | 4.0 ⁺² | 3.2 ⁻² | 2.4 ⁺⁴ | 2.4 ⁺⁴ |
| 1 | 5.8 ⁺² | 2.1 ⁺³ | | | | 1.5 ⁺¹ | 2.9 ⁺¹ | | | | 5.7 ⁺¹ | 2.1 ⁺³ | | 1.4 ⁺² | 1.1 ⁺² | 7.5 ⁻¹ | 5.3 ⁺³ | 5.3 ⁺³ |
| 2 | 3.5 ⁺² | 1.4 ⁺³ | | | | 9.3 ⁺³ | 1.7 ⁺¹ | | | | 4.2 ⁺¹ | 1.5 ⁺³ | | 1.0 ⁺² | 8.0 ⁺¹ | NEG. | 3.6 ⁺³ | 3.6 ⁺³ |
| 8 | 9.2 ⁺¹ | 5.8 ⁺² | | | | 2.6 ⁺¹ | 4.8 ⁺⁰ | | | | 1.5 ⁺¹ | 6.4 ⁺² | | 2.1 ⁺¹ | 3.0 ⁺¹ | | 1.4 ⁺³ | 1.4 ⁺³ |
| 24 | 1.6 ⁺¹ | 2.4 ⁺² | | | | NEG. | 9.6 ⁻¹ | | | | 5.7 ⁺⁰ | 1.5 ⁺² | | 1.5 ⁺⁰ | 1.6 ⁺¹ | | 4.3 ⁺² | 4.3 ⁺² |
| 96 | 4.3 ⁺⁰ | 8.4 ⁺¹ | | | | | NEG. | | | | 2.1 ⁺⁰ | 1.2 ⁺¹ | | NEG. | 6.0 ⁺⁰ | | 1.1 ⁺² | 1.1 ⁺² |
| 192 | 3.3 ⁺⁰ | 5.8 ⁺¹ | | | | | | | | | 1.2 ⁺⁰ | 4.9 ⁺⁰ | | | 4.0 ⁺⁰ | | 7.4 ⁺¹ | 7.4 ⁺¹ |
| 360 | 2.2 ⁺⁰ | 3.5 ⁺¹ | | | | | | | | | 5.5 ⁻¹ | 2.1 ⁺⁰ | | | 2.0 ⁺⁰ | | 4.2 ⁺¹ | 4.2 ⁺¹ |
| 720 | 9.9 ⁻¹ | 1.7 ⁺¹ | | | | | | | | | NEG. | NEG. | | | 6.0 ⁻¹ | | 1.9 ⁺¹ | 1.9 ⁺¹ |
| 2160 | NEG. | 5.8 ⁺⁰ | | | | | | | | | | | | | NEG. | | 5.8 ⁺⁰ | 5.8 ⁺⁰ |
| 4320 | | 2.4 ⁺⁰ | | | | | | | | | | | | | | | 2.4 ⁺⁰ | 2.4 ⁺⁰ |

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA CC @ EL. 27'-6"

PRELIMINARY

ESTIMATED HIGHEST DIRECT P DOSE RATES ($\mu R/hr$) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

(2)

