

50-320

I+E

Grass, Soil, Water, + Air Milk, IWFS,
IWFS, Sample Survey Data³
4/29 - 6/4/79

230 273

790620001

ROISMAN 79-98

RIVER SAMPLING

Agencies: EPA, PaDER, Md, NRC, DOE, Met-Ed.

- NRC:
- (1) Selected River, grab samples; analyzed by NRC on TMI site.
 - (2) Selected grab samples from discharge points.
 - (3) Weekly independent sampling and analysis of each type of sump or tank being discharged; comparison of results with licensee.
 - (4) Analysis of every fourth IWFS and IWTS grab sample; comparison of results with licensee.

- EPA:
- (1) Water sampled twice daily (composited) from 4 sampling sites across the Susquehanna River at Columbia Bridge. Samples analyzed at EPA Lab, Las Vegas, Nevada.
 - (2) Analyzed water periodically from down river locations: Brunner Island; City Island; Lancaster Co. Water Co.; New Freedom Water Plant.
 - (3) Analyzed 141 water samples collected by Pa. from area drinking water supplies.
 - (4) Analyze discharge samples from 1 to 6 effluent points collected daily by Pa. DER.
 - (5) Have continuous radiation monitor and composite sampler of discharge 001.
 - (6) Has analyzed fish (walleve, carp, small mouth bass, redhorse) from Susquehanna River.

- PaDER:
- (1) Collection of water samples daily (EPA analysis).
 - (2) Selected analyses of samples by PaDER.
 - (3) Monthly sample analyses from Columbia, York Haven, and Steelton.

- Maryland:
- (1) Analyses of composite samples at Holtwood, Conowingo Dams.
 - (2) Selected water sample analyses from river and discharge points.

DOE: Analyzed water from Susquehanna River collected 4/9/79.

MET-ED SAMPLING LOCATIONS

Downstream

9A2 0.5 mi S. of site discharge - grab
9B1 1.5 mi S. of site, above York Haven Dam - grab
8E1 4.1 mi S. at Brunner Island - grab composite
7G1 15 mi SE at Columbia Water Treatment Plant - composite
8C2 2.3 mi SSE of site - York Haven Hydro - composite

Upstream

1C3 2.3 mi N. of Site at Swatara Creek - grab
15F1 8.7 mi NW of Steelton Municipal Water Works - grab composite

River Radiological Measurements

(Met-Ed Data)

Ra-226 1.5 - 2.0 pCi/l (upstream & downstream)
K-40 mpto 14 pCi/l
Zr-Nb-95 Max 4.4 pCi/l after 76 Chinese test
H-3 generally less than 300 pCi/l, max in 1978 5430 at 9B1
gross beta 3.0 - 7.8 pCi/l, 1978
I-131 less than 0.2 pCi/l

NRC GRASS SAMPLES

Following is a summary of the grass sample data for samples analyzed by the NRC Mobile Lab.

Date	Location	Sample Size	Method	Activity ¹³¹ I PC/CM
4/30/74	Red Hill Farm Booth on Rt 441	1 m ²		$< 2.25 \times 10^{-4}$ $\mu\text{Ci}/\text{m}^2$
4/30/74	500 KV Substation	1 m ²		$< 2.25 \times 10^{-4}$ $\mu\text{Ci}/\text{m}^2$
4/30	Goat's farm	1 m ²		$< 4.1 \times 10^{-5}$ $\mu\text{Ci}/\text{m}^2$ I ¹³¹
5/1	Point 7 Windsland Rt 441	1 m ²		$< 1.3 \times 10^{-4}$ $\mu\text{Ci}/\text{m}^2$ I ¹³¹
5/1	East Side Location 8	1 m ²		$< 1.3 \times 10^{-4}$ $\mu\text{Ci}/\text{m}^2$ I ¹³¹
5/2	South Gate	1 m ²		$< 5 \times 10^{-5}$ $\mu\text{Ci}/\text{m}^2$ I ¹³¹
5/2	North End of Drevers Island	1 m ²		$< 5 \times 10^{-5}$ $\mu\text{Ci}/\text{m}^2$ I ¹³¹
5/2	Cemetery NE Location 10	1 m ² ?		$< 4.1 \times 10^{-5}$ $\mu\text{Ci}/\text{m}^2$ I ¹³¹
5/3	E-3 at RR Hwy			$< 7 \times 10^{-5}$ $\mu\text{Ci}/\text{m}^2$ I ¹³¹
5/3	W-4	1 m ²		$< 7.5 \times 10^{-5}$ $\mu\text{Ci}/\text{m}^2$ I ¹³¹
5/3	North Gate	1 m ²		$< 7.5 \times 10^{-5}$ $\mu\text{Ci}/\text{m}^2$
5/4	South Gate	1 m ²		I ¹³¹ $< 7 \times 10^{-5}$ $\mu\text{Ci}/\text{m}^2$
5/5	E-11 Engle Rd.	1 m ²		I ¹³¹ $< 7 \times 10^{-5}$
5/6 1245	Pt 4 Goldsboro	1 m ²		I ¹³¹ $< 7.1 \times 10^{-5}$ $\mu\text{Ci}/\text{m}^2$
5/7 1040	West Pt-4	1 m ²		I ¹³¹ $< 7.6 \times 10^{-5}$ $\mu\text{Ci}/\text{m}^2$
5/8 1250	Point sum	1 m ²		I ¹³¹ $< 6.0 \times 10^{-5}$ $\mu\text{Ci}/\text{m}^2$
5/9 1030	West S.D., Pt-4	1 m ²		I ¹³¹ $< 4.1 \times 10^{-5}$ $\mu\text{Ci}/\text{m}^2$
5/10 1423	East Pt-4	1 m ²		I $< 6.0 \times 10^{-5}$ $\mu\text{Ci}/\text{m}^2$
5/10 5/11 1400	East 1400 Feet Park	1 m ²		I ¹³¹ $< 1 \times 10^{-5}$ $\mu\text{Ci}/\text{m}^2$
5/12/74	Boat Ramp - Goodsville	1 m ²		I ¹³¹ $< 6.0 \times 10^{-5}$

NRC GRASS SAMPLES

Following is a summary of the grass sample data for samples analyzed by the NRC Mobile Lab.

Date	Location	Sample Size	Method	Activity Bq/m² <i>Bq/meter²</i>
5/17/79	COLLINS RD. PT NEAR RIVER 14	1 sq mt.	Ge (bi)	less than 6.0 E - 5
5/17/79	WEST SIDE BTW LOC 17+1 P SOUTH	1 sq mt.	Ge (Li)	less than 1.4 E - 7
5/18/79	GATE	1 sq mt.	Ge (bi)	less than 1 E - 4
5/19/79	West hill Pl # 4	1 sq mt.	Ge (bi)	less than 4.1 E - 5

WATER

SAMPLE SURVEY DATA

DATE: 6/4

LOCATION: IWFS-104

TIME ON:

TIME OFF: 1000 6/4

FLOW RATE:

TOTAL VOLUME: 500ml

NRC SAMPLE NUMBER: 1849

ANALYSIS FINDINGS: (3) $I < \frac{2.E-7 \mu C}{ml}$

230 - 278

Water
SAMPLE SURVEY DATA

DATE: 6/4

LOCATION: IWTS eff 107

TIME ON:

TIME OFF: 1000 6/4

FLOW RATE:

TOTAL VOLUME: 500 ml

NRC SAMPLE NUMBER: 1848

ANALYSIS FINDINGS: $^{131}\text{I} < 2.1 \times 10^{-7} \frac{\mu\text{Ci}}{\text{ml}}$

SOIL

VEGETATION SAMPLE SURVEY DATA

DATE: 6/4

LOCATION: W-18

TYPE OF VEGETATION:

VOLUME OR AREA COLLECTED: 1m²

TIME OF COLLECTION: 5/22

A.M.

P.M.

WIND DIRECTION:

SPEED:

NRC SAMPLE NUMBER: 1850

RESULTS: ¹³¹I < 4.2 E-7 $\frac{\mu\text{Ci}}{\text{ml}}$

Th 232 } daughters
Ra 226 }
K40 } seen

230 280

Veget. Sample

GRASS

1 m²

Book Lending near PT #5 East.

6/2/79

0930

NRC # 1792

$^{131}\text{I} < 8 \text{E} - 5 \text{ uCi} / \text{m}^2$

230 281

6/2/79

GRASS SAMPLE

FALMOUTH BOAT ACCESS

1 M²

1450 Pm

WRC #179/

$^{131}\text{I} < 8 \text{ E-}5 \text{ } \mu\text{C} / \text{m}^2$

230 282

AIR SAMPLE SURVEY DATA

DATE: 5/29 .

LOCATION: Point 11 East Side

TIME ON: 0950 5/29

TIME OFF: 1050 5/29

FLOW RATE: 6 CFM

TOTAL VOLUME: 1

NRC SAMPLE NUMBER: 1716

ANALYSIS FINDINGS:

$^{137}\text{I} < 8.1 \text{E}-12 \text{ } \mu\text{C}/\text{ml}$

AIR SAMPLE SURVEY DATA

DATE: 5/29/79

LOCATION: Mobile Lab

TIME ON: 1410

TIME OFF: 1540

FLOW RATE: 6 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1717

ANALYSIS FINDINGS:

$^{131}\text{I} < 5.3\text{E}-12 \text{ nCi/ml}$

VEGETATION SAMPLE SURVEY DATA

DATE: 5/29/79

LOCATION: Point # 11 East Side

TYPE OF VEGETATION: Grass

VOLUME OR AREA COLLECTED: 1 M²

TIME OF COLLECTION: 0955['] A.M. P.M.

WIND DIRECTION: 330 SPEED: 3

NRC SAMPLE NUMBER: 1715

RESULTS:

131 I < 7E-5 $\mu\text{Ci/ml}$

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: May 28-29 1979

LOCATION: Mobile Lab

CP 200

TIME INDICATED ON: 1512

TIME INDICATED OFF: 1454

FLOW RATE ON: 40 LPM

FLOW RATE OFF: 40 LPM

INDICATED TOTAL FLOW ON: 669450

INDICATED TOTAL FLOW OFF: 671090

PRESSURE ON: 0.8 (Vacuum)

PRESSURE OFF: 1.0 (Vacuum)

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1718

ANALYSIS FINDINGS:

131
 $I < 1.4E-12 \text{ uCi/ml}$

230 286

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: May 28-29, 1979

LOCATION: Observation Center

TIME INDICATED ON: 1527

TIME INDICATED OFF: 1530

FLOW RATE ON: 45 LPM

FLOW RATE OFF: 45 LPM

INDICATED TOTAL FLOW ON: 498790

INDICATED TOTAL FLOW OFF: 500000

PRESSURE ON: 3.0 (Vacuum)

PRESSURE OFF: 3.0 (Vac)

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1719

ANALYSIS FINDINGS:

$^{131}\text{I} < 1.2\text{E}-12 \text{ } \mu\text{Ci}/\text{ml}$

230 287

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: Mon 25-29, 1979

LOCATION: North Gate

TIME INDICATED ON: 1532 28 May

TIME INDICATED OFF: 1523 29 May

FLOW RATE ON: 50 LPM

FLOW RATE OFF: 50 LPM

INDICATED TOTAL FLOW ON: 289580

INDICATED TOTAL FLOW OFF: 290840

PRESSURE ON: 5.0 (Vacuum)

PRESSURE OFF: 6.0 (Vacuum)

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1720

ANALYSIS FINDINGS:

Font not employed again -
Guards say they will
make a note of it,

131 I 1.1×10^{-12} $\mu\text{Ci}/\text{hr}$
230 288 flow for
above times

VEGETATION SAMPLE SURVEY DATA

DATE: May 28, 1979

LOCATION: ~~Gauguin~~ Church Rd & Rt 441

TYPE OF VEGETATION: Grass

VOLUME OR AREA COLLECTED: 1 m²

TIME OF COLLECTION: 1536

A.M.

P.M.

WIND DIRECTION:

SPEED: 0

NRC SAMPLE NUMBER:

1730

RESULTS:

¹³¹I < ~~8.3E-5~~ $\mu\text{Ci}/\text{m}^2$
8.3E-5

230 289

VEGETATION SAMPLE SURVEY DATA

DATE: 5/28/79

LOCATION: MOBILE LAB

TYPE OF VEGETATION: GRASS

VOLUME OR AREA COLLECTED: 1 M²

TIME OF COLLECTION: 1505 A.M. P.M.

WIND DIRECTION: 0 SPEED: 0

NRC SAMPLE NUMBER: 1733

RESULTS:

131 $I < 1.2E-4 \text{ nCi/m}^2$

230 290

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: 27-28 May 1977

LOCATION: Mobile Lab

TIME INDICATED ON: 1501

TIME INDICATED OFF: 1510

FLOW RATE ON: 40 LPM

FLOW RATE OFF: 40 LPM

INDICATED TOTAL FLOW ON: 667770

INDICATED TOTAL FLOW OFF: 669450

PRESSURE ON: 0.1 (Vacuum)

PRESSURE OFF: 0.1

TOTAL VOLUME: 51869 ml

NRC SAMPLE NUMBER: 1708

ANALYSIS FINDINGS:

¹³¹I < 1.4E-12 nCi/ml

230 291

AIR SAMPLE SURVEY DATA

DATE:

LOCATION:

Mobile Lab

CP-200

TIME ON:

1501 (5/27)

TIME OFF:

1510 (5/28)

FLOW RATE:

40 lpm

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1708

ANALYSIS FINDINGS:

131

I < 1.4E-12 $\mu\text{Ci}/\text{ml}$

230 292

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: 27-28 May 1979

LOCATION: Observation Center

TIME INDICATED ON: 1450 cp 200

TIME INDICATED OFF: 1525'

FLOW RATE ON: 45 LPM

FLOW RATE OFF: 45 LPM

INDICATED TOTAL FLOW ON: 497490

INDICATED TOTAL FLOW OFF: 49890

PRESSURE ON: 2.5 (Vacuum)

PRESSURE OFF: 2.4 (Vacuum)

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1709

ANALYSIS FINDINGS:

^{131}I CI. 3E-12 $\mu\text{Ci}/\text{ml}$

230 293

VEGETATION SAMPLE SURVEY DATA

DATE: May 27, 1975

LOCATION: 100 yds S of Pt 14 W

TYPE OF VEGETATION: Grass

VOLUME OR AREA COLLECTED: 1 m²

TIME OF COLLECTION: 1250

A.M.

P.M.

WIND DIRECTION: 90

SPEED: 8

NRC SAMPLE NUMBER: 1695

RESULTS:

Grass 131 I < 66-5 µci/ml

230 294

Soil

~~VEGETATION~~ SAMPLE SURVEY DATA

DATE: 5/27/79

LOCATION: #11 East

TYPE OF VEGETATION: Soil

VOLUME OR AREA COLLECTED:

1 #² ✓

I DO NOT
Believe this!

TIME OF COLLECTION: 1000

~~A.M.~~

P.M.

WIND DIRECTION: 330

SPEED: 3

NRC SAMPLE NUMBER: 1732

RESULTS:

567 grams

¹³ I < 1.6 E-7 ^{uCi}/_{gm}

K-40 also

... 4

VEGETATION SAMPLE SURVEY DATA

DATE: 26 May 79

LOCATION: Observation Center

TYPE OF VEGETATION: Grass

VOLUME OR AREA COLLECTED: 1 m²

TIME OF COLLECTION: 1455 A.M.

P.M.

WIND DIRECTION: 270 SPEED: 8

NRC SAMPLE NUMBER: 1679

RESULTS:

13/2 C 6 E-S $\mu\text{Ci}/\text{m}^2$

230 296

VEGETATION SAMPLE SURVEY DATA

DATE: 5/26/79 Taken 5/27/79

LOCATION: Observation Center

TYPE OF VEGETATION: Grass

VOLUME OR AREA COLLECTED: 1 m²

TIME OF COLLECTION: ? A.M. P.M.

WIND DIRECTION: SPEED:

NRC SAMPLE NUMBER: 1680

RESULTS: 121 I C 6 E - 5 $\frac{\mu\text{Ci}}{\text{m}^2}$

230 297

VEGETATION SAMPLE SURVEY DATA

DATE: May 25 1979

LOCATION: Observation Center

TYPE OF VEGETATION: Grass

VOLUME OR AREA COLLECTED: 1 M²

TIME OF COLLECTION: 1001

A.M.

P.M.

WIND DIRECTION: 270

SPEED: 3 mph

NRC SAMPLE NUMBER: 16

RESULTS:

131 J L 6 6 - 5 $\frac{\text{kg}}{\text{m}^2}$

230 298

VEGETATION SAMPLE SURVEY DATA

DATE: May 24 1979

LOCATION: Boat Ramp, East P. #4

TYPE OF VEGETATION: Grass

VOLUME OR AREA COLLECTED: 1 m²

TIME OF COLLECTION: 10 30 A.M. P.M.

WIND DIRECTION: 180° SPEED: 12 mph

NRC SAMPLE NUMBER: 1677

RESULTS: ¹³¹ I < 6 E-5 $\mu\text{Ci}/\text{m}^2$

230 299

VEGETATION SAMPLE SURVEY DATA

DATE: 5/24/79

LOCATION: Plot E 9 and E 10

TYPE OF VEGETATION: GRASS

VOLUME OR AREA COLLECTED:

TIME OF COLLECTION:

A.M.

0930

P.M.

WIND DIRECTION:

SPEED:

NRC SAMPLE NUMBER: 1681

RESULTS:

¹³¹ I C 6 E - S $\frac{\text{min}}{\text{m}^2}$

230 300

VEGETATION SAMPLE SURVEY DATA

DATE: 5-22-79

LOCATION: West pt. # 4

TYPE OF VEGETATION:

VOLUME OR AREA COLLECTED: "1 sq. meter" 772 gms

TIME OF COLLECTION: ? A.M. P.M.

WIND DIRECTION:

SPEED:

NRC SAMPLE NUMBER: 1797

RESULTS:

¹³¹I < 2.0E-7 mCi/gm

The 228 daughter } seen
K40

230 300

Soil

ATR SAMPLE SURVEY DATA

DATE: Dump Hole #2 (onsite sample)

LOCATION:

TIME ON: 0920

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 663gms

NRC SAMPLE NUMBER: 1491

ANALYSIS FINDINGS: $I^{131} = 8.47 E-7 \text{ mCi/gm}$

230 302

Soil

VEGETATION SAMPLE SURVEY DATA

DATE: 5-22-79

LOCATION: East pt #10

TYPE OF ~~VEGETATION~~:

VOLUME OR AREA COLLECTED: 660 grams

TIME OF COLLECTION:

A.M.

P.M.

WIND DIRECTION:

SPEED:

NRC SAMPLE NUMBER:

1748

RESULTS:

¹³¹I < 2.1E-7 $\mu\text{Ci}/\text{gram}$

K 40, Th 228 } daughters seen
Ra 226 }

230 303

Soil

VEGETATION SAMPLE SURVEY DATA

DATE: 5-22-79

LOCATION:

Obs Center

TYPE OF VEGETATION:

VOLUME OR AREA COLLECTED:

"1 sq meter"

691 grams

TIME OF COLLECTION:

A.M.

P.M.

WIND DIRECTION:

SPEED:

NRC SAMPLE NUMBER:

1749

RESULTS:

$^{131}\text{I} < 2.0 \text{E}-12 \text{ } \mu\text{Ci/gm}$

Also saw $\left. \begin{array}{l} \text{Th } 228 \\ \text{Ra } 226 \end{array} \right\} \text{ daughters}$

230 304

Soil

VEGETATION SAMPLE SURVEY DATA

DATE: 5-22-79

LOCATION: East pt. #4

TYPE OF VEGETATION:

VOLUME OR AREA COLLECTED:

641 grams

TIME OF COLLECTION:

assume 1200

A.M.

P.M.

WIND DIRECTION:

SPEED:

NRC SAMPLE NUMBER:

1752

RESULTS:

¹³¹I < 2.4E-7 $\mu\text{Ci/gm}$

K40 also seen

230 305

soil

VEGETATION SAMPLE SURVEY DATA

DATE: 22
5-~~20~~-79

LOCATION: West - pt #1

TYPE OF ~~VEGETATION~~:

VOLUME OR AREA COLLECTED: 1 one square meter

TIME OF COLLECTION: A.M. P.M.

WIND DIRECTION: SPEED:

NRC SAMPLE NUMBER: 1734

RESULTS: 727 grams

¹³¹ I < 1.9E-7 μ Ci/gm

Also saw Th 228 } daughters
Ra 226 }

K 40

230 306

Soil
~~VEGETATION~~ SAMPLE SURVEY DATA

DATE: 5-22-79

LOCATION: East pt #6

TYPE OF VEGETATION:

VOLUME OR AREA COLLECTED: 760 grams

TIME OF COLLECTION: A.M. P.M.

WIND DIRECTION: SPEED:

NRC SAMPLE NUMBER: 1834

RESULTS:

$^{131}\text{I} < 2.8\text{E}-7 \text{ mCi/gm}$

Th 228 }
Ra 226 } K 40 seen

230 307

Soil

~~VEGETATION~~ SAMPLE SURVEY DATA

DATE: 5-22-79

LOCATION: TLD # _____

(No number was on sample)

TYPE OF VEGETATION:

VOLUME OR AREA COLLECTED:

"1 sq. meter"

TIME OF COLLECTION: _____

A.M.

P.M.

WIND DIRECTION:

SPEED:

NRC SAMPLE NUMBER:

1810

RESULTS:

$^{131}\text{I} < 2.8 \text{E} - 7 \text{ mCi/gram}$

The 20+ daughters
Ra 226

seen

K40

230 308

Soil

~~DEFINITION~~ SAMPLE SURVEY DATA

DATE: 5-22-79

LOCATION: TMI west pt #15

TYPE OF VEGETATION:

VOLUME OR AREA COLLECTED: 1 sq. meter

794 grams

TIME OF COLLECTION: — A.M. P.M.

WIND DIRECTION: SPEED:

NRC SAMPLE NUMBER: 1826

RESULTS:

¹³¹I = 2.45 μ Ci/gram

Th 232 } day 1
Ra 226 } day 1

seen

K 40

230 309

Soil

~~VEGETATION~~ SAMPLE SURVEY DATA

DATE: 5-22-79

LOCATION: Location TLO # E-2 (Hilldale Rd)

TYPE OF VEGETATION:

VOLUME OR AREA COLLECTED: 655 grams

TIME OF COLLECTION: ? A.M. P.M.

WIND DIRECTION: SPEED:

NRC SAMPLE NUMBER: 1798

RESULTS:

$^{131}\text{I} < 2.3\text{E}-7 \mu\text{Ci/gm}$

$\text{Cs}^{137} = 5.07\text{E}-7 \mu\text{Ci/gm} \pm 12\%$

Th 228 Daughter } seen
K40 }

230 310

VEGETATION SAMPLE SURVEY DATA

DATE: 5/21/79

LOCATION: observation center

TYPE OF VEGETATION: grass

VOLUME OR AREA COLLECTED: 1 m²

TIME OF COLLECTION: A.M. 2135 P.M.

WIND DIRECTION: 270° SPEED: 0-5 mph

NRC SAMPLE NUMBER: 1606

RESULTS:

BI $1 \times 6 \times 6 - 5 \frac{\mu\text{g}}{\text{m}^2}$

30 311

VEGETATION SAMPLE SURVEY DATA

DATE: May 21, 1979

LOCATION: Tri County Boat Ramp (Between points East 3 and 4)

TYPE OF VEGETATION: Grass

VOLUME OR AREA COLLECTED: one square meter

TIME OF COLLECTION: 1000 A.M. P.M.

WIND DIRECTION: 180 SPEED: 10 mph

NRC SAMPLE NUMBER: 1605

RESULTS:

$^{131}\text{I} < 6.0 \text{ E} - 5 \frac{\mu\text{Ci}}{\text{m}^2}$

230 312

well water

AIR SAMPLE SURVEY DATA

DATE: 5-20-79

LOCATION: Hoover Farm

TIME ON: 1700

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 500ml marcell

NRC SAMPLE NUMBER: 1601

ANALYSIS FINDINGS:

¹³¹I < 1.4E-7 μ C/ml

No other peaks after 1200 sec
count

230 313

Woodruff
Smith

VEGETATION SAMPLE SURVEY DATA

DATE: May 20, 1979

LOCATION: Pt #4, west (church at Yocumtown Rd & Vally Rd)

TYPE OF VEGETATION: Clover and grass hay

VOLUME OR AREA COLLECTED: One square meter

TIME OF COLLECTION:

A.M.

P.M. 1345

WIND DIRECTION:

117°

SPEED:

7 mph

NRC SAMPLE NUMBER:

1578

RESULTS:

$^{131}\text{I} < 6\text{E}-5 \mu\text{Ci}/\text{m}^2$

230 314

~~SR~~ SAMPLE SURVEY DATA

DATE: 5-20-79

LOCATION: Hoover Farm #1 - chopped forage

TIME ON:

TIME OFF: 1700

FLOW RATE:

TOTAL ~~VOLUME~~: 42.5 gms

NRC SAMPLE NUMBER: 1594

ANALYSIS FINDINGS:

¹³¹I < 1.8 E-6 μ C/gm

No other peaks present at 1200 sec

230 315

Grass

SAMPLE SURVEY DATA

DATE: 5-20-79

LOCATION: Hoover Farm, East Pasture

TIME ON: ~ 1700

TIME OFF:

FLOW RATE:

TOTAL VOLUME: ~~1 m³~~ 1 m²

NRC SAMPLE NUMBER: 1580

ANALYSIS FINDINGS:

$^{131}\text{I} < 6\text{E}-5 \mu\text{Ci}/\text{m}^2$

230 316

~~##~~ SAMPLE SURVEY DATA

DATE: 5-20-77

LOCATION: Hoover Farm #2 - Silage (main diet of all cows, put up last Oct)

TIME ON:

140gms

TIME OFF:

1700

FLOW RATE:

TOTAL ~~TIME~~:

140 grams

NRC SAMPLE NUMBER:

1592

ANALYSIS FINDINGS:

$^{131}\text{I} < 5.4\text{E}-7 \text{ } \mu\text{Ci/ml}$

No peaks present at 1200 sec count

230 317

Muls
AIR SAMPLE SURVEY DATA

DATE: 5-20-79

LOCATION: Hoover Farm

TIME ON:

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 500 ml Marinelli

NRC SAMPLE NUMBER: 1574

ANALYSIS FINDINGS:

No peaks detected

(for ¹³¹I results see resin count of same sample)

230 318

SOIL

SAMPLE SURVEY DATA

DATE: 5-20-79

LOCATION: Hoover Farm East Pasture

TIME ON: ~1700

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 541 gms

NRC SAMPLE NUMBER: 1581

ANALYSIS FINDINGS:

Cs 137 = $1.6E-6 \frac{\mu\text{Ci}}{\text{gm}} \pm 7.7\%$

¹³¹I < MDA

230 319

~~AN~~ SAMPLE SURVEY DATA

DATE: 5-20-79

LOCATION: Hoover Farm #8 - Soil, West Pasture

TIME ON:

TIME OFF:

FLOW RATE: 1700

TOTAL ~~VOLUME~~: 514 gms

NRC SAMPLE NUMBER: 1599

ANALYSIS FINDINGS:

$^{131}\text{I} < 1.5 \text{E}-7 \text{ } \mu\text{Ci/gm}$

No other peaks after 1200 sec count
(only the 928 daughters + K40)
-normal BKGD

230 320

SOIL

SAMPLE SURVEY DATA

DATE: 5-20-79

LOCATION: Hoover Farm # 3 - Soil, pasture

TIME ON:

TIME OFF: 1700

FLOW RATE:

TOTAL ~~VOLUME~~:

445 grams

NRC SAMPLE NUMBER:

1596

ANALYSIS FINDINGS:

¹³¹I < 1.7E-7 uCi/gm

No other peaks seen for 1200 sec. count

230 321

Water

~~W~~ SAMPLE SURVEY DATA

DATE: 5-19-79

LOCATION: RML 7 Composite

TIME ON: 1300, 1400, 1500, 1600

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 4.6 l

NRC SAMPLE NUMBER 1385

ANALYSIS FINDINGS:

¹³¹IL 7.5 $\mu\text{Ci}/\text{l}$

VEGETATION SAMPLE SURVEY DATA

DATE: 5/19/79

LOCATION: West side #14

TYPE OF VEGETATION: grass & weeds

VOLUME OR AREA COLLECTED: 1 m²

TIME OF COLLECTION: A.M. 2:30 P.M.

WIND DIRECTION: 90° SPEED: 8 mph

NRC SAMPLE NUMBER: 1557

RESULTS:

⁽³⁾ I < 7.4 E-5 nC/~~g~~ m²

230 323

R. Woodruff
Greg Smith

VEGETATION SAMPLE SURVEY DATA

DATE: May 19, 1979

LOCATION: West Side, Pt #4

TYPE OF VEGETATION: Grass

VOLUME OR AREA COLLECTED: one square meter

TIME OF COLLECTION: 1000 A.M. P.M.

WIND DIRECTION: 105° SPEED: 7 mph

NRC SAMPLE NUMBER: 1546

RESULTS:

¹³¹
 $I < 4.1 \text{ E-5 } \mu\text{Ci}/\text{m}^2$

230 324

R. Woodruff

VEGETATION SAMPLE SURVEY DATA

DATE: 5-18-79

LOCATION: South Gate and 441

TYPE OF VEGETATION: Grass

VOLUME OR AREA COLLECTED: one meter square

TIME OF COLLECTION: 1200 A.M. P.M.

WIND DIRECTION: 350° SPEED: 7 mph

NRC SAMPLE NUMBER: 1535

RESULTS: $I^{131} < 1E-4 \text{ mCi/m}^2$

230 325

VEGETATION SAMPLE SURVEY DATA

DATE: 5/17/79

LOCATION: COLLINS Rd - near river - (Pt #14)

TYPE OF VEGETATION: grass

VOLUME OR AREA COLLECTED: 1 meter²

TIME OF COLLECTION: 2:00

A.M.

P.M. +

WIND DIRECTION: 75°

SPEED: 4 mph

at

NRC SAMPLE NUMBER: 1519

RESULTS:

¹³¹I < 6.0E-5 $\mu\text{Ci}/\text{m}^2$

230 326

GRASS

AIR SAMPLE SURVEY DATA

DATE: 5/17/79

LOCATION: ^{Between} WEST 1 CARONS 17 and 18

~~TIME ON:~~

~~TIME OFF:~~

~~FLOW RATE:~~

~~TOTAL VOLUME:~~ ^{under} 1 m²

NRC SAMPLE NUMBER: 1505

ANALYSIS FINDINGS:

¹³¹ I < 1.4 E - 2 ⁴⁰ / m²

230 327

Water

SAMPLE SURVEY DATA

DATE: 5/17/79

LOCATION: RML 7 Composite

TIME ON: 1300, 1400 & 1500 1600

TIME OFF:

FLOW RATE:

TOTAL VOLUME: ~~6.5~~ 6.5 liters

NRC SAMPLE NUMBER:

1602

ANALYSIS FINDINGS:

< + 6 $\frac{1}{2}$ liters

230 328

VEGETATION SAMPLE SURVEY DATA

DATE: 5-16-79

LOCATION: E-14 (Falmouth Access Pt.)

TYPE OF VEGETATION: grass

VOLUME OR AREA COLLECTED: 1 m²

TIME OF COLLECTION:

A.M.

130 P.M.

1330

WIND DIRECTION: 345

SPEED: 10 mph

NRC SAMPLE NUMBER: 1485

RESULTS:

~~ST~~
~~131 J C 1.4 E - 7 m²~~
~~meter²~~

131 J C 1.4 E - 7 m²
meter²

230 329

Grass

SAMPLE SURVEY DATA

DATE:

5/14/79

LOCATION:

441 South midway between pts. 9+10

TIME ON:

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

1 m²

NRC SAMPLE NUMBER:

1445

ANALYSIS FINDINGS:

$\bar{I}^{131} < 1.4E-7 \text{ mCi/m}^2$

230,330

Crust

AIR SAMPLE SURVEY DATA

DATE: 5/14/79

LOCATION: Fishing Access Point South of E Location #13/Rt 441

TIME ON:

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1450

ANALYSIS FINDINGS:

131 $\bar{I} < 1.4 \times 10^{-7} \mu\text{Ci}/\text{m}^3$

230 381

Soil

SAMPLE SURVEY DATA

DATE: May 14, 1979

LOCATION: Midway along 441 south, between #9 and #10.

TIME ON: NA

TIME OFF: NA

FLOW RATE: NA

TOTAL VOLUME: sampled from 1 sq meter area

NRC SAMPLE NUMBER: 1458

ANALYSIS FINDINGS: $Cs^{137} = 2.16 E-7 \mu Ci/gm \pm 13\% (1\sigma)$

$I^{131} < 1.21 E-10 \mu Ci/gm$

852 gms
180

672 gms in sample

230 332

GRASS

~~SAMPLE~~ SURVEY DATA

DATE: 5-13-79

LOCATION: Goat farm by road 441

TIME ON: 1000 am

~~TIME OFF:~~

~~FLOW RATE:~~

~~TOTAL VOLUME:~~ 1 M²

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

230 333

Grass

SAMPLE SURVEY DATA

DATE: 5/13/79

LOCATION: Road by goat farm

TIME ON:

1000 hrs

TIME OFF:

FLOW RATE:

TOTAL VOLUME: ^{area} 1 m²

NRC SAMPLE NUMBER: 1426

ANALYSIS FINDINGS: I¹³¹ < B.I.E-BMC/m²

230 334

GRASS

AIR SAMPLE SURVEY DATA

DATE: 5-12-79

LOCATION: Boat Ramp, Goldsboro

TIME ON: 1800

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 1 m^2 (assumed)

NRC SAMPLE NUMBER: 1405

ANALYSIS FINDINGS:

131
IL 6.0E-5 $\mu\text{Ci}/\text{m}^2$

230 335

9202
AIR SAMPLE SURVEY DATA

DATE: 5-11-79

LOCATION: *Holler Park*

TIME ON: 1400

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 1 m^3

NRC SAMPLE NUMBER: 1385

ANALYSIS FINDINGS:

¹³¹I < $1 \text{ E-4 } \mu\text{Ci}/\text{m}^3$

230 336

Woltho
York
C

Grass
AIR SAMPLE SURVEY DATA

DATE: 5/10/79

LOCATION:
East Side, Point 4, Riverside East Sales

~~TIME ON:~~

TIME OFF: 1420

~~FLOW RATE:~~

TOTAL ^{area} VOLUME: 1 m²

NRC SAMPLE NUMBER: 1362

ANALYSIS FINDINGS:

131 ↓ < 6.0 E⁻⁵ μg/m²

Young
Waltner

GWS

ATR SAMPLE SURVEY DATA

DATE: 5/9/79

LOCATION: west side, Point 4

TIME ON: 1030

TIME OFF:

FLOW RATE:

VOLUME:

NRC SAMPLE NUMBER:

1338

ANALYSIS FINDINGS:

$^{131}\text{I} < 4.1 \text{E}^{-5} \text{ nCi/m}^2$

230 338

Young
Wolters

Grass

SAMPLE SURVEY DATA

DATE: 5/8/79

LOCATION: Goat farm on east side between point 5 (north gate)
+ point 4 (boat yard)

TIME ON: 1250

TIME OFF:

FLOW RATE: \bar{F}

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1321

ANALYSIS FINDINGS: I-131 $< 6.0 \times 10^{-5} \mu\text{Ci}$
 m^2

230 339

Young
Wolthor

Gross

AIR SAMPLE SURVEY DATA

DATE: 5/7/79

LOCATION: West side, Pt 4, Intersection of Rt 202 + Rt 392

TIME ON: 1040

~~TIME OFF:~~

~~FLOW RATE:~~

~~TOTAL VOLUME:~~

NRC SAMPLE NUMBER: 1314

ANALYSIS FINDINGS: 13) $I < 7.6 \times 10^{-5} \mu\text{Ci}/\text{m}^2$

Young
Wolter

Water

AIR-SAMPLE SURVEY DATA

DATE: 5/6/79

LOCATION: Private residence, Mr. AM. Mva Kovich,
Laurel Drive, Phone 944-2358

TIME ON:
1630

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1311

ANALYSIS FINDINGS:

¹³¹I < 1.3E-7 uCi/ml

230 341

Water

~~SAMPLE~~ SURVEY DATA

DATE: 5-6-79

LOCATION: 1 WTS # 107

TIME ON: 1600

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1312

ANALYSIS FINDINGS:

$^{131}\text{I} < 1.7\text{E}-7 \mu\text{g/ml}$

Young & Welford

Grass

AIR SAMPLE SURVEY DATA

DATE: 5/6/79

LOCATION: New Goldsboro (Point 4) - intersection of Rt 262 & Rt 392

TIME: 1245

~~TIME OFF:~~

~~FLOW RATE:~~

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1313

ANALYSIS FINDINGS: $^{131}\text{I} < 7.1 \times 10^{-5} \text{ } \mu\text{Ci}/\text{m}^2$

230 343

43

CRASS

~~AIR~~ SAMPLE SURVEY DATA

DATE:

5-5-79

LOCATION:

7.6 11 ENGLE ROAD

TIME ON:

~~1000~~ 1020

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

1 M²

NRC SAMPLE NUMBER:

1254

ANALYSIS FINDINGS:

¹³¹I < 7 ~~0~~ E-5 $\mu\text{G}/\text{m}^3$

230 344

GRASS

AIR SAMPLE SURVEY DATA

DATE:

5-4-79

LOCATION:

EAST SIDE LOCATION #9 SUBSTATION

TIME ON:

1345

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

1 m²

NRC SAMPLE NUMBER:

1236

ANALYSIS FINDINGS:

¹³⁷I < 7E-5 μCi/m²

230 345

Grass

AIR SAMPLE SURVEY DATA

DATE: 5-4-79

LOCATION: South Gate

TIME ON: 0855

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 1 m^3

NRC SAMPLE NUMBER: 1229

ANALYSIS FINDINGS:

¹³¹I < 7E-5 $\mu\text{Ci}/\text{m}^3$

230 346

water

SAMPLE SURVEY DATA

DATE: 5/3/79

LOCATION: TMI - 2
cooling tower A bleed down

TIME ON:

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1219

ANALYSIS FINDINGS: $< 4.3 \text{ pCi/l I}^{131}$

230 347

Guon

AIR SAMPLE SURVEY DATA

DATE: 5-3-79

LOCATION: North Gate

TIME ON: 1450

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 1 m²

NRC SAMPLE NUMBER: 1209

ANALYSIS FINDINGS:

< 7E-5 $\mu\text{Ci}/\text{m}^2$

GRASS

AIR SAMPLE SURVEY DATA

DATE:

5-3-79

LOCATION:

W. LOCATION 4

TIME ON:

1030

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

1 M²

NRC SAMPLE NUMBER:

1207

ANALYSIS FINDINGS:

¹³¹I < 7E-5 ^μCi/m²

230 349

Schultz & Ladum

→ (plus 1 African violet blossom)

GRASS ~~413~~ SAMPLE SURVEY DATA

DATE: 5-3-79

LOCATION: RR CROSSING & RT AAI (POINT #3)

TIME ON:

TIME OFF:

FLOW RATE: 1 m²

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1197

ANALYSIS FINDINGS:

¹³¹I < 7.0 E-5 uCi/ml

Grass

AIR SAMPLE SURVEY DATA

DATE: 5-2-79

LOCATION: Cemetery - NE location 10

TIME ON:

TIME OFF: 1500

FLOW RATE:

TOTAL VOLUME: ~~area~~ 1 m²? (not marked)

NRC SAMPLE NUMBER: 1185

ANALYSIS FINDINGS:

¹³¹I = 4.1E-5 uCi/ml

230 351

Grass

AIR SAMPLE SURVEY DATA

DATE:

5-2-79

LOCATION:

North End of Brewer's Island

TIME ON:

1040

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

1 m²

NRC SAMPLE NUMBER:

1179

ANALYSIS FINDINGS:

¹³¹I < 5E-5 mCi/m²

Grass

AIR SAMPLE SURVEY DATA

DATE:

5-2-79

LOCATION:

South Gate

TIME ON:

11-5-8

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

1 m³

NRC SAMPLE NUMBER:

1177

ANALYSIS FINDINGS:

¹²I < 5E-5 mCi/m³

Waltham
Young

GRASS
AIR SAMPLE SURVEY DATA

DATE: 5/2/79

LOCATION: west side, Pt 4, Intersection of Rt 262 + Rt 392

TIME: 1040

~~TIME OFF:~~

~~FLOW RATE:~~

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1314

ANALYSIS FINDINGS:

$$^{131}I < \frac{7.0E-5}{.92}$$

$$< 7.6E-5 \text{ nCi/m}^2$$

230 354

Young/Hobbs

CP-200

No filter paper

AIR SAMPLE SURVEY DATA

DATE:

5/2/79

Time 1800

Direction 180°

LOCATION:

North Gate

Speed

6 mph

TIME ON:

1858

} 1 hour

TIME OFF:

1958

FLOW RATE:

4 cfm

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1184

ANALYSIS FINDINGS:

¹³¹I < 1.6E-11

230-355

Terc, Smith

CP-200

with filter paper

AIR SAMPLE SURVEY DATA

wind data
At 1500
240°
2 m/hr.

DATE:

5/2/79

LOCATION:

North Gate

TIME ON:

1345

} 3 hr.

TIME OFF:

1645

FLOW RATE:

2 1/2 cfm

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1182

ANALYSIS FINDINGS:

¹³¹I < 5.5E-12 $\mu\text{Ci}/\text{ml}$

Schultz & Ladun

AIR SAMPLE SURVEY DATA

DATE: 5-2-79

LOCATION: COLLINS RD $\frac{1}{2}$ RT 441

TIME ON: 0332

TIME OFF: 0502

} 90 min.

FLOW RATE: 3 CFM

net eff = .76

TOTAL VOLUME: 7.64 E6 ml

NRC SAMPLE NUMBER: 1167

ANALYSIS FINDINGS:

¹³¹I < 8.1 E-72 uCi/ml

230 357

AIR SAMPLE SURVEY DATA

DATE: ~~4/2~~ 5/2/79

LOCATION: On top of Instrument Van at South Gate entrance
to TMI ~~area~~

TIME ON: 0814

TIME OFF: 1152

FLOW RATE: 2.0 PM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1175

ANALYSIS FINDINGS:

$^{131}\text{I} < 4.6\text{E}-12 \text{ } \mu\text{Ci}/\text{cc}$

230 358

Grass

~~1147~~ SAMPLE SURVEY I TA

DATE:

5-1-79

LOCATION:

Recount of 2 samples together (# 1147 and 1148)

TIME ON:

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1150

ANALYSIS FINDINGS:

¹³¹ I < 6.5E-5 $\mu\text{Ci}/\text{m}^2$

for each of samples

(This is 1/2 of MDA already reported)

230 359

Gross

SAMPLE SURVEY DATA

DATE: 5/1/79

LOCATION: Point 7 Medium Lawn RT441

TIME ON:

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 1m²

NRC SAMPLE NUMBER: 1147

ANALYSIS FINDINGS: $< 1.3 \text{E-}4 \text{ } \mu\text{Ci}/\text{m}^2$
I-131

230 360

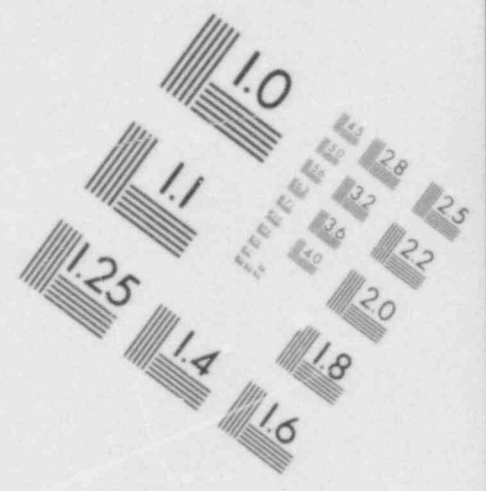
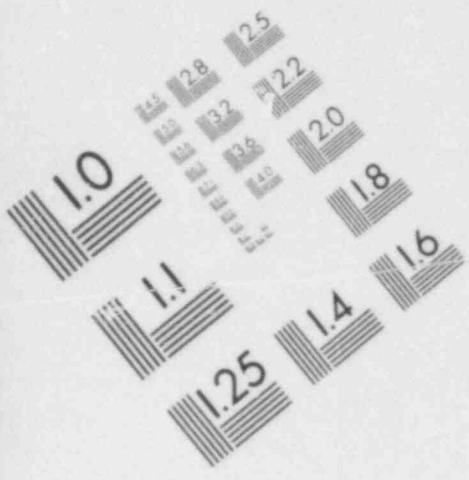
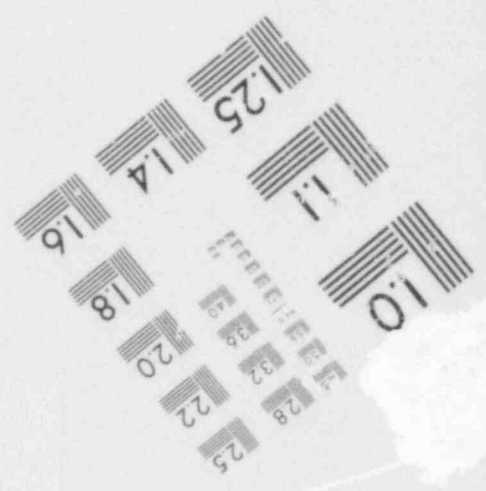
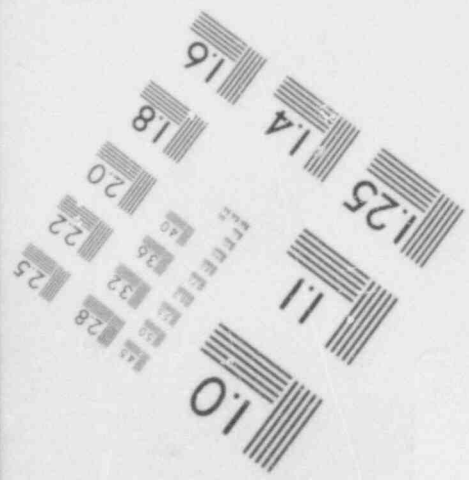
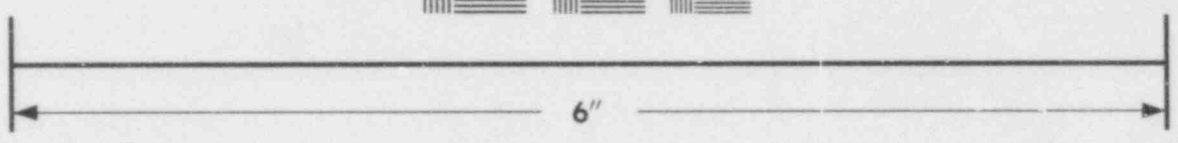
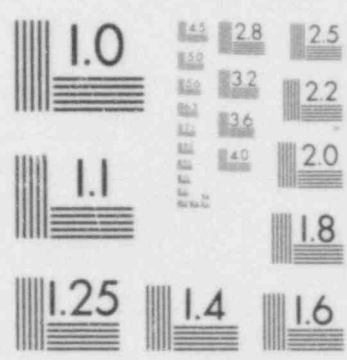


IMAGE EVALUATION
TEST TARGET (MT-3)



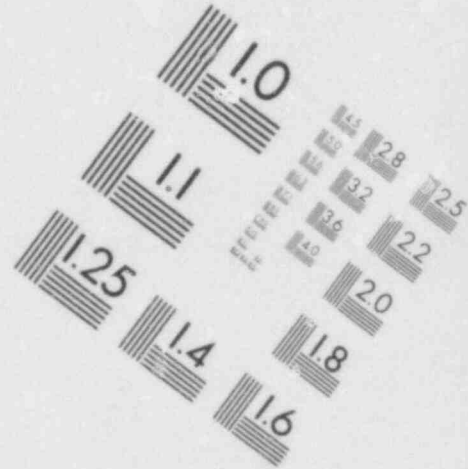
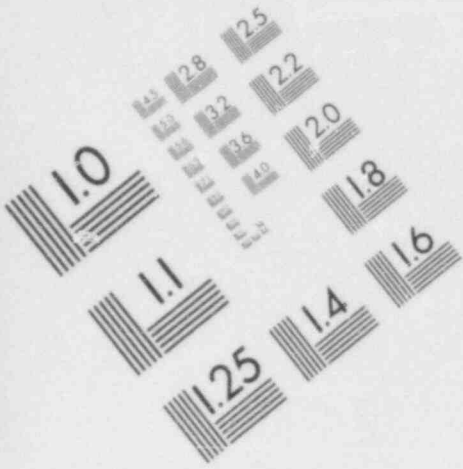
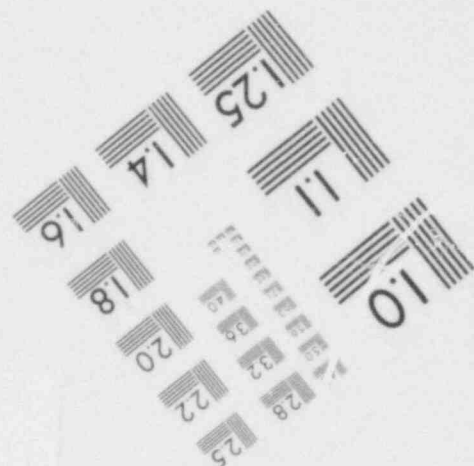
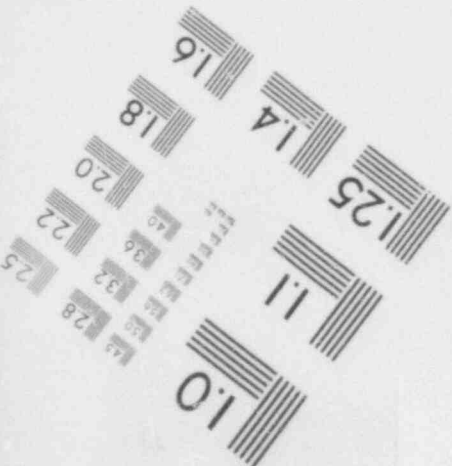
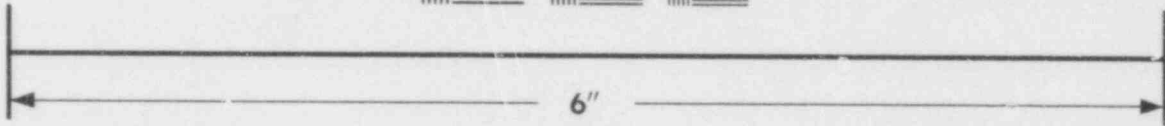
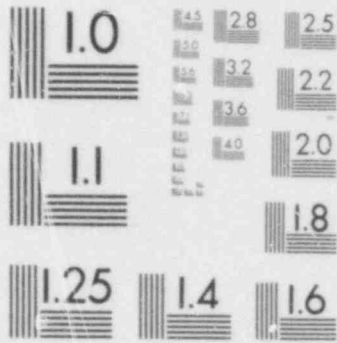
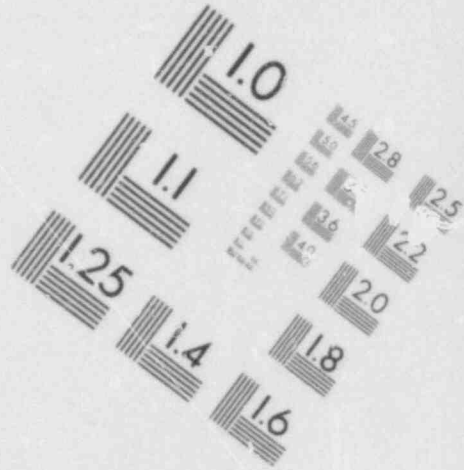
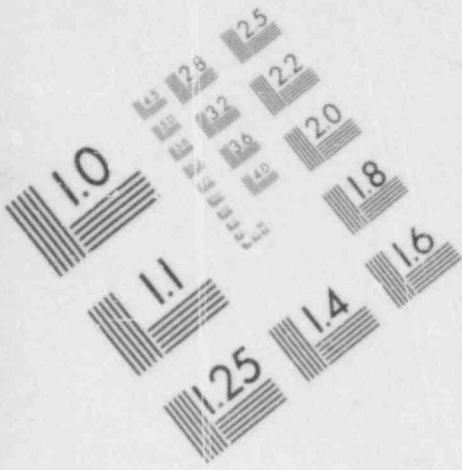
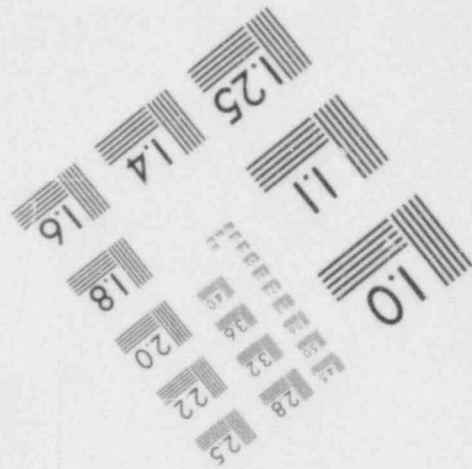
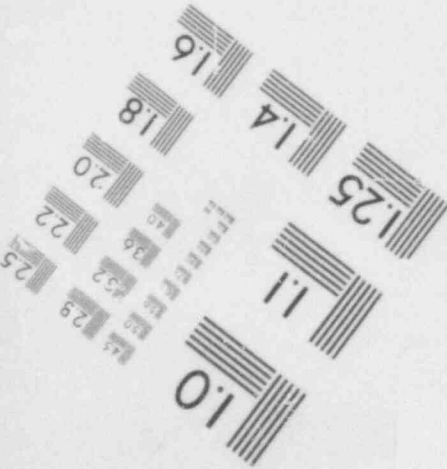
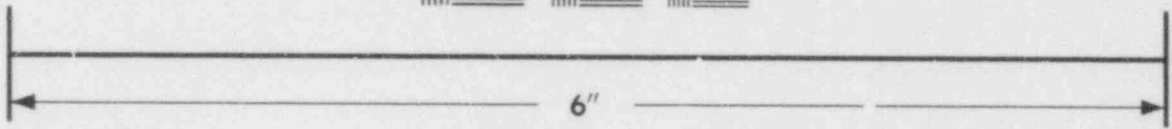
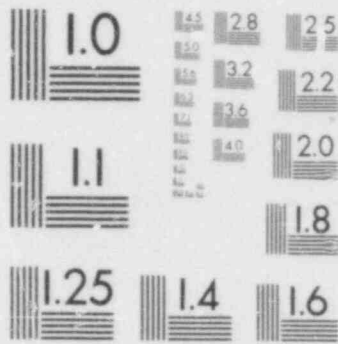


IMAGE EVALUATION
TEST TARGET (MT-3)





**IMAGE EVALUATION
TEST TARGET (MT-3)**



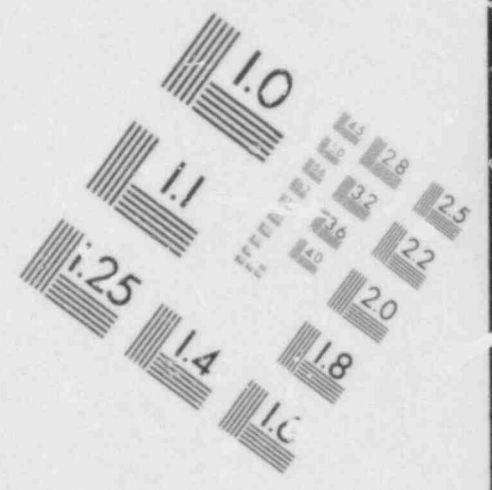
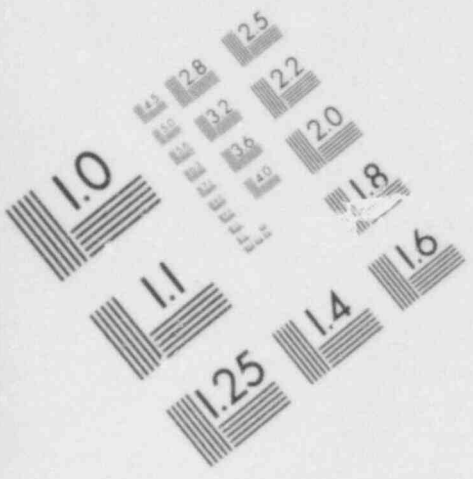
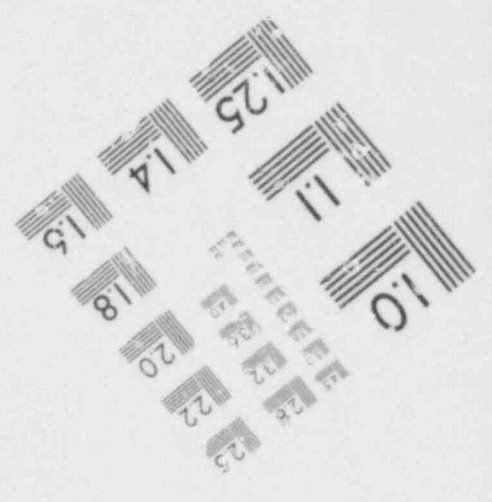
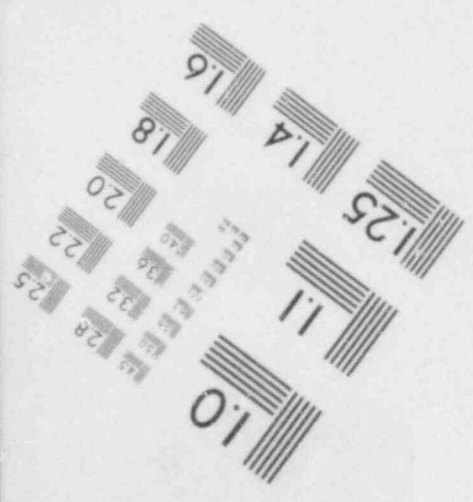
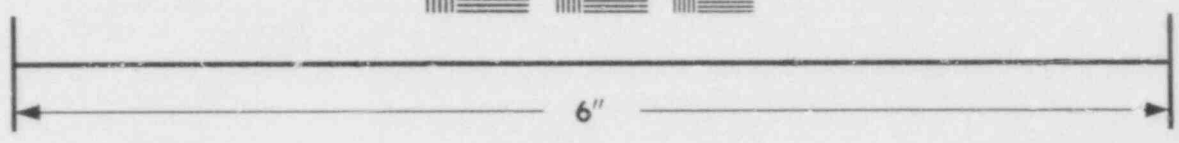


IMAGE EVALUATION
TEST TARGET (MT-3)



Grass

~~XXX~~ SAMPLE SURVEY DATA

DATE: 5-1-79

LOCATION: E. location B

TIME ~~GM~~: 1430

~~TIME OFF:~~

~~FLOW RATE:~~

~~TOTAL VOLUME:~~

NRC SAMPLE NUMBER: 1148

ANALYSIS FINDINGS: $< 1.3E-4 \mu\text{Ci}/\text{m}^2$ $\bar{131}$

231 001

AIR SAMPLE SURVEY DATA

DATE: 5/1/79

LOCATION: TMI Observation Center 2nd Floor (Continuous Monitor)

TIME ON: 1500 5/1/79

TIME OFF: 1500 5/2/79

FLOW RATE: 60 lpm

TOTAL VOLUME: 8.64 E 7 ml.

WRC SAMPLE NUMBER: 1182

ANALYSIS FINDINGS: I-131 < $\frac{8.6 \text{ E-13 } \mu\text{Ci}}{\text{ml}}$

231 002

AIR SAMPLE SURVEY DATA

DATE: ~~5/11/79~~ 5/11/79

LOCATION: Continuous Air Sample located on 2nd floor
of TMS Observation Center

TIME ON: 1500

TIME OFF: 1500

FLOW RATE: 60 liters per min

TOTAL VOLUME:

NRC SAMPLE NUMBER: (17)

ANALYSIS FINDINGS:

¹³¹IK 6.6 E-13 mCi/cc

231 003

AIR SAMPLE SURVEY DATA

DATE:

5/1/79

LOCATION:

Observation Cata Parking lot (P. 3)

TIME ON:

1916

TIME OFF:

1916

FLOW RATE:

3 cfm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1152

ANALYSIS FINDINGS:

$^{131}\text{I} \leftarrow 1.63\text{E}-11 \text{ } \mu\text{Ci}/\text{ml}$

231 004

CP 200

Young & Hold

AIR SAMPLE SURVEY DATA

DATE: 5/1/79

LOCATION: { 50 KV Parking Lot for 45 min.
{ south side of 50KV parking lot } for 45 min
{ Along side of Rt 441 at bottom of hill }

TIME ON: 2100 } 45 min } 2153 } 45 min
TIME OFF: 2145 } } 2238 }

FLOW RATE:
4 cfm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1153

ANALYSIS FINDINGS:

¹³¹I < 1.2E-11 mCi/ml

231 005

AIR SAMPLE SURVEY DATA

DATE: 5-1-79

LOCATION: Airport

TIME ON: 1300

105 min

TIME OFF: 1445

FLOW RATE: ~~3 CFM~~ 2.8 CFM

TOTAL VOLUME: $105 \text{ min} \times \frac{2.8 \text{ ft}^3}{\text{min}} \times \frac{28,300 \text{ ml}}{\text{ft}^3} = 8.32 \text{ E } 6$

NRC SAMPLE NUMBER: 1149

ANALYSIS FINDINGS: $< 6.9 \text{ E } -12$ I¹³¹ $\mu\text{Ci}/\text{ml}$

AIR SAMPLE SURVEY DATA

DATE: 5/1/77

LOCATION: Observator Center

TIME ON: 8.25

TIME OFF: 10.55

FLOW RATE: ~~3~~ ~~2.8~~ 3.8 CFM

TOTAL VOLUME: $\frac{3.8 \text{ Ft}^3}{\text{min}} \times 150 \text{ min} \times \frac{28,300 \text{ ml}}{\text{Ft}^3} = 1.61 \text{ E}7 \text{ ml}$

NRC SAMPLE NUMBER: 1146

ANALYSIS FINDINGS: $I^{131} < 3.54 \text{ E-}12 \text{ } \mu\text{Ci/ml}$

AIR SAMPLE SURVEY DATA

DATE: 5-1-79

LOCATION: Red Hill Fruit Stand

TIME ON: 0320

TIME OFF: 0420

FLOW RATE: 4 CFM ——— net. eff = .51

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1091

ANALYSIS FINDINGS:

$^{131}\text{I} < 2.3 \text{E}-11 \text{ } \mu\text{Ci}/\text{ml}$

Grass
~~NRC~~ SAMPLE SURVEY DATA

DATE: 4/30/79

LOCATION: Goat Farm (on Route 441, between points 7+5-East)

~~TIME ON:~~ Grass sample

TIME OFF: 1800

~~FLOW RATE:~~

Area
TOTAL ~~VOLUME~~: 1 sq meter

NRC SAMPLE NUMBER: 1131

ANALYSIS FINDINGS:

¹³¹
 $I < 4.1 E - 5 \text{ } \mu\text{Ci} / \text{m}^2$

GRASS
AIR SAMPLE SURVEY DATA

DATE: 4/30/79

LOCATION: RED Hill Farm Booth on Rt 441

TIME ON: GRASS

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1115

ANALYSIS FINDINGS:

17 $I < 2.25 \times 10^{-4} \text{ mCi/m}^2$

231 010

GRASS
~~AIR SAMPLE SURVEY DATA~~

DATE: 4-30-79

LOCATION: 500 KV SUBSTATION

TIME ON: 1200

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 1 m³

NRC SAMPLE NUMBER: 1116

ANALYSIS FINDINGS:

¹³¹I < 2.25 E-4 ~~μCi~~ / m³

Account ¹³¹I @ 7.7 E (-5) $\mu\text{Ci}/\text{m}^3$
1119

Do not pull
Day shift will pull

Doc Smith

AIR SAMPLE SURVEY DATA

DATE: ~~4/29/29~~ 4/30/29

LOCATION: observation Center (2nd Floor Terrace)

TIME ON: 1517

TIME OFF:

FLOW RATE: 60 L/min

TOTAL VOLUME: ~~600~~

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

231 012

Young/Holby

CP-200

AIR SAMPLE SURVEY DATA

DATE:

4/30/79

LOCATION:

North Gate

TIME ON:

2149

TIME OFF:

2249

FLOW RATE:

3 ft³/min

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1129

ANALYSIS FINDINGS:

¹³¹I < 1.6E-11 uCi/ml

231 013

Holmes & Young

AIR SAMPLE SURVEY DATA

Wind: At 1800, 180°, 11 -/hr

DATE: 4/30/79

LOCATION: North Gate

TIME ON: 1913

TIME OFF: 2013

FLOW RATE: 3 cfm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1130

ANALYSIS FINDINGS:

$^{131}\text{I} < 1.6 \text{E}-11 \text{ } \mu\text{Ci}/\text{m}^3$

231 014

Schultz & Ladun

AIR SAMPLE SURVEY DATA

DATE: 4-30-79

LOCATION: BALCONY OF OBSERVATION CENTER

TIME ON: 0240

TIME OFF: 0340

FLOW RATE: 7 cfm

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1107

ANALYSIS FINDINGS:

¹³¹I < 5.4 E-12 nCi/ml

231 015

AIR SAMPLE SURVEY DATA

TBTL/Smith

DATE: 4/30/79

LOCATION: Middletown HOFFER PARK

TIME ON: 0900

TIME OFF: 1015

FLOW RATE: 2 cfm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1113

ANALYSIS FINDINGS:

$^{131}\text{I} < 1.1\text{E}-11 \text{ mCi/cc}$

231 016

NRC AIR SAMPLES

Following is a summary of the air sample data for the 24-hour period of 4/29-30/1979.

<u>Location</u>	<u>Sample Time</u>	<u>cfm</u>	<u>Activity $\mu\text{Ci/ml}$</u>
Addleton Ho Her Part	0900-1015	2	$< 1.1 \times 10^{-11} \mu\text{Ci/l}$
TMI Obs. Cr	0240-0340	7	$< 5.4 \times 10^{-12} \mu\text{Ci/l}$
North Gate	1913-2013	3	$< 1.6 \times 10^{-11}$
North Gate	2149-2249	3	$< 1.6 \times 10^{-11}$
NRC Daily Sample TMI Obs.	1500 4/29	1500 4/30	8×10^{-13}

231 017

NRC AIR SAMPLES

Following is a summary of the air sample data for the 24-hour period of April 29, 1979.

<u>Location</u>	<u>Sample Time</u>	<u>cfm</u>	<u>Activity $\mu\text{Ci/ml}$</u>
E/Truck # 15 Keene Rd. RT 101	0850 - 0955	5.6	$< 6.3 \text{ E}^{-12}$
500 KEV Parking lot	1732 - 1832	5	$< 7.75 \text{ E}^{-12}$
E location Falmouth Fishing Area	1140 - 1240	6	$< 6.4 \text{ E}^{-12}$
Obs. Center	2116 - 2236	4	$< 1.8 \text{ E}^{-11}$
NRC Daily Sample	0400 - 1317	60 L/min	$< 2 \text{ E}^{-12} \mu\text{Ci/ml I}_{131}$

231 018

AIR SAMPLE SURVEY DATA

DATE:

4/20/79

LOCATION:

pt. 8 Observator Center

TIME ON:

2116

TIME OFF:

2236

FLOW RATE:

4 ft³/min at start 4 1/4 ^{ft³}/min at end,

TOTAL VOLUME:

ret. eff = .51 for CP-200

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

1097

R# 2000

270'

8 m/
r.

¹³¹I < 1.8E-11 uCi/ml

24 Hour Sample

Schultz &
Ladum

AIR SAMPLE SURVEY DATA

DATE: 4-29-79

LOCATION: OBSERVATION CENTER BLDG.

TIME ON: 0400

9 hrs 17 min

$\frac{540}{27}$
607

TIME OFF: 1317

FLOW RATE: 60 LPM

TOTAL VOLUME: $657 \text{ min} \times \frac{60 \text{ l}}{\text{min}} \times \frac{10^3 \text{ ml}}{\text{l}} = 3.94 \times 10^7$

NRC SAMPLE NUMBER: 1094

ANALYSIS FINDINGS: $< 2 \times 10^{-12} \text{ ml/ft}^3$ 131

CP-100

1095

AIR SAMPLE SURVEY DATA

DATE: 4/29/79

LOCATION: Pt. 9 50 KW Parking Lot

TIME ON: 1732

TIME OFF: 1832

FLOW RATE: $5\frac{1}{2} \frac{\text{ft}^3}{\text{m}}$ at start $5 \frac{\text{ft}^3}{\text{m}}$ at end

TOTAL VOLUME: $9.92E6$ ml.

NRC SAMPLE NUMBER: 1095

ANALYSIS FINDINGS: I-131 $7.75E-12 \frac{\mu\text{Ci}}{\text{ml}}$

1730 at 285° at 8 $\frac{\text{m}}{\text{hr}}$

231 021

AIR SAMPLE SURVEY DATA

DATE: 4/29/79

LOCATION: E Location 13 (Falmouth Fishing Area)

TIME ON: 1140

t = 60 min

TIME OFF: 1240

FLOW RATE: 6.0 CFM (true)

TOTAL VOLUME: $60 \text{ min} \times \frac{6 \text{ CFM}^2}{\text{min}} \times \frac{28,300 \text{ ml}}{\text{CFM}} = 1.0257 \text{ ml}$

NRC SAMPLE NUMBER: 1093

ANALYSIS FINDINGS: $< 6.4 \text{ E-}12$

231 022

AIR SAMPLE SURVEY DATA

DATE:

4/27/79

LOCATION:

Observation Center

TIME ON:

1500

TIME OFF:

1500

} 24hr Sample

FLOW RATE:

60 LPM

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1118

ANALYSIS FINDINGS:

¹³¹I = 8E-13 mCi/cc

AIR SAMPLE SURVEY DATA

DATE: 4/29/79

LOCATION: E Location 15 (Keener Rd & Rt 441)

TIME ON: 0850

$t = 65 \text{ min}$

TIME OFF: 0955

FLOW RATE: 5.5 \leftrightarrow 5.8

AVE 5.6 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1090

ANALYSIS FINDINGS: $< 6.3 \times 10^{-12} \text{ uCi/l}$

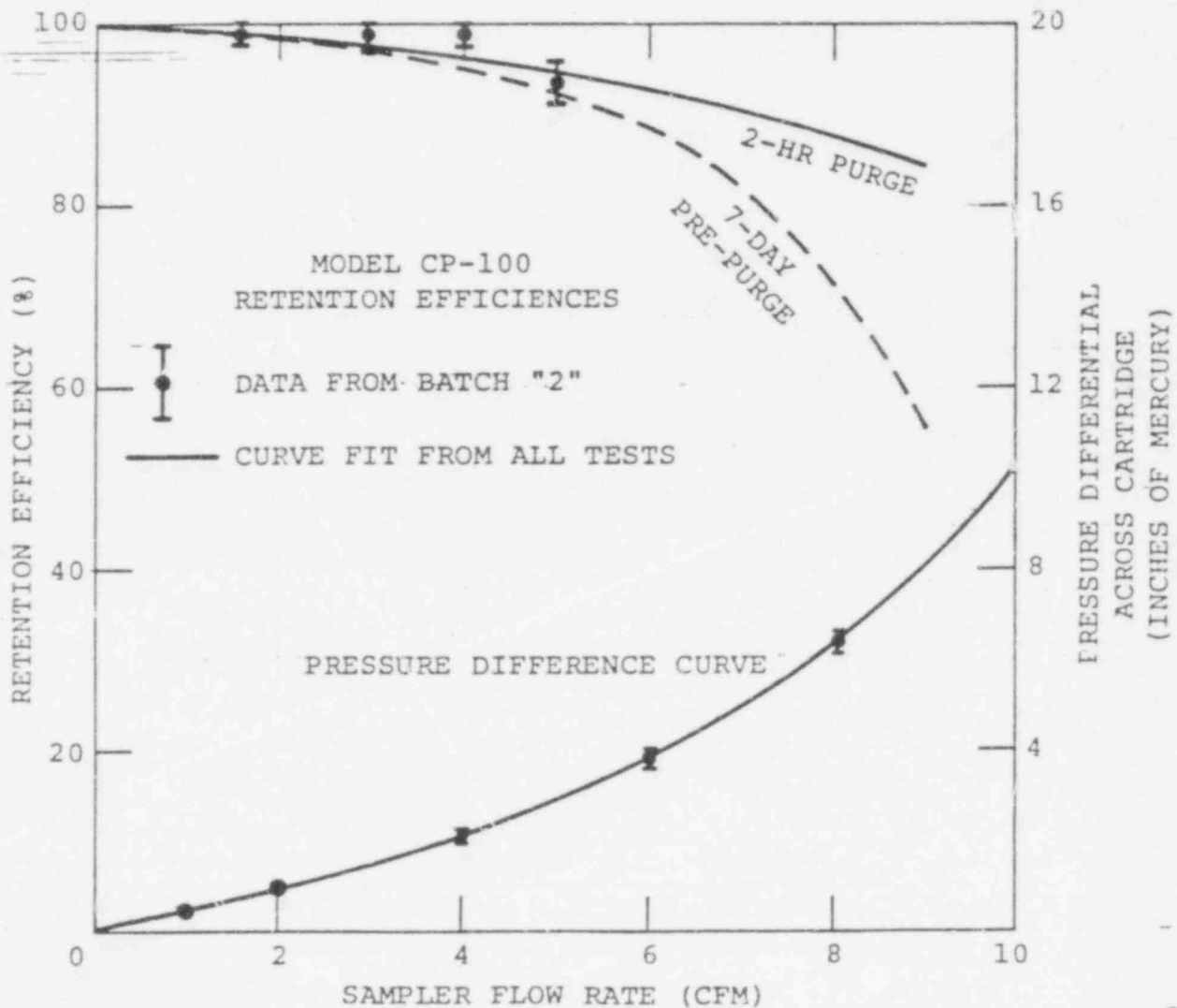
231 024

(PRELIMINARY)
IODINE SAMPLER CARTRIDGE
CERTIFICATION
CP - 100

This is a preliminary certification for batch #2. Cartridges have been tested according to the Quality Control procedures established by the NUCLEAR ENVIRONMENTAL SERVICES division of SCIENCE APPLICATIONS, INC. and that the cartridges have been determined to have absorption properties given below. Tests up to 5 cfm have been completed. There is no indication that batch #2 will differ from previous tests. Results of full test series will be sent when complete.