| SOURCE TIME (HR) | SI/CN LINES IN PEN AREA el. 2' FP-10K | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 3' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PVE TUN. el. 2' FP-14C, 7A | SAFEGUARDS SUMP DRAIN LINE IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINE IN PVE TUN. el. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' & 13' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER MAIN TRAY el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|---|--|---|---|---|---|--|---|--------------------------------|--|----------------------------------|----------------------|-------------------|
| 0 | NEG. | NEG. | NEG. | NEG. | 4.5 ⁺² | NEG. | NEG. | 4.0 ⁺³ | 3.9 ⁺³ | NEG. | NEG. | NEG. | NEG. | 2.1 ⁺³ | 4.0 ⁺² | 4.3 ⁻¹ | 3.0 ⁺³ | 1.1 ⁺⁴ |
| 1 | | | | | 1.3 ⁺² | | | 2.3 ⁺³ | 1.0 ⁺³ | | | | | 3.5 ⁺² | 1.1 ⁺² | 2.8 ⁺⁰ | 5.9 ⁺² | 3.9 ⁺³ |
| 2 | | | | | 7.8 ⁺¹ | | | 1.6 ⁺³ | 6.2 ⁺² | | | | | 2.6 ⁺² | 8.0 ⁺¹ | 4.3 ⁻¹ | 4.2 ⁺² | 2.6 ⁺³ |
| 8 | | | | | 2.2 ⁺¹ | | | 6.5 ⁺² | 1.7 ⁺² | | | | | 5.2 ⁺¹ | 3.0 ⁺¹ | NEG. | 1.0 ⁺² | 9.2 ⁺² |
| 24 | | | | | 4.4 ⁺⁰ | | | 2.7 ⁺² | 3.1 ⁺¹ | | | | | 3.6 ⁺⁰ | 1.6 ⁺¹ | | 2.4 ⁺¹ | 3.3 ⁺² |
| 96 | | | | | 1.1 ⁺⁰ | | | 9.4 ⁺¹ | 7.9 ⁺⁰ | | | | | 1.7 ⁻¹ | 6.0 ⁺⁰ | | 7.3 ⁺⁰ | 1.1 ⁺² |
| 192 | | | | | 8.5 ⁻¹ | | | 6.3 ⁺¹ | 6.1 ⁺⁰ | | | | | NEG. | 4.0 ⁺⁰ | | 4.9 ⁺⁰ | 7.4 ⁺¹ |
| 360 | | | | | NEG. | | | 4.0 ⁺¹ | 4.1 ⁺⁰ | | | | | | 2.0 ⁺⁰ | | 2.0 ⁺⁰ | 4.6 ⁺¹ |
| 720 | | | | | | | | 2.0 ⁺¹ | 1.8 ⁺⁰ | | | | | | 6.0 ⁻¹ | | 6.0 ⁻¹ | 2.2 ⁺¹ |
| 2160 | | | | | | | | 6.5 ⁺⁰ | 2.9 ⁻¹ | | | | | | NEG. | | NEG. | 6.8 ⁺⁰ |
| 4320 | | | | | | | | 2.7 ⁺⁰ | NEG. | | | | | | | | | 2.7 ⁺⁰ |

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

SURRY AUXILIARY BLDG RADIATION ZONE AREA DD @ EL. 27'-6"

PRELIMINARY

ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

— MITIGATION PHASE - NO LETDOWN —

| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA el. 2' FP-10K | CHARGING PUMP CUB. el. 2' & 15' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PHE TUN. el. 2' FP-19L, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PHE TUN. el. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' & 13' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER DRAW TRAP el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL MATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|--|---|---|---|---|---|--|---|--------------------------------|--|----------------------------------|----------------------|-------------------|
| 0 | NEG. | 1.8 ⁺² | NEG. | 2.2 ⁺³ | 4.4 ⁺¹ | NEG. | 9.7 ⁺⁰ | NEG. | 3.9 ⁺³ | NEG. | 7.7 ⁺¹ | 1.7 ⁺⁴ | NEG. | 2.1 ⁺³ | 4.0 ⁺² | 4.3 ⁻¹ | 2.2 ⁺⁴ | 2.6 ⁺⁴ |
| 1 | | 1.1 ⁺² | | 9.4 ⁺² | 1.2 ⁺¹ | | 2.6 ⁺⁰ | | 1.0 ⁺³ | | 1.9 ⁺¹ | 2.1 ⁺³ | | 3.5 ⁺² | 1.1 ⁺² | 2.8 ⁺⁰ | 3.6 ⁺³ | 4.6 ⁺³ |
| 2 | | 7.2 ⁺¹ | | 6.2 ⁺² | 7.6 ⁺⁰ | | 1.7 ⁺⁰ | | 6.2 ⁺² | | 1.4 ⁺¹ | 1.5 ⁺³ | | 2.6 ⁺² | 8.0 ⁺¹ | 1.8 ⁺⁰ | 2.6 ⁺³ | 3.2 ⁺¹ |
| 8 | | 2.9 ⁺¹ | | 2.2 ⁺² | 2.2 ⁺⁰ | | 4.8 ⁻¹ | | 1.7 ⁺² | | 5.0 ⁺⁰ | 6.4 ⁺² | | 5.2 ⁺¹ | 3.0 ⁺¹ | 4.3 ⁻¹ | 9.5 ⁺² | 1.1 ⁺³ |
| 24 | | 1.2 ⁺¹ | | 5.7 ⁺¹ | 4.2 ⁻¹ | | NEG. | | 3.1 ⁺¹ | | 1.9 ⁺⁰ | 1.5 ⁺² | | 3.6 ⁺⁰ | 1.6 ⁺¹ | NEG. | 2.4 ⁺² | 5.5 ⁺² |
| 96 | | 4.1 ⁺⁰ | | 1.4 ⁺¹ | NEG. | | | | 7.9 ⁺⁰ | | 7.0 ⁻¹ | 1.2 ⁺¹ | | 1.7 ⁻¹ | 6.0 ⁺⁰ | | 3.6 ⁺¹ | 4.4 ⁺¹ |
| 192 | | 2.9 ⁺⁰ | | 1.0 ⁺¹ | | | | | 6.1 ⁺⁰ | | NEG. | 4.9 ⁺⁰ | | NEG. | 4.0 ⁺⁰ | | 2.2 ⁺¹ | 2.6 ⁺¹ |
| 360 | | 1.8 ⁺⁰ | | 6.9 ⁺⁰ | | | | | 4.1 ⁺⁰ | | | 2.1 ⁺⁰ | | | 2.0 ⁺⁰ | | 1.3 ⁺¹ | 1.7 ⁺¹ |
| 720 | | 8.6 ⁻¹ | | 3.4 ⁺⁰ | | | | | 1.8 ⁺⁰ | | | NEG. | | | 6.0 ⁻¹ | | 5.0 ⁺⁰ | 6.8 ⁺⁰ |
| 2160 | | NEG. | | 8.8 ⁻¹ | | | | | 2.9 ⁻¹ | | | | | | NEG. | | NEG. | 1.2 ⁺⁰ |
| 4320 | | | | NEG. | | | | | NEG. | | | | | | | | | NEG. |