TEST CONDITIONS

IODINE SPECIES: METHYL
RELATIVE HUMIDITY: $32 \pm 2\%$
TEMPERATURE: 86 ± 2.0



231 025

CP-100

<u>FLOW RATE (CFM)</u>	<u>RETENTION EFFICIENCIES</u>		<u>PRESSURE DROP (INCHES OF Hg)</u>
	<u>2-HR PURGE</u>	<u>7-DAY PURGE</u>	
1	0.99	0.99	0.4
2	0.98	0.98	0.9
3	0.97	0.97	1.4
4	0.96	0.95	2.1
5	0.94	0.92	2.9
6	0.92	0.90	3.8
7	0.89	0.86	4.9
8	0.87	0.75	6.4
9	0.85	0.67	8.0
10	0.81	0.55	9.6

This certifies that batch 2 of the CP-100 Cartridges has the above properties based on interim test results. Sufficient testing has been carried out to issue this certification. The results of the complete test procedure will be sent when complete.

Charles A. Pelletier

Charles A. Pelletier, Science Applications, Inc.
11/9/78

AM-1 I Releases (Cartridge)
Unit 2 Station Vent

From	To	CFM	NRC	Results ($\mu\text{Ci/cc}$)		Other
				RMC	SAI	
5/1 1744	5/1 2318		<2.6 E-12			
5-1 2320	5-3 0019		1.7E-12 $\pm 18\%$			
5-3 0021	5-4 0004		<7E-13			
5/4 1100	5/5 0003	0	1.3E-11 $\leq 8.6 \times 10^{-15} \mu\text{Ci/cc}$			
5/5 0009	5/6 0150		1.3E-11 2.07×10^{-12}			
5/6 0154	5/6 1300		2.8 $\times 10^{-12}$			
5/6 0150	5/7 0443		1.01 $\times 10^{-12}$			
5/7 0449	5/8 0045	3.1	2.7 $\times 10^{-11}$ "I"			
5/8 0055	5/8 2337		$\leq 6.36 \times 10^{-13}$			
5/9 2241	5/9 2300		2.4 $\times 10^{-12}$			
5/9 2259	5/9 2220		6.0E-12			
5/10 2300	5/11 2221		3.1E-12			
5/11 2225	5/12 2315		4.45E-13			
5/12 2320	5/13 2233		2.0E-12			

2000-1100

AIR SAMPLE SURVEY DATA

DATE: 6-4-79

LOCATION: AM-1 C/P CP100

TIME ON: 0015 6/3

TIME OFF: 0045 6/4

FLOW RATE: 3.45 cfm

TOTAL VOLUME: 1.44E8 ml

NRC SAMPLE NUMBER: 1833

ANALYSIS FINDINGS:

¹³¹I < 5.9E-13 μ C/ml

AIR SAMPLE SURVEY DATA

DATE: 6-3-79

LOCATION: AM-1 c/p cp100

TIME ON: 0016 6/2

TIME OFF: 0016 6/3

FLOW RATE: 3.25 cfm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1797

ANALYSIS FINDINGS:

¹³¹I < 6.1E-13 uCi/ml

AIR SAMPLE SURVEY DATA

DATE: 6-2-79 .

LOCATION: AM-1 c/p cp100.

TIME ON: 2132 5/31

TIME OFF: 0009 6/2

FLOW RATE: 2.95 cfm

TOTAL VOLUME: 1.33E8 cf

NRC SAMPLE NUMBER: 1779

ANALYSIS FINDINGS:

13'I = 3.5E-12 uCi/ml $\pm 9\%$

AIR SAMPLE SURVEY DATA

DATE: 5-1-79

LOCATION: AM-1 4/P CP100

TIME ON: 0011 5/31

TIME OFF: 2131 5/31

FLOW RATE: 2.9 cfm

TOTAL VOLUME: 1.08E8 ml

NRC SAMPLE NUMBER: 1759

ANALYSIS FINDINGS:

¹³¹I = 4.4E-12 μ Ci/ml \pm 10%

Xe ^{131m}, Xe ¹³³ present

AIR SAMPLE SURVEY DATA

DATE: 5-31-79

LOCATION: AM-1 4/P ep100

TIME ON: 0017 5/30

TIME OFF: 0009 5/31

FLOW RATE: 3.0 cfm

TOTAL VOLUME: $1.22 E+8$

NRC SAMPLE NUMBER: 1737

ANALYSIS FINDINGS:

¹³¹I = $5.2 E-12 \mu\text{Ci}/\text{l} \pm 8\%$

AIR SAMPLE SURVEY DATA

DATE: 5-30-79

LOCATION: AM-1 C/P ep 100

TIME ON: 0046 5/29

TIME OFF: 0012 5/30

FLOW RATE: 2.95 cfm

TOTAL VOLUME: 1.17E8 ml

NRC SAMPLE NUMBER: 1725

ANALYSIS FINDINGS:

¹³¹I = $5.3E-12$ $\frac{\mu\text{Ci}}{\text{ml}} \pm 8\%$

AIR SAMPLE SURVEY DATA

DATE: 5-29-79

LOCATION: AM-1 charc cp 100

TIME ON: 0111 5/28

TIME OFF: 0042 5/29

FLOW RATE: 3.35 cfm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1710

ANALYSIS FINDINGS:

$$^{131}\text{I} = 6.1\text{E}-12 \text{ mCi/ml} \pm 7\%$$

also $X_{e^{131m}}$, $X_{e^{133}}$ present

231 034

AIR SAMPLE SURVEY DATA

DATE: 5/28/79

LOCATION: AM-1

TIME ON: 0025 (5/27)

TIME OFF: 0108 (5/28)

FLOW RATE: 3.175 CFM

TOTAL VOLUME: 1.33 E 8 ml

NRC SAMPLE NUMBER: 1697

ANALYSIS FINDINGS: ¹³¹I = 5.1 E -12 per ml

231 035

AIR SAMPLE SURVEY DATA

DATE: 5/28

LOCATION: AM-1

TIME ON: 0028 (5/26)

TIME OFF: 0023 (5/27)

FLOW RATE: 3 cfm

TOTAL VOLUME: 1.2268 m³

NRC SAMPLE NUMBER: 1696

ANALYSIS FINDINGS: ¹³¹I = 6.66 - 12 $\mu\text{Ci}/\text{m}^3$

231 036

AIR SAMPLE SURVEY DATA

Counting

DATE: 5/26/72

LOCATION: AM-1 Part/Chase

TIME ON: 0045 (5/24)

TIME OFF: 0021 (5/25)

FLOW RATE: 3.15 CFM

TOTAL VOLUME: 1,26 CFM

NRC SAMPLE NUMBER: 1674

ANALYSIS FINDINGS:

$$^{131}\text{I} = 7.3 \text{ E-12 } \frac{\mu\text{Ci}}{\text{ml}} \pm 7\%$$

AIR SAMPLE SURVEY DATA

DATE: 5/25

LOCATION: AM-1

TIME ON: 0044 (5/23)

TIME OFF: 0040 (5/24)

FLOW RATE: 2.9 CFM

TOTAL VOLUME: 1.18 E 8 ml.

NRC SAMPLE NUMBER: 1658

ANALYSIS FINDINGS: ¹³¹I = 7.0 E - 12 $\frac{\mu\text{Ci}}{\text{ml}}$

231 038

AIR SAMPLE SURVEY DATA

DATE: 5/23

LOCATION: AM-1

TIME ON: 0045 5/22

TIME OFF: 0039 5/23

FLOW RATE: 3.25 CFM

TOTAL VOLUME: 1.32 E 8 ml

NRC SAMPLE NUMBER: 1641

ANALYSIS FINDINGS: I-131 = $9.5E-12 \pm 6\%$ $\frac{\mu\text{Ci}}{\text{ml}}$

231 039

AIR SAMPLE SURVEY DATA

DATE: 5-21-79

LOCATION: AM-1 C/P CP 100

TIME ON: 2300 5/19

TIME OFF: 2227 5/20

FLOW RATE: 3.1 cfm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1584

ANALYSIS FINDINGS:

¹³¹
 $I = 1.1 E - 11 \text{ } \mu\text{Ci/ml} \pm 5.2\%$

Xe¹³¹m present

231 040 ~~231~~ 231

AIR SAMPLE SURVEY DATA

DATE: 5-20-79

LOCATION: AM-1 yp sp100

TIME ON: 2255 (5/18)

TIME OFF: 2254 (5/19)

FLOW RATE: 3.1 fpm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1565

ANALYSIS FINDINGS:

¹³¹
 $I = 9.5 E - 12 \text{ } \mu\text{Ci/ml} \pm 5\%$

AIR SAMPLE SURVEY DATA

DATE: 5-19-79

LOCATION: AM-1 C/P ep 100

TIME ON: 2350 5/17

TIME OFF: 2248 5/18

FLOW RATE: 3.2 cfm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1542

ANALYSIS FINDINGS:

¹³¹
 $I = 8.4E-12 \text{ nCi/ml} \pm 6\%$

231 042

AIR SAMPLE SURVEY DATA

DATE: 5-17-79

LOCATION: AM-1 C/P

TIME ON: 2258 5/15

TIME OFF: 2330 5/16

FLOW RATE: 3.0 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1500

ANALYSIS FINDINGS:

¹³¹I = 8.6E-12 $\mu\text{Ci}/\text{ml}$

$\pm 6\%$

231 043

AIR SAMPLE SURVEY DATA

DATE:

LOCATION: AM-1

TIME ON: 2320 - 5/12

TIME OFF: 2333 - 5/13

FLOW RATE: 3.0 l/m

TOTAL VOLUME: 1.32E8

NRC SAMPLE NUMBER: 1439

ANALYSIS FINDINGS:

$^{131}\text{I} = 2.0 \text{ E-}12 \text{ } \mu\text{Ci/cc}$

231.044

AIR SAMPLE SURVEY DATA

DATE:

LOCATION:

AM-1

TIME ON:

2300 (5/10)

TIME OFF:

2221 (5/11)

FLOW RATE:

3.2 cfm

TOTAL VOLUME:

1.2758 cc

NRC SAMPLE NUMBER:

1392

ANALYSIS FINDINGS:

¹³¹I = $3.1 \text{E}-12 \text{ } \mu\text{Ci/cc}$

231.045

AIR SAMPLE SURVEY DATA

DATE: 5-11-79

LOCATION: AM-1

TIME ON: 2341 5/9

TIME OFF: 2300 5/10

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1374

ANALYSIS FINDINGS:

$^{131}\text{I} = 2.4 \text{ E-12} \pm 14\% \text{ } \mu\text{Ci/ml}$

231 946

AIR SAMPLE SURVEY DATA

DATE: 5-8-79

LOCATION: AM-1

TIME ON: 0449 5/7

TIME OFF: 0045 5/8

FLOW RATE: 3.1 CFM

TOTAL VOLUME: 1.1 E 8 ml

NRC SAMPLE NUMBER: 1306

ANALYSIS FINDINGS:

$$I^{131} = 2.7E-12 \text{ } \mu\text{C/ml} \pm 13\%$$

XE 133, XE 131m present

231 047

AIR SAMPLE SURVEY DATA

DATE:

LOCATION: AM-1

TIME ON: ~~1349 5/5~~ 0009 5/5

TIME OFF: ~~0047 5/6~~ 0150 5/6

FLOW RATE: 3.3 cfm

TOTAL VOLUME: 1.44E8 cc

NRC SAMPLE NUMBER: 1268

ANALYSIS FINDINGS:

$^{131}\text{I} = 2.07 \text{E}-12 \mu\text{Ci/cc}$

231 048

AIR SAMPLE SURVEY DATA

DATE:

LOCATION: AM-1

TIME ON: 1100 - 5/4/79

TIME OFF: 0003 - 5/5/79

FLOW RATE: 3 fpm

TOTAL VOLUME: 6.65 E-7 cc

NRC SAMPLE NUMBER: 1250

ANALYSIS FINDINGS:

$^{131}\text{I} < 8.6 \text{ E-}13 \mu\text{Ci/cc}$

In-plant air (effluents)

NR SAMPLE SURVEY DATA

DATE: 5/3

LOCATION: AM-1

TIME ON: 2328 (5/1)

TIME OFF: 0019 (5/3)

TOTAL VOLUME: 1.18 E8 ml

SAMPLE COUNTED BY - ANL ~~NRC~~

NRC SAMPLE NUMBER: 1194

ANALYSIS FINDINGS:

¹³¹I = $1.7E-12$ $\mu\text{Ci/ml}$ $\pm 18\%$

also XE 133
XE 131M present

AIR SAMPLE SURVEY DATA

DATE: 6/5

LOCATION: AM-1 c/p CP-100

TIME ON: 0048 (6/4)

TIME OFF: 0029 (6/5)

FLOW RATE: 3.0 CFM

TOTAL VOLUME: 1.2 E 8 ml

NRC SAMPLE NUMBER: 1856

ANALYSIS FINDINGS: $I = 2.7E-12 \pm 12.7\% \frac{\mu\text{Ci}}{\text{ml}}$

AM-2 I Release (Cartridge)
Unit 2 Station Vent

From	To	CFM	Results ($\mu\text{Ci/cc}$)			
			NRC	RMC	SAI	Other
5/1 1744	5/1 2300		<1.5 E-12			
5-1 2310	5-3 0034		5.1 E-12 \pm 8%			
5/3 0045	5/4 0015		<5 E-13			
5/4 1101	5/5 0017	24	131-E 2.5 $\times 10^{-12}$ <i>u/s</i>			
5/5 0015	5/4 0158		131E 1.70 $\times 10^{-12}$			
5/6 0200	5/6 1305		<1.4 $\times 10^{-12}$			
5/7 0501	5/8 0105		<9.1 $\times 10^{-13}$ 131E			
5/8 0110	5/8 2325		<7.7 $\times 10^{-13}$			
5/8 2330	5/9 2335		<4.8 $\times 10^{-13}$			
5/12 <i>unknown</i>	5/12 2250		6.35 E-13			
5/12 2330	5/13 2350		5.1 E-12			

101-1105-5100

AIR SAMPLE SURVEY DATA

DATE: 6/5

LOCATION: AM-2 c/p CP-100

TIME ON: 0100 (6/4)

TIME OFF: 0037 (6/5)

FLOW RATE: 3.35 CFM

TOTAL VOLUME: 1.3 E 8 ml

NRC SAMPLE NUMBER: 1855

ANALYSIS FINDINGS: $^{131}\text{I} < 6.5 \text{ E-13 } \frac{\mu\text{Ci}}{\text{ml}}$

231 053

AIR SAMPLE SURVEY DATA

DATE: 6-4-79

LOCATION: AM-2 4/p cp100

TIME ON: 0020 6/3#

TIME OFF: 0054 6/4

FLOW RATE: 3.25 f/m

TOTAL VOLUME: 1.36 E 8 ml

NRC SAMPLE NUMBER: 1832

ANALYSIS FINDINGS:

¹³¹I = 3.4E-12 uCi/ml ± 90%

Xe ¹³³ present

AIR SAMPLE SURVEY DATA

DATE: 6-3-79

LOCATION: AM-2 c/p 4100

TIME ON: 0031 6/2

TIME OFF: 0018 6/3

FLOW RATE: 3.4 cfm

TOTAL VOLUME: 1.4E8 ml

NRC SAMPLE NUMBER: 7808

ANALYSIS FINDINGS:

$$^{131}\text{I} = 2.5 \text{E} - 12 \text{ } \mu\text{Ci}/\text{ml} \pm 11\%$$

X₂ ¹³³ seen

231 055

AIR SAMPLE SURVEY DATA

DATE: 6-2-79.

LOCATION: AM-2 c/p ep100.

TIME ON: 2130 5/31

TIME OFF: 0018 4/2

FLOW RATE: 3.28 cfm

TOTAL VOLUME: 1.48E8

NRC SAMPLE NUMBER: 1780

ANALYSIS FINDINGS:

¹³¹I = 2.4E-12 $\mu\text{Ci}/\text{ml} \pm 11\%$

231 056

AIR SAMPLE SURVEY DATA

DATE: 6-1-79

LOCATION: AM-2 C/P ep 100

TIME ON: 0017 5/31

TIME OFF: 2125 5/31

FLOW RATE: 3.35 f/m

TOTAL VOLUME: 1.20×10^8 ml

NRC SAMPLE NUMBER: 1760

ANALYSIS FINDINGS:

$$^{131}\text{I} = 4.0 \times 10^{-12} \text{ nCi/ml} \pm 9\%$$

231 057

AIR SAMPLE SURVEY DATA

DATE: 5-31-79.

LOCATION: AM-2 4p 4100

TIME ON: 0005 5/30

TIME OFF: 0001 5/31

FLOW RATE: 3.3 cfm

TOTAL VOLUME: $1.33 \times 10^8 \text{ ml}$

NRC SAMPLE NUMBER: 1738

ANALYSIS FINDINGS:

$^{131}\text{I} = 5.4 \times 10^{-12} \mu\text{Ci/ml} \pm 7\%$

231 058

AIR SAMPLE SURVEY DATA

DATE: 5-30-79.

LOCATION: AM-2 C/P CP100

TIME ON: 0100 5/29

TIME OFF: 0020 5/30

FLOW RATE: 3.45 cfm

TOTAL VOLUME: = $1.37E8$ ml

NRC SAMPLE NUMBER: 1726

ANALYSIS FINDINGS:

$^{131}\text{I} = 5.3E-12 \text{ mCi/ml} \pm 7\%$

231 059

AIR SAMPLE SURVEY DATA

DATE: 5-29-79

LOCATION: AM-2 chan cp 100

TIME ON: 0119 5/28

TIME OFF: 0059 5/29

FLOW RATE: 3.3 cfm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1712

ANALYSIS FINDINGS:

$^{131}\text{I} = 6.6 \text{ E-}12 \text{ } \mu\text{Ci/ml} \pm 7\%$

$\text{Xe}^{133}, \text{Xe}^{131}$ _m

231 060

AIR SAMPLE SURVEY DATA

DATE: 5/28/79

LOCATION: AM-2

TIME ON: 0040 (5/27)

TIME OFF: 0117 (5/28)

FLOW RATE: 3.2 CFM

TOTAL VOLUME: 1.33×10^8 ml

NRC SAMPLE NUMBER: 1699

ANALYSIS FINDINGS: $^{131}I \leq 7.6 \times 10^{-12}$ $\mu\text{Ci}/\text{ml}$

231 061

AIR SAMPLE SURVEY DATA

DATE: 5/28/79

LOCATION: AM-2

TIME ON: 0037 (5/26)

TIME OFF: 0038 (5/27)

FLOW RATE: 1.65 CFM

TOTAL VOLUME: 6.72×10^7 ml

NRC SAMPLE NUMBER: 1698

ANALYSIS FINDINGS: $^{131}\text{I} = 1.1 \times 10^{-11}$ $\mu\text{Ci}/\text{ml}$

231 062

AIR SAMPLE SURVEY DATA

Counting

DATE: 5/26/79

LOCATION: AM-2 Chose/Amr

TIME ON: 0052 (5/24)

TIME OFF: 0028 (5/25)

FLOW RATE: 2.95 CFM

TOTAL VOLUME: 1.18 E8 ml

NRC SAMPLE NUMBER: 4673

ANALYSIS FINDINGS: ¹³¹I = 9.3 E -12 $\mu\text{Ci}/\text{ml}$ $\pm 7\%$

231 003

AIR SAMPLE SURVEY DATA

DATE: 5/25

LOCATION: AM-2

TIME ON: 0052 (5/23)

TIME OFF: 0048 (8/24)

FLOW RATE: 2.9 CFM

TOTAL VOLUME: $1.18 E 8$ ml.

NRC SAMPLE NUMBER: 1657

ANALYSIS FINDINGS: $^{137}\text{I} = 7.6 E - 12 \frac{\mu\text{Ci}}{\text{ml.}} \pm 7.4\%$

231 064

AIR SAMPLE SURVEY DATA

DATE: 5/23

LOCATION: AM-2 c/p

TIME ON: 0055 (5/22)

TIME OFF: 0045 (5/23)

FLOW RATE: 2.9 CFM

TOTAL VOLUME: 1.2E8 ml

NRC SAMPLE NUMBER: 1638

ANALYSIS FINDINGS: I-131 = $1.2E-11 \frac{\mu\text{Ci}}{\text{ml}} \pm 5\%$

AIR SAMPLE SURVEY DATA

DATE: 5-21-79

LOCATION: AM-2 c/p cp 100

TIME ON: 2314 5/19

TIME OFF: 2235 5/20

FLOW RATE: 2.98 cfm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1591

ANALYSIS FINDINGS:

131
 $I = 1.0E-11 \text{ mCi/ml} \pm 5\%$

231 066

AIR SAMPLE SURVEY DATA

DATE: 5-20-79

LOCATION: AM-2 c/p 40100

TIME ON: 2231 (5/18)

TIME OFF: 2305 (5/19)

FLOW RATE: 3.7 cfm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1564

ANALYSIS FINDINGS:

¹³¹
 $I = 7.7E-12 \text{ } \mu\text{Ci/ml} \pm 5\%$

AIR SAMPLE SURVEY DATA

DATE: 5-19-79

LOCATION: AM-2 C/P CP100

TIME ON: 0000 5/18

TIME OFF: 2227 5/18

FLOW RATE: 2.9 cfm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1540

ANALYSIS FINDINGS:

¹³¹
 $I = 1.4E-11 \mu Ci/ml \pm 5\%$

CP 100

AIR SAMPLE SURVEY DATA

DATE: 5-18-79

LOCATION: AM-2 C/P

TIME ON: 2352 5/16

TIME OFF: 2353 5/17

FLOW RATE: 2.9 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1522

ANALYSIS FINDINGS:

$^{131}\text{I} = 1.3\text{E}-11 \mu\text{Ci}/\text{ml}$
 $\pm 4\%$

231 069

AIR SAMPLE SURVEY DATA

DATE: ~~5~~ 5-17-79

LOCATION: AM-2 C

TIME ON: 2305 5/15

TIME OFF: 2348 5/16

FLOW RATE: 2.9 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1498

ANALYSIS FINDINGS:

$^{131}\text{I} - 9.9 \text{E} - 11 \text{ mCi/ml} \pm 6\%$

AIR SAMPLE SURVEY DATA

DATE:

LOCATION: AM-02

TIME ON: 2330 (5/12)

TIME OFF: 2350 (5/13)

FLOW RATE: 2.9 fpm

TOTAL VOLUME: 1.20 E8 cc

NRC SAMPLE NUMBER: 144/

ANALYSIS FINDINGS:

$^{131}\text{I} = 5.1 \text{E}-12 \text{ } \mu\text{G}/\text{cc}$

231 071

AIR SAMPLE SURVEY DATA

DATE:

LOCATION:

AM-2

TIME ON:

2330 (5/8)

TIME OFF:

2335 (5/9)

FLOW RATE:

2.9 cfm

TOTAL VOLUME:

1.1958

NRC SAMPLE NUMBER:

1349

ANALYSIS FINDINGS:

$^{131}\text{I} < 4.8\text{E}-13 \text{ } \mu\text{Ci}/\text{cc}$

AIR SAMPLE SURVEY DATA

DATE:

LOCATION:

AM - 2

TIME ON:

0501 5/7

TIME OFF:

0105 5/8

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1308

ANALYSIS FINDINGS:

¹³¹I = 9.1×10^{-13} uCi/ml (MSA)

XE 133

XE 131m

present

231 073

~~229 167~~

AIR SAMPLE SURVEY DATA

DATE:

LOCATION: AM-2

TIME ON: 0015 - 5/5

TIME OFF: 0158 - 5/6

FLOW RATE: 2.9 fpm

TOTAL VOLUME: 1.27E8 cc

NRC SAMPLE NUMBER: 1267

ANALYSIS FINDINGS:

¹³¹I: 1.70 E-12 μ Ci/cc

231 074

~~229 168~~

AIR SAMPLE SURVEY DATA

DATE:

LOCATION: AM-2

TIME ON: 1101 - 5/4/79

TIME OFF: 0017 - 5/5/79

FLOW RATE: 2.9 cfm

TOTAL VOLUME: 6.53 E7 cc

NRC SAMPLE NUMBER: 1252

ANALYSIS FINDINGS:

¹³¹I = 2.5 E-12 µCi/cc

(± 12%)

231 075

~~229 169~~

AIR SAMPLE SURVEY DATA

DATE: 5/3-4/79

LOCATION: AM-2

TIME ON: 5-3-79 0045

TIME OFF: 5-4-79 0015

FLOW RATE: 2.8 cfm

TOTAL VOLUME: 1.1258 cc

NRC SAMPLE NUMBER: 1233

ANALYSIS FINDINGS:

~~131~~ I < 5.1E-13 nCi/cc

Indications of
¹³³Xe & ^{131m}Xe

~~229 170~~

In Plant (effluents)

AIR SAMPLE SURVEY DATA

DATE: 5/3/79

LOCATION: AM-2

TIME ON: 2316 (5/1)

TIME OFF: 0234 (5/3)

TOTAL VOLUME: 1.29 ± 8 ml

SAMPLE COUNTED BY - ANL NRC

NRC SAMPLE NUMBER: 1195

ANALYSIS FINDINGS: $^{131}\text{I} = 5.1 \text{ } \cancel{\text{XE}} \text{E} - 12 \mu\text{Ci/ml} \pm 80\%$

also XE 133, XE 131 m present

231 077

~~229 171~~

Marinelli (120 ml)

I Releases (Cartridge)

Unit 2 Station Vent

Am-2 Gas

From	To	ml CFM	NRC	Results (µCi/cc)		
				RMC	SAI	Other
5/2 2030		1200	Xe ¹³³ 1.6E-5 Xe ^{135m} 3.8E-5			

~~229 172~~

231 078

AIR SAMPLE SURVEY DATA

DATE:

5-12-79

LOCATION:

AM-2 GAS

TIME ON:

2030

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

1200 ml

NRC SAMPLE NUMBER:

1414

ANALYSIS FINDINGS:

¹³³Xe = $1.6E-5$ $\mu\text{Ci}/\text{ml}$

^{135m}Xe = $3.8E-5$ $\mu\text{Ci}/\text{ml}$

231 079

~~229 115~~

AM-3 I Releases (Cartridge)
Unit 2 Station Vent

From	To	CFM	NRC	Results (μCi/cc)		
				RMC	SAI	Other
5/4 1840 hrs	5/4 2353	X	131I $< 2.2 \times 10^{-12}$ /cc			
5/5 2100	5/5 2200		$< 1.4 \times 10^{-10}$			
5/6 1241	5/6 1247		$< 1.5 \times 10^{-10}$			
5/6 1240	5/7 0430		$< 9 \times 10^{-13}$			
5/7 0438	5/8 0010		1.8×10^{-12} /cc			
5/8 0033	5/8 2352		$< 6.2 \times 10^{-13}$			
5/9 0100	5/9 2240		6.6 E-12			
5/9 2243	5/10 2255		5.6 E-12			
5/10 2327	5/11 2232		4.7 E-12			
5/11 2235	5/12 2242		2.7 E-12			
5/12 2255	5/13 2315		1.1 E-11			
5/13 2325	5/14 2319		1.2 E-11			

~~209~~

AIR SAMPLE SURVEY DATA

DATE: 6/5

LOCATION: AM-3 e/p CP-100

TIME ON: 0035 (6/4)

TIME OFF: 0013 (6/5)

FLOW RATE: 3.22 CFM

TOTAL VOLUME: $1.3 \text{ E}8 \text{ ml}$

NRC SAMPLE NUMBER: 1854

ANALYSIS FINDINGS: $^{131}\text{I} < 6.5 \text{ E}-13 \frac{\mu\text{Ci}}{\text{ml}}$

231 081

~~229 175~~

AIR SAMPLE SURVEY DATA

DATE: 6-4-79

LOCATION: AM-3 c/p 4100

TIME ON: 0005 6/3

TIME OFF: 0031 6/4

FLOW RATE: 3.2 cfm

TOTAL VOLUME: 1.33E8 ml

NRC SAMPLE NUMBER: 1831

ANALYSIS FINDINGS:

$^{131}\text{I} = 2.3\text{E}-12 \mu\text{Ci}/\text{ml} \pm 11\%$

Xe 137 present

AIR SAMPLE SURVEY DATA

DATE: 6-3-79.

LOCATION: AM-3 4/P 4100.

TIME ON: 0007 6/2

TIME OFF: 0003 6/3

FLOW RATE: 3.1 cfm

TOTAL VOLUME: 1.26 E 8 ml

NRC SAMPLE NUMBER: 1801

ANALYSIS FINDINGS:

¹³¹
 $I = 3.8 E - 12 \frac{\mu Ci}{ml} \pm 9\%$

231 083

AIR SAMPLE SURVEY DATA

DATE: 6-2-79.

LOCATION: AM-3 c/p ep100

TIME ON: 2137 5/31

TIME OFF: 0001 6/2

FLOW RATE: 3.35 cfm

TOTAL VOLUME: 1.5×10^8 ml

NRC SAMPLE NUMBER: 1781

ANALYSIS FINDINGS:

131

$I = 3.7 \times 10^{-12}$ uli/ml $\pm 8\%$

AIR SAMPLE SURVEY DATA

DATE: 5-29-79.

LOCATION: AM-3 chan 4p100.

TIME ON: 0058 5/28

TIME OFF: 0033 5/29

FLOW RATE: 3.05 f/m

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1711

ANALYSIS FINDINGS:

¹³¹ I = $3.5E-12 \pm 11\%$ ~~uCi/m³~~ ~~at~~

Xe^{131m}, Xe¹³³ present

231 035

AIR SAMPLE SURVEY DATA

DATE: 6-1-79.

LOCATION: AM-3 C/P CP100

TIME ON: 0004 5/31

TIME OFF: 2135 5/31

FLOW RATE: 3.2 cfm

TOTAL VOLUME: 1.17E8 ml

NRC SAMPLE NUMBER: 1761

ANALYSIS FINDINGS:

$^{131}\text{I} < 7.2\text{E}-13 \text{ } \mu\text{Ci}/\text{ml}$

Xe^{131m}, Xe¹³³ present

231 00

231 086

AIR SAMPLE SURVEY DATA

DATE: 5-31-79

LOCATION: AM-3 c/p c¹⁰⁰

TIME ON: 0008 5/30

TIME OFF: 0004 5/31

FLOW RATE: ~~2.5~~ cf
3.2

TOTAL VOLUME: 1.3E8 ml

NRC SAMPLE NUMBER: 1740

ANALYSIS FINDINGS:

$^{131}\text{I} = 3.4 \text{E-}12 \text{ } \mu\text{Ci/ml} \pm 10\%$

231 087

AIR SAMPLE SURVEY DATA

DATE: 5-30-79.

LOCATION: AM-3 c/p c100

TIME ON: 0030 5/29

TIME OFF: 0001 5/30

FLOW RATE: 3.05 cfm

TOTAL VOLUME: 1.21 EA ml

NRC SAMPLE NUMBER: 1727

ANALYSIS FINDINGS:

¹³¹
 $I = 3.5 \cdot E-12 \pm 10\% \mu Ci/ml$

AIR SAMPLE SURVEY DATA

DATE: 5/29/79

LOCATION: Am-4

TIME ON: 0010 (5/27)

TIME OFF: 0059 (5/28)

FLOW RATE: 2.8 cfm

TOTAL VOLUME: 1.18 e8 ml

NRC SAMPLE NUMBER: 1703

ANALYSIS FINDINGS: ¹³¹I < 7 e-13 $\mu\text{Ci}/\text{ml}$

231 089

AIR SAMPLE SURVEY DATA

DATE: 5/28/79

LOCATION: AM-3

TIME ON: 0018 (5/27)

TIME OFF: 0054 (5/28)

FLOW RATE: 3.2 CFM

TOTAL VOLUME: 1,346 ft³ ml

NRC SAMPLE NUMBER: 1701

ANALYSIS FINDINGS: ¹³¹I 516 G-12 µCi/ml

AIR SAMPLE SURVEY DATA

DATE: 5/28/76

LOCATION: A1-3

TIME ON: 0019 (5/26)

TIME OFF: 0011 (5/27)

FLOW RATE: 3.25 CFM

TOTAL VOLUME: 1.32 E 8 ml

NRC SAMPLE NUMBER: 1700

ANALYSIS FINDINGS: $^{131}\text{I} = 8.40 \times 10^{-12} \text{ } \mu\text{Ci}/\text{ml}$

231 091

AIR SAMPLE SURVEY DATA

DATE: 5/28/79

LOCATION: AM - 4

TIME ON: 0024 (5/26)

TIME OFF: 0006 (5/27)

FLOW RATE: 2.75 CFM

TOTAL VOLUME: 1.1×10^8 ml

NRC SAMPLE NUMBER: 1702

ANALYSIS FINDINGS: $^{131}\text{I} < 8.8 \times 10^{-13}$ $\mu\text{Ci}/\text{ml}$

231 092

AIR SAMPLE SURVEY DATA

Counting
DATE: 5/26/79

LOCATION: AM-3 Chuc/lat

TIME ON: 0022 5/24

TIME OFF: 0009 5/29

FLOW RATE: 3.275 CFM

TOTAL VOLUME: 1.32×10^8 ml

NRC SAMPLE NUMBER: 1672

ANALYSIS FINDINGS: $^{131}\text{I} = 1.1 \times 10^{-11} \mu\text{Ci/ml}$

231 093

AIR SAMPLE SURVEY DATA

DATE: 5/23

LOCATION: AM-3

TIME ON: 5/22 - 0029

TIME OFF: 5/23 - 0024

FLOW RATE: 3.05 CFM

TOTAL VOLUME: 1.2E8 ml

NRC SAMPLE NUMBER: 1633

ANALYSIS FINDINGS: $^{129}\text{I} = 1.0\text{E}-11 \frac{\mu\text{Ci}}{\text{ml}} \pm 6\%$

231 094

AIR SAMPLE SURVEY DATA

DATE: 5-21-79

LOCATION: AM-3 c/p cp100

TIME ON: 2243 5/19

TIME OFF: 2215 5/20

FLOW RATE: 3.1 $\frac{m^3}{m}$

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1590

ANALYSIS FINDINGS:

$$^{131}\text{I} = 1.3 \text{ E-11 } \frac{\mu\text{C}}{\text{m}^3} \pm 5\%$$

231 095

AIR SAMPLE SURVEY DATA

DATE: 5-20-79

LOCATION: AM - ~~3~~ C/P cp 100

TIME ON: 2225 5/18

TIME OFF: 2240 5/19

FLOW RATE: 3.0 cfm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1562

ANALYSIS FINDINGS:

131
I < 7.1E-13 uCi/ml

231 096

CP100

AIR SAMPLE SURVEY DATA

DATE: 5-19-79

LOCATION: AM-3 C/P

TIME ON: 2333 5/17


TIME OFF: 2220 5/18

FLOW RATE: 2.8 cfm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1539

ANALYSIS FINDINGS:

(3)
I < 8.2E  c/mf

231 097

Air

AIR SAMPLE SURVEY DATA

DATE: 5-18-79

LOCATION: AM 3 C/P cp 100

TIME ON: 2312 5/16

TIME OFF: 2330 5/17

FLOW RATE: 2.95 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1524

ANALYSIS FINDINGS:

$^{131}\text{I} = 6.0\text{E}-12 \text{ uCi/ml} \pm 7\%$

231 098

AIR SAMPLE SURVEY DATA

DATE: 5-17-79

LOCATION: AM-3 C/P

TIME ON: 2245 5/15

TIME OFF: 2308 5/16

FLOW RATE: 3.05 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1497

ANALYSIS FINDINGS:

$^{131}\text{I} = 4.1 \times 10^{-12} \text{ nCi/ml}$
 $\pm 9\%$

2231 099

AIR SAMPLE SURVEY DATA

DATE:

LOCATION:

AM-3

TIME ON:

2325 (5/13)

TIME OFF:

2319 (5/14)

FLOW RATE:

3.9 cfm

TOTAL VOLUME:

1.58E8

NRC SAMPLE NUMBER:

1457

ANALYSIS FINDINGS:

$^{131}\text{I} \leftarrow 1.2 \text{E}-11 \text{ mB/cc}$

231 100

AIR SAMPLE SURVEY DATA

DATE:

LOCATION:

AM-3

TIME ON:

2255 (5/12)

TIME OFF:

2315 (5/13)

FLOW RATE:

3.4 cfm

TOTAL VOLUME:

1.39E8

NRC SAMPLE NUMBER:

1443

ANALYSIS FINDINGS:

$^{131}\text{I} = 1.1\text{E}-11 \text{ } \mu\text{Ci/cc}$

231 101

AIR SAMPLE SURVEY DATA

DATE:

LOCATION:

AM-3

TIME ON:

2307- 5/10

TIME OFF:

2230 - 5/11

FLOW RATE:

2.9 fpm

TOTAL VOLUME:

1.15E8 cc

NRC SAMPLE NUMBER:

1393

ANALYSIS FINDINGS:

¹³¹I : 4.7E-12 mCi/cc

231 102

AIR SAMPLE SURVEY DATA

DATE:

5-11-79

LOCATION:

AM-3

TIME ON:

2243 5/9

TIME OFF:

2255 5/10

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1375

ANALYSIS FINDINGS:

131 I 5.6E-12 nCi/ml ± 8%

231 103

AIR SAMPLE SURVEY DATA

DATE: 5-9-79

LOCATION: AM-3

TIME ON: 0100

TIME OFF: 2040

FLOW RATE: 3.31 fm

TOTAL VOLUME: 1.2258 cc

NRC SAMPLE NUMBER: 1352

ANALYSIS FINDINGS:

¹³¹I = $6.6 \text{E}-12$ $\mu\text{Ci}/\text{cc}$

231 104

AIR SAMPLE SURVEY DATA

DATE: 5/8

LOCATION: AM-2

TIME ON: 0438 5/7

TIME OFF: 0010 5/8

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1307

ANALYSIS FINDINGS:

$$^{131}\text{I} = 1.8 \text{E} - 12 \pm 17\% \\ \text{ng/ml}$$

XE 133, XE 131m present

231 105

AIR SAMPLE SURVEY DATA

DATE: 5/4/79

LOCATION: AM-3

TIME ON: 1840

TIME OFF: ~~0~~ 2353

FLOW RATE: 3 fpm

TOTAL VOLUME: 2.63E7 cc

NRC SAMPLE NUMBER: 1247

ANALYSIS FINDINGS:

$^{131}\text{I} < 2.2\text{E}-12 \text{ } \mu\text{Ci/cc}$

Indications of ^{133}Xe & $^{131\text{m}}\text{Xe}$

231 106

AIR SAMPLE SURVEY DATA

DATE: 5/23

LOCATION: EXHAUST TRI-STATE LAUNDRY

TIME ON: 1600

TIME OFF: 1706

FLOW RATE: 2.5 FM

TOTAL VOLUME: 4.7 E6 ml.

NRC SAMPLE NUMBER: 1637

ANALYSIS FINDINGS: I-131 $< 1.7 E-11 \frac{\mu\text{Ci}}{\text{ml}}$

231 107

Marinelli (1200 mls)

I Releases (Gastrolago)

Unit 2 Station Vent

μCi/ml

AM-3 GAS

From	To	CFM	NRC	Results (μCi/cc)		
				RMC	SAI	Other
5/10/79	2010		Xe 133 1.2X10 ⁻⁶			
5/12/79	1008		Xe 131m 67.E-6 ± 13% 9.2E-6 ± 2%			

GAS

AIR SAMPLE SURVEY DATA

DATE: 5-12-79

LOCATION: AM-3 GAS

TIME ON: 1008

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 1200 ml

NRC SAMPLE NUMBER: 1403

ANALYSIS FINDINGS:

$XE131m = 6.7E-6 \text{ } \mu\text{Ci/ml} \pm 13\%$

$XE133 = 9.2E-6 \text{ } \mu\text{Ci/ml} \pm 2\%$

231-109

AIR SAMPLE SURVEY DATA

DATE: 5-10-79

LOCATION: AM-3 (GAS)

TIME ON: 2010

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 1200 ml

NRC SAMPLE NUMBER: 1367

ANALYSIS FINDINGS:

$^{133}\text{Xe} = 1.2 \text{E}-6 \text{ } \mu\text{Ci}/\text{ml}$

231 110

AM-4 I Releases (Cartridge)
Unit 2 Station Vent

From	To	CFM	NRC	Results (µCi/cc)		
				RMC	SAI	Other
5/5 1339	5/6 0207	3.85	131-E-13X ¹⁰ 9/10/12			
75/9 0016	75/9 2250		2,14 E-12			
5/9 2300	5/10 2252		< 8, 2 E-13			
5/10 2304	5/11 2226		2,2 E-12			
5/12 2255	5/13 2325		9,5 E-12			

08

AIR SAMPLE SURVEY DATA

DATE: 6/5/79

LOCATION: AM4 c/p CP-100

TIME ON: 0040 (6/4)

TIME OFF: 0022 (6/5)

FLOW RATE: 2.85 CFM

TOTAL VOLUME: 1.1E8 ml.

NRC SAMPLE NUMBER: 1853

ANALYSIS FINDINGS: $^{131}\text{I} < 7.6 \text{ E-13 } \frac{\mu\text{Ci}}{\text{ml}}$

AIR SAMPLE SURVEY DATA

DATE: 6-4-79

LOCATION: AM-4 C/P CP100

TIME ON: 0007 6/3

TIME OFF: 0037 6/4

FLOW RATE: 2.2 cfm

TOTAL VOLUME: 1.27E8 ml

NRC SAMPLE NUMBER: 1830

ANALYSIS FINDINGS:

$^{131}\text{I} < 6.6\text{E}-13 \text{ } \mu\text{Ci/ml}$

AIR SAMPLE SURVEY DATA

DATE: 6-3-79.

LOCATION: AM-4 c/p sp100.

TIME ON: 0009 6/2

TIME OFF: 0005 6/3

FLOW RATE: 3 cfm

TOTAL VOLUME: 1.22E 8 ml

NRC SAMPLE NUMBER: 1802

ANALYSIS FINDINGS:

¹³¹I < 6.8E-13 $\frac{\mu\text{Ci}}{\text{ml}}$

231 114

AIR SAMPLE SURVEY DATA

DATE: 6-2-79.

LOCATION: AM-4 c/p ep100

TIME ON: 2134 5/31

TIME OFF: 0005 6/2

FLOW RATE: 2.85 cfm

TOTAL VOLUME: 1.28 E8 ml

NRC SAMPLE NUMBER: 1782

ANALYSIS FINDINGS:

¹³¹I < 6.6 E-13 uCi/ml

231 115

AIR SAMPLE SURVEY DATA

DATE: ~~5-2~~ 6-1-79

LOCATION: AM-4/ C/P ep 100

TIME ON: 0007 5/31

TIME OFF: 2133 5/31

FLOW RATE: 2.9 cfm

TOTAL VOLUME: 1.06 E 8 ml

NRC SAMPLE NUMBER: 1762

ANALYSIS FINDINGS:

$^{131}\text{I} < 8.0\text{E}-13 \mu\text{Ci/ml}$

AIR SAMPLE SURVEY DATA

DATE: 5-31-79

LOCATION: AM-4 C/P 9100

TIME ON: 0008 5/30

TIME OFF: 0004 5/31

FLOW RATE: 3.05 cfm

TOTAL VOLUME: 1.24 EA ml

NRC SAMPLE NUMBER: 1741

ANALYSIS FINDINGS:

¹³¹I < 6.8 E-13 uCi/ml

231 118

AIR SAMPLE SURVEY DATA

DATE: 5-30-79.

LOCATION: AM-4 c/p op 100

TIME ON: 0131 5/29

TIME OFF: 0005 5/30

FLOW RATE: 2.8 fpm

TOTAL VOLUME: 1.07 E 8 ml

NRC SAMPLE NUMBER: 1728

ANALYSIS FINDINGS:

$^{131}\text{I} < 7.9\text{E}-13 \text{ } \mu\text{Ci}/\text{ml}$

AIR SAMPLE SURVEY DATA

DATE: 5-29-79

LOCATION: AM-4 C/P CP100

TIME ON: 0102 5/28

TIME OFF: 0130 5/29

FLOW RATE: unknown

TOTAL VOLUME:

NRC SAMPLE NUMBER: 7714

ANALYSIS FINDINGS:

$^{131}\text{I} < 8.1 \text{E}-5 \text{ uCi/cartridge}$

Not divided by vol. ($^{131}\text{I} < \text{MDA}$)

231 112

AIR SAMPLE SURVEY DATA

DATE: 5/26/79

LOCATION: AM-4 Chem/Bart

TIME ON: 0033 - 5/24

TIME OFF: 0013 - 5/25

FLOW RATE: 7.1 cfm

TOTAL VOLUME: 1.4E8 ml

NRC SAMPLE NUMBER: 7671

ANALYSIS FINDINGS: $^{131}\text{I} < 6.9 \text{E}^{-13} \text{ } \mu\text{Ci}/\text{ml}$

231 120

AIR SAMPLE SURVEY DATA

DATE: 5/23

LOCATION: AM 4

TIME ON: 2235 (5/22)

TIME OFF: 0017 (5/23)

FLOW RATE: 2.95 cfm

TOTAL VOLUME: 8.6 E6 ml

NRC SAMPLE NUMBER: 1635

ANALYSIS FINDINGS: I-131 $\leq 9.4 \text{ E-12} \mu\text{Ci}$
ml.

231 121

AIR SAMPLE SURVEY DATA

DATE: 5-21-79

LOCATION: AM-4 c/p cp 100

TIME ON: 2248 5/19

TIME OFF: 2222 5/20

FLOW RATE: 2.98 cfm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1589

ANALYSIS FINDINGS:

131

$I < 6.8 \text{E-}13 \text{ mCi/ml}$

231 122

AIR SAMPLE SURVEY DATA

DATE: 5-20-79

LOCATION: AM-4 C/P ep 100

TIME ON: 2228 (5/18)

TIME OFF: 2246 (5/19)

FLOW RATE: 3.05 d/m

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1561

ANALYSIS FINDINGS: 131

$$I = 6.7E-12 \mu\text{G}/\text{ml} \pm 70\%$$

X₂ 131 m present (and as usual)
X₂ 133

231 123

AIR SAMPLE SURVEY DATA

DATE: 5-19-77

LOCATION: AM-4 C cp100

TIME ON: 2340 5/17

TIME OFF: 2222 5/18

FLOW RATE: 2.83 fpm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1541

ANALYSIS FINDINGS:

¹³¹
 $I = 1.6E-11 \text{ mCi/ml} \pm 5\%$

231 124

AIR SAMPLE SURVEY DATA

DATE: 5-18-79

LOCATION: AM-4 C/P

TIME ON: 2323 5/16

TIME OFF: 2337 5/17

FLOW RATE: 3.15

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1527

ANALYSIS FINDINGS:

¹³¹I = $8.5E-12$ $\mu\text{Ci}/\text{ml} \pm 6\%$

231 125

AIR SAMPLE SURVEY DATA

DATE: 5-17-79

LOCATION: AM-4 C/P

TIME ON: 2252 5/15

TIME OFF: 2320 5/16

FLOW RATE: 3.1 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1499

ANALYSIS FINDINGS:

¹³¹I = 4.9E-12 ac/ml ± 8%

231 126

AIR SAMPLE SURVEY DATA

DATE:

LOCATION: AM-4

TIME ON: 2255 (5/12)

TIME OFF: 2325 (5/13)

FLOW RATE: 2.8 cfm

TOTAL VOLUME: 1.16E8 cc

NRC SAMPLE NUMBER: 1444

ANALYSIS FINDINGS:

¹³¹I: $9.5E-12$ $\mu\text{Ci}/\text{cc}$

231 127

AIR SAMPLE SURVEY DATA

DATE:

LOCATION:

AM-4

TIME ON:

2300 5/9

TIME OFF:

2252 5/10

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1373

ANALYSIS FINDINGS:

131 I 8.2×10^{-13} $\mu\text{Ci}/\text{ml}$

231 128

AIR SAMPLE SURVEY DATA

DATE:

LOCATION: AM-4

TIME ON: 2304 (5/10)

TIME OFF: 2226 (5/11)2

FLOW RATE: 2.8 cfm

TOTAL VOLUME: 1.11×10^8

NRC SAMPLE NUMBER: 1394

ANALYSIS FINDINGS:

$^{131}\text{I} = 2.2 \times 10^{-12} \text{ mCi/cc}$

231 129

AIR SAMPLE SURVEY DATA

DATE: 5-9-79

LOCATION: AM-04 (C/P)

TIME ON: 0016

TIME OFF: 2250

FLOW RATE: 3.05 fpm

TOTAL VOLUME: 1.17 E8 cc

NRC SAMPLE NUMBER: 1348

ANALYSIS FINDINGS:

$^{125}I = 2.14E-12 \mu\text{Ci/cc}$

231-130

AIR SAMPLE SURVEY DATA

DATE: 5-9-79 / 2300

LOCATION: AM-4 (GAS)

TIME ON: ?

TIME OFF: .

FLOW RATE:

TOTAL VOLUME: 1200 ml

NRC SAMPLE NUMBER: 1345

ANALYSIS FINDINGS:

$^{133}\text{Xe} = 9.2 \text{E-}7 \text{ ml/ml}$

RMIC data for ^{133}Xe on the
back.

23E-122

AIR SAMPLE SURVEY DATA

DATE: 6/5

LOCATION: AM-5 C/P CP-100

TIME ON: 0105 (6/4)

TIME OFF: 0049 (6/5)

FLOW RATE: 3.8 CFM

TOTAL VOLUME: 1.5 E8 ml

NRC SAMPLE NUMBER: 1851

ANALYSIS FINDINGS: $^{131}\text{I} = 5.4 \text{ E-}10 \frac{\mu\text{Ci}}{\text{ml}} \pm .62\%$

231 133

AIR SAMPLE SURVEY DATA

DATE: 6-4-79

LOCATION: AM-5 C 2100

TIME ON: 0026 6/3

TIME OFF: 0104 6/4

FLOW RATE: 3.75 dm

TOTAL VOLUME: 1.57E8 ml

NRC SAMPLE NUMBER: 1828

ANALYSIS FINDINGS:

$$^{131}\text{I} = 5.68 \text{E} - 10 \frac{\text{mCi}}{\text{ml}} \pm 0.6\%$$

AIR SAMPLE SURVEY DATA

DATE: 6-4-79

LOCATION: AM-5 P. filter

TIME ON: 1430 5/28

TIME OFF: 1216 6/3

FLOW RATE: ?

TOTAL VOLUME: "3.4 EA" ml

NRC SAMPLE NUMBER: 1829

ANALYSIS FINDINGS:

$$^{131}\text{I} = 2.6\text{E}-11 \mu\text{C}/\text{ml} \pm 2\%$$

$$^{137}\text{Cs} = 1.2\text{E}-12 \mu\text{C}/\text{ml} \pm 10\%$$

AIR SAMPLE SURVEY DATA

DATE: 6-3-79

LOCATION: AM-5 c/p cp100

TIME ON: 0030 6/2

TIME OFF: 0022 6/3

FLOW RATE: 3.85 cfm

TOTAL VOLUME: 1.56E8 ml

NRC SAMPLE NUMBER: 1803

ANALYSIS FINDINGS:

$^{131}\text{I} = 4.26\text{E}-10 \text{ } \mu\text{Ci}/\text{ml} \pm 0.7\%$

AIR SAMPLE SURVEY DATA

DATE: 6-2-79.

LOCATION: AM-5 c ep 100

TIME ON: 2123 5/31

TIME OFF: 0008 6/2

FLOW RATE: 3.7 cfm

TOTAL VOLUME: 1.7 E 8 ml

NRC SAMPLE NUMBER: 1783

ANALYSIS FINDINGS:

¹³¹
 $I = 6.80E-10 \mu\text{Ci/ml} \pm 0.5\%$

AIR SAMPLE SURVEY DATA

DATE: 6-1-79

LOCATION: AM-5

TIME ON: 0022 5/31

TIME OFF: 2122 5/31

FLOW RATE: 3.8 cfm

TOTAL VOLUME: 1.36 E8 ml

NRC SAMPLE NUMBER: 1763

ANALYSIS FINDINGS:

$^{131}\text{I} = 1.16\text{E}-9 \mu\text{Ci/ml} \pm 0.5\%$

231 138

A.7.6 SAMPLE SURVEY DATA

DATE: 5-31-79

LOCATION: AM-5

TIME ON: 0035 5/30

TIME OFF: 0020 5/31

FLOW RATE: 3.8 cfm

TOTAL VOLUME: 1.53E8 ml

NRC SAMPLE NUMBER: 1742

ANALYSIS FINDINGS:

¹³¹

$$I = 9.24E-10 \text{ mCi/ml} \pm 0.5\%$$

V-5 I Releases (Cartridge)
Unit 2 Station Vent

From	To	CFM	Results (MCI/cc)			Other
			NRC	RMC	SAI	
5/1 1744	5/1 2345		1.58 E-8			
5-1 2342	5-3 0041		3.7 E-9			
5-3 0103	5-3 1450		9.6 E-9			
5-3 1455	5-3 1915		1.14 E-8			
5-3 0103	5-4 0023		2.47 E-9			
5/4 1110	5-5 0024	3.6	121-E 8.8 x 10 ⁻⁹ MCI/cc			
5/5 1339	5/6 0207		9.73 x 10 ⁻⁹			
5/6 0212	5/6 1200		1.13 x 10 ⁻⁸			
5/5 0024	5/5 0953		1.08 x 10 ⁻⁸			
5/6 1200	5/7 0505		8.03 x 10 ⁻⁹			
5/7 0505	5/8 0120		1.4 x 10 ⁻⁹ 131E			
5/8 0128	5/8 2312		6.48 x 10 ⁻⁹			

V-5 I Releases (Cartridge)
Unit 2 Station Vent

From	To	CFM	Results ($\mu\text{Ci/cc}$)			
			NRC	RMC	SAI	Other
5/9 0100	5/9 2307	3.5	1.1E-8			
5/12 1958	5/12 2335	3.9	2.9E-9			
5/12 2340	5/13 1718	3.8	2.3E-9			

AIR SAMPLE SURVEY DATA

DATE: 5-30-79.

LOCATION: AM-5 C 4100

TIME ON: 0320 5/29

TIME OFF: 0029 5/30

FLOW RATE: 3.95 cfm

TOTAL VOLUME: 1.42E8 ml

NRC SAMPLE NUMBER: 1724

ANALYSIS FINDINGS:

$^{131}\text{I} = 1.05\text{E}-9 \mu\text{Ci}/\text{ml} \pm 0.5\%$

AIR SAMPLE SURVEY DATA

DATE: 5-29-79 .

LOCATION: AM-5 C

cp100

TIME ON: 0132 5/28

TIME OFF: 0107 5/29

FLOW RATE: 3.8 cfm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1713

ANALYSIS FINDINGS:

$^{131}\text{I} = 1.42 \text{E-}9 \text{ mCi/ml} \pm 0.4\%$

AIR SAMPLE SURVEY DATA

DATE: 5/25/79

LOCATION: A11-5

TIME ON: 2015 (5/27)

TIME OFF: 0128 (5/28)

FLOW RATE: 1.8 CFM

TOTAL VOLUME: 1,590.7 ml

NRC SAMPLE NUMBER: 1704

ANALYSIS FINDINGS: $^{131}\text{I} = 1.8 \text{E} - 9 \text{ } \mu\text{Ci}/\text{ml}$

231 14A

AIR SAMPLE SURVEY DATA

DATE: 5/28/79

LOCATION: AM-5

TIME ON: 0059 (5/27)

TIME OFF: 0011 (5/27)

FLOW RATE: 3.7 CFM

TOTAL VOLUME: 1.268 mc

NRC SAMPLE NUMBER: 1705

ANALYSIS FINDINGS: $^{131}\text{I} = 1.4 \times 10^{-9} \text{ } \mu\text{Ci}/\text{mc}$

231 145

AIR SAMPLE SURVEY DATA

DATE: 5/28/79

LOCATION: #14-5

TIME ON: 2010 (5/25)

TIME OFF: 0051 (5/27)

FLOW RATE: 3.96 cfm

TOTAL VOLUME: 1.93 68 ml

NRC SAMPLE NUMBER: 1706

ANALYSIS FINDINGS:

$^{131}\text{I} = 2.4 \text{E}-9 \text{ } \mu\text{Ci}/\text{ml}$

231 146

AIR SAMPLE SURVEY DATA

Count

DATE: 5/25/79

LOCATION: AMS chanc / part

TIME ON: 5/24 20 38

TIME OFF: 5/25 00 34

FLOW RATE: 3.4 CFM

TOTAL VOLUME: 1.44×10^8 ml

NRC SAMPLE NUMBER: 1670

ANALYSIS FINDINGS: $^{131}\text{I} = 2.2 \times 10^{-10} \pm 1\% \text{ } \mu\text{Ci}/\text{ml}$

231 147

AIR SAMPLE SURVEY DATA

DATE: 5/23

LOCATION: AM-5

TIME ON: 1412 5/22

TIME OFF: 0059 5/23

FLOW RATE: 3.85 CFM

TOTAL VOLUME: 7.1×10^7 ml

NRC SAMPLE NUMBER: 7640

ANALYSIS FINDINGS: I-131 = $4.8 \times 10^{-9} \frac{\mu\text{Ci}}{\text{ml}}$ $\pm 0.3\%$

231 148

AIR SAMPL. SURVEY DATA

DATE: 5-21-79

LOCATION: AM-5 ~~c/1~~ cp100

TIME ON: 0524 5/20

TIME OFF: 2248 5/20

FLOW RATE: 3.8 cfm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1588

ANALYSIS FINDINGS:

$$^{131}\text{I} = 5.5\text{E}-9 \mu\text{Ci}/\text{ml} \pm .2\%$$

231 149

AIR SAMPLE SURVEY DATA

DATE: 5-19-79

LOCATION: AM-5 C CP 100

TIME ON: 0236

TIME OFF: 2317

FLOW RATE: 3.8 cfm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1558

ANALYSIS FINDINGS:

¹³¹I = 1.08E-8 $\mu\text{C}/\text{ml} \pm 0.2\%$

231 150

AIR SAMPLE SURVEY DATA

CP100

DATE: 5-18-79

LOCATION: AM-5 C

TIME ON: 0005 - 5/18

TIME OFF: 2236

FLOW RATE: 3.8 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1537

ANALYSIS FINDINGS:

$$^{131}\text{I} = 1.08 \text{E} - 8 \text{ } \mu\text{Ci}/\text{ml} \pm 0.2\%$$

AIR SAMPLE SURVEY DATA

DATE: 5-18-79

LOCATION: AM-5 C

TIME ON: 2358 5/16

TIME OFF: 0003 5/18

FLOW RATE: 3.9 cfm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1526

ANALYSIS FINDINGS:

$^{131}\text{I} = 6.98\text{E}-9 \mu\text{C}/\text{ml} \pm 0.2\%$

231 152

AIR SAMPLE SURVEY DATA

DATE: 5-17-79

LOCATION: AM-5 C

TIME ON: 1901 5/16

TIME OFF: 2355 5/16

FLOW RATE: 3.9 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1496

ANALYSIS FINDINGS:

$^{131}\text{I} = 2.2 \pm 9 \text{ mc/ml}$

$\pm 10\%$

AIR SAMPLE SURVEY DATA

DATE: 5-15-79

LOCATION: AM-5

TIME ON: 1835

TIME OFF: 2308

FLOW RATE: 3.9

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1471

ANALYSIS FINDINGS:

¹³¹I = 2.5E-9 μ ci/ml

12
13

3933

231 154

AIR SAMPLE SURVEY DATA

DATE: 5-13-79

LOCATION: AM-5

TIME ON: 1722 ✓

TIME OFF: 2357 ✓

FLOW RATE: 3.9 cfm

TOTAL VOLUME: 4.36E7 cc

NRC SAMPLE NUMBER: 1442

ANALYSIS FINDINGS:

¹³⁶I = 2.2E-9 µCi/cc

231 155

AIR SAMPLE SURVEY DATA

DATE:

LOCATION: AM-5

TIME ON: 2340 (5/12)

TIME OFF: 1718 (5/13)

FLOW RATE: 3.8 cfm

TOTAL VOLUME: $1.07E8$ cc

NRC SAMPLE NUMBER: 1437

ANALYSIS FINDINGS:

¹³¹I = $2.3E-9$ mg/cc

231-456

I Releases (Cartridge)
Unit 2 Station Vent

From	To	CFM	Results ($\mu\text{Ci}/\text{cc}$)		
			NRC	RMC	SAI

231 157

I Releases (Cartridge)
Unit 2 Station Vent

From	To	CFM	NRC	RMC	Results (MCI/cc)		Other
					SAI		

231 158

AIR SAMPLE SURVEY DATA

DATE: 5-12-79

LOCATION: AM-5

TIME ON: 1958

TIME OFF: 2335

FLOW RATE: 3.9 lpm

TOTAL VOLUME: 2.37E7 cc

NRC SAMPLE NUMBER: 1418

ANALYSIS FINDINGS:

^{131}I : $2.9\text{E}-9$ MBq/cc

2311159

AIR SAMPLE SURVEY DATA

DATE: 5/12/79

LOCATION: ARMS

TIME ON: 1200

TIME OFF: 0505

FLOW RATE: 3.6 CFM

TOTAL VOLUME: 3.1×10^7 ml

NRC SAMPLE NUMBER: 1410

ANALYSIS FINDINGS: ¹³¹ $\bar{I} = 1.6 \text{ E-}8 \frac{\mu\text{Ci}}{\text{ml}}$

231 160

AIR SAMPLE SURVEY DATA

DATE:

5-11-78

LOCATION:

AM-5

TIME ON:

2030 5/9

TIME OFF:

2305 5/10

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1376

ANALYSIS FINDINGS:

$^{131}\text{I} = 2.4 \text{E} - 12 \text{ } \mu\text{L}/\text{ml} \pm 10\%$

23T-161

AIR SAMPLE SURVEY DATA

DATE: 5-9-79

LOCATION: AM 5

TIME ON: 0100

TIME OFF: 2307

FLOW RATE: 3.5 dm^3/min

TOTAL VOLUME: 1.31×10^8 cc

NRC SAMPLE NUMBER: 1353

ANALYSIS FINDINGS:

$^{131}\text{I} = 1.1 \times 10^{-8} \text{ mCi/cc}$

AIR SAMPLE SURVEY DATA

DATE: 5/8

LOCATION: AM-5

TIME ON: 0505 5/7

TIME OFF: 0120 5/8

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1309

ANALYSIS FINDINGS:

$^{131}\text{I} = 1.4\text{E}-9 \text{ uCi/ml} \pm 10\%$

also KE 133, KE 131 m present

231 163

AIR SAMPLE SURVEY DATA

DATE:

LOCATION:

AM-5

TIME ON:

1339 5/5/79

TIME OFF:

00207 5/6/79

FLOW RATE:

3.85 fpm

TOTAL VOLUME:

8.15E7 cc

NRC SAMPLE NUMBER:

1269

ANALYSIS FINDINGS:

¹³¹I =

9.73E-9 µCi/cc

AIR SAMPLE SURVEY DATA

DATE:

LOCATION:

AM-5 (U-5)

TIME ON:

1110 - 5/4/79

TIME OFF:

0024 - 5/5/79

FLOW RATE:

3.6 fpm

TOTAL VOLUME:

8.09E7

NRC SAMPLE NUMBER:

1251

ANALYSIS FINDINGS:

$^{131}\text{I} = 8.8 \text{E}-9 \text{ } \mu\text{g}/\text{cc}$

In-plant (effluent)

AIR SAMPLE SURVEY DATA

DATE: 5/3/79

LOCATION: AM-5

TIME ON: 2342 (5/1)

TIME OFF: 0041 (5/3)

TOTAL VOLUME: 1.53E8

SAMPLE COUNTED BY - ANL NRC

NRC SAMPLE NUMBER: 1196

ANALYSIS FINDINGS:
 $^{131}\text{I} = 3.7\text{E}-9 \text{ } \mu\text{Ci}/\text{ml}$

AIR SAMPLE SURVEY DATA

DATE: 6-1-79

LOCATION: AM-5 Gas

TIME ON: 1500

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 1200 ml

NRC SAMPLE NUMBER: 1769

ANALYSIS FINDINGS:

$$\text{Xe }^{131\text{m}} = 7.21\text{E-}5 \text{ nCi/ml} \pm 2.7\%$$

$$\text{Xe }^{133} = 3.75\text{E-}6 \text{ nCi/ml} \pm 3.5\%$$

METROPOLITAN EDISON COMPANY Subsidiary of General Public Utilities Corporation

Subject TMI Unit 2 ¹³¹I and ¹³³Xe Releases from
3/28 to 4/30/79

Location TMI

Date 5/11/79

To R. C. Arnold
J. Collins, NRC
J. G. Herbein
L. W. Harding
L. L. Lawyer
J. E. Logan
G. P. Miller
J. E. Mudge
B. Rusche
J. L. Seelinger
~~_____~~
A. Tsaggaris

Reference is made to the above captioned memo dated May 8th transmitted herewith our corrected pages to be included into referenced memo.


S. W. Porter, Jr. C.H.P.

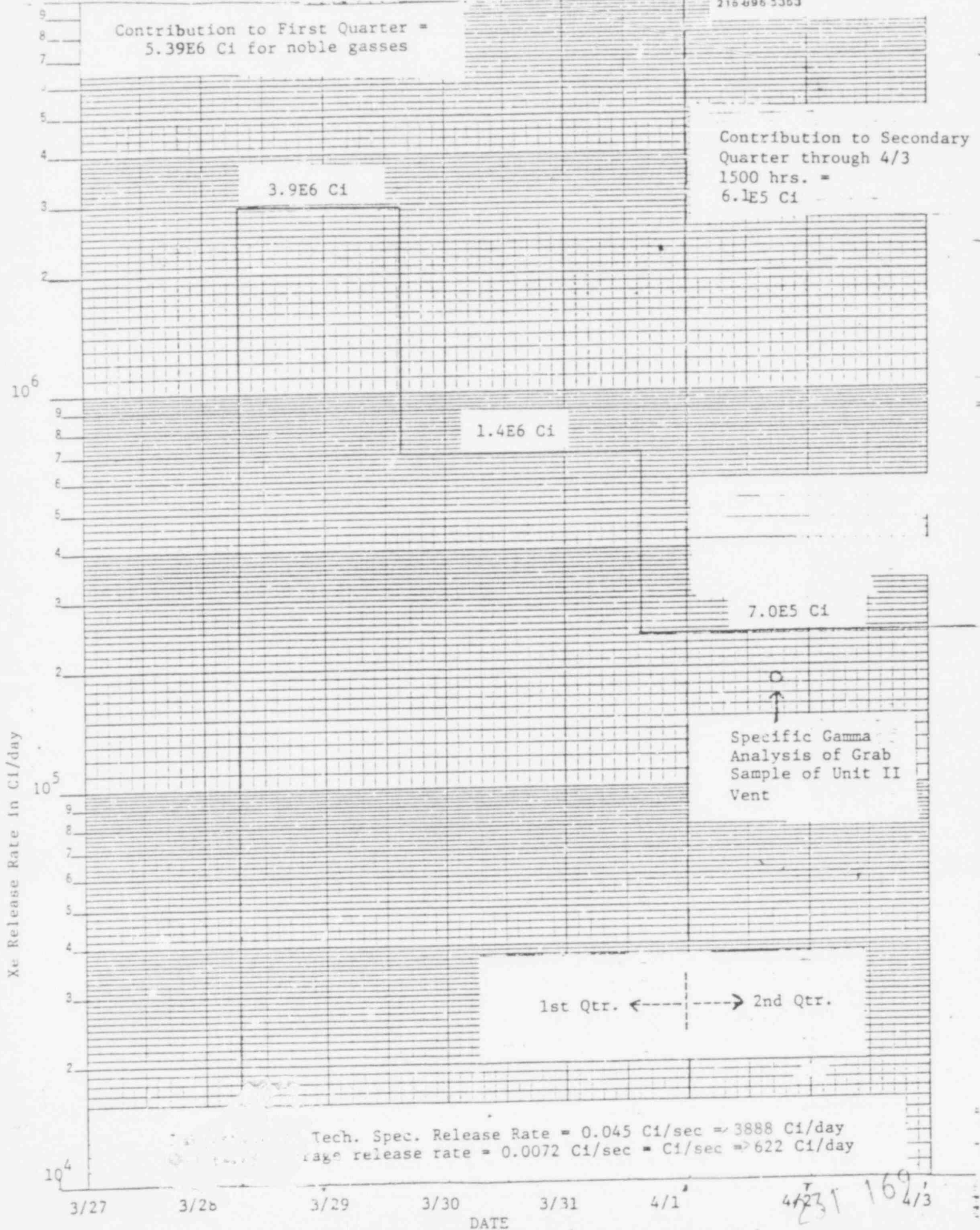
SWP/cr

- enc.: 1. Corrected Graph--¹³³Xe Released as Calculated from TLD Data and X/Q--TMI Unit II.
2. Corrected Graph--TMI Airborne ¹³¹I Release from Unit I Station vent RMA-8.

CORRECTED GRAPH

Porter-Gertz Consultants
76 RITTENHOUSE PLACE
ARDMORE, PA. 19003
215-696-3363

Xe Released as Calculated from TLD Data and X/Q - TMI Unit II





UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

May 5, 1979

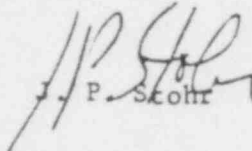
MEMORANDUM FOR: G. H. Smith
FROM: J. P. Stohr
SUBJECT: ESTIMATE OF TOTAL I-131 RELEASE

We've estimated the total I-131 released by TMI-2 from 3/28 thru 4/30/79 at approximately 16 ci. This estimate is based on the activity observed on the charcoal cartridges pulled from HPR-219 and the average flow out the station vent during the sampling period.

Activity values from NRC (Mobile Lab) analyses of the charcoal cartridges were used where possible. For those samples which the Mobile Lab did not count, Met-Ed/RMC values were used. For those periods for which a cartridge has not yet been counted, e.g., because they have been lost or misplaced, estimates were made.

The station vent flow rates used were those average values determined by Met-Ed/Porter-Gertz.

A revised estimate may be made for this period when the misplaced cartridges (2) are located, particularly the one from 3/28/79.