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

PRELIMINARY

SURRY AUXILIARY BLDG RADIATION ZONE AREA EE @ EL. 27'-6"

ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

(2)

| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA el. 2' FP-10K | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PVE TUN. el. 2' FP-14C, 7A | SAFEGUARDS SUMP DRAIN LINE IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINE IN PVE TUN. el. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS LUB. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' 13' & 27.5' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER MAIN TRAY el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONAL MATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|---|--|---|---|---|---|--|---|--------------------------------|---|----------------------------------|----------------------|--------------------|
| 0 | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | 4.0 ⁺³ | 6.3 ⁺⁴ | NEG. | NEG. | 1.5 ⁺¹ | NEG. | 2.1 ⁺³ | 4.0 ⁺³ | 4.3 ⁻¹ | 2.5 ⁺³ | 7.0 ⁺⁴ |
| 1 | | | | | | | | 2.5 ⁺³ | 2.1 ⁺⁴ | | | 4.5 ⁻¹ | | 3.5 ⁺² | 1.1 ⁺² | 2.8 ⁺⁰ | 4.6 ⁺² | 2.4 ⁺⁴ |
| 2 | | | | | | | | 1.6 ⁺³ | 1.3 ⁺⁴ | | | NEG. | | 2.6 ⁺² | 8.0 ⁺¹ | 1.8 ⁺⁰ | 3.4 ⁺² | 1.5 ⁺⁴ |
| 8 | | | | | | | | 6.5 ⁺² | 4.2 ⁺³ | | | | | 5.2 ⁺¹ | 3.0 ⁺¹ | 4.3 ⁻¹ | 8.2 ⁺¹ | 4.9 ⁺³ |
| 24 | | | | | | | | 2.7 ⁺² | 9.5 ⁺² | | | | | 3.6 ⁺⁰ | 1.6 ⁺¹ | NEG. | 2.0 ⁺¹ | 1.2 ⁺³ |
| 96 | | | | | | | | 9.4 ⁺¹ | 2.4 ⁺² | | | | | 1.7 ⁻¹ | 6.0 ⁺⁰ | | 6.0 ⁺⁰ | 3.4 ⁺² |
| 192 | | | | | | | | 6.3 ⁺¹ | 1.8 ⁺² | | | | | NEG. | 4.0 ⁺⁰ | | 4.0 ⁺⁰ | 2.5 ⁺² |
| 360 | | | | | | | | 4.0 ⁺¹ | 1.2 ⁺² | | | | | | 2.0 ⁺⁰ | | 2.0 ⁺⁰ | 1.6 ⁺² |
| 720 | | | | | | | | 2.0 ⁺¹ | 5.6 ⁺¹ | | | | | | 6.0 ⁻¹ | | 6.0 ⁻¹ | 5.9 ⁺¹ |
| 2160 | | | | | | | | 6.5 ⁺⁰ | 1.1 ⁺¹ | | | | | | NEG. | | NEG. | 1.75 ⁺¹ |
| 4320 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 2.7 ⁺⁰ | 3.1 ⁺⁰ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 5.8 ⁺⁰ |