J. P. Stohr

cc: B. H. Grier
J. Collins
R. Bores

231 170

HPR-219 I Releases (Cartridge)
Unit 2 Station Vent

From	To	CFM	NRC	Results ($\mu\text{Ci/cc}$)		
				RMC	SAI	Other
5/3 0009	5/3 2355		6.84 $\times 10^{-9}$			
5/3 2355	5/5 0037	2355	131-I 6.62×10^{-9}			
5/5 0041	5/6 0110		131-I 6.93×10^{-9}			
5/6 1115	5/7 0145		131-I 4.19×10^{-9}			
5/7 0149	5/8 0244		131-I 1.7×10^{-9}			
5/8 0248	5/8 2255		131-I 398×10^{-9}			
5/9 2259	5/9 2220		6.28×10^{-9}			
5/9 2221	5/10 2320		1.39×10^{-9}			
5/11 2257	5/12 2230		4.6E-10			

HPR-219 I Releases (Cartridge)
Unit 2 Station Vent

From	To	CFM	Results (μCi/cc)			C/day	Total
			NRC	RMC	SAI		
4/26 0400	4/26 0800	8.9 E+4	1.1 E-8	1.04 E-8	0.039	0.0066	
4/26 0805	1220	9.23 E+4	1.05 E-8	8.8 E-9	0.039	0.0070	
4/26 1220	1558	9.3 E+4	7.44 E-9	7.3 E-9	0.028	0.0043	
4/26 1606	1913 (Remote)	9.1 E+4	1.44 E-8	6.93 E-9	0.058	0.0069	
4/27 0913	4/27 0006	8.78 E+4	1.38 E-8	1.36 E-8	0.049	0.0100	
4/27-0011	4/28-0038	8.3 E+4	1.01 E-8	7.13 E-9 OR 8.4 E-9	0.037	0.00382 (24h)	
4/28-0042	4/28-0830	8.3 E+4	3.35 E-9	3.03 E-9	0.011	0.00382 (24h)	
4/28-0832	4/28-1625	8.83 E+4	9.51 E-9	9.3 E-9	0.034	0.0112	
4/28-1625	4/29-0025	8.83 E+4	8.21 E-9	8.9 E-9	0.029	0.0098	
4/29-0028	4/30-0008	8.45 E+4	1.5 E-8		0.051	0.0509	
4/30 0010	5/1 0010	7.84 E+4	1.87 E-8		0.059	0.0597	
5/1 0012	5/2 0002		1.62 E-8				
5/2 0005	5/3 0005		1.08 E-8				

23 * THIS IS RATE ONLY FOR PERIOD OF SAMPLING TOTAL = ~~0.000000~~ 0.000000
 THRU 4/30 = 15.70086

HPR-219 I Releases (Cartridge)
Unit 2 Station Vent

total
Ci

From	To	CFM	Results (µCi/cc)			Other
			NRC	RMC	SAI	
4/24 0408	0637	5.8E+4	3.0E-8	6.2E-10 ?	5.7E-8	0.070
4/24 0672	0813	7.3E+4	4.2E-8	2.7E-8	3.1E-8	0.124
4/24 0815	1215	7.4E+4	3.09E-8	1.9E-8	2.4E-8	0.092
4/24 1217	1600	6.8E+4	1.06E-8	1.7E-8	2.2E-8	0.044
4/24 1602	1955	6.8E+4	2.4E-8		2.1 X 10 ⁻⁸	0.066
4/24 1958	4/25 0001	6.8E+4	2.6E-8			0.071
4/25 0004	4/25 0012	7.52E+4	1.99E-8	1.54E-8 ±25%	1.6 X 10 ⁻⁶	0.027
4/25 0520	4/25 0658	8.7E+4	1.46E-8	1.6E-8 ±25%	1.1 X 10 ⁻⁸	0.0035
4/25 -0701	4/25 -1200	87.750	1.0E-8	1.27E-8 ±25%		0.0074
4/25 1200	1555	8.8E+4	2.0E-8	1.82E-8 ±25%		0.0117
4/25 1557	2010	8.9E+4	1.2E-8	1.22E-8 ±25%	6.3 X 10 ⁻¹⁰	0.0076
4/25 2013	4/26 0013	8.9E+4	1.2E-8	1.08E-8 ±25%	1.9 X 10 ⁻⁹	0.0073
4/26 0016	0357	8.9E+4	1.2E-8	1.09E-8 ±25%		0.043

HPR-219 I Releases (Cartridge)
Unit 2 Station Vent

From	To	CFM	Results (µCi/cc)				Other	Total Ci
			NRC	RMC	SAI	TMI Sample #		
4/22 0807	1229	6.5E+4	9.34E-8	4.89E-8	8.3E-8	1703	0.0450	
4/22 1230	1621	6.9E+4	9.58E-8	3.93 x 10 ⁻⁸	6.9E-8	1719	0.0432	
4/22 1624	2024	5.8E+4	1.25E-7		2 5.76E-7 <i>Recheck</i>	1748	0.0492	
4/22 2036	2130	5.8E+4	1.3E-7		1.12E-7	1764	0.0115	
4/23 2130	0000	5.8E+4	9.6E-8		8.82E-8	1773	0.0243	
4/23 0007	0406 0440	5.8E+4	6.67 5.9E-8			1787	0.0262	
4/23 0407	0758	5.8E+4	5.9E-8		4.2E-8	1818	0.0224	
4/23 0801	0201	5.8E+4			4.1E-8	1857	0.0142	
4/23 1223	1614	5.8E+4			1.4E-7	1867	0.0531	
4/23 1617	2010	5.8E+4	6.3E-8			1897	0.0241	
4/23 2014	8156	5.8E+4	5.7E-8			1906	0.0095	
4/23 2159	0001	5.8E+4	5.9E-8			1908	0.0119	
4/24 0004	0404	5.8E+4	4.9E-8				0.0193	
			5.8E-8					

231 174

~~15273~~

HPR-219 I Releases (Cartridge)
Unit 2 Station Vent

From	To	CFM	Results ($\mu\text{Ci/cc}$)				total Ci
			NRC	RMC	SAI	Other	
4/20 0821	4/20 1105	6.4 E+4	1.9 E-7	1.9 E-7			0.0564
4/20 1105	4/20 1300	5.72 E+4	2.8 E-7	2.8 E-7			0.0521
4/20 1300	4/20 1620	5.72 E+4	-	1.1 E-7			0.0356
4/20 1620	4/20 2019	6.3 E+4	1.75 E-7	9.6 E-8			0.0741
4/20 2023	4/20 2204	6.3 E+4	2.31 E-7	1.37 E-7			0.0416
4/20 2208	4/20 2249	6.3 E+4	2.98 E-7	-			0.0555 0.0218
4/20 2249	4/21 0317	6.3 E+4	1.13 E-7	6.72 E-8			0.0540
4/21 0320	4/21 0402	6.3 E+4	7.56 E-8	4.08 E-8			0.0057
4/21 0404	4/21 0819	8.9 E+4	5.16 E-8	2.77 E-8			0.0331
4/21 0819	4/21 1201	8.9 E+4	8.0 E-8	3.44 E-8			0.0447
4/21 1204	4/21 1625	8.9 E+4	8.8 E-8	3.64 E-8			0.0578
4/21 1628	4/21 2017	8.9 E+4	4.9 E-8	2.88 E-8			0.0283
4/21 2018	4/22 0103	5.9 E+4	1.01 E-7	6.83 E-8			0.0523
4/22 0105	4/22 0141	6.5 E+4	1.15 E-7	4.93 E-8			0.0584
4/22 0447	4/22 0804	6.5 E+4	8.8 E-8	4.74 E-8			0.0319

231
175

#77777

HPR-219 I Releases (Cartridge)
Unit 2 Station Vent

From	To	CFM	Results ($\mu\text{Ci/cc}$)		
			NRC	RMC	SAI
4/18 0000	4/18 0945	7 E+4	1.83 E-7	9.88 E-8	0.0381
4/18 0950	4/18 1200	7 E+4	1.4 E-7	6.41 E-8	0.0361
4/18 1204	4/18 1647	7.3 E+4	7.2 E-8	4.38 E-8	0.0421
4/18 1650	4/18 1823	7.3 E+4	3.2 E-8	4.36 E-8	0.0061
4/18 2347	4/19 0358	8.4 E+4	7.5 E-8	8.58 E-8	0.0448
4/19 0358	4/19 0800	7.4 E+4	6.6 E-8	5.83 E-8	0.0334
4/19 0803	4/19 1210	7.4 E+4	1.0 E-7	4.9 E-8	0.0517
4/19 1212	4/19 1355	7.4 E+4	3.5 E-8	1.4 E-8	0.0075
4/19 1355	4/19 1705	7.4 E+4	~1.8 E-7	-	0.0792
4/19 1728	4/19 2025	7.4 E+4	1.8 E-7	1.24 E-7	0.0667
4/19 2025	4/20 0001	7.4 E+4	1.2 E-7	8.8 E-8	0.0543
4/20 0001	4/20 0351	6.4 E+4	3.3 E-7	2.58 E-7	0.1375
4/20 0351	4/20 0821	6.4 E+4	2.0 E-7	1.97 E-7	0.0978

total

~~113777~~

HPR-219 I Releases (Cartridge)
Unit 2 Station Vent

total
Ci

From	To	CFM	NRC	Results (µCi/cc)			Other
				RMC	SAI	SAI	
4/16 0758	4/16 1156	8.2 E+4	—	1.2 E-7			0.0663
4/16 1156	4/16 1550	8.2 E+4	3.6 E-7	9.56 E-8			0.3091
4/16 1556	4/16 1810	8.2 E+4	—	2.91 E-7			
4/16 1810	4/16 2356	8.2 E+4	—	1.59 E-7			0.1277
4/16 2356	4/17 0402	6.4 E+4	1.19 E-7	1.01 E-7			0.0525
4/17 0402	4/17 0835	6.4 E+4	1.2 E-7	9.7 E-8			0.067208
4/17 0835	4/17 1226	6.4 E+4	1.4 E-7	8.4 E-8			0.0587
4/17 1226	4/17 1634	6.1 E+4	—	8.6 E-8			0.075200
4/17 1640	4/17 1946	6.1 E+4	2.3 E-7	2.0 E-7			0.0579
4/17 1956	4/17 2357	6.5 E+4	2.14 E-7	1.5 E-7			0.074200
4/17 2357	4/18 0405	6.5 E+4	2.16 E-7	1.74 E-7			0.0368
4/18 0405	4/18 0550	6.5 E+4	4.5 E-7	2.78 E-7			0.0731
4/18 0550	4/18 0800	6.5 E+4	2.12 E-7	2.2 E-7			0.0939
							0.0985
							0.0869
							0.0507

~~0.0663~~
0.3091

HPR-219 I Releases (Cartridge)
Unit 2 Station Vent

Total
Ci

From	To	CFM	Results (µCi/cc)			Other
			NRC	RMC	SAI	
4/8 1830	4/8 1515		3.4E-8			
4/9 0425	4/10 1608	9.1 E+4	3.8E-8	1.08E-8		0.2055 2.0850E-8
4/10 1608	4/11 1840	9.1 E+4	-	2.96E-8		0.1214
4/11 1920	4/13 2315	9.1 E+4	1.2E-7	5.22E-8		0.9524
4/13 2315	4/14 1030	9.1 E+4	-	*		0.36
4/14 1030	4/14 1915	9.1 E+4	1.4E-7	1.41E-7		0.1873
4/14 1915	4/15 0522	9.1 E+4	2.5E-7	1.7E-7		0.3867
4/15 0522	4/15 0804	9.1 E+4	2.7E-7	2E-7		0.1114
4/15 0804	4/15 1802	8.2 E+4	4.9E-7	4E-7		0.6728
4/15 1802	4/15 2140	8.2 E+4	2.1E-7	1.78E-7		0.1051
4/15 2145	4/15 2346	8.2 E+4	2.5E-7	1.46E-7		0.0695
4/15 2346	4/16 0408	8.2 E+4	-	1.6E-7		0.0973
4/16 0408	4/16 0758	8.2 E+4	2.3E-7	1.39E-7		0.1215

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178
* Mete. not in operation - total Ci interpolated.

HPR-219 I Releases (Cartridge)
Unit 2 Station Vent

From	To	CFM	NRC	Results (MCI/cc)		Other	Total C
				RMC	SAI		
3/28							
3/28 01400	3/28 1900	8.2 E+4	-	★			(0.22)★
3/28 1900	3/30 2200 3/28 1900	8.83 E+4	3.6 E-7	5.4 E-7		1.28	2.714
3/30 2200	4/1 0600	8.92 E+4	-	6.4 E-8			0.310
4/1 0600	4/3 0315	8.9 E+4	1.4 E-7	2.3 E-7		0.50	0.9472
4/3 0315	4/3 1905	9.1 E+4	-	5.36 E-8			0.131
4/3 1905	4/3 2232	9.1 E+4	-	1.6 E-7			0.085
4/3 2232	4/5 1830	9.1 E+4	-	1.7 E-7			1.155
4/5 1830	4/6 1515	9.1 E+4	3.4 E-8	1.0 E-8			0.1078
4/6 1516	4/7 0600	9.1 E+4	★★★	★★★			1.0780MP
4/7 0600	4/7 1225	9.1 E+4	2.2 E-8	1.6 E-7			(0.18)
Sum (4/7 1225)	4/8 0245	9.1 E+4	1.1 E-7				2.158
4/8 0245	4/9 0425	9.1 E+4	-	2.96 E-7			1.174

* Flow rates from Porter/Gentz

★★ No release point data; Auxiliary + fuel handling building release rates used.

★★★ LOST - Data from interpolation.

Fig.

HPR-219 I Releases (Cartridge)
Unit 2 Station Vent

From	To	CFM	NRC	Results ($\mu\text{Ci/cc}$)		
				RMC	SAI	Other

231 18U

HPR-219 I Releases (Cartridge)
Unit 2 Station Vent

From	To	CFM	NRC	Results ($\mu\text{Ci/cc}$)		
				RMC	SAI	Other

HPR-219 I Releases (Cartridge)
Unit 2 Station Vent

From	To	CFM	Results ($\mu\text{Ci}/\text{cc}$)			
			NRC	RMC	SAI	Other

AIR SAMPLE SURVEY DATA

DATE: 6/5/79

LOCATION: HPR-219 C/P CP-200

TIME ON: 1651 (6/3)

TIME OFF: 1.32 (6/4)

FLOW RATE: 2 CFM

TOTAL VOLUME: $6.3 E 7$ ml.

NRC SAMPLE NUMBER: 1852

ANALYSIS FINDINGS: $^{131}\text{I} = 9.5 E - 12 \pm 8.5\% \frac{\mu\text{Ci}}{\text{ml}}$

231 183

AIR SAMPLE SURVEY DATA

DATE: 6-3-79

LOCATION: HPR-219 P. filter only

TIME ON: 1213 6/2

TIME OFF: 1105 6/3

FLOW RATE: 2 cfm

TOTAL VOLUME: 8.2×10^7 ml

NRC SAMPLE NUMBER: 1804

ANALYSIS FINDINGS:

$$\frac{4.5 \times 10^{-5}}{8.2 \times 10^7} \cdot 99$$

131 I $< 5.7 \times 10^{-13}$ $\mu\text{C}/\text{ml}$

231 184

AIR SAMPLE SURVEY DATA

DATE: 6-1-79

LOCATION: HPR-219 c/p cp100.

TIME ON: 0040 5/31

TIME OFF: 2145 5/31

FLOW RATE: 43.46 lpm

TOTAL VOLUME: 5.50 E7 ml

NRC SAMPLE NUMBER: 1764

ANALYSIS FINDINGS:

$$^{131}\text{I} = 4.1 \text{E}-11 \text{ uCi/ml} \pm 4\%$$

231 185

AIR SAMPLE SURVEY DATA

DATE: 5-31-79

LOCATION: HPR-219

TIME ON: 0010 5/23

TIME OFF: 2351 5/30

FLOW RATE: 43.83 $l \cdot min$

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1743

ANALYSIS FINDINGS:

¹³¹
 $I = 7.4E-12 \text{ } \mu\text{Ci/ml} \pm 3\%$

"Volume may not be correct" was on sample

- SAC says HPR-219 is now drawing down the stack.

231 186 -

AIR SAMPLE SURVEY DATA

DATE: 5/23

LOCATION: HP12-219

TIME ON: 0019 (5/22)

TIME OFF: 0007 (5/23)

FLOW RATE: 43.88 LPM

TOTAL VOLUME: 6.3 E7 ml

NRC SAMPLE NUMBER: 1639

ANALYSIS FINDINGS: I-131 = $1.1 \text{ E-}10 \frac{\mu\text{Ci}}{\text{ml}}$ $\pm 2\%$

231 187

AIR SAMPLE SURVEY DATA

DATE: 5-21-79

LOCATION: HPR-219

TIME ON: 2228 (5/19)

TIME OFF: 2205 (5/20)

FLOW RATE: 43.9 lpm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1587

ANALYSIS FINDINGS:

$$^{131}\text{I} = 9.3\text{E}-11 \text{ } \mu\text{Ci}/\text{ml} \pm 2\%$$

231 188

AIR SAMPLE SURVEY DATA

DATE: 5-20-79

LOCATION: HPR-219 c/p cp 100

TIME ON: 2215(5/18)

TIME OFF: 2223(5/19)

FLOW RATE: 48.9 lpm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1560

ANALYSIS FINDINGS:

$^{131}\text{I} = 8.3\text{E}-11 \text{ } \mu\text{Ci/ml} \pm 2\%$

231 189

AIR SAMPLE SURVEY DATA

cp 100

DATE: 5-15-77

LOCATION: HDR-219

TIME ON: 2323 5/17

TIME OFF: 2210 5/18

FLOW RATE: 50 lpm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1538

ANALYSIS FINDINGS:

$^{131}\text{I} = 7.1 \text{E}-12 \text{ } \mu\text{Ci/ml} \pm 9\%$

231 190

AIR SAMPLE SURVEY DATA

DATE: 5-17-79

LOCATION: ~~A~~ HPR-219 C/P

TIME ON: 2235 5/15

TIME OFF: 2255 5/16

FLOW RATE: 53.9 lpm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1495

ANALYSIS FINDINGS:

$^{131}\text{I} = 5.2 \text{E} - 10 \mu\text{Ci} / \text{ml}$

$\pm 1\%$

231 191

AIR SAMPLE SURVEY DATA

DATE:

LOCATION: HPR-219

TIME ON: 2234 - 5/12

TIME OFF: 2303 - 5/13

FLOW RATE: 48 lpm

TOTAL VOLUME: 7.05 E7 cc

NRC SAMPLE NUMBER: 1440

ANALYSIS FINDINGS:

¹³¹I = 6.5 E-10 µg/cc

231 192

AIR SAMPLE SURVEY DATA

DATE:

8/1

LOCATION:

HPR-219

TIME ON:

2325 5/10

TIME OFF:

2255 5/11

FLOW RATE:

48.9 lpm

TOTAL VOLUME:

6.89E7 cc

NPC SAMPLE NUMBER:

1391

ANALYSIS FINDINGS:

$^{131}\text{I} = 7.8 \text{ E-}10 \mu\text{Ci/cc}$

231 193

AIR SAMPLE SURVEY DATA

DATE:

~~4/30~~

LOCATION:

HR-219

TIME ON:

2221 (~~5/70~~) (5/9)

TIME OFF:

2320 (~~5/10~~) (5/10)

FLOW RATE:

55 lpm

TOTAL VOLUME:

8.24E7 cc

NRC SAMPLE NUMBER:

1368

ANALYSIS FINDINGS:

$^{131}\text{I} = 1.39\text{E}-9 \mu\text{Ci/cc}$

231 194

AIR SAMPLE SURVEY DATA

DATE:

LOCATION:

HPR-219

TIME ON:

2257-5/11

TIME OFF:

2230-5/12

FLOW RATE:

48.9 lpm

TOTAL VOLUME:

6.91E7

NRC SAMPLE NUMBER:

1417

ANALYSIS FINDINGS:

$^{131}\text{I} = 4.6\text{E}-10 \text{ } \mu\text{Ci}/\text{cc}$

231 195

AIR SAMPLE SURVEY DATA

DATE:

~~5-21-79~~

LOCATION:

HPR-219

TIME ON:

2259 (5/8)

TIME OFF:

2220 (5/9)

FLOW RATE:

53.4 lpm

TOTAL VOLUME:

7.55E7

NRC SAMPLE NUMBER:

~~124~~ 1347

ANALYSIS FINDINGS:

¹³⁴I = 6.28E-9 $\mu\text{Ci/cc}$

231

1980

AIR SAMPLE SURVEY DATA

DATE: 5/8

LOCATION: HDR-219

TIME ON: 0149 (5/7)

TIME OFF: 0244 (5/8)

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1310

ANALYSIS FINDINGS:

¹³¹I = $1.7E-9$ nCi/ml $\pm 10\%$

231 197

AIR SAMPLE SURVEY DATA

DATE:

LOCATION: HPR-219

TIME ON: 0041 (5/5)

TIME OFF: 0110 (5/6)

FLOW RATE: 48.9 lpm

TOTAL VOLUME: 7.18 E7 cc

NRC SAMPLE NUMBER: 1266

ANALYSIS FINDINGS:

$^{131}\text{I} = 6.93\text{E}-9 \text{ } \mu\text{Ci/cc}$

AIR SAMPLE SURVEY DATA

DATE:

LOCATION: HPR-219

TIME ON: 2355 (5/3/79)

TIME OFF: 0037 (5/5/79)

FLOW RATE: 53.9 lpm

TOTAL VOLUME: 7.99E7 cc

NRC SAMPLE NUMBER: 1248

ANALYSIS FINDINGS:

$^{131}\text{I} = 6.62\text{E}-9 \text{ } \mu\text{Ci/cc}$

231 199

8173

NRC AIR SAMPLES

Following is a summary of the air sample data for the 7 day period of May 1, 1979 through May 6, 1979.

<u>Date</u>	<u>Location</u>	<u>Sample Time</u>	<u>cfm</u>	<u>Activity uCi/ml</u>
5/1	Red Hill Exit Stand	0320-0420 - 60min	4	I-131 < 2.3 x 10 ⁻¹¹
5/1	Observation Center	0825-1055 - 150min	3.8	I-131 < 3.54 x 10 ⁻¹²
5/1	Airport	1300-1445 105min	2.8	I-131 < 6.9 x 10 ⁻¹²
5/1	Observation Center Parking Lot	1816-1916 60min	3	I-131 < 1.63 x 10 ⁻¹¹
5/1	500 KV Substation Parking Lot	2100-2145	4	I-131 < 1.2 x 10 ⁻¹¹
	South of Substation Parking Lot @ Billard Hill	2153-2238 } 150 min		
5/2	Collins Road & RT 441	0332-0502 90min	3	I-131 < 8.1 x 10 ⁻¹¹
5/2	Instrument Van at South Gate	0814-1152	2	I-131 < 4.6 x 10 ⁻¹²
5/2	North Gate	1345-1645	2.5	I-131 < 5.5 x 10 ⁻¹²
5/2	North Gate	1858-1958	4	I-131 < 1.6 x 10 ⁻¹¹
5/3	R.L. Leasing & RT 441 (PT 3)	0150-0250	5	I-131 < 7.1 x 10 ⁻¹²
5/3	Unit 2 Security Trailer	0830-0930	7	I-131 < 4.8 x 10 ⁻¹²
5/3	West Location 4	1030-1130	5	I-131 < 6.7 x 10 ⁻¹²
5/3	North Gate	1450-1550	7	I-131 < 4.5 x 10 ⁻¹²
5/3	North Gate	1658-1758	6.5	I-131 < 5.9 x 10 ⁻¹²
5/3	North Gate	2126-2226	7	I-131 < 5.5 x 10 ⁻¹²
5/4	Observation Ch. balcony	0258-0358	6.5	I-131 < 5.0 x 10 ⁻¹²
5/4	South Gate	0757-0857	6	I-131 < 4.6 x 10 ⁻¹²
5/4	500 KEV Substation	1343-1443	4.8	I-131 < 7 x 10 ⁻¹²
5/4	Observation Tower	2048-2248	6	I-131 < 2.8 x 10 ⁻¹²

231 200

NRC AIR SAMPLES

Following is a summary of the air sample date for the 7 day period of May 1, 1979 through May 6, 1979.

Date	Location	Sample Time	fm	Activity uCi/ml
5/5	Substation	0444 - 0544	5	I-131 $< 7 \times 10^{-12}$
5/5	Red Hill Farm Stand	0850 - 0950	4	I-131 $< 8.4 \times 10^{-12}$
5/5	500 KEV Parking Lot	1405 - 1505	4	I-131 $< 4.9 \times 10^{-12}$
5/5	Pt. 3 Goldsboro	2144 - 2244	5	$< 7 \times 10^{-12}$
5/6	Pt 3 Goldsboro	0215 - 0315	5	$< 7 \times 10^{-12}$
5/6	Pt 4 ^{near} Goldsboro	1230 - 1330	3.75	$< 9 \times 10^{-12}$
5/6	Pt 6 ^{East Side Laurel Road}	1541 - 1641	5	$< 7 \times 10^{-12}$
5/6	Pt 3 ^{East Side RR crossing + Rt 441}	1759 - 1859	5	$< 7 \times 10^{-12}$
5/6	Northgate	1907 - 2007	6	$< 5.7 \times 10^{-12}$
5/5-6	NRC Van South Gate	5/5 1445 - 5/6 1335	Vol. 1030 ft^3	$< 2 \times 10^{-12}$ Reported as "Daily" sheet
NRC Daily Sample				
5/1	TAI Obs Ctr	4/30 1500 - 5/1 1500	60 lpm	$< 6.6 \times 10^{-13}$
5/2	TAI Obs Ctr	5/1 1500 - 5/2 1500	60 lpm	$< 8.6 \times 10^{-13}$
5/3	TAI Obs Ctr	5/2 1500 - 5/3 1500	60 lpm	$< 6.6 \times 10^{-13}$
5/4	South Gate Eq Van	5/3 1730 - 5/4 1535	60 lpm	$< 4.2 \times 10^{-13}$
5/4	TAI Obs Ctr	5/3 1500 - 5/4 1500	60 lpm	$< 1.0 \times 10^{-12}$
5/5	TAI Obs Ctr	5/4 1515 - 5/5 1510	40 lpm	$< 5.75 \times 10^{-13}$
5/5	South Gate Equipment Van	5/4 1537 - 5/5 1537	57 lpm	$< 6.9 \times 10^{-13}$

NRC AIR SAMPLES

Following is a summary of the air sample data for the 7 day period of May 7, 1979, 1979 through May 13, 1979.

<u>Date</u>	<u>Location</u>	<u>Sample Time</u>	<u>cfm</u>	<u>Activity uCi/ml</u>
5/7/79	Pt 3 East Side RR Crossing & Rt 441	0205-0305	5	I-131 $< 2.4 \times 10^{-12}$
5/7	West Side, Pt 4 Intersection Rt 262 & 392	1021-1121	5	$< 6.7 E^{-12}$
5/7	Mohawk Ave	1202-1302	7	$< 5 E^{-12}$
5/7	North Gate	1711-1811	6	$< 5.6 E^{-12}$
5/7	Pt 3 East Side RR Crossing & Rt 441	2227-2327	5	$< 6.7 E^{-12}$
5/8	Middle town - end of Union St. at River	0331-0431	5.5	$< 6.1 E^{-12}$
5/8	On site by pump house	0925-1025	5	$< 7.2 E^{-12}$
5/8	Pt No. 1 Pt 441 Middle town, Union & Susquehanna St.	2220-2320	4.5	$< 9 E^{-12}$
5/9	West Side - Pointy	0340-0440	5.5	$< 6.1 E^{-12}$
5/9	West Side - Pointy	1030-1130	5	$< 4.1 E^{-12}$
5/9	East Side - Pt 4	1742-1842	5	$< 3.1 E^{-11}$
5/9	RR Crossing & Rt 441 East Side - Pt 3	2209-2309	5	$^{131}I < 8.3 E^{-12}$
5/10	Pt 5 North Gate	0302-0402	7	$^{131}I < 4.8 E^{-12}$
5/10	Pt-4 East	1317-1417	4	$^{131}I < 8.7 E^{-12}$
5/10	North Gate	0933-1033	5	$^{131}I < 8.0 E^{-12}$
5/10	Pt-4 East	1721-1821	5	$^{131}I < 5.0 E^{-12}$
5/10	Observation Center	1934-2034	6	$^{131}I < 9.4 E^{-12}$
5/11	Pump Station NW	0928-1028	4.8	$< 1.1 E^{-11}$
5/11	Hopper Pl. - middle town	1310-1407		$< 1.2 E^{-11}$
5/11	Pump Station NW	0928-1028	4.8	$^{131}I < 1.1 E^{-11}$
5/11	NORTH GATE	1928-2134	7	$^{131}I < 3.2 \times 10^{-12}$ uCi
5/11	GOLDS BOED	0312-0412	4.5	$^{131}I < 1.2 E^{-11}$
5/11	PUMPHOUSE @ Compressor	2238-2338	5	$^{131}I < 1.1 E^{-11}$
5/12	OBS. CTR	0530-0630	4.5	$^{131}I < 1.1 E^{-11}$
5/12	BOAT RFR: iA GOLDSBOED	0949-1049	5.5	$^{131}I < 7.3 E^{-12}$ 231 203

revised 5/12

NRC AIR SAMPLES

Following is a summary of the air sample data for the 7 day period of 1979 through _____, 1979.

¹³¹I

Reported 5/13

Date	Location	Sample Time	cfm	Activity uCi/ml
5/12	North Gate	1338 - 1438	6	< 8.4 E-12
5/12	PT 4-W262 & 392	1808 - 1908	5	< 9.7 E-12
5/12	AT MOUTH OF CANAL WEST SIDE	2157 - 2257	5	< 3.9 E-12
5/13	GOLDSBORO,	0313 - 0415	4.5	< 7.33 E-12
5/13	TRI COUNTY BOAT DOCK	1331 1431	7.0	< 4.79 E-13
5/13	GEN. SURVEY BLDG. N.V. CANE	0830 - 0930	6.5	< 5.2 E-12
5/13	#9 Substation	1900 - 1900	5	< 7.5 E-12
5/12/13	NORTH GATE CONTINUOUS	1420 - 1455	2	< 7.78 E-13
5/12-5/13	VISITORS CENTER CONTINUOUS	1505 - 1500	2	< 7.94 E-13
5/12-5/13	SOUTH GATE CONTINUOUS	1520 - 1515	2	< 1.4 E-12
5/13	500 KV SUBSTATION	2237 - 2337	4.9	< 9.7 E-12
5/13				
5/14	500 KV SUBSTATION	0630 - 0730	4.5	< 7.5 E-12
5/14	441 SOUTH, MIDWAY BETWEEN #59 & 10	1035 - 1135	5.0	< 6.7 E-12
5/13-5/14	VISITORS CENTER CONTINUOUS	1500 - 1500	2.	< 4.6 E-13
5/14	VISITORS CENTER	2100 - 2330	6	< 2.8 E-12
5/13-5/14	SOUTH GATE CONTINUOUS	1515 - 1515	1	< 2.0 E-12
5/14	FISHING POINT ACCESS SOUTH OF SURVEY PT. 13	1325 - 1425	6	< 9 E-12
5/14	RR TRACKS AFRFT 441 SAMPLE PT. # 3	2122 - 22 2	5	< 6.7 E-12

231 204

NRC AIR SAMPLES

Following is a summary of the air sample data for the 7 day period of 1979 through _____, 1979.

Date	Location	Sample Time	cfm	Activity uCi/ml
5/14 - 5/15	CONTINUOUS NORTH GATE	144P - 144P	2	less than 1.3 E-12
5/14 - 5/15	CONTINUOUS SOUTH GATE	1515 - 151P	1.0	less than 2.1 E-12
5/14 - 5/15	CONTINUOUS VISITORS CENTER	1500 - 1500	2	less than 1.3 E-12
5/15	GOLDS BORO	0400 - 0500	4.5	less than 7.5 E-12
5/15	MOUTH OF CANAL	1812 - 1912	5.1	less than 5.6 E-12
5/15	P#21 N. End of Brunner Island	1815 - 1915	1.9	
5/15 - 5/16	CONTINUOUS VISITORS CENTER	1501 - 1500	2	less than 9.5 E-13
5/15 - 5/16	CONTINUOUS NORTH GATE	1449 - 1445	2	less than 1.1 E-12
5/16	P#21 N. End of Brunner Island	1830 - 1930	4.9	less than 7.5 E-12
5/15 - 5/16	CONTINUOUS SOUTH GATE	1521 - 1515	2	less than 8.4 E-13
5/16	HARRISBURG INT. AIRPORT	0435 - 0535	4.5	less than 6.6 E-12
5/16	E 14 - PALMOUTH ACCESS PT.	1322 - 1422	7.4	less than 5.3 E-12
5/16 - 5/17	CONTINUOUS SOUTH GATE	1515 - 1512	2	less than 1.1 E-12
5/16 - 5/17	CONTINUOUS VISITORS CENTER	1500 - 1503	2	less than 9.5 E-13
5/16 - 5/17	CONTINUOUS NORTH GATE	1445 - 1445	2	less than 9.5 E-13
5/17	MOUTH OF CANAL IN HIDDLETOWN	1705 - 1805	6	less than 6.1 E-12
5/17	BALL PARK WEST SIDE RET. PTS #17 + 18	1100 - 1200	6.5	less than 5.2 E-12
5/17	SOUTH END BRUNNER'S ISLAND	0430 - 0530	5	less than 6.7 E-12

231 205

AIR SAMPLE SURVEY DATA

DATE: 6/4/79

LOCATION: Falmouth Boat Access

cp-100
C

TIME ON: 1440

TIME OFF: 1540

FLOW RATE: 8.0 CFM

TOTAL VOLUME: 1.4E7 ml.

NRC SAMPLE NUMBER: 1845

ANALYSIS FINDINGS: ¹³¹I < 5.8 E-12 $\frac{\mu\text{Ci}}{\text{ml}}$

231 206

AIR SAMPLE SURVEY DATA

DATE: 6/4/79

LOCATION: GE-6 (Met Ed) # 8321

TIME ON: 1816 6/1

TIME OFF: 1836 6/1

FLOW RATE: 2.5 cfm

TOTAL VOLUME: 1.4 E6 ml.

NRC SAMPLE NUMBER: 1836

ANALYSIS FINDINGS: $^{131}\text{I} < 7.3 \text{E-11} \frac{\mu\text{Ci}}{\text{ml}}$

SAI RESULTS

$^{131}\text{I} = 1.9 \text{E-11} \pm 39.1\%$

231 207

AIR SAMPLE SURVEY DATA

DATE: 4/4/79

LOCATION: 200 yds S pt 14 W.

TIME ON: 1101

C CP100

TIME OFF: 1201

FLOW RATE: 6 CFM

TOTAL VOLUME: 1.0×10^7 ml.

NRC SAMPLE NUMBER: 1837

ANALYSIS FINDINGS: $^{131}\text{I} < 8.1 \times 10^{-12} \frac{\mu\text{Ci}}{\text{ml}}$

231 208

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: 6/3-4/79

LOCATION: mobile lab

TIME INDICATED ON: 1527

TIME INDICATED OFF: 1511

FLOW RATE ON: 48 LPM

FLOW RATE OFF: 35 LPM

INDICATED TOTAL FLOW ON: 679510

INDICATED TOTAL FLOW OFF: 681180

PRESSURE ON: 0.5 (Vac)

PRESSURE OFF: 1.0 (Vac)

TOTAL VOLUME: 5.3 E7 ml

NRC SAMPLE NUMBER: 1844

ANALYSIS FINDINGS: $^{131}\text{I} < 1.5 \text{ E-12 } \frac{\mu\text{Ci}}{\text{ml}}$

CP-200 c/p

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: 6/3-4/79
LOCATION: Jhs Canton - CD-200 - c/p

TIME INDICATED ON: 1546

TIME INDICATED OFF: 1505

FLOW RATE ON: 40 LPM

FLOW RATE OFF: 40 LPM

INDICATED TOTAL FLOW ON: 506720

INDICATED TOTAL FLOW OFF: 508120

PRESSURE ON: 3.0 (vac)

PRESSURE OFF: 3.0 (vac)

TOTAL VOLUME: 5.6 E 7 ml

NRC SAMPLE NUMBER: 1846

ANALYSIS FINDINGS: 1.4×10^{-12} $\frac{\mu\text{Ci}}{\text{ml}}$

231 210

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: 6/3-4/79

LOC. SN: North Gate CP-200 4P

TIME INDICATED ON: 1541

TIME INDICATED OFF: 1500

FLOW RATE ON: 5.5 LPM

FLOW RATE OFF: 5.5

INDICATED TOTAL FLOW ON: 307340

INDICATED TOTAL FLOW OFF: 310640

PRESSURE ON: 3.0 (Vac)

PRESSURE OFF: 4.0 (Vac)

TOTAL VOLUME: 7.7 E7 ml

NRC SAMPLE NUMBER: 1847

ANALYSIS FINDINGS: ¹³¹I 2.1 E-12 $\frac{\mu\text{Ci}}{\text{ml}}$

231-211

AIR SAMPLE SURVEY DATA

DATE: 6-3-79

LOCATION: Met Ed sample GE-10 Met Ed # 8503

TIME ON: 0340 c/p c/p¹⁰⁰

TIME OFF: 0400

FLOW RATE: 2.5 cfm

TOTAL VOLUME: 1,425.6 ml

NRC SAMPLE NUMBER: 1825

ANALYSIS FINDINGS:

$^{131}\text{I} < 6.0\text{E}-11$
No peaks

$^{137}\text{Cs} < 4.1\text{E}-11$

SAI result

$^{137}\text{Cs} = 3.68\text{E}-10 \pm 22.3\%$

~~SAI~~ $^{131}\text{I} = 9.18\text{E}-11 \pm 23.6\%$

231 212

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: 6/2-2/79

LOCATION: North Gate

TIME INDICATED ON: 1506

TIME INDICATED OFF: 1545

FLOW RATE ON: 5.5 LPM

FLOW RATE OFF: 5.5 LPM

INDICATED TOTAL FLOW ON: 303880

INDICATED TOTAL FLOW OFF: 307340

PRESSURE ON: 3.0 (Vac)

PRESSURE OFF: 3.0 (Vac)

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1824

ANALYSIS FINDINGS:

$^{131}\text{I} < 1.0 \times 10^{-12} \text{ mCi/m}^3$

MACHINE

~~NOT~~
GROUNDED

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: 6/2-3/79

LOCATION: Observation Center

TIME INDICATED ON: 1521

TIME INDICATED OFF: 1545

FLOW RATE ON: 40 LPM

FLOW RATE OFF: 40 LPM

INDICATED TOTAL FLOW ON: 505250

INDICATED TOTAL FLOW OFF: 506720

PRESSURE ON:

3.0 (Voc)

PRESSURE OFF:

2.5 (Voc)

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1822

ANALYSIS FINDINGS:

¹³¹I < 1.4E-11 uCi/ml

c/p

cp 200

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: 6/23/77

LOCATION: Mobile Lab

TIME INDICATED ON: 1517

TIME INDICATED OFF: 1525

c/p of 200

FLOW RATE ON: 40 LPM

FLOW RATE OFF: 40 LPM

INDICATED TOTAL FLOW ON: 677820

INDICATED TOTAL FLOW OFF: 679510

PRESSURE ON: 0.15 (vac)

PRESSURE OFF:

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1819

ANALYSIS FINDINGS:

13' I < 1.4E - 12 $\mu\text{Ci}/\text{ml}$

POOR ORIGINAL

231-215

AIR SAMPLE SURVEY DATA

DATE: 6-2-79

LOCATION: Met Ed GE-9 Met Ed #8393

TIME ON: 1329

TIME OFF: 1347

FLOW RATE: 2.5 cfm

TOTAL VOLUME: 1.27 ECml

NRC SAMPLE NUMBER: 1809

ANALYSIS FINDINGS:

¹³¹I < 6.9E-11 μCi/ml

SAL result

¹³¹I = 6.4E-11 μCi/ml ± 29.2%

AIR SAMPLE SURVEY DATA

DATE: 6-1-79

LOCATION: (met Ed) SSE-01 (met # 8421) (8231)

TIME ON: 1407

TIME OFF: 1427

FLOW RATE: 2.5 f/m

TOTAL VOLUME: 1.42E6 ml

NRC SAMPLE NUMBER: 1805

ANALYSIS FINDINGS:

¹³¹I < 6.7E-11 uCi/ml

SAI result

¹³¹I = 4.0E-10 uCi/ml ± 7.36%

AIR SAMPLE SURVEY DATA

DATE: 6-1-79.

LOCATION: Met Ed GE-7

Met Ed # 8422/8156

TIME ON: 0418

TIME OFF: 0438

FLOW RATE: 2.5 fpm

TOTAL VOLUME: 1.42E6 ml

NRC SAMPLE NUMBER: 1806

ANALYSIS FINDINGS:

$^{131}\text{I} < 6.7\text{E}-11 \text{ mCi/ml}$

NO ^{60}Co

SAI result $^{131}\text{I} = 2.07\text{E}-11 \text{ mCi/ml} \pm 94.2\%$
 $^{60}\text{Co} = 2.15\text{E}-11 \pm 6.2\%$

231 218

AIR SAMPLE SURVEY DATA

DATE: 5-30-79

LOCATION: ~~Mete~~ Met ED ENE-01

TIME ON: 0645

Met Ed # 8419/7807

TIME OFF: 0705

FLOW RATE: 2.5 cfm

TOTAL VOLUME: 1.42E6 ml

NRC SAMPLE NUMBER: 1808

ANALYSIS FINDINGS: $^{131}\text{I} < 7.9\text{E}-11 \text{ mCi/ml}$
(because counted on 6/3/79)
decay correction = 0.72

SAC result

$^{131}\text{I} = 7.8\text{E}-11 \pm 30.1\%$

231 219

AIR SAMPLE SURVEY DATA

DATE: 6/3/79 .

LOCATION: Obs Center .

C/P

TIME ON: 1442

TIME OFF: 1544

cp 100

FLOW RATE: 7.5 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1823

ANALYSIS FINDINGS:

¹³¹I < 6.1E-12 nCi/ml

AIR SAMPLE SURVEY DATA

DATE: 6/3/79

LOCATION: MOBILE LAB

TIME ON: 0919

TIME OFF: 1019

FLOW RATE: 7.5 CFM

TOTAL VOLUME: 1.27E7 ml

NRC SAMPLE NUMBER: 1807

ANALYSIS FINDINGS:

13,
 $I < 6.4E-12 \text{ } \mu\text{Ci/ml}$

AIR SAMPLE SURVEY DATA

DATE: 6/2/79

LOCATION: Falmouth Boat Access

C of 100

TIME ON: 1431

TIME OFF: 1531

FLOW RATE: 7.5 cpm

TOTAL VOLUME: 5.64E7 ml

NRC SAMPLE NUMBER: 1789

ANALYSIS FINDINGS:

¹³¹I < ~~1.0E-12~~ $\mu\text{Ci/ml}$
6.4E-12

AIR SAMPLE SURVEY DATA

DATE: 6/2/79.

LOCATION: Boat Landing C ep100

TIME ON: 0914

TIME OFF: 1014

FLOW RATE: 8 CFM

TOTAL VOLUME: 1.36 E7 ml

IRC SAMPLE NUMBER: 1785

ANALYSIS FINDINGS:

$^{131}\text{I} < 6.0\text{E}-12 \text{ } \mu\text{Ci}/\text{ml}$

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: 6/1-2/79

LOCATION: Observation Center

TIME INDICATED ON: 1533

TIME INDICATED OFF: 1600

FLOW RATE ON: 50 LPM

FLOW RATE OFF: 40 LPM

INDICATED TOTAL FLOW ON: 503950

INDICATED TOTAL FLOW OFF: 505250

PRESSURE ON: 3.4 (vac)

PRESSURE OFF: 3.4 Vac

TOTAL VOLUME: 6.36 F 7ml

NRC SAMPLE NUMBER: 1786

ANALYSIS FINDINGS:

13. $\pm 1.3E-12$ $\mu\text{Ci}/\text{ml}$

C/P 4200

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: 6/1-2/79

LOCATION: Missile Lab

TIME INDICATED ON: 1541

C/P cp 200

TIME INDICATED OFF: 1512

FLOW RATE ON: 40 LPM

FLOW RATE OFF: 40 LPM

INDICATED TOTAL FLOW ON:

INDICATED TOTAL FLOW OFF: 677820

PRESSURE ON: 0

PRESSURE OFF:

TOTAL VOLUME: 5.64E7 ml

NRC SAMPLE NUMBER: 1788

ANALYSIS FINDINGS:

$^{131}\text{I} < 1.4\text{E}-12 \text{ } \mu\text{Ci}/\text{ml}$

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: 6/1-2/79

LOCATION: Nante Gate

TIME INDICATED ON: 1525

TIME INDICATED OFF: 1505

FLOW RATE ON: 55 LPM

FLOW RATE OFF: 55 LPM

INDICATED TOTAL FLOW ON: 3005-60

INDICATED TOTAL FLOW OFF: 30380

PRESSURE ON: 4.0 (Voc)

PRESSURE OFF: 4.2 (Voc)

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1787

ANALYSIS FINDINGS:

$^{131}\text{I} < 1.1 \text{E}-12 \text{ nCi/ml}$

AIR SAMPLE SURVEY DATA

DATE:

6/1/79

c ep 100

LOCATION:

Pt. 8 Observation Center

TIME ON:

1105

TIME OFF:

1205

FLOW RATE:

6 cfm

TOTAL VOLUME:

1.02E7 ml

NRC SAMPLE NUMBER:

1784

ANALYSIS FINDINGS:

$^{131}I < 8.6E-12 \text{ mCi/ml}$

AIR SAMPLE SURVEY DATA

DATE: 6-2-79. (Met Ed)
sample

LOCATION: Observation Center

TIME ON: 0445

TIME OFF: 0505

FLOW RATE: 2.5 cfm

TOTAL VOLUME: 1.415E6 ml

NRC SAMPLE NUMBER: 1778

ANALYSIS FINDINGS:

⁽³⁾ I < 4.0E-11 $\mu\text{Ci}/\text{ml}$

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE:

5/31/79 - 6/1/79

LOCATION:

Mobile Lab

TIME INDICATED ON:

1555

TIME INDICATED OFF:

1540

FLOW RATE ON:

40 cfm

FLOW RATE OFF:

40

INDICATED TOTAL FLOW ON:

674500

INDICATED TOTAL FLOW OFF:

676170

PRESSURE ON:

0

PRESSURE OFF:

0

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1771

ANALYSIS FINDINGS:

$^{131}\text{I} < 1.4\text{E}-12 \text{ } \mu\text{Ci}/\text{ml}$

assembl
cpm

✓
c/p cp200

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: 5/31/79 - 6/1/79

LOCATION: North Gate

TIME INDICATED ON: 1526

TIME INDICATED OFF: 1525

FLOW RATE ON: 50 cfm

FLOW RATE OFF: 50 cfm

INDICATED TOTAL FLOW ON: 297310

INDICATED TOTAL FLOW OFF: 300520

PRESSURE ON: 5.0 (Vac)

PRESSURE OFF: 6.0 (Vac)

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1773

ANALYSIS FINDINGS:

$^{131}I < 1.1E-12 \frac{\mu Ci}{ml}$

C/P
cp 200
assumed
lpm

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: May 23 and 24, 1979

LOCATION: Mobile Lab

TIME INDICATED ON: 1528 on May 23

TIME INDICATED OFF: 1530 on May 24

FLOW RATE ON: 45 LPM

FLOW RATE OFF: 45 LPM

INDICATED TOTAL FLOW ON: 661170

INDICATED TOTAL FLOW OFF: 662840

PRESSURE ON: 0

PRESSURE OFF: 0

TOTAL VOLUME: 6.49 E7 ml

NRC SAMPLE NUMBER: 1654

ANALYSIS FINDINGS: I-131 $\leq 1.3E-12$ uCi
ml.

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: May 23 and 24, 1979

LOCATION: North Gate

TIME INDICATED ON: 1515 on May 23

TIME INDICATED OFF: 1507 on May 24

FLOW RATE ON: 50 LPM

FLOW RATE OFF: 55 LPM

INDICATED TOTAL FLOW ON: 274880

INDICATED TOTAL FLOW OFF: 278120

PRESSURE ON: 4.0 (Vacuum)

PRESSURE OFF: 4.0

TOTAL VOLUME: 7.52E7 ml

NRC SAMPLE NUMBER: 1656

ANALYSIS FINDINGS: I-131 $1.1 \text{E-12} \frac{\mu\text{Ci}}{\text{ml}}$

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: May 23 and 24, 1979

LOCATION: Visitors Center

TIME INDICATED ON: 1521 on May 23

TIME INDICATED OFF: 1525 on May 24

FLOW RATE ON: 45 LPM

FLOW RATE OFF: 45 LPM

INDICATED TOTAL FLOW ON: 49 2540

INDICATED TOTAL FLOW OFF: 49 3790

PRESSURE ON: 2.0 (Vacuum)

PRESSURE OFF: 2, 2

TOTAL VOLUME: 6.5 E 7 ml

NRC SAMPLE NUMBER: 1655

ANALYSIS FINDINGS: $^{135}\text{I} < 1.3 \text{ E-}12 \frac{\mu\text{Ci}}{\text{ml}}$

AIR SAMPLE SURVEY DATA

DATE: 5/23/79

LOCATION: E-12 (South Gate #441)

TIME ON: 5225

TIME OFF: 5325

FLOW RATE: 5 1/2 cfm

TOTAL VOLUME: 9.3466

NRC SAMPLE NUMBER: 1666

ANALYSIS FINDINGS:

(3)
I < 8.7E -12 $\mu\text{ci}/\text{ml}$

AIR SAMPLE SURVEY DATA

DATE: 5/23/79

LOCATION: E-14 (Collin's Rd
At Fishermans what)

TIME ON: 1711

TIME OFF: 1811

FLOW RATE: ~~6.25~~ 6.25 gpm average.

TOTAL VOLUME: 1.06 E 7 ml

NRC SAMPLE NUMBER: 1648

ANALYSIS FINDINGS: I-131 < 7.6 E-12 $\frac{\mu\text{Ci}}{\text{ml}}$

AIR SAMPLE SURVEY DATA

DATE: May 23, 1979

LOCATION: Boat Ramp at East, Point #4

TIME ON: 1132

TIME OFF: 1234

FLOW RATE: 8.0 CFM.

TOTAL VOLUME: 1.4×10^7 ml.

NRC SAMPLE NUMBER: 1650

ANALYSIS FINDINGS: I-131 5.8×10^{-12} $\frac{\mu\text{Ci}}{\text{ml}}$

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: May 22 and 23, 1979

LOCATION: North Gate

TIME INDICATED ON: 1501 on May 22

TIME INDICATED OFF: 1515 on May 23

FLOW RATE ON: 50 LPM

FLOW RATE OFF: 50 LPM

INDICATED TOTAL FLOW ON: 271710

INDICATED TOTAL FLOW OFF: 274880

PRESSURE ON: 5.8 (vacuum)

PRESSURE OFF: 5.8

TOTAL VOLUME: $7.27 E 7$ ml.

NRC SAMPLE NUMBER: 1649

ANALYSIS FINDINGS: I-131 $< 1.1 E -12$ $\frac{\mu Ci}{ml}$

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: May 22 and 23, 1979

LOCATION: Mobile Lab

TIME INDICATED ON: 1520 on May 22

TIME INDICATED OFF: 1528 on May 23

FLOW RATE ON: 45 LPM

FLOW RATE OFF: 45 LPM

INDICATED TOTAL FLOW ON: 659500

INDICATED TOTAL FLOW OFF: 661170

PRESSURE ON: 1.0 (Vacuum)

PRESSURE OFF:

TOTAL VOLUME: 6.5 E7 ml.

NRC SAMPLE NUMBER: 1651

ANALYSIS FINDINGS: I-131 $1.3 \frac{E-12 \mu Ci}{ml}$

231 238

800
2750
2100

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: May 22 and 23, 1979

LOCATION: Observation Center

TIME INDICATED ON: 1510 on May 22

TIME INDICATED OFF: 1521 on May 23

FLOW RATE ON: 50 LPM

FLOW RATE OFF: 45 LPM

INDICATED TOTAL FLOW ON: 491300

INDICATED TOTAL FLOW OFF: 492540

PRESSURE ON: 2.1 (vacuum)

PRESSURE OFF: 2.1

TOTAL VOLUME: 6.9E7 ml

NRC SAMPLE NUMBER: 1647

ANALYSIS FINDINGS: I-131 1.2×10^{-12} $\frac{\mu\text{Ci}}{\text{ml}}$

AIR SAMPLE SURVEY DATA

DATE: May 23, 1979

LOCATION: Observation Center

TIME ON: ~~0650~~ 0550

TIME OFF: ~~07~~ 0650

FLOW RATE: 6 cfm

TOTAL VOLUME: 1.02 E7 ml.

NRC SAMPLE NUMBER: 1630

ANALYSIS FINDINGS: I-131 $7.9 E -12 \mu Ci$
ml.

231 240

AIR SAMPLE SURVEY DATA

DATE: 5/22/79

LOCATION: E-8

TIME ON: 2224 to 2254 @ 0.6cfm

2325 to 2355 @ 0.25cfm

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 1.04 E 7 ml.

NRC SAMPLE NUMBER: 1652

ANALYSIS FINDINGS: I-131 $7.8 E-12 \frac{\mu Ci}{ml}$

231 240

McG. mess / Holo day

AIR SAMPLE SURVEY DATA

DATE: 5/22/79

LOCATION: East Pt 8 (Observation Center)

TIME ON: 1853

TIME OFF: 1953

FLOW RATE: 6 1/2 cfm

TOTAL VOLUME: 1.1 E 7 ml

NRC SAMPLE NUMBER: 1645

ANALYSIS FINDINGS:

$^{131}I < 9.5 E - 12 \text{ } \mu\text{Ci} / \text{ml}$

1800 - 22
1900 - 24
248
-64
42

231 242

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: May 21 and 22, 1979

LOCATION: Visitors Center

TIME INDICATED ON: 1510 on May 21

TIME INDICATED OFF: 1510 on May 22

FLOW RATE ON: 50 LPM

FLOW RATE OFF: 50 LPM

INDICATED TOTAL FLOW ON: 490080

INDICATED TOTAL FLOW OFF: 491300

PRESSURE ON: 2.0

PRESSURE OFF: 2.1

TOTAL VOLUME: 7.2 E 7 ml

NRC SAMPLE NUMBER: 1615

ANALYSIS FINDINGS: I-131 $1.1 \text{E}-12 \frac{\mu\text{Ci}}{\text{ml}}$

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: May 21 and 22, 1979

LOCATION: North Gate

TIME INDICATED ON: 1500 on May 21

TIME INDICATED OFF: 1500 on May 22

FLOW RATE ON: 50 LPM

FLOW RATE OFF: 50 LPM

INDICATED TOTAL FLOW ON: 268590

INDICATED TOTAL FLOW OFF: 271710

PRESSURE ON: 6.0 (vacuum)

PRESSURE OFF: 5.8

TOTAL VOLUME: 7.2 E7 ml

NRC_SAMPLE NUMBER: 1616

ANALYSIS FINDINGS: I-131 $< 1.1 E^{-12}$ μCi
ml

AIR SAMPLE SURVEY DATA

DATE: May 21, 1979

wind 270°
@ 2 mph

LOCATION: IE Trailer

TIME ON: 1350

TIME OFF: 1455

FLOW RATE: 7.8 CFM

TOTAL VOLUME: 1.4E7 ml

NRC SAMPLE NUMBER: 1618

ANALYSIS FINDINGS: I-131 $< 5.8 E-12 \frac{\mu\text{Ci}}{\text{ml}}$

VEGETATION SAMPLE SURVEY DATA

DATE: 5/20/79

LOCATION: Ohmstead AFB

TYPE OF VEGETATION: grass

VOLUME OR AREA COLLECTED: 1 m²

TIME OF COLLECTION: A.M. 2:50 P.M.

WIND DIRECTION: 120° SPEED: 5 mph

NRC SAMPLE NUMBER: 1607

RESULTS: $^{131}I = 6 \times 10^{-5} \text{ uCi/g}$

AIR SAMPLE SURVEY DATA

DATE: 5/20/79

LOCATION: 1 E Trailer

TIME ON: 1948

TIME OFF: 2048

FLOW RATE: 5 CFM X 60 minutes

TOTAL VOLUME: 5.49 X 10⁶ ml

NRC SAMPLE NUMBER: 1620

ANALYSIS FINDINGS:

¹³¹I < 9.5 C - 12 $\frac{\mu\text{Ci}}{\text{ml}}$

231 247

AIR SAMPLE SURVEY DATA

DATE: 5/20/79

LOCATION: Olmstead AFB

TIME ON: 2150

TIME OFF: 2250

FLOW RATE: 5 CPM

TOTAL VOLUME: 9.5×10^6 ml

NRC SAMPLE NUMBER: 1619

ANALYSIS FINDINGS: ^{131}I $< 9.5 \times 10^{-12}$ $\frac{\mu\text{Ci}}{\text{ml}}$

AIR SAMPLE SURVEY DATA

DATE: 5/21/79

LOCATION: Observation Center

TIME ON: 2054

TIME OFF: 2154

FLOW RATE: 5 CFM

TOTAL VOLUME: 8.5E6 ml

NRC SAMPLE NUMBER: 1610

ANALYSIS FINDINGS: I-31K $9.5E-12$ uCi
ml

AIR SAMPLE SURVEY DATA

DATE: 5/21/79

LOCATION: observation tower #8 east side

TIME ON: 1700

TIME OFF: 1800

FLOW RATE: 5 CFM

TOTAL VOLUME: 8.5×10^6 ml

NRC SAMPLE NUMBER: 1609

ANALYSIS FINDINGS: I-131 $< 9.5 \times 10^{-12}$ $\frac{\mu\text{Ci}}{\text{ml}}$

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: May 20 and 21, 1979

LOCATION: North Gate

TIME INDICATED ON: 1520 on May 20

TIME INDICATED OFF: 1500 on May 21

FLOW RATE ON: 50 LPM

FLOW RATE OFF: 50 LPM

INDICATED TOTAL FLOW ON: 265520

INDICATED TOTAL FLOW OFF: 268590

PRESSURE ON: 5.1 (vacuum)

PRESSURE OFF: 5.5

TOTAL VOLUME: 7.10×10^7 ml.

NRC SAMPLE NUMBER 1608

ANALYSIS FINDINGS: $0.131 \text{ L} \times \frac{8.1 \times 10^{-5}}{7.1 \times 10^7} = 1.14 \times 10^{-12} \frac{\mu\text{Ci}}{\text{ml}}$

ER mu

200
bisset

AIR SAMPLE SURVEY DATA

DATE: 5/22/79

LOCATION: Goldsboro

TIME ON: 5:00 AM

TIME OFF: 6:00 AM

FLOW RATE: 5.0 CFM

TOTAL VOLUME: 8.5×10^6 ml.

NRC SAMPLE NUMBER: 1611

ANALYSIS FINDINGS: I-131 $\frac{9.5 \times 10^{-12} \mu\text{Ci}}{\text{ml}}$

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: May 20 and 21, 1979

LOCATION: Mobile Lab

TIME INDICATED ON: 1534 on May 19

TIME INDICATED OFF: 1534

FLOW RATE ON: 45 LPM

FLOW RATE OFF: 45 LPM

INDICATED TOTAL FLOW ON: 656170

INDICATED TOTAL FLOW OFF: 657830

PRESSURE ON: 0 (Vacuum)

PRESSURE OFF: 0

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1603

ANALYSIS FINDINGS:

131 I $< 6 \text{E}-5 \frac{\mu\text{Ci}}{\text{m}^2}$

COPY

Bulghay
Besset

AIR SAMPLE SURVEY DATA

DATE: 5/22/79

LOCATION: Goldsboro

TIME ON: 5:00 AM

TIME OFF: 6:00 AM

FLOW RATE: 5.0 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

231 254

Wadeuff
Smith

AIR SAMPLE SURVEY DATA

DATE: May 22, 1979

LOCATION: Access area, East point # 13

TIME ON: 0845

TIME OFF: 0945

FLOW RATE: 7.8 CFM

TOTAL VOLUME: 1.3×10^7 ml.

NRC SAMPLE NUMBER: 1614

ANALYSIS FINDINGS: I-131 6.2×10^{-12} $\frac{\mu\text{Ci}}{\text{ml}}$

AIR SAMPLE SURVEY DATA

BURGIN
MCKEOWN

DATE: 5/21/79

LOCATION: 500 KV SUBSTATION (EAST SIDE)

TIME ON: 5:00 A.M.

TIME OFF: 6:00 A.M.

FLOW RATE: 5.0 CFM

TOTAL VOLUME: $8.5 E 6$ ml.

NRC SAMPLE NUMBER: 1613

ANALYSIS FINDINGS:

I-131 $9.5 E -12 \mu Ci$
ml.

AIR SAMPLE SURVEY DATA

DATE: May 21, 1979.

LOCATION: The County Boat Ramp (between EAST points 3 and 4)

TIME ON: 0946

TIME OFF: 1046

FLOW RATE: 8.0 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1600

ANALYSIS FINDINGS:

131 I < 6.0 E - 12 nCi/ml

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: May 20 and 21, 1979

LOCATION: Visitors Center

TIME INDICATED ON: 1526 on May 20

TIME INDICATED OFF: 1510

FLOW RATE ON: 50 LPM

FLOW RATE OFF: 50 LPM

INDICATED TOTAL FLOW ON: 488910

INDICATED TOTAL FLOW OFF: 490080

PRESSURE ON: 2.0 (vacuum)

PRESSURE OFF: 2.0

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1597

ANALYSIS FINDINGS:

¹³¹I < 1.1E-12 uCi/ml

231 258

Woodruff

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: May 19 and 20, 1979

LOCATION: Mobile Lab

TIME INDICATED ON: 1515 on May 19

TIME INDICATED OFF: 1533 on May 20

FLOW RATE ON: 45 LPM

FLOW RATE OFF: 45

cp 200
1 c/p

INDICATED TOTAL FLOW ON: 654520

INDICATED TOTAL FLOW OFF: 656170

PRESSURE ON: 0 Vacuum

PRESSURE OFF: 0

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1571

ANALYSIS FINDINGS:

$^{131}\text{I} < 1.2 \text{E}-12 \text{ mCi/ml}$

231 259

Woodruff
Smith

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: May 19 and 20, 1979

LOCATION: Visitors Center

TIME INDICATED ON: 1550 on May 19

TIME INDICATED OFF: 1526 on May 20

FLOW RATE ON: 50 LPM

FLOW RATE OFF: 50 LPM

cp 200
c/p

INDICATED TOTAL FLOW ON: 487700

INDICATED TOTAL FLOW OFF: 488910

PRESSURE ON: 2.0 (vacuum)

PRESSURE OFF: 2.0

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1570

ANALYSIS FINDINGS:

$^{131}\text{I} < 1.1 \text{ E-12 } \mu\text{C/ml}$

Woodruff
Smith

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: May 19 and 20, 1979

LOCATION: North Gate

TIME INDICATED ON: 1450 am May 19

TIME INDICATED OFF: 1520 am May 20

FLOW RATE ON: 50 LPM

FLOW RATE OFF: 50 LPM

cp 200
c/p

INDICATED TOTAL FLOW ON: 262210

INDICATED TOTAL FLOW OFF: 265520

PRESSURE ON: 3.75 vacuum

PRESSURE OFF: 4.0

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1569

ANALYSIS FINDINGS: $^{131}I < 1.1 E-12 \mu\text{Ci}/\text{ml}$

Woodruff
Smith

AIR SAMPLE SURVEY DATA

DATE: May 20, 1979

LOCATION: #4 (Church on Yacumtown Rd) West side

TIME ON: 1340

cp 100

TIME OFF: 1440

C

FLOW RATE: 5.5 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1568

ANALYSIS FINDINGS:

¹³¹
 $I < 8.7E-12 \text{ } \mu\text{Ci/ml}$

Burgin
McKeown

AIR SAMPLE SURVEY DATA

~~_____~~
DATE: 5/20/79

LOCATION: Goldsboro

CP 100

TIME ON: 3:15 AM

TIME OFF: 4:15 AM

FLOW RATE: 5.0 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1554

ANALYSIS FINDINGS:

I-131 $< 9.5 E - 12 \frac{\mu Ci}{ml}$

231 263

AIR SAMPLE SURVEY DATA

DATE: 5/19/79

LOCATION: west side Loc #14

TIME ON: 2127

TIME OFF: 2227

FLOW RATE: 5 CFM X 60 minutes

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1555

ANALYSIS FINDINGS:

$^{131}\text{I} < 9.5\text{E}-12 \text{ } \mu\text{Ci/ml}$

AIR SAMPLE SURVEY DATA

DATE: 5/19/71

LOCATION: East side location #9

TIME ON: 1716

TIME OFF: 1816

FLOW RATE: 4.5 lpm X 60 min

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1556

ANALYSIS FINDINGS:

^{131}I ~~1.1 E-11 uCi/ml~~
< 1.1 E-11 uCi/ml

Woodruff
Smith

AIR SAMPLE SURVEY DATA

DATE: 5-19-79

LOCATION: Trailer 111, NW of Unit II

TIME ON: 1345

TIME OFF: 1445

FLOW RATE: 7.0 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1548

ANALYSIS FINDINGS:

$^{131}\text{I} < 6.8 \text{E} - 12 \text{ } \mu\text{Ci}/\text{ml}$

231 266

Wind: 120° at 6 mph

R. Woodruff
Greg Smith

AIR SAMPLE SURVEY DATA

DATE: May 19, 1979

LOCATION: Yacum town Rd (West #4)

TIME ON: 1005

TIME OFF: 1105

FLOW RATE: 6.8 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1545

ANALYSIS FINDINGS:

$$131 \quad I < \frac{8.1E-5}{1.15E7}$$

$$< 7.0E-12 \text{ } \mu\text{G/ml}$$

231 267

BURGIN
MCKEOWN

AIR SAMPLE SURVEY DATA

DATE: 5/19/79

LOCATION: GOLDSBORO

cp100

TIME ON: 4:50 am.

TIME OFF: 5:50 a.m.

FLOW RATE: 4.5 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1543

ANALYSIS FINDINGS:

$$^{131}\text{I} < \frac{8.1 \text{E}-5}{7.64 \text{E}6 \text{ml}}$$

$$< 1.1 \text{E}-11 \mu\text{Ci}/\text{ml}$$

R. Woodcock
Greg Smith

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: May 18 and 19, 1979

LOCATION: Visitors Center

TIME INDICATED ON: 1500 on May 18, 1979

TIME INDICATED OFF: 1500 on May 19

FLOW RATE ON: 50 LPM on May 18, 1979

FLOW RATE OFF: 50 LPM on May 19

INDICATED TOTAL FLOW ON: 486630

INDICATED TOTAL FLOW OFF: 487700

PRESSURE ON: 2.2 (Vacuum)

PRESSURE OFF: 2.2

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1550

ANALYSIS FINDINGS:

¹³¹I < 1.1 E-12 uCi/ml

231 269

R. Woodruff
Greg Smith

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: 5-18-79 to 5-19-79

LOCATION: North Gate

TIME INDICATED ON: 1445 on May 18

TIME INDICATED OFF: ~~14~~ 1450 on May 19

FLOW RATE ON: 55 LPM

FLOW RATE OFF: ~~45~~⁵⁰ LPM

INDICATED TOTAL FLOW ON: 259020

INDICATED TOTAL FLOW OFF: 262210

PRESSURE ON: 4.3 (vacuum)

PRESSURE OFF: 5.0

TOTAL VOLUME:

NRC_SAMPLE NUMBER: 1552

ANALYSIS FINDINGS:

$$^{131}\text{I} < \frac{8.1\text{E}-5}{7.59\text{E}7}$$

< 1.1 E-12 uCi/ml

R. Woodruff
Greg Smith

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: May 18 and 19, 1979

LOCATION: Mobile Lab

TIME INDICATED ON: 1510 on May 18

TIME INDICATED OFF: 1515 on May 19

FLOW RATE ON: 45 LPM

FLOW RATE OFF: 45 LPM

INDICATED TOTAL FLOW ON: 652850

INDICATED TOTAL FLOW OFF: 654520

PRESSURE ON: 0 (Vacuum)

PRESSURE OFF: 0

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1549

ANALYSIS FINDINGS:

¹³¹I < 1.2E-12 nCi/ml

Holaday
&
Stearns

AIR SAMPLE SURVEY DATA

DATE: 5/18/79

LOCATION: #9 (500 kV Substation)

TIME ON: 22 46 ~~500 kV Substation~~

TIME OFF: 23 46

FLOW RATE: 4.8 l

TOTAL VOLUME:

RPC SAMPLE NUMBER: 1544

ANALYSIS FINDINGS:

$^{131}\text{I} < 9.9 \text{E}-12 \text{ nCi/ml}$

WIND DATA
600
12 mph
at 1600
450
6 mph
at 1900

R. Woodruff

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: 5-17-79 to 5-18-79

LOCATION: North Gate

TIME INDICATED ON: 1450

TIME INDICATED OFF: ~~1445~~ 1445

FLOW RATE ON: 50 LPM

FLOW RATE OFF: 45 LPM

INDICATED TOTAL FLOW ON: 255940

INDICATED TOTAL FLOW OFF: 259020

PRESSURE ON: 6

PRESSURE OFF: 5.5

TOTAL VOLUME: $\frac{47.51}{\text{min}} \times 1435 \text{ min} \times \frac{10^3 \text{ ml}}{\text{L}} = 6.8257 \text{ L}$

NRC SAMPLE NUMBER: 1532

ANALYSIS FINDINGS: $I^{131} < 1.19E-12$

R. Woodruff

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: 5-17-79 and 5-18-79

LOCATION: Visitors Center

TIME INDICATED ON: 1504 on May 17, 1979

TIME INDICATED OFF: 1500 on May 18, 1979

FLOW RATE ON: 50 LPM

FLOW RATE OFF: 50 LPM

INDICATED TOTAL FLOW ON: 485470

INDICATED TOTAL FLOW OFF: 486630

PRESSURE ON: 2.0 (vacuum)

PRESSURE OFF: 2.0 (vacuum)

TOTAL VOLUME: $50 \text{ lpm} \times \frac{10^3 \text{ ml}}{\text{e}} \times 1436 \text{ min} = 7.18 \text{ E } 7 \text{ l}$

NRC SAMPLE NUMBER: 1531

ANALYSIS FINDINGS: $\frac{13}{1} / < 1.13 \text{ E } -12$

R. Woodruff

AIR SAMPLE SURVEY DATA

DATE: 5-18-79

LOCATION: South Gate

TIME ON: 1142

TIME OFF: 1242

FLOW RATE: 6.0 CFM

TOTAL VOLUME: $\frac{6 \text{ ft}^3}{\text{min}} \times 60 \text{ min} \times \frac{28,300 \text{ ml}}{\text{ft}^3} = 1.02 \text{ E } 7 \text{ ml}$

NRC SAMPLE NUMBER: 1530

ANALYSIS FINDINGS: $\frac{131}{1} < 7.94 \text{ E } -12 \text{ } \mu\text{C}/\text{ml}$

R. Woodruff

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: 5-17-79 and 5-18-79

LOCATION: Mobile Lab

TIME INDICATED ON: 1513 on May 17, 1979

TIME INDICATED OFF: 1510 on May 18, 1979

FLOW RATE ON: 45 LPM

FLOW RATE OFF: 45 LPM

INDICATED TOTAL FLOW ON: 651190

INDICATED TOTAL FLOW OFF: 652850

PRESSURE ON: 0 (vacuum)

PRESSURE OFF: 0

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1529

ANALYSIS FINDINGS: $^{131}\text{I} < 1.3 \text{E} - 12 \text{ uCi/ml}$

231 276

Water

SAMPLE SURVEY DATA

DATE: 5-17-79

LOCATION: RM-L-7

TIME ON: ~~1300~~ 1300, 1400, 1500, 1600 composite

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1534

ANALYSIS FINDINGS: 5¹³¹ ← 6 pL/P

Stearns & Holaday

AIR SAMPLE SURVEY DATA

WIND DATA
↓

DATE: 5/18/79

LOCATION: # 9 (500 kv substation)

TIME ON: 2246

TIME OFF: 2346

FLOW RATE: 4.8 f csm

TOTAL VOLUME:

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

60°
12 mph
at 1600

450
6 mph
at 1900

Burgin
McKeown

AIR SAMPLE SURVEY DATA

DATE: 5/18/79

LOCATION: South End of Brunner's Island

TIME ON: 5:00 A.M.

TIME OFF: 6:00 A.M.

FLOW RATE: 5.5 CFM

TOTAL VOLUME: ~~100~~

NRC SAMPLE NUMBER: 1518

ANALYSIS FINDINGS:

$^{131}\text{I} < 8.7\text{E}-12 \text{ } \mu\text{C}/\text{ml}$

231 2/9

Sheet of Slacks

AIR SAMPLE SURVEY DATA

DATE: 5/17/79

LOCATION: mouth of canal at Snogueharina River

TIME ON: 1705

TIME OFF: 1805

FLOW RATE: 5.9 ± 0.2 CFM

TOTAL VOLUME: $60 \text{ min} \times 5.9 \frac{\text{ft}^3}{\text{min}} \times \frac{28,300 \text{ ml}}{\text{ft}^3}$
 $= 107 \text{ ml}$

NRC SAMPLE NUMBER: 1517

ANALYSIS FINDINGS:

131 $I < 0.1 \text{E-12} \text{ nCi/ml}$

WIND DATA

at 1600 ~~350~~
at 1700 Swainbl, 13 mph

Woodruff
Verbylce

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: 5/16-17/79

LOCATION: Mobile Lab

TIME INDICATED ON: 1515 5/16/79

TIME INDICATED OFF: 1512

FLOW RATE ON: 45 LPM

FLOW RATE OFF: 45 LPM

INDICATED TOTAL FLOW ON: 649610

INDICATED TOTAL FLOW OFF: 651190

PRESSURE ON: 0 (vacuum)

PRESSURE OFF: 0

TOTAL VOLUME: 6.43 E 7 ml

NRC SAMPLE NUMBER: 1528

ANALYSIS FINDINGS: ¹³¹I 1.1 E - 7 $\mu\text{Ci}/\text{ml}$

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: 5/16 & 17/79

LOCATION: Observation Center

TIME INDICATED ON: 1500 5/16/79

TIME INDICATED OFF: ~~3~~ 1503 on 5-17-79

FLOW RATE ON: 50 LPM

FLOW RATE OFF: 50 LPM

INDICATED TOTAL FLOW ON: 484340

INDICATED TOTAL FLOW OFF: 485470

PRESSURE ON: 2.1 (vacuum)

PRESSURE OFF: 2.0

TOTAL VOLUME: 7.267 ml

NRC SAMPLE NUMBER: 1510

ANALYSIS FINDINGS: ¹³¹I < 4.5 E-13 $\mu\text{Ci}/\text{ml}$

Vetbyka

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: 5/16 & 17/79

LOCATION: North gate

TIME INDICATED ON: 1445 5/16/79

TIME INDICATED OFF: 1445

FLOW RATE ON: 50 LPM

FLOW RATE OFF: 50 LPM on 5-17-79

INDICATED TOTAL FLOW ON: 253030

INDICATED TOTAL FLOW OFF: 255940

PRESSURE ON: ~~5.0~~ 5.0 (vacuum)

PRESSURE OFF: 6.5

TOTAL VOLUME: 7,267 ml

NRC SAMPLE NUMBER: 1512

ANALYSIS FINDINGS: ¹³¹I < 0.5 Bq - 13 $\frac{1}{1000}$

Shaub & Stearn

AIR SAMPLE SURVEY DATA

WIND DATA

↓ Variable
at 3 mph
at 1700

DATE: 5/17/79

LOCATION: mouth of canal at Susquehanna River

TIME ON: 1705

TIME OFF: 1805

FLOW RATE: 519 ^{± 0.2} CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

231 284

Woodruff
Tom

AIR SAMPLE SURVEY DATA

DATE: 5-17-79

LOCATION: Bell Park between West Side 18 and 17

TIME ON: 1100

TIME OFF: 1200

FLOW RATE: 6.5 CFM (~~5.5~~) ave

TOTAL VOLUME: 390 CF 11 E 7

NRC SAMPLE NUMBER: 1504

ANALYSIS FINDINGS:

131 I < 2.2 E-2 $\frac{\mu\text{Ci}}{\text{m}^3}$

231 285

Burgin
McKee

AIR SAMPLE SURVEY DATA

DATE: 5/17/79

LOCATION: South End of Runners Island (west side)

TIME ON: 4:30 am.

TIME OFF: 5:30 pm.