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

PRELIMINARY

SURRY AUXILIARY BLDG RADIATION ZONE AREA FF @ EL. 45'-10"

ESTIMATED HIGHEST DIRECT P DOSE RATES (μ R/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA EL. 2' FP-10K | CHARGING PUMP CUB. EL. 2' & 13' FP-10C | AUX. BLDG SUMP EL. 2' FB-9A | DRAIN LINES IN SUMP AREA EL. 2' & 13' FP-19N | DRAIN LINES IN PVE TUN. EL. 2' FP-14L, 7A | SAFEGUARDS SUMP DRAIN LINE IN PEN AREA EL. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINE IN PVE TUN. EL. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS LUB. EL. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK EL. 2' & 13' | REACTOR COOLANT SAMPLING LINES EL. 2' 13' & 15' | CONTAIN. LEAKAGE MONITOR LINES EL. 2' & 13' | HYDROGEN ANALYZER DOWN TRAY PENETRATING EL. 2' | CONTAIN. ATMOSP. THRU PIPE PENETRATING EL. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|--|---|--|---|---|---|---|--|---|--------------------------------|--|----------------------------------|----------------------|-------------------|
| 0 | 5.5 ⁺¹ | NEG. | NEG. | NEG. | NEG. | 1.1 ⁺⁰ | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | 1.6 ⁺⁷ | NEG. | 1.6 ⁺⁷ | 1.6 ⁺⁷ |
| 1 | 1.4 ⁺¹ | | | | | NEG. | | | | | | | | | 3.8 ⁺⁶ | | 3.8 ⁺⁶ | 3.8 ⁺⁶ |
| 2 | 8.5 ⁺⁰ | | | | | | | | | | | | | | 2.8 ⁺⁶ | | 2.8 ⁺⁶ | 2.8 ⁺⁶ |
| 8 | 2.2 ⁺⁰ | | | | | | | | | | | | | | 9.8 ⁺⁵ | | 9.8 ⁺⁵ | 9.8 ⁺⁵ |
| 24 | 4.0 ⁺¹ | | | | | | | | | | | | | | 3.5 ⁺⁵ | | 3.5 ⁺⁵ | 3.5 ⁺⁵ |
| 96 | NEG. | | | | | | | | | | | | | | 1.1 ⁺⁵ | | 1.1 ⁺⁵ | 1.1 ⁺⁵ |
| 192 | | | | | | | | | | | | | | | 6.9 ⁺⁴ | | 6.9 ⁺⁴ | 6.9 ⁺⁴ |
| 360 | | | | | | | | | | | | | | | 3.1 ⁺⁴ | | 3.1 ⁺⁴ | 3.1 ⁺⁴ |
| 720 | | | | | | | | | | | | | | | 6.5 ⁺³ | | 6.5 ⁺³ | 6.5 ⁺³ |
| 2160 | | | | | | | | | | | | | | | 2.9 ⁺¹ | | 2.9 ⁺¹ | 2.9 ⁺¹ |
| 4320 | | | | | | | | | | | | | | | 2.8 ⁻² | | 2.8 ⁻² | 2.8 ⁻² |

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

PRELIMINARY

SURRY AUXILIARY BLDG RADIATION ZONE AREA GG @ EL. 45'-10"

ESTIMATED HIGHEST DIRECT P DOSE RATES (μ R/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