FLOW RATE: 5.0 CFM

TOTAL VOLUME: $300 \text{ Ft}^3 \times 28,300 \frac{\text{ml}}{\text{Ft}^3} = 8.49 \text{E}6 \text{ ml}$

NRC SAMPLE NUMBER: 1501

ANALYSIS FINDINGS: $I^{131} < 6.71 \text{E}-12 \text{ nCi/ml}$

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: 5/15 & 16/79

LOCATION: M. Sted. Lab

— TIME INDICATED ON: 1521 on 5/15/79

TIME INDICATED OFF: 1515 5/16/79

— FLOW RATE ON: 40 LPM

FLOW RATE OFF: 45 LPM

— INDICATED TOTAL FLOW ON: 647990

INDICATED TOTAL FLOW OFF: 649610

— PRESSURE ON: (vacuum) 1/2

PRESSURE OFF: 1/4 (vacuum)

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1494

ANALYSIS FINDINGS:

¹³⁷I < 8.4E-13 uCi/ml

AIR SAMPLE SURVEY DATA

DATE: 5-16-79

LOCATION: E 14 - (Falmouth access point)

TIME ON: 1322

TIME OFF: 1422

FLOW RATE: 6.2 cfm (for 10 min.)
7.4 cfm (rest of time)

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1492

ANALYSIS FINDINGS:

$$\frac{5.7E-5}{1.22E7, 88}$$

¹³¹I < 5.3E-12 uCi/ml

Burgin
McKeown

AIR SAMPLE SURVEY DATA

DATE: 5/16/79

LOCATION: Harrisburg International Airport

TIME ON: 4:35 A.M.

TIME OFF: 5:35 A.M.

FLOW RATE: 4.5 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1493

ANALYSIS FINDINGS:

$$^{131}\text{I} < \frac{4.7\text{E}-5}{7.64\text{E}6 \cdot 93}$$

$< 6.6\text{E}-12$ uCi/ml

Shank J. Stone

AIR SAMPLE SURVEY DATA

DATE: 5/16/79

LOCATION: ~~1850~~ PT 21

TIME ON: ~~1930~~ 1850

TIME OFF: 1930

FLOW RATE: 4.9 CFM

TOTAL VOLUME: 8.3 E-6

NRC SAMPLE NUMBER: 1490

ANALYSIS FINDINGS: ¹³¹I < 7.5 E-12

231 290

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: 5/15/16/79

LOCATION: NORTH GATE

TIME INDICATED ON: 1449 5/15/79

TIME INDICATED OFF: 1445 5/16/79

FLOW RATE ON: 50 LPM

FLOW RATE OFF: 50 LPM

INDICATED TOTAL FLOW ON: 250040

INDICATED TOTAL FLOW OFF: 253030

PRESSURE ON: (vacuum 3ⁱⁿ)

PRESSURE OFF: 4.5

TOTAL VOLUME: ~~1489~~ 7,1857 ml

NRC SAMPLE NUMBER: 1489

ANALYSIS FINDINGS:

¹³¹I < 1.1 e-12 $\mu\text{Ci}/\text{ml}$

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: 5 | 15 | 16 | 79

LOCATION: OBSERVATION CENTER

TIME INDICATED ON: 1501 5/15/79

TIME INDICATED OFF: 1500 5/16/79

FLOW RATE ON: 50 LPM

FLOW RATE OFF: 50 LPM

INDICATED TOTAL FLOW ON: 483160

INDICATED TOTAL FLOW OFF: 484340

PRESSURE ON: (vacuum) 24³

PRESSURE OFF: 216 (vacuum)

TOTAL VOLUME: 7.2 ϵ m³

NRC SAMPLE NUMBER: 1486

ANALYSIS FINDINGS: ¹³¹I < 9.5 ϵ -13 μ g/m³

AIR SAMPLE SURVEY DATA

DATE:

5/16

LOCATION:

Pt # 21 N.E. end of Brunner Island

10 mph
1300
1700

TIME ON:

1850

1930

TIME OFF:

FLOW RATE:

4.7

4.9

~4.9

(less than 5 minutes after start)
throughout most of sample

TOTAL VOLUME:

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

231 293

Office
copy

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: 5/15/79 179

LOCATION: North Gate

TIME INDICATED ON: 1449 on 5/15/79

TIME INDICATED OFF: 1445 5/16/79

FLOW RATE ON: 50 LPM

FLOW RATE OFF: ~~50~~ 50 LPM

INDICATED TOTAL FLOW ON: 250040

INDICATED TOTAL FLOW OFF: 253030

PRESSURE ON: (vacuum) 30 in

PRESSURE OFF: 4.5

TOTAL VOLUME:

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

231 20A

office copy

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: 5/15 & 5/16
LOCATION: Visitors Center
TIME INDICATED ON: 1501 on 5/15/79
TIME INDICATED OFF:
FLOW RATE ON: 50 LPM
FLOW RATE OFF: 50 LPM
INDICATED TOTAL FLOW ON: 483160
INDICATED TOTAL FLOW OFF: 484340
PRESSURE ON: (vacuum) 2
PRESSURE OFF: (vacuum) 2
TOTAL VOLUME:
NRC SAMPLE NUMBER:
ANALYSIS FINDINGS:

231 295

OFFICE COPY

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: 5/15 E 16/79

LOCATION: Mobil Lab

TIME INDICATED ON: 1521 on 5/15/79

TIME INDICATED OFF: 1515 5/16/79

FLOW RATE ON: 40 LPM

FLOW RATE OFF: 45 LPM

INDICATED TOTAL FLOW ON: ~~647990~~ 647990

INDICATED TOTAL FLOW OFF: 649610

PRESSURE ON: (vacuum) 1/2

PRESSURE OFF: 1/4 (vacuum)

TOTAL VOLUME:

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS: $< 8.4 \text{ E-13 } \mu\text{Ci/ml}$

R. Woodruff

Continuous

AIR SAMPLE SURVEY DATA

DATE: May 14 and 15, 1979

LOCATION: North Gate

TIME ON: 1448 on May 14, 1979

$$24 \times \frac{60 \text{ min}}{\text{hr}} = 1440 \text{ min}$$

TIME OFF: 1448 on May 15, 1979

FLOW RATE: $1440 \text{ min} \times \frac{50 \text{ l}}{\text{min}} \times \frac{10^3 \text{ ml}}{\text{l}} = 7.2 \times 10^7 \text{ ml}$

TOTAL VOLUME: 50 LPM (START & END)

NRC SAMPLE NUMBER: 1464

ANALYSIS FINDINGS: $I^{131} < 1.3 \times 10^{-12} \text{ } \mu\text{Ci/ml}$

R. Woodruff

Continuous AIR SAMPLE SURVEY DATA

DATE: May 14 and 15, 1979

LOCATION: Mobile Lab

TIME ON: 1515 on May 14, 1979

TIME OFF: 1615 on 5/15/79

FLOW RATE: 30 LPM (start & stop)

TOTAL VOLUME: 4.32×10^7

NRC SAMPLE NUMBER: 1465

ANALYSIS FINDINGS:

$$^{131}\text{I} < \frac{8.1 \times 10^{-5}}{(0.94)(4.32 \times 10^7)(0.94)}$$

$$^{131}\text{I} < 2.1 \times 10^{-12} \mu\text{Ci/ml}$$

231 298

R. Woodruff

Continuous AIR SAMPLE SURVEY DATA

DATE: May 14 and 15, 1979

LOCATION: Visitors Center

TIME ON: 1500 on May 14, 1979

TIME OFF: 1500 on May 15, 1979

FLOW RATE: 50 LPM

TOTAL VOLUME: 7.2 E 7 ml

NRC SAMPLE NUMBER: 1466

ANALYSIS FINDINGS: ¹³¹I < 1.3 E - 12 $\mu\text{Ci}/\text{ml}$

231 299

BURGIN
MCKEOWN

AIR SAMPLE SURVEY DATA

DATE: 5/15/79

LOCATION: GOLDSBORO

TIME ON: 4:00 A.M.

TIME OFF: 5:00 A.M.

FLOW RATE: 4.5 CFM

TOTAL VOLUME: $\frac{4.5 \text{ ft}^3}{\text{min}} \times 60 \text{ min} \times \frac{28,300 \text{ ml}}{\text{ft}^3} = 7.64 \text{E}6$

NRC SAMPLE NUMBER: 1459

ANALYSIS FINDINGS: $\text{I}^{131} < 7.46 \text{E-}12 \text{ uCi/ml}$

231 300

AIR SAMPLE SURVEY DATA

DATE: 5/15/79

WIND DATA

LOCATION: mouth of canal

180°
6 mph
at 1800

TIME ON: 1812

TIME OFF: 1912

FLOW RATE: ~ 5.1 CPM - start
~ 5.2 CPM - end

TOTAL VOLUME:

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

131
$$\frac{4.7E-5}{8.74E6} \text{ } 194$$

$$25.7E-12 \text{ } \mu\text{Ci/ml}$$

AIR SAMPLE SURVEY DATA

WIND DATA

~~180°~~
6 mph
at 1800'

DATE: 5/15/77

LOCATION: mouth of canal

TIME ON: 1812

TIME OFF: 1912

FLOW RATE: 5.0 CFM
5.2 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

Office Copy

R. Woodruff

Continuous AIR SAMPLE SURVEY DATA

DATE: May 14 and 15, 1979

LOCATION: Visitors Center

TIME ON: 1500 on May 14, 1979

TIME OFF: 1500 on 5/15/79

FLOW RATE: 50 LPM

TOTAL VOLUME:

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

231 303

Office Copy

R. Woodruff

Continuous AIR SAMPLE SURVEY DATA

DATE: May 14 and 15, 1979

LOCATION: Mobile Lab

TIME ON: 1515 on May 14, 1979

TIME OFF: 1515 on 5/15/79

FLOW RATE: 30 LPM (start & stop)

TOTAL VOLUME:

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

Office Copy

R. Woodruff

Continuous

AIR SAMPLE SURVEY DATA

DATE: May 14 and 15, 1979

LOCATION: North Gate

TIME ON: 1448 on May 14, 1979

TIME OFF: 1448 on 5/15/79

FLOW RATE:

STOP → ~~50~~ 50 LPM

TOTAL VOLUME:

START ↓
50 LPM

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

OFFICE COPY

BURGIN
MCKEOWN

AIR SAMPLE SURVEY DATA

DATE: 5/15/79

LOCATION: GOLDSBORO

TIME ON: 4:00 A.M.

TIME OFF: 5:00 A.M.

FLOW RATE: 4.5 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

AIR SAMPLE SURVEY DATA

Sketch of Skam
WIND DATA
+

DATE:

5/14/74

LOCATION:

3 RR tracks on ^{RT} 441

770^a
4 mph
at 20' or

TIME ON:

21:22

TIME OFF:

22:22

FLOW RATE:

5 CFM

TOTAL VOLUME:

300 CFM

~~200~~

NRC SAMPLE NUMBER:

1456

ANALYSIS FINDINGS:

131 I < 6.7E 12 p/b/cc

R. Woodruff

AIR SAMPLE SURVEY DATA

DATE: May 14, 1979

LOCATION: "Fishing Point Access" south of (#13) survey point on 441 south

TIME ON: 1325

TIME OFF: 1425

FLOW RATE: 6.0 CFM

TOTAL VOLUME: 360 CF1

NRC SAMPLE NUMBER: 1451

ANALYSIS FINDINGS: 131
I < 9.1 E - 12 μ g/m³

231 308

~~Office Copy~~

R. Woodruff
Greg Smith

AIR SAMPLE SURVEY DATA

DATE: May 13-14, 1979
LOCATION: Mobile Lab.
TIME ON: 15:15 on May 13
TIME OFF: 15:15 on May 14
FLOW RATE: 30 l/min
TOTAL VOLUME: 1.8 E 6 ml
NRC SAMPLE NUMBER: #1449
ANALYSIS FINDINGS: $^{131}\text{I} < 2.0 \text{ E } -12 \text{ } \mu\text{Ci}/\text{ml}$

Shrub & Stearns

AIR SAMPLE SURVEY DATA

WIND DATA
↓
170°
4 mph
at 200'

DATE: 5/14/79.

LOCATION: OBSERVATION CENTRAL

TIME ON: 2100

2300:30 → A = 2hr and 30 seconds

TIME OFF:

FLOW RATE: 6 cfm

TOTAL VOLUME: 2.05 E7 cc

NRC SAMPLE NUMBER: 1453

ANALYSIS FINDINGS:

¹³¹I < 2.8 E-12 mbq/cc

~~off~~

R. Woodruff
Greg Smith

AIR SAMPLE SURVEY DATA

DATE: May-13-14, 1979

LOCATION: Visitors Center

TIME ON: 1500 on 5-13-79

TIME OFF: 1500 on May 14, 1979

FLOW RATE: 50 l/m

TOTAL VOLUME: 7.2 E7

NRC SAMPLE NUMBER: 1454

ANALYSIS FINDINGS:

¹³ IR 4.6E-13

AIR SAMPLE SURVEY DATA

DATE: 5/14/79

LOCATION: 500 KV SUBSTATION

TIME ON: 6:30 A.M.

TIME OFF: 7:30 A.M.

FLOW RATE: 45 CFM

TOTAL VOLUME: $4.5 \frac{\text{ft}^3}{\text{min}} \times 60 \text{ min} \times \frac{28,300 \text{ ml}}{\text{ft}^3} = 7.64 \text{ E}^6 \text{ ml}$

NRC SAMPLE NUMBER: 1447

ANALYSIS FINDINGS: $\text{I}^{131} < 7.46 \text{ E}^{-12} \text{ MC/ml}$

231 312

off copy!

Shank
&
SITONS

AIR SAMPLE SURVEY DATA

DATE: 5/14/79

LOCATION: #3 RR TRACKS AND LT. 941

TIME ON: 2122

TIME OFF: 2222

FLOW RATE: 5 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

office copy

R. Woodruff
Greg Smith

AIR SAMPLE SURVEY DATA

DATE: May 13-14, 1979

LOCATION: Mobile Lab

TIME ON: 1515 on May 13

TIME OFF: 1515 on May 14

FLOW RATE: 30 l/m

TOTAL VOLUME:

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

231 314

Office Copy

R. Woodruff
Greg Smith

AIR SAMPLE SURVEY DATA

DATE: May 13-14, 1979

LOCATION: Visitors Center

TIME ON: 1500 on 5-13-79

TIME OFF: 1500 on May 14, 1979

FLOW RATE: 50 l/min

TOTAL VOLUME:

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

231 315

Office Copy

R. Woodruff
Greg Smith

Continuous

AIR SAMPLE SURVEY DATA

DATE: May 13 - 14, 1979

LOCATION: North Gate

TIME ON: 1445 on May 13

TIME OFF: 1448 on May 14

FLOW RATE: 50 l/m

TOTAL VOLUME:

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

231 316

Office Copy

R. Woodruff

Grass

~~▶~~ SAMPLE SURVEY DATA

DATE: May 14, 1979

LOCATION: Fishing Access Point⁴, south of (#13)
survey point on 441.

~~TIME ON:~~

~~1:30~~

~~TIME OFF:~~

~~FLOW RATE:~~

TOTAL VOLUME: one square meter

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

231 317

office Copy

R. Woodruff

AIR SAMPLE SURVEY DATA

DATE: May 14, 1979

LOCATION: "Fisting Access point" south of (#13) survey point on 441 south.

TIME ON: 1325

TIME OFF: 1425

FLOW RATE: 6.0 CFM

TOTAL VOLUME: 360 CF

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

231 318

Office Copy

R. Woodruff

Soil

SAMPLE SURVEY DATA

DATE: May 14, 1979

LOCATION: along 441 south, midway between pts. 9 and 10.

~~TIME ON:~~

~~TIME OFF:~~

~~FLOW RATE:~~

TOTAL VOLUME:

sampled from one square meter of surface

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

231 319

Office Copy

R. Woodruff

Grass

SAMPLE SURVEY DATA

DATE: May 14, 1979

LOCATION: on 441 south, midway between pts 9 and 10

TIME ON: 1100 hrs

~~TIME OFF:~~

~~FLOW RATE:~~

TOTAL VOLUME: One square meter

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

231 320

R. Woodruff

AIR SAMPLE SURVEY DATA

DATE: May 14, 1979

LOCATION: on 441 south, midway between pts. 9 and 10

TIME ON: 1035

TIME OFF: 1135

FLOW RATE: 5.0 CFM

TOTAL VOLUME: $300 \text{ CF} \times \frac{28,300 \text{ ml}}{\text{ft}^3} = 8.49 \text{ EG. ml}$

NRC SAMPLE NUMBER: 1446

ANALYSIS FINDINGS: $I^{131} < 6.7E-12$

231 321

Copy
I

AIR SAMPLE SURVEY DATA

DATE: 5/14/79

LOCATION: 500 KV SUBSTATION

TIME ON: 6:30 A.M.

TIME OFF: 7:30 A.M.

FLOW RATE: 4.5 CFM.

TOTAL VOLUME:

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

231.322

Sludg | Steam

AIR SAMPLE SURVEY DATA

WIND DATA

↓
300°

2 mph

at 2280

DATE: 3/13

LOCATION: Substation (Vent #9)

TIME ON: 2237

TIME OFF: 2337

FLOW RATE: 4.9 CFM

TOTAL VOLUME: 8.3256 cc

NRC SAMPLE NUMBER: 1434

ANALYSIS FINDINGS:

^{B1} I < 9.7 E-12 nCi/cc

231 323

AIR SAMPLE SURVEY DATA

DATE:

5/13

LOCATION:

#9 (Substation)

TIME ON:

1800

TIME OFF:

1900

FLOW RATE:

5 CFM

TOTAL VOLUME:

8.4956

NRC SAMPLE NUMBER:

1435

ANALYSIS FINDINGS:

¹³¹I < 9.5E-12 MB/CC

Lead & Stearns

300°

2 m fls
at 1700

231 324

Office copy

Steam of Shaul

AIR SAMPLE SURVEY DATA

WIND DATA

DATE: 5/13/79

LOCATION: 500KV substation

TIME ON: 2237

TIME OFF: 2337

FLOW RATE: 4.9 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

300° 2 mph
@ 2200 hours

OFFICE
COPY

Shed & Steam

AIR SAMPLE SURVEY DATA

DATE:

5/13/79

LOCATION:

#9 (Substation)

TIME ON:

1800

TIME OFF:

1908

FLOW RATE:

5 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

~~300'~~
2 mph
at 1700

231 326

R. Wooden
Greg Smith

Continuous AIR SAMPLE SURVEY DATA

DATE: 5-12-79 and 5-13-79

LOCATION: Mobile LAB

TIME ON: 1520 on 5-12-79

TIME OFF: 1515 on 5-13-79

23 hrs 55 min
= 1435 min

FLOW RATE: 30 l/m

TOTAL VOLUME: $1435 \text{ min} \times \frac{30 \text{ l}}{\text{min}} \times \frac{10^3 \text{ ml}}{\text{l}} = 4.31 \text{ E } 7 \text{ ml}$

NRC SAMPLE NUMBER: 1430

ANALYSIS FINDINGS: $I^{131} < 2.4 \text{ E-} 12 \frac{\text{mCi}}{\text{ml}}$

$$I^{131} < \frac{5.7 \text{ E-} 5}{(4.31 \text{ E } 7) (0.95)}$$

231 327

R. Woodruff
Greg Smith

Continuous

AIR SAMPLE SURVEY DATA

DATE: 5-12-79 and 5-13-79

LOCATION: Visitors Center

TIME ON: 1505 on 5-12-79

TIME OFF: 1500 on 5-13-79

} 23 hrs 55 min

FLOW RATE: 50 l/min

TOTAL VOLUME: $1435 \text{ min} \times \frac{50 \text{ l}}{\text{min}} \times \frac{10^3 \text{ ml}}{\text{l}} = 7.18 \text{ E}7 \text{ ml}$

NRC SAMPLE NUMBER: 1427

ANALYSIS FINDINGS: $\frac{1}{1}^{131} < 7.94 \text{ E}-13 \text{ } \mu\text{Ci}/\text{ml}$

R. Woodruff
Greg Smith

AIR SAMPLE SURVEY DATA

DATE: 5-13-79

LOCATION: General Security Bld, High voltage panel

TIME ON: 0830

TIME OFF: 0930

FLOW RATE: 6.5 CFM average

TOTAL VOLUME: $60 \text{ min} \times 6.5 \frac{\text{ft}^3}{\text{min}} \times \frac{28,300 \text{ ml}}{\text{ft}^3} = 1.1 \text{ E } 7 \text{ ml}$

NRC SAMPLE NUMBER: 1425

ANALYSIS FINDINGS: $I^{131} < 5.2 \text{ E } -12 \text{ uCi/lp}$

0944

Burgin
Nick Keswin

AIR SAMPLE SURVEY DATA

DATE: 5/13/79

LOCATION: Goldsboro

TIME ON: 3:15 AM

TIME OFF: 4:15 AM

FLOW RATE: 4.5 CFM

TOTAL VOLUME: $60 \text{ min} \times \frac{4.5 \text{ FE}^3}{\text{min}} \times \frac{28,300 \text{ ml}}{\text{FE}^3} = 7.64 \text{ E}6 \text{ ml}$

NRC SAMPLE NUMBER: 1424

ANALYSIS FINDINGS: $I^{131} < \frac{10 \text{ mCi}}{\text{ml}} \times 7.33 \text{ E}^{-12} \text{ uCi/ml}$

AIR SAMPLE SURVEY DATA

DATE:

LOCATION: AM-4

TIME ON: 2230 (5/11)

TIME OFF: 2250 (5/12)

FLOW RATE: 2.8 fpm

TOTAL VOLUME: 1.16×10^{-8}

NRC SAMPLE NUMBER: 1419

ANALYSIS FINDINGS:

$^{137}\text{I} = 7.6 \times 10^{-13} \text{ mCi/cc}$

231 331

R. Woodruff
Greg Smith

Continuous

AIR SAMPLE SURVEY DATA

DATE: 5/12+13/79

LOCATION: NORTH GATE

TIME ON: 1420 on 5-12-79

TIME OFF: 1445 on 5-13-79

} 24 hrs 25 min
1465 min

FLOW RATE: 50 l/min

TOTAL VOLUME: ~~1465~~

$$1465 \times 50 \frac{\text{l}}{\text{min}} \times \frac{10^3 \text{ ml}}{\text{l}} = 7.33 \text{ E } 7 \text{ ml}$$

NRC SAMPLE NUMBER: 1429

ANALYSIS FINDINGS: $\bar{I}^{131} < 7.7 \text{ BE} - 13 \text{ uCi/l}$

231 332

1533

R. Woodruff

Greg Smith

~~C-111111~~ AIR SAMPLE SURVEY DATA

DATE:

5-13-79

LOCATION:

TRI-COUNTY BOAT DOCK

TIME ON:

1331

TIME OFF:

1431

FLOW RATE:

7.0 CFM

TOTAL VOLUME:

$$60 \text{ min} \times \frac{7 \text{ ft}^3}{\text{min}} \times \frac{28,300 \text{ ml}}{\text{ft}^3} = 1.19 \text{E} 7 \text{ ml}$$

NRC SAMPLE NUMBER:

1428

ANALYSIS FINDINGS:

$< 4.79 \text{E} - 13 \text{ } \mu\text{Ci/ml}$ I¹³¹

231 333

Office copy

R. Woodruff
Greg Smith

AIR SAMPLE SURVEY DATA

DATE: 5-13-79

LOCATION: General Security Bld, High voltage panel

TIME ON: 0830

TIME OFF: 0930

FLOW RATE: 6.5 CFM average

TOTAL VOLUME:

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

231 334

Office Copy

R. Woodruff
Greg Smith

~~C. J. ...~~ AIR SAMPLE SURVEY DATA

DATE: 5-13-79

LOCATION: Tri-county Boat Club

TIME ON: 1331

TIME OFF: 1431

FLOW RATE: 7.0 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

231 335

Office Copy

R. Woodruff
Greg Smith

Continuous

AIR SAMPLE SURVEY DATA

DATE: 5/12+13/79

LOCATION: NORTH GATE

TIME ON: 1420 on 5-12-79

TIME OFF: 1445

FLOW RATE: 50 l/m

TOTAL VOLUME:

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

231 336

Office Copy

R. Wooden
Greg Smith

Continuous AIR SAMPLE SURVEY DATA

DATE: 5-12-79 and 5-13-79

LOCATION: Mobile LAB

TIME ON: 1520 on 5-12-79

TIME OFF: 1515 on 5-13-79

FLOW RATE: 30 l/m

TOTAL VOLUME:

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

231 337

Office Copy

R. Woodruff
Greg Smith

Continuous

AIR SAMPLE SURVEY DATA

DATE: 5-12-79 and 5-13-79

LOCATION: Visitors Center

TIME ON: 1505 on 1-12-79

TIME OFF: 1500 on 1-13-79

FLOW RATE: 50 l/m

TOTAL VOLUME:

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

231 338

copy

BURGIN
MCKEOWN

AIR SAMPLE SURVEY DATA

DATE: 5/13/79

LOCATION: GOLDSBORO

TIME ON: 3:15 A.M.

TIME OFF: 4:15 A.M.

FLOW RATE: 4.5 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

231 339

5/12/79

Shard & Murray

150°

8 m/s

AIR SAMPLE SURVEY DATA

DATE: 5/12/79

LOCATION: at mouth of canal (on west side of canal)

TIME ON: 2157

TIME OFF: 2257

FLOW RATE: 5 CFM

TOTAL VOLUME: 8.4956 cc

NRC SAMPLE NUMBER: 1415

ANALYSIS FINDINGS:

131 I < 39E-12 mG/cc

231 340

Shaw & Shaw

AIR SAMPLE SURVEY DATA

DATE: 5/12/79

LOCATION: Point #7 (2623393)

TIME ON: 1808

TIME OFF: 1908

FLOW RATE: 5 CFM

TOTAL VOLUME: ~~2705~~ 2705

NRC SAMPLE NUMBER: 1413

ANALYSIS FINDINGS: $< 9.7 \text{ E-12 } \mu\text{Ci}/\text{ml}$

1050

6 mft

Q 1600

R. Woodruff
Greg Smith

AIR SAMPLE SURVEY DATA

DATE: 5-12-79

LOCATION: North gate

TIME ON: 1338

TIME OFF: 1438

FLOW RATE: 6 CFM

TOTAL VOLUME: ~~6 CFM~~ 1×10^7 ml

NRC SAMPLE NUMBER: 1411

ANALYSIS FINDINGS:

¹³¹I $< 8.4 \times 10^{-12}$ $\frac{\mu\text{Ci}}{\text{ml}}$

231 342

R. Woodruff
Greg Smith

AIR SAMPLE SURVEY DATA

DATE: 5-12-79

LOCATION: Boat ramp, Goldsboro

TIME ON: 0949

TIME OFF: 1049

FLOW RATE: 5.5 cfm

TOTAL VOLUME: 330 CF

NRC SAMPLE NUMBER: 1070

ANALYSIS FINDINGS: $^{131}\text{I} < 7.3 \times 10^{-12} \mu\text{Ci}/\text{ml}$.

231 343

MCKEOWN
BURGIN

AIR SAMPLE SURVEY DATA

DATE: 5/12/70

LOCATION: TMI VISITORS CENTER

TIME ON: 5:30 A.M.

TIME OFF: 1:30 AM

FLOW RATE: 4.5

TOTAL VOLUME: 7.64 EBCC

NRC SAMPLE NUMBER: 1398

ANALYSIS FINDINGS:

¹³¹
 $I < 1.1 E-11 \text{ } \mu\text{Ci/ml}$

231 344

STEARNS
+
Shack

AIR SAMPLE SURVEY DATA

DATE: 5/11/79

LOCATION: PUMP HOUSE (@ AIR COMPRESSOR)

TIME ON: 2238

2200

TIME OFF: 2338

WIND 90°
@ 4 MPH

FLOW RATE: 5 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1399

ANALYSIS FINDINGS:

$^{131}\text{I} < 1.1 \text{E}-11 \text{ uCi/ml}$

231 345

Schultz
Burgin
Cohen

AIR SAMPLE SURVEY DATA

DATE: 5-11-79

LOCATION: Goldsboro

TIME ON: 0312

TIME OFF: 0412

FLOW RATE: 4.5 cfm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1378

ANALYSIS FINDINGS:

¹³¹I < 1.2E-11 uCi/ml

231 346

STEARNS & Shamir

AIR SAMPLE SURVEY DATA

DATE: 5/11/79

LOCATION: North Gate

TIME ON: 1928

TIME OFF: 2134

FLOW RATE: 7 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1388

ANALYSIS FINDINGS: $^{131}\text{I} < 3.2 \times 10^{-12} \text{ uCi/ml}$

~~1000 MG. VENT~~

126
6 mph

2015

90°
3 mph

231 347

R. Woodkuff
G. Smith

AIR SAMPLE SURVEY DATA

DATE: 5-11-79

LOCATION: Perimeter fence, west side, by pump house

TIME ON: 0928

TIME OFF: 1028

FLOW RATE: 4.8 CFM

TOTAL VOLUME: 288 CF 8.15 E 6 ml

NPC SAMPLE NUMBER:

~~1381~~ 1382

ANALYSIS FINDINGS:

1.51

1.1 E-11 mg/ml

231 348

R. Woodruff
Greg Smith

AIR SAMPLE SURVEY DATA

DATE: 5-11-79

LOCATION: Hoff Park, Middletown

TIME ON: 1310

TIME OFF: 1407

FLOW RATE: start at 4.3 CFM for 20 min. = 86 CF
37 min @ 4.5 CFM = 160
246 CF

TOTAL VOLUME: 246 CF

NRC SAMPLE NUMBER: 1069

ANALYSIS FINDINGS:

$^{131}\text{I} < 1.2 \times 10^{-11} \mu\text{Ci}/\text{ml}$

231 349

AIR SAMPLE SURVEY DATA

DATE: 5/10/79

LOCATION: OBSERVATION Tower (Point 8)

TIME ON: 1934

TIME OFF: 2034

FLOW RATE: 6 CFM

TOTAL VOLUME: 1.0267 ml

NRC SAMPLE NUMBER: 1383

ANALYSIS FINDINGS: $^{131}\text{I} \leftarrow 9.4\text{E}-12 \frac{\text{picij}}{\text{ml}}$

WIND DATA
↓
270°
4 mph
at 1900
↓
340°
20 mph
at 1930

231 350

AIR SAMPLE SURVEY DATA

WIND DATA

180°
8 mph
at ~~150~~
160

DATE: 5/10/79

LOCATION: # 4 Riverside Boat sales .

TIME ON: 1721

TIME OFF: 1821

FLOW RATE: 5.0 CFM

5.0

5.1

TOTAL VOLUME: 4.9

Average - 5.0 CFM

NRC SAMPLE NUMBER: 1365

ANALYSIS FINDINGS: ¹³¹I : 5.0 E-12 $\mu\text{Ci}/\text{ml}$

231 351

Waltner
Yair

AIR SAMPLE SURVEY DATA

DATE: 5/10/79

LOCATION:

East side Point #4, Riverside East Solar

TIME ON:

1217

TIME OFF:

1417

FLOW RATE:

4 cfm

TOTAL VOLUME:

6.79 CB

NRC SAMPLE NUMBER:

1366

ANALYSIS FINDINGS:

¹³¹I < 8.7E-12

231 352

Waltney
Young

AIR SAMPLE SURVEY DATA

DATE: 5/10/79

LOCATION: North - Gate

TIME ON:

0933

TIME OFF:

1033

} 1 hour

FLOW RATE:

5 cfm.

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1361

ANALYSIS FINDINGS:

¹³¹I < 8.0E-12 uCi/ml

NRC MILK SAMPLES

Following is a summary of the milk data for samples analyzed by the NRC Mobile Lab.

Date	Location	Method	Activity pCi/l
5/5/79	TM-M-7B-3		¹³¹ I < 11 pCi/l
5/5/79	TM-M-2G1		¹³¹ I < 11 pCi/l
5/8/79	Goat milk - farm 1445		¹³¹ I 12.2 pCi/l
5/9	TM-M-2G1		< 10 pCi/l I ₁₃₁ ± 15%
5/9	TM-M-7B3		< 10 pCi/l I-131
5/7	TM-M-14D1		¹³¹ I < 10 pCi/l.
5/11	TM-M-4B1		¹³¹ I < 11 pCi/l.
5/12	TM-M-14D1		¹³¹ I < 11 pCi/l
5/13	TM-M-2G1		¹³¹ I < 10 pCi/l
5/13	TM-M-7B3		¹³¹ I < 10 pCi/l
5/15	TM-M-4B1		¹³¹ I < 10.3 pCi/l.
5/15	TM-M-2G1		¹³¹ I < 10.4 pCi/l
5/15	TM-M-7B3		¹³¹ I < 10.4 pCi/l.
5/16	GOAT FARM		¹³¹ I < 10 pCi/l

MILK
VEGETATION SAMPLE SURVEY DATA

DATE: 6/4/79

LOCATION: TM-M-7B3

TYPE OF VEGETATION:

VOLUME OR AREA COLLECTED: 3.79 l

TIME OF COLLECTION:

0800

A.M.

P.M.

(6-2-74)

WIND DIRECTION:

SPEED:

NRC SAMPLE NUMBER: 1818

RESULTS: 13/

$I < 12.6 \text{ } \mu\text{Ci}$
l

231 355

MILK
~~MILK~~ SAMPLE SURVEY DATA

DATE: 6/4/79

LOCATION: TM-M-4B1

TYPE OF VEGETATION:

VOLUME OR AREA COLLECTED: 3.79 l

TIME OF COLLECTION:

0800

A.M.

P.M.

(6/2/79)

WIND DIRECTION:

SPEED:

NRC SAMPLE NUMBER: 1838

RESULTS: 131 $\bar{I} < 12.8 \frac{\mu\text{Ci}}{\text{l}}$

231 356

MILK
~~VEGETATION~~ SAMPLE SURVEY DATA

DATE: 6/4/79

LOCATION: TM-M-14D1

TYPE OF VEGETATION:

VOLUME OR AREA COLLECTED: 3.79 l

TIME OF COLLECTION:

0800 (5/31/79) A.M.
~~6/1/79~~

P.M.

WIND DIRECTION:

SPEED:

NRC SAMPLE NUMBER:

1793

RESULTS:

MI I < 13.00
l

231 357

MILK SAMPLE SURVEY

DATE: 6/3/79

MILKSHED LOCATION: Bet. Pts 425 E Side

TMI SAMPLE I.D. NUMBER:

TYPE OF MILK:

COW

GOAT

TIME OF COLLECTION: 1450

A.M.

P.M.

VOLUME: 1 gal

NRC SAMPLE NUMBER: 1843

RESULTS: $\text{I} < \frac{11.5}{\cancel{10}} \text{ pCi}$
l

231 358

MILK
VEGETATION SAMPLE SURVEY DATA

DATE: 6/4/79

LOCATION: TM-M-14D1

TYPE OF VEGETATION:

VOLUME OR AREA COLLECTED: 3,79 l

TIME OF COLLECTION: 0800
16/2/79)

A.M.

P.M.

WIND DIRECTION:

SPEED:

NRC SAMPLE NUMBER: 1835

RESULTS: $^{131}\text{I} < 12.6 \frac{\mu\text{Ci}}{\text{l}}$

231 359

MILK
~~VEGETATION~~ SAMPLE SURVEY DATA

DATE: 6-4-79

LOCATION: TM-M-261

TYPE OF VEGETATION:

VOLUME OR AREA COLLECTED: 3.79 l

TIME OF COLLECTION: 0800
(6-2-79)

A.M.

P.M.