— MITIGATION PHASE - NO LETDOWN —

| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA el. 2' FP-10K | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PYE TUN. el. 2' FP-HC, 7A | SAFEGUARDS SUMP DRAIN LINE IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINE IN PYE TUN. el. 2' FP-19C | DRAIN LINES INSIDE WARE TANKS LUB. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' & 13' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER MAIN TRAP el. 143' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|--|---|--------------------------------------|---|---|---|--|--|---|---|---|---|---|--------------------------------|--|----------------------------------|----------------------|-------------------|
| 0 | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | 2.2 ⁺⁹ | 1.0 ⁺¹ | 4.2 ⁺⁰ | 2.2 ⁺⁴ | 2.2 ⁺⁴ |
| 1 | | | | | | | | | | | | | | 3.5 ⁺³ | 4.0 ⁺⁰ | 2.8 ⁺¹ | 3.5 ⁺³ | 3.5 ⁺³ |
| 2 | | | | | | | | | | | | | | 2.6 ⁺³ | 2.9 ⁺⁰ | 1.7 ⁺¹ | 2.6 ⁺³ | 2.6 ⁺³ |
| 8 | | | | | | | | | | | | | | 5.3 ⁺² | 1.0 ⁺⁰ | 4.2 ⁺⁰ | 5.4 ⁺² | 5.4 ⁺² |
| 24 | | | | | | | | | | | | | | 3.7 ⁺¹ | 5.0 ⁻¹ | 9.9 ⁻¹ | 3.9 ⁺¹ | 3.9 ⁺¹ |
| 96 | | | | | | | | | | | | | | 1.7 ⁺⁰ | NEG. | NEG. | 1.7 ⁺⁰ | 1.7 ⁺⁰ |
| 192 | | | | | | | | | | | | | | 6.9 ⁻¹ | | | 6.9 ⁻¹ | 6.9 ⁻¹ |
| 360 | | | | | | | | | | | | | | NEG. | | | NEG. | NEG. |
| 720 | | | | | | | | | | | | | | | | | | |
| 2160 | | | | | | | | | | | | | | | | | | |
| 4320 | | | | | | | | | | | | | | | | | | |

REGULATORY DOCKET FILE COPY

NOTED FEB 14 1980

PRELIMINARY

SURRY AUXILIARY BLDG RADIATION ZONE AREA HH @ EL. 45'-10"

ESTIMATED HIGHEST DIRECT T DOSE RATES ($\mu R/hr$) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

MITIGATION PHASE - NO LETDOWN

| (2) | | | | | | | | | | | | | | | | | | | | (1) | |
|------------------------|--|---|--------------------------------------|---|--|---|--|--|---|---|---|---|--|-------------------------------|--|----------------------------------|-------------------|-------------------|--|-----|--|
| SOURCE TIME (HR) | SI/CH LINES IN PEN AREA el. 2' FP-10K | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PPE TUN. el. 2' FP-19L, 7A | SAFEGUARDS SUMP DRAIN LINE IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINE IN PPE TUN. el. 2' FP-19C | DRAIN LINES INSIDE WARD TANKS CUB. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR CONTANT SAMPLING LINES el. 2' 19:27.5 | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAY el. 13' | CONTAIN. ATMOSP. THRU PIPE PENSTAMP el. 2' | CONTAIN. SHINE THA POME | CONTAIN. SHINE THA PERSONAL MATCH | CONTAIN. BOMB R.S. HEADERS | SUB- TOTAL | TOTAL | | | |
| 0 | 5.6 ⁺² | NEG. | NEG. | NEG. | NEG. | 1.3 ⁺⁰ | NEG. | NEG. | NEG. | 5.5 ⁺⁴ | 5.5 ⁺⁰ | 8.1 ⁺² | NEG. | 5.3 ⁺³ | 1.8 ⁺⁴ | 1.8 ⁺⁰ | 2.4 ⁺⁴ | 7.9 ⁺⁴ | | | |
| 1 | 1.4 ⁺² | | | | | NEG. | | | | 2.2 ⁺⁴ | 1.4 ⁺⁰ | 1.0 ⁺² | | 6.9 ⁺² | 7.2 ⁺³ | 1.2 ⁺¹ | 8.0 ⁺³ | 3.0 ⁺⁴ | | | |
| 2 | 8.6 ⁺¹ | | | | | | | | | 1.6 ⁺⁴ | 1.0 ⁺⁰ | 7.5 ⁺¹ | | 5.0 ⁺² | 5.3 ⁺³ | 7.2 ⁺⁰ | 6.0 ⁺³ | 2.2 ⁺⁴ | | | |
| 8 | 2.3 ⁺¹ | | | | | | | | | 6.0 ⁺³ | 3.6 ⁻¹ | 3.1 ⁺¹ | | 9.7 ⁺¹ | 2.3 ⁺³ | 1.7 ⁺⁰ | 2.4 ⁺³ | 8.4 ⁺³ | | | |
| 24 | 4.1 ⁺⁰ | | | | | | | | | 2.3 ⁺³ | NEG. | 7.3 ⁺⁰ | | 5.7 ⁺⁰ | 8.0 ⁺² | 7.1 ⁻¹ | 8.2 ⁺² | 3.1 ⁺³ | | | |
| 96 | 1.1 ⁺⁰ | | | | | | | | | 9.1 ⁺² | | NEG. | | 1.9 ⁻¹ | 3.0 ⁺² | NEG. | 3.0 ⁺² | 1.2 ⁺³ | | | |
| 192 | 7.4 ⁻¹ | | | | | | | | | 5.7 ⁺² | | | | NEG. | 1.6 ⁺² | | 1.6 ⁺² | 7.3 ⁺² | | | |
| 360 | NEG. | | | | | | | | | 3.1 ⁺² | | | | | 7.0 ⁺¹ | | 7.0 ⁺¹ | 3.8 ⁺² | | | |
| 720 | | | | | | | | | | 1.4 ⁺² | | | | | 1.6 ⁺¹ | | 1.6 ⁺¹ | 1.6 ⁺² | | | |
| 2160 | | | | | | | | | | 5.5 ⁺¹ | | | | | NEG | | NEG. | 5.5 ⁺¹ | | | |
| 4320 | | | | | | | | | | 1.9 ⁺¹ | | | | | | | NEG | 1.9 ⁺¹ | | | |

PRELIMINARY

SURRY AUXILIARY BLDG RADIATION ZONE AREA II @ EL. 45'-10"

ESTIMATED HIGHEST DIRECT P DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

— MITIGATION PHASE - NO LETDOWN —

(2)

| SOURCE TIME (HR) | SI/CH LINES IN PEN. AREA el. 2' FP-10K | CHARGING PUMP CUB. el. 2' & 15' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN P4E TUN. el. 2' FP-MC.7A | SAFEGUARDS SUMP DRAIN LINE IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINE IN P4E TUN. el. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' & 13' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER DOWN TRAY el. 143' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE TRAIL DOME | CONTAIN. SHINE TRAIL PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | (1) SUB- TOTAL | TOTAL |
|------------------------|---|---|--------------------------------------|---|--|---|--|---|---|---|---|---|---|---------------------------------|---|----------------------------------|----------------------|------------|
| 0 | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | 8.0^{+4} | NEG. | NEG. | NEG. | 1.1^{+4} | 2.5^{+2} | 1.2^{+0} | 1.1^{+4} | 9.1^{+4} |
| 1 | | | | | | | | | | 3.3^{+4} | | | | 1.5^{+3} | 6.5^{+1} | 9.3^{+0} | 1.6^{+3} | 3.5^{+4} |
| 2 | | | | | | | | | | 2.3^{+4} | | | | 1.1^{+3} | 4.7^{+1} | 5.0^{+0} | 1.2^{+3} | 2.4^{+4} |
| 8 | | | | | | | | | | 8.8^{+3} | | | | 2.3^{+2} | 1.9^{+1} | 1.2^{+0} | 2.5^{+2} | 9.1^{+3} |
| 24 | | | | | | | | | | 3.4^{+3} | | | | 1.6^{+1} | 7.6^{+0} | 1.8^{-1} | 2.4^{+1} | 3.4^{+3} |
| 96 | | | | | | | | | | 1.3^{+3} | | | | 6.2^{-1} | 2.8^{+0} | NEG. | 3.2^{+0} | 1.3^{+3} |
| 192 | | | | | | | | | | 8.4^{+2} | | | | NEG. | 1.6^{+0} | | 1.6^{+0} | 8.4^{+2} |
| 360 | | | | | | | | | | 4.6^{+2} | | | | | 7.9^{-1} | | 7.9^{-1} | 4.6^{+2} |
| 720 | | | | | | | | | | 2.0^{+2} | | | | | NEG. | | NEG. | 2.0^{+2} |
| 2160 | | | | | | | | | | 8.0^{+1} | | | | | | | | 8.0^{+1} |
| 4320 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 2.7^{+1} | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 2.7^{+1} |