WIND DIRECTION:

SPEED:

NRC SAMPLE NUMBER: 1796

RESULTS: $I < 12.2 \frac{\mu\text{Ci}}{\text{l}}$

231 360

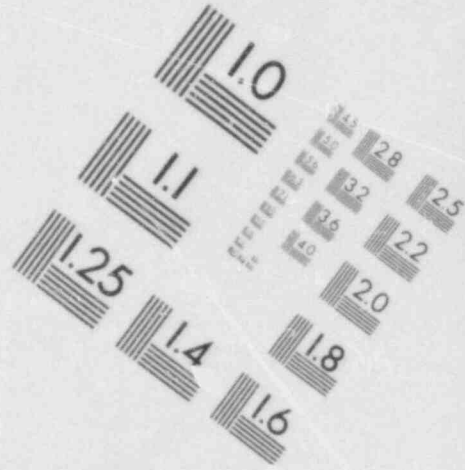
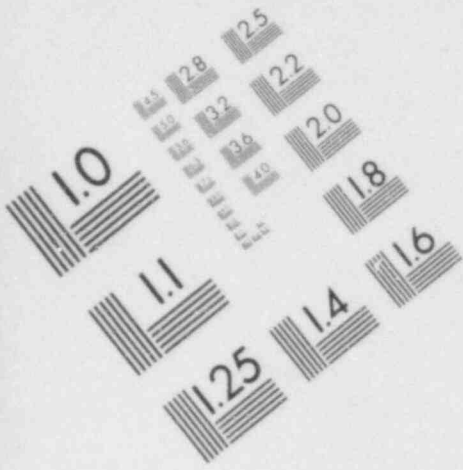
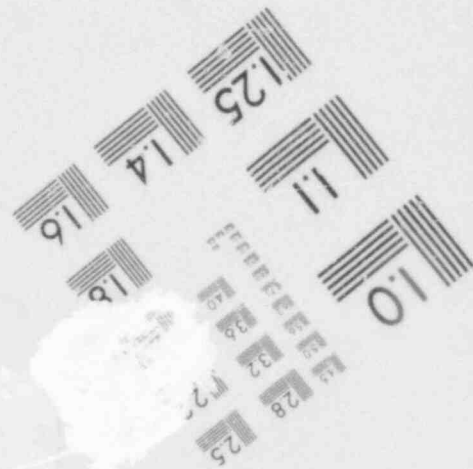
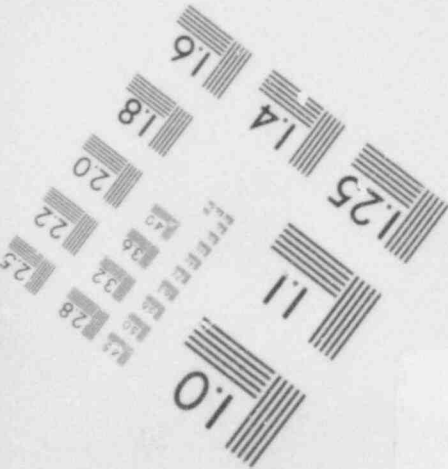
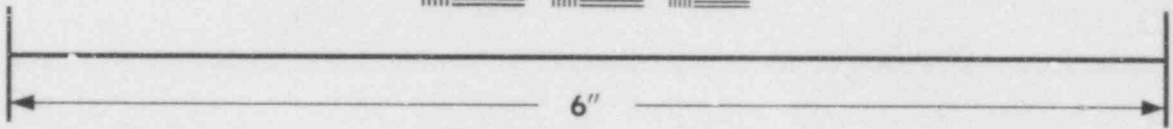
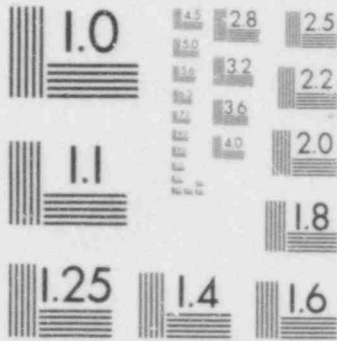


IMAGE EVALUATION
TEST TARGET (MT-3)



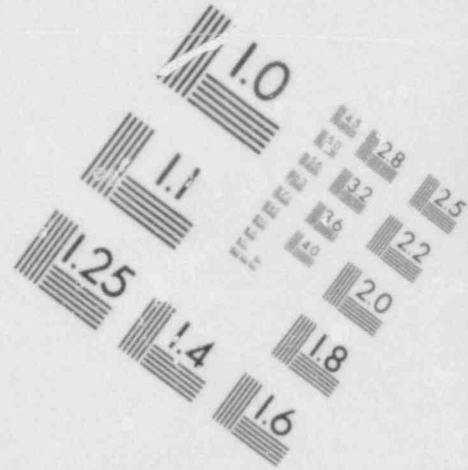
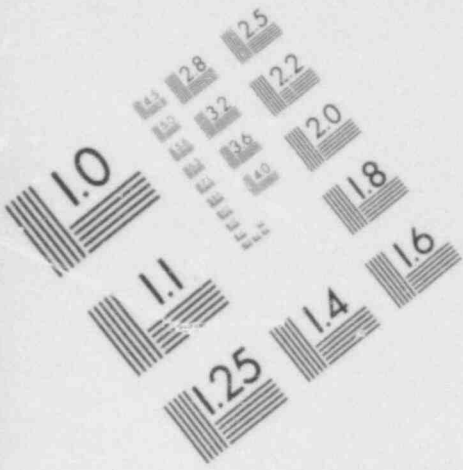
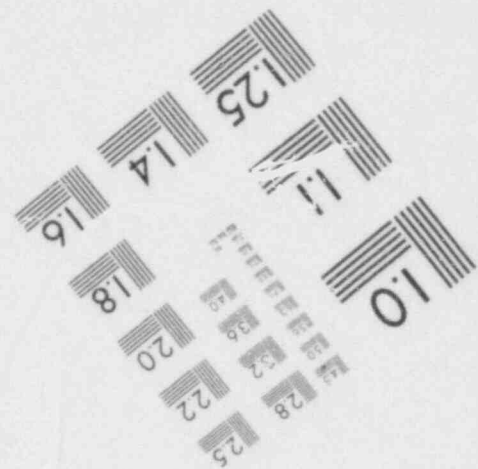
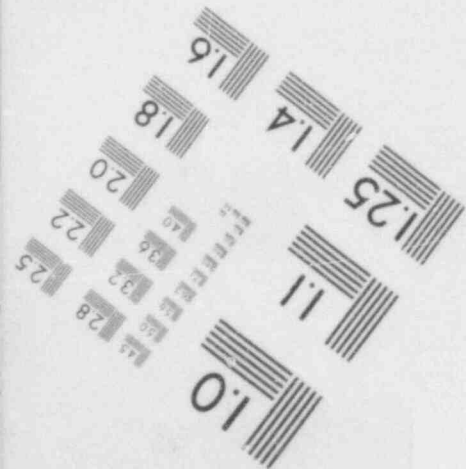
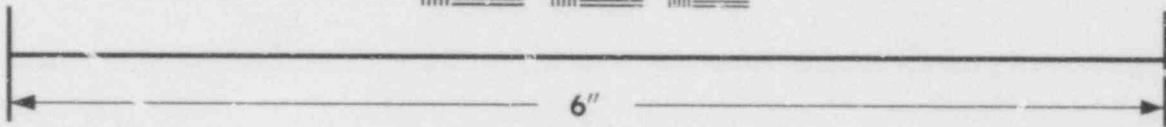
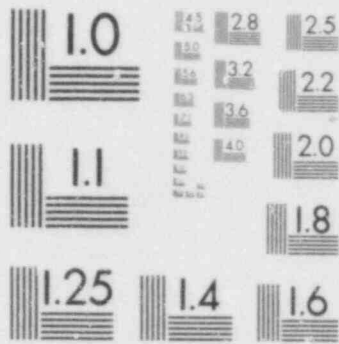


IMAGE EVALUATION
TEST TARGET (MT-3)



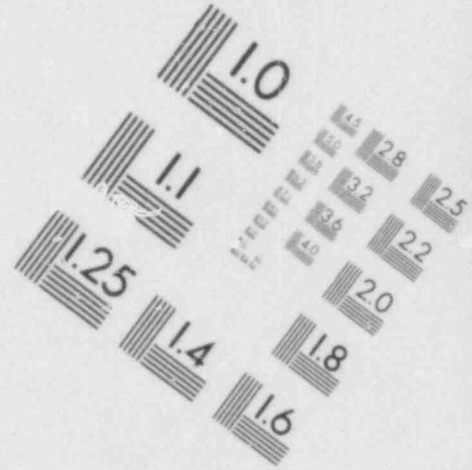
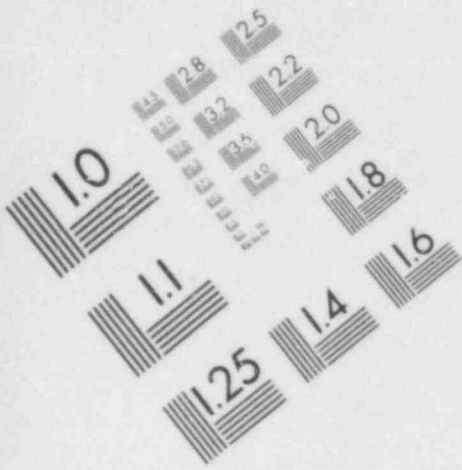
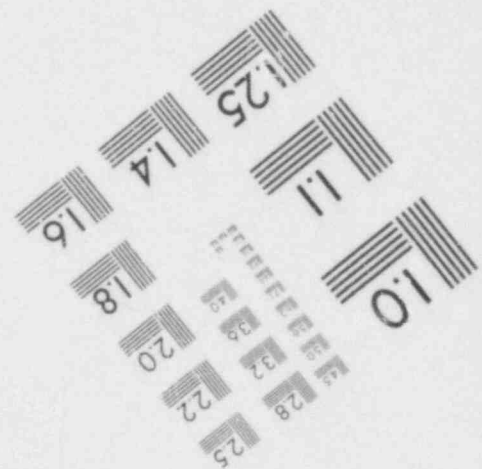
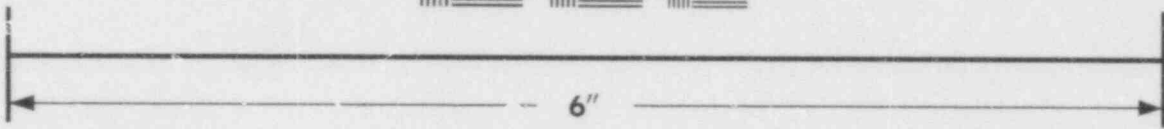


IMAGE EVALUATION
TEST TARGET (MT-3)



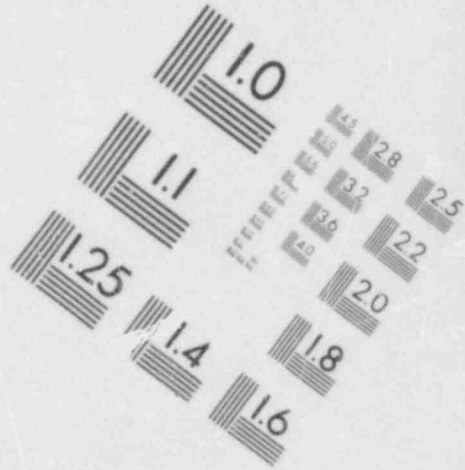
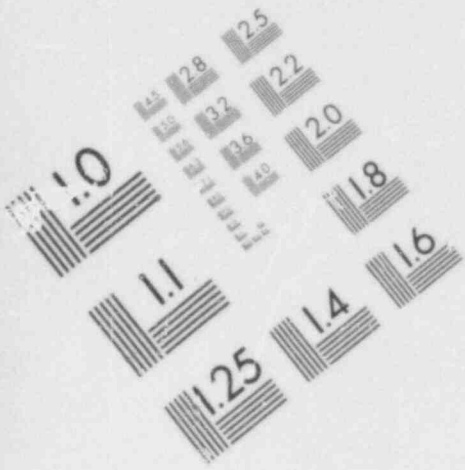
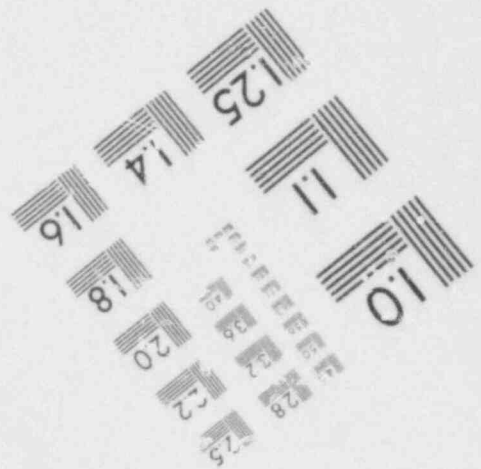
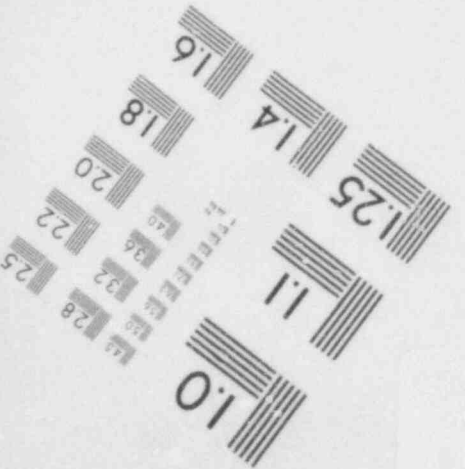
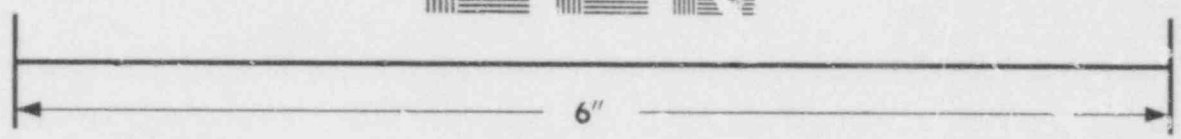


IMAGE EVALUATION
TEST TARGET (MT-3)



Milk

VEGETATION SAMPLE SURVEY DATA

DATE: 5-31-79

LOCATION: 7M-M-4B1

TYPE OF VEGETATION:

VOLUME OR AREA COLLECTED: 3.79 l

TIME OF COLLECTION: AM(0800) A.M. P.M.

WIND DIRECTION:

SPEED:

NRC SAMPLE NUMBER: 1770

RESULTS:

¹³¹I < 12.0 pCi/l

232 001

Milk

~~SAMPLE SURVEY DATA~~

DATE: 5-31-79

LOCATION: TM-M-7B3

TIME ON: AM (0800)

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 3.79 l

N.C. SAMPLE NUMBER: 1772

ANALYSIS FINDINGS:

$^{131}\text{I} < 12.9 \text{ pCi/l}$

232 002

Milk

~~VEGETATION~~ SAMPLE SURVEY DATA

DATE: 5-31-79

LOCATION: TM-M-2G1

TYPE OF VEGETATION:

VOLUME OR AREA COLLECTED: 3.79 l

TIME OF COLLECTION: AM(0800) A.M. P.M.

WIND DIRECTION: SPEED:

NRC SAMPLE NUMBER: 1790

RESULTS:

¹³¹I < 13.0 pCi/l

232 003

Milk

~~VEGETATION~~ SAMPLE SURVEY DATA

Date: 5-31-79

LOCATION: TM-M-14D1

TYPE OF VEGETATION: 4 milkings, last one this AM²

VOLUME OR AREA COLLECTED: 3.78 l

TIME OF COLLECTION: A.M. P.M.

WIND DIRECTION: SPEED:

NRC SAMPLE NUMBER: 1793

RESULTS:

¹³¹I = 1.3 ± 11.8 pCi/l

Therefore,

¹³¹I < 11.8 pCi/l

Milk

~~XXXXXXXXXX~~ SAMPLE SURVEY DATA

DATE: 5-29-79

LOCATION: TM-M-261

TYPE OF VEGETATION:

VOLUME OR AREA COLLECTED: 3.79 l

TIME OF COLLECTION: AM(0800) A.M. P.M.

WIND DIRECTION: SPEED:

NRC SAMPLE NUMBER: 1747

RESULTS:

(3) I < 11.6 pμ/l

232 005

Na. 1 (TL) Analysis for I-131

Sample Number 1739 Date Collected 5-29-79
 Time Collected AM(0800)
 Sample Description ml thru resin
 Sample Location M-4D1
 Date Analyzed 5-30-79 Time Analyzed _____
 Volume 3.79 Sample Gross CPM (Cs) _____
 Background CPM (C_B) _____ Efficiency (EFF) 0.077
 Decay Factor (DF) _____

$$D.F. = e^{-(3.59E-3) \Delta t}$$

t_s = sample counting time (in minutes) _____

t_B = background counting time (in minutes) _____

Δt = time in hours between sample was taken and counted

$$\text{Concentration: } A = \frac{C_s - C_B}{(VOL) (EFF) (D.F.) (2.22)} = \text{Pci/liter}$$

$$\text{Error } (3\sigma) = \frac{1.34 \sqrt{\frac{C_s}{t_s} + \frac{C_B}{t_B}}}{(VOL) (EFF) (D.F.)} = \text{Pci/liter}$$

Sample lost - resin lost

232 006

Na. 1 (TL) Analysis for I-131

Sample Number 1731 Date Collected 5-29-79
 Time Collected AM(0800)
 Sample Description Milk thru resin
 Sample Location TM-M-4B1
 Date Analyzed 5-30-79 Time Analyzed 1500
 Volume 3.79 l Sample Gross CPM (Cs) 105.7 5284
 Background CPM (C_B) 115.6 Efficiency (EFF) 0.077
 Decay Factor (DF) 0.89

$$D.F. = e^{-(3.59E-3) \Delta t}$$

t_s = sample counting time (in minutes) 50
 t_B = background counting time (in minutes) 50

Δt = time in hours between sample was taken and counted

$$\text{Concentration: } A = \frac{C_s - C_B}{(VOL) (EFF) (D.F.) (2.22)} = \text{Pci/liter}$$

$$\text{Error } (3\sigma) = \frac{1.34 \sqrt{\frac{C_s}{t_s} + \frac{C_B}{t_B}}}{(VOL) (EFF) (D.F.)} = \text{Pci/liter}$$

$$^{131}\text{I} = \frac{4.66 \sqrt{5284}}{(50 \text{ ml}) (0.077) (2.22) (3.79 \text{ l}) (0.89)}$$

~~11.8~~ Pci/l
11.8

Na. 1 (TL) Analysis for I-131

Sample Number 1735 Date Collected 5-29-79
 Time Collected AM(0800)
 Sample Description Milk thru resin
 Sample Location 7M-M-7B3
 Date Analyzed 5-30-79 Time Analyzed 1530
 Volume 3.79L Sample Gross CPM (Cs) 1061 5303
 Background CPM (C_B) 107.8 5395 Efficiency (EFF) 0.077
 Decay Factor (DF) 0.89

$$D.F. = e^{-(3.59E-3) \Delta t}$$

t_s = sample counting time (in minutes) 50
 t_B = background counting time (in minutes) 50

Δt = time in hours between sample was taken and counted

Concentration: A = $\frac{C_s - C_B}{(VOL) (EFF) (D.F.) (2.22)}$ = Pci/liter

Error (3σ) = $\frac{1.34 \sqrt{\frac{C_s}{t_s} + \frac{C_B}{t_B}}}{(VOL) (EFF) (D.F.)}$ = Pci/liter

MDA

$$131 \frac{L}{L} < \frac{4.66 \sqrt{5395}}{(50 \text{ min}) (3.79) (0.077) (0.89) (2.22 \text{ dpm/pl})}$$

< pCi/l

11.9

MILK SAMPLE SURVEY

DATE: 5/26 + 5/27 /79.

MILKSHED LOCATION: Becker

TMI SAMPLE I.D. NUMBER: T M n 7 B 3

TYPE OF MILK: COW GOAT

TIME OF COLLECTION: A.M. P.M.

VOLUME: 3.79

NRC SAMPLE NUMBER: /

RESULTS: 131
f < 10 Pa/l

232 009

MILK SAMPLE SURVEY

DATE: 5/26/79

MILKSHED LOCATION: Fisher

TMI SAMPLE I.D. NUMBER: TM 21 1421 2

TYPE OF MILK:

COW

GOAT

TIME OF COLLECTION:

A.M.

P.M.

VOLUME: 3.79

NRC SAMPLE NUMBER: /

RESULTS:

15/2 C 11 6a/2

232 010

MILK SAMPLE SURVEY

DATE 5/27/79

MILKSHED LOCATION: Oellig

TMI SAMPLE I.D. NUMBER: TM-M-261

TYPE OF MILK:

COW

GOAT

TIME OF COLLECTION:

A.M.

P.M.

VOLUME: 3.79L

NRC SAMPLE NUMBER: /

RESULTS:

151 F C 10 1ci/l

232 011

MILK SAMPLE SURVEY

DATE: 5/2/79

MILKSHED LOCATION: *Blasame* ?

TMI SAMPLE I.D. NUMBER: TM-M-4B1

TYPE OF MILK:

COW

GOAT

TIME OF COLLECTION:

A.M.

P.M.

VOLUME: 3, 75

NRC SAMPLE NUMBER: \

RESULTS: $^{134}\text{I} < 10 \text{ Pci/liter}$

232 012

MILK SAMPLE SURVEY

DATE: 27 May 79

MILKSHED LOCATION: Between pts 425 on 441

TMI SAMPLE I.D. NUMBER: / ~~3~~

TYPE OF MILK: COW GOAT

TIME OF COLLECTION: 1600 A.M. P.M.

VOLUME: 1 gal

NRC SAMPLE NUMBER: /

RESULTS: < 10 pCi/liter

MILK SAMPLE SURVEY

DATE: 5/25/79

MILKSHED LOCATION: TM-M-261

TMI SAMPLE I.D. NUMBER: ↙

TYPE OF MILK:

COW

GOAT

TIME OF COLLECTION:

A.M.

P.M.

VOLUME: 3.79 l

NRC SAMPLE NUMBER:

RESULTS: ³¹I < 10 pc/l

MILK SAMPLE SURVEY

4
DATE: 5/25/79

MILKSHED LOCATION: TM-M-7B3

TMI SAMPLE I.D. NUMBER: ↑

TYPE OF MILK: Cow COW GOAT

TIME OF COLLECTION: A.M. P.M.

VOLUME: 3.79 l

NRC SAMPLE NUMBER: ✓

RESULTS:
⁽³⁾ I < 10 pa/l

232 015

MILK SAMPLE SURVEY

DATE: 5/25/79

MILKSHED LOCATION: TM-M-14 D1

TMI SAMPLE I.D. NUMBER: 

TYPE OF MILK:

COW

GOAT

TIME OF COLLECTION:

A.M.

P.M.

VOLUME: 3.79 l

NRC SAMPLE NUMBER: 

RESULTS:


¹³¹I < 11 pCi/liter

232 016

MILK SAMPLE SURVEY

DATE: 5/25/79

MILKSHED LOCATION:

TMI SAMPLE I.D. NUMBER:  TM-M-4B1

TYPE OF MILK:

COW

GOAT

TIME OF COLLECTION:

A.M.

P.M.

VOLUME: 3.79 l

NRC SAMPLE NUMBER:

RESULTS: $(2 \pm 10) \mu\text{Ci}/\text{l}$

232 017

MILK SAMPLE SURVEY

DATE: 5/23/79

MILKSHED LOCATION: TM-11-4B1

TMI SAMPLE I.D. NUMBER: N/A

TYPE OF MILK:

COW

GOAT

TIME OF COLLECTION:

A.M.

P.M.

VOLUME: 3.79 liters

NRC SAMPLE NUMBER: N/A

RESULTS: 131 I < 11 pc/liter

232 018

MILK SAMPLE SURVEY

DATE: May 23, 1979

MILKSHED LOCATION: Goat farm on 441 south

TMI SAMPLE I.D. NUMBER: NONE

TYPE OF MILK:

COW

GOAT

TIME OF COLLECTION:

A.M.

(P.M. of May 22 milking)

VOLUME: 1 gallon

NRC SAMPLE NUMBER: NONE

RESULTS: ¹³¹I < 11 pCi/iter

232 019

MILK SAMPLE SURVEY

DATE: 5/23/79

MILKSHED LOCATION: TM-M-14D1

TMI SAMPLE I.D. NUMBER: N/A

TYPE OF MILK:

COW

GOAT

TIME OF COLLECTION:

A.M.

P.M.

5/22/79

VOLUME: 3.79 liters

NRC SAMPLE NUMBER:

N/A

RESULTS: ¹³¹I < 11 pci/liter

232 020

MILK SAMPLE SURVEY

DATE: 5/23/79

MILKSHED LOCATION: TM-M-261

TMI SAMPLE I.D. NUMBER: N/A

TYPE OF MILK:

COW

GOAT

TIME OF COLLECTION:

A.M.

P.M.

VOLUME: 3.79 liters

NRC SAMPLE NUMBER: N/A

RESULTS: ¹³¹I < 11 pc/liter

232 021

MILK SAMPLE SURVEY

DATE: 5/23/79

MILKSHED LOCATION: TM-M-783

TMI SAMPLE I.D. NUMBER:

TYPE OF MILK:

COW

GOAT

TIME OF COLLECTION:

A.M.

P.M.

VOLUME: 3.79 liters

NRC SAMPLE NUMBER: N/A

RESULTS: ¹³¹I < 11 pc/liter

232 022

Miss

AIR-SAMPLE SURVEY DATA

Sampling
DATE: *5/21/79*

LOCATION: *TR 14 D1*

TIME ON:

TIME OFF:

FLOW RATE:

TOTAL VOLUME: *3.79 L*

NRC SAMPLE NUMBER: *—*

ANALYSIS FINDINGS: *131 I C ± 11 fa/lt*

232 023

Map

AIR SAMPLE SURVEY DATA

^{Sampling}
DATE: 5/21/75

LOCATION: T21 M 2 G 1

TIME ON:

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 3.79 liter

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

$< \pm 11 \text{ f}^2/\text{liter}$

232 024

Milk

AIR SAMPLE SURVEY DATA

DATE: 5/24/79

LOCATION: T.M. M. Unit

TIME ON:

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 3.79 lit.

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

< $\pm 11 \frac{\text{Ba}}{\text{lit}}$

232 025

milk

AIR SAMPLE SURVEY DATA

DATE: 5-19-79

LOCATION: TM-M-2 G1

TIME ON: AM(0800)

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 5.79 l

NRC SAMPLE NUMBER: 1572

ANALYSIS FINDINGS:

¹³¹I < 10.9 pCi/l

232 026

Milk

AIR SAMPLE SURVEY DATA

DATE: 5-19-79

LOCATION: TM-M-4B1

TIME ON: AM(0800)

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 3.79 l

NRC SAMPLE NUMBER: 1575

ANALYSIS FINDINGS:

¹³¹I < 10.9 pCi/l

232 027

milk

AIR SAMPLE SURVEY DATA

DATE: 5-19-77

LOCATION: TM-M-7B3

TIME ON: AM(0800)

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 3.79

NRC SAMPLE NUMBER: 1579

ANALYSIS FINDINGS:

$^{131}\text{I} < 10.8 \mu\text{Ci/l}$

232 028

milk

SAMPLE SURVEY DATA

DATE: 5-20-79

LOCATION: HOOPER Farm

TIME ON: 1700

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 3.79 l

NRC SAMPLE NUMBER: 1582

ANALYSIS FINDINGS: 131
I = 9.5 pl/l

232 029

milk

AIR SAMPLE SURVEY DATA

DATE: 5-18-79

LOCATION: TM-M-14 D1

TIME ON: PM (1800)

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 3.79 l

NRC SAMPLE NUMBER: 1598

ANALYSIS FINDINGS:

$^{131}\text{I} < 9.7 \mu\text{Ci/l}$

232 030

MILK SAMPLE SURVEY

DATE: 5-20-79

MILKSHED LOCATION: Goat Farm on 441

TMI SAMPLE I.D. NUMBER:

TYPE OF MILK:

COW

GOAT

TIME OF COLLECTION:

A.M.

P.M.

VOLUME:

1 gallon

NRC SAMPLE NUMBER:

1563

RESULTS:

131

$$I = 5 \text{ pCi/l} \pm 9 \text{ pCi/l}$$

232 031

milk

STAR SAMPLE SURVEY DATA

DATE: 5-17-79

LOCATION: TM-M-14D2

TIME ON:

TIME OFF: AM(0800)

FLOW RATE:

TOTAL VOLUME: 3.79 l

NRC SAMPLE NUMBER: 1523

ANALYSIS FINDINGS:

¹³¹I < 10.5 pCi/l

232 032

Milk

AIR SAMPLE SURVEY DATA

DATE: 5-19-79

LOCATION: 7M-M-2G1

TIME ON:

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 3.79 L

NRC SAMPLE NUMBER: 1520

ANALYSIS FINDINGS:

¹³¹I < 10.5 pCi/L

232 033

MILK SAMPLE SURVEY

DATE: 5/16/79

MILKSHED LOCATION: goat farm on 441

TMI SAMPLE I.D. NUMBER:

TYPE OF MILK:

COW

GOAT

TIME OF COLLECTION:

A.M.

P.M.

(previous night milking)

VOLUME: 1 gal.

NRC SAMPLE NUMBER: ~~1486~~ 1487

RESULTS:

~~no bacteria~~

B/I C 10 pc/liter

232 034

Milk

AIR SAMPLE SURVEY DATA

DATE: 5-15-79

LOCATION: TM-M-4B1

TIME ON: @ 8 AM

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 3.79 l

NRC SAMPLE NUMBER: 1467

ANALYSIS FINDINGS:

$^{131}\text{I} < 10.3 \text{ pCi/l}$

232 035

milk

AIR-SAMPLE SURVEY DATA

DATE: 5-15-79

LOCATION: TM-M-2G1

TIME ON: AM (0800)

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 3.79 l

NRC SAMPLE NUMBER: 1468

ANALYSIS FINDINGS:

¹³¹I < 10.4 pCi/l

237-036

Milk

AIR SAMPLE SURVEY DATA

DATE: 5-15-79

LOCATION: TM-M-7B3

TIME ON: AM(0800)

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 3.79 l

NRC SAMPLE NUMBER: 1469

ANALYSIS FINDINGS:

¹³¹
I < 10.4 pCi/l

232 037

MICK

AIR SAMPLE SURVEY DATA

DATE: ~~5-12-79~~ 5-12-79

LOCATION: TM-M-1401

TIME ON: PM

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 3.79 l

NRC SAMPLE NUMBER: 1433

ANALYSIS FINDINGS:

¹³¹I < 11 PC/l

232,038

MKK

WATER SAMPLE SURVEY DATA

DATE:

5-13-79

LOCATION:

TM-M-261

TIME ON:

~~8:00~~ AM

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

3.79 l

NRC SAMPLE NUMBER:

1432

ANALYSIS FINDINGS:

¹³¹IC 10 pg/l

232 039

MUC

AIR SAMPLE SURVEY DATA

DATE:

5-13-74

LOCATION:

TM-M-7B3

TIME ON:

PM

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

379 l

NRC SAMPLE NUMBER:

1431

ANALYSIS FINDINGS:

¹³¹ I < 10 PG/l

232 040
1

Summary for PNI (5/1/79 -

NRC GRASS SAMPLES

Following is a summary of the grass sample data for samples analyzed by the NRC Mobile Lab.

Date	Location	Sample Size	Method	Activity PCI/GM
5/1/79	Point 1 Horseshoe Lane #1444	1 m ²		2.3×10^{-4} $\mu\text{Ci}/\text{m}^2 \text{L}^{-13}$
5/1/79	East Side Locater #	1 m ²		2.3×10^{-4} $\mu\text{Ci}/\text{m}^2 \text{L}^{-13}$
5/11/79	HOFFER PARK	1 m ²		13% $< 1 \times 10^{-4}$ $\mu\text{Ci}/\text{m}^2$

AIR SAMPLE SURVEY DATA

DATE:

5-11-79

LOCATION:

TM-M-7B3

TIME ON:

AM

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

3.79 l

NRC SAMPLE NUMBER:

1387

ANALYSIS FINDINGS:

¹³¹I < 11 pCi/l

232 042

AIR SAMPLE SURVEY DATA

DATE: 5-11-79

LOCATION: T-M-M-261

TIME ON: AM

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 3.79 l

NRC SAMPLE NUMBER: 1390

ANALYSIS FINDINGS:

$^{131}\text{I} < 11 \text{ pg/l}$

232 043

A7R SAMPLE SURVEY DATA

DATE:

5-11-79

LOCATION:

TM-M-14D'

TIME ON:

AM

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

3.79 L

NRC SAMPLE NUMBER:

1389

ANALYSIS FINDINGS:

$^{131}\text{I} < 11 \text{ pg/l}$

232 044

M14K

AIR SAMPLE SURVEY DATA

DATE: 5-11-79

LOCATION: TM-M-4B1

TIME ON: AM

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 3.79 l

NRC SAMPLE NUMBER: 138!

ANALYSIS FINDINGS:

¹³¹I < 11 PG/l

232 045

M14C

AIR SAMPLE SURVEY DATA

DATE:

5-9-79

LOCATION:

TM-M-14D1

TIME ON:

AM

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

3.79L

NRC SAMPLE NUMBER:

1351

ANALYSIS FINDINGS:

¹³¹I < 10 pCi/L

232 046

M14C

WATER SAMPLE SURVEY DATA

DATE:

5-9-79

LOCATION:

TM-M-7B3

TIME ON:

AM

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

3.79 L

NRC SAMPLE NUMBER:

1346

ANALYSIS FINDINGS:

(7) I < 10 µg/l

252
047

M14C

SAMPLE SURVEY DATA

DATE:

5-9-79

LOCATION:

TM-M-221

TIME ON:

AM

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

3.79 l

NRC SAMPLE NUMBER:

1343

ANALYSIS FINDINGS:

⁽³⁾ I < 10 pg/l

young
water

Goat milk

AIR SAMPLE SURVEY DATA

DATE: 5/8/79

LOCATION: Goat farm on east side near North gate

TIME ON: 1445

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

$$^{131}\text{I} = 12.2 \text{ pCi/l} \pm 15\%$$

232 049

nick

AIR SAMPLE SURVEY DATA

DATE:

5-5-79

LOCATION:

TM-M-7B3

TIME ON:

AM

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

3.79 l

NRC SAMPLE NUMBER:

1273

ANALYSIS FINDINGS:

131 I < 11 pA/l

232 05.0

AKK

AIR SAMPLE SURVEY DATA

DATE: 5-5-79

LOCATION: MILK-TM-M-21

TIME ON: AM

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 3.79 l

NRC SAMPLE NUMBER: 1270

ANALYSIS FINDINGS:

$^{131}\text{I} < 11 \text{ PC/l}$

232 051

POOR ORIGINAL

Milk Sampling Program

Milk samples are split with the breeders every two days at 4 or 5 locations which are given in Table 1.

Table 1

Code	Type of Milk	Latitude (degrees)	Distance (miles)
481	Cows	62.5	1.1
783	Cow	39.6	1.6
481	Cow	29.7	2.7
771	Cows	135	7
181	Goats	5	1.2

Analytical procedure: Four liters of raw unpreserved milk containing 10 mg. iodide carrier were passed through a 40 cc. Dowex 1-B (50-50 mesh) anion exchange column and counted for 15.0 minutes on a 3" x 3" NaI detector or for 6.0 minutes on a 6" (6") detector.

Young/Wreia

Boat Milk ~~SR~~ SAMPLE SURVEY DATA

DATE: 5-5-79

LOCATION: Boat farm between
points 5 + 4 on east side

TIME ON: 1100

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 3.79 l

NRC SAMPLE NUMBER: 1253

ANALYSIS FINDINGS:

24.3 ± 10.0 pCi/l

232053

232053

MILK

AIR SAMPLE SURVEY DATA

DATE:

5-3-79

LOCATION:

261

TIME ON:

AM

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

3.79L

NRC SAMPLE NUMBER:

1232

ANALYSIS FINDINGS:

$^{137}\text{I} < 11 \text{ pCi/L}$

232 054

MILK

AIR SAMPLE SURVEY DATA

DATE: 5-3-79

LOCATION: 7B-3

TIME ON: AM

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 3.79L

NRC SAMPLE NUMBER: 1230

ANALYSIS FINDINGS:

¹³¹I < 11 PC/L

232 055

MICK

AIR SAMPLE SURVEY DATA

DATE:

5-1-79

LOCATION:

4B1

TIME ON:

AM

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

3.79L

NRC SAMPLE NUMBER:

1178

ANALYSIS FINDINGS:

$^{131}I < 11 \text{ pCi/L}$

232 056

M14C

AIR SAMPLE SURVEY DATA

DATE: 5-1-79

LOCATION: 2a1

TIME ON: AM

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 3.74 L

NRC SAMPLE NUMBER: 1174

ANALYSIS FINDINGS:

¹³¹I < 11 ~~pp~~ G/L

232 057

MILK

AIR SAMPLE SURVEY DATA

DATE: 5-1-79

LOCATION: 7B3

TIME ON: AM

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 3.79L

NRC SAMPLE NUMBER: 1172

ANALYSIS FINDINGS:

< 10 PC/L

232 058

Milk

AIR SAMPLE SURVEY DATA

DATE: 5-1-79

LOCATION: 1401

TIME ON: AM

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 3.74 l

NRC SAMPLE NUMBER: 1176

ANALYSIS FINDINGS:

< 11 pc/l
¹³¹I < ~~110~~ pc/l

232 059

Goat Milk AIR SAMPLE SURVEY DATA

DATE: 7/30/79

LOCATION: Goat Farm on Route 441, between points 4+5 - E1D

TIME ON: Goat Milk

TIME OFF: Picked up 1 gal of goat milk at 1850
Goats milked on 7/29/79

FLOW RATE:

TOTAL VOLUME: 1 gallon.

NRC SAMPLE NUMBER: 1123

ANALYSIS FINDINGS:

$$^{131}\text{I} = \cancel{31.9} \pm 11.6 \text{ pCi/l}$$

$$31.9 \quad (3.19 \times 10^{-8} \pm 1.16 \times 10^{-8} \text{ uCi/ml})$$

(average of 2 counts)



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF ENVIRONMENTAL QUALITY

BUREAU OF RADIATION PROTECTION

380 SCOTCH ROAD, TRENTON, N. J. 08628

May 9, 1979

Mr. Phillip Stohr *PS*
Region I
Office of Inspection & Enforcement
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, Pennsylvania 19406

Dear Mr. Stohr:

As per your request, attached is a summary of the N.J. Bureau of Radiation Protection