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PRELIMINARY

SURRY AUXILIARY BLDG RADIATION ZONE AREA JJ @ EL. 45'-10"

ESTIMATED HIGHEST DIRECT $\dot{\gamma}$ DOSE RATES (mR/hr) FROM VARIOUS SOURCES DUE TO
LOCA (TID-14844 SOURCE TERMS) INSIDE UNIT # 2 CONTAINMENT

———— MITIGATION PHASE - NO LETDOWN ————

| SOURCE TIME (HR) | (2) | | | | | | | | | | | | | | | | (1) SUB- TOTAL | TOTAL |
|------------------------|---|--|-----------------------------------|--|---|---|--|--|--|---|--|---|---|--------------------------------|--|----------------------------------|----------------------|-------------------|
| | SE/CH LINES IN PEN AREA el. 2' FP-10K | CHARGING PUMP CUB. el. 2' & 13' FP-10C | AUX. BLDG SUMP el. 2' FB-9A | DRAIN LINES IN SUMP AREA el. 2' & 13' FP-19N | DRAIN LINES IN PPE TUN. el. 2' FP-14L, 7A | SAFEGUARDS SUMP DRAIN LINES IN PEN AREA el. 2' FP-7A | SAFEGUARDS SUMP DRAIN LINES IN PPE TUN. el. 2' FP-19C | DRAIN LINES INSIDE WASTE TANKS CUB. el. 2' & 13' FP-19C | LOW LEVEL OR HIGH LEVEL WASTE DRAIN TANK el. 2' & 13' | REACTOR COOLANT SAMPLING LINES el. 2' & 13' 15:27.5' | CONTAIN. LEAKAGE MONITOR LINES el. 2' & 13' | HYDROGEN ANALYZER DRAIN TRAY el. 13' | CONTAIN. ATMOSP. THRU PIPE PENETRATION el. 2' | CONTAIN. SHINE THRU DOME | CONTAIN. SHINE THRU PERSONNEL HATCH | CONTAIN. DOME R.S. HEADERS | | |
| 0 | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | NEG. | 1.5 ⁺⁰ | 5.5 ⁺⁴ | NEG. | NEG. | NEG. | 2.2 ⁺⁴ | 4.0 ⁺⁰ | 4.2 ⁺⁰ | 2.2 ⁺⁴ | 7.7 ⁺⁴ |
| 1 | | | | | | | | | NEG. | 2.2 ⁺⁴ | | | | 3.5 ⁺³ | 1.1 ⁺⁰ | 2.8 ⁺¹ | 3.5 ⁺³ | 2.6 ⁺⁴ |
| 2 | | | | | | | | | | 1.6 ⁺⁴ | | | | 2.6 ⁺³ | 8.0 ⁻¹ | 1.7 ⁺¹ | 2.6 ⁺³ | 1.9 ⁺⁴ |
| 8 | | | | | | | | | | 6.0 ⁺³ | | | | 5.3 ⁺² | NEG. | 4.2 ⁺⁰ | 5.3 ⁺² | 6.5 ⁺³ |
| 24 | | | | | | | | | | 2.3 ⁺³ | | | | 3.7 ⁺¹ | | 9.9 ⁻¹ | 3.8 ⁺¹ | 2.3 ⁺³ |
| 96 | | | | | | | | | | 9.1 ⁺² | | | | 1.7 ⁺⁰ | | NEG. | 1.7 ⁺⁰ | 9.1 ⁺² |
| 192 | | | | | | | | | | 5.7 ⁺² | | | | 6.9 ⁻¹ | | | 6.9 ⁻¹ | 5.7 ⁺² |
| 360 | | | | | | | | | | 3.1 ⁺² | | | | NEG. | | | NEG. | 3.1 ⁺² |
| 720 | | | | | | | | | | 1.4 ⁺² | | | | | | | NEG. | 1.4 ⁺² |
| 2160 | | | | | | | | | | 5.5 ⁺¹ | | | | | | | NEG. | 5.5 ⁺¹ |
| 4320 | | | | | | | | | | 1.9 ⁺¹ | | | | | | | NEG. | 1.9 ⁺¹ |

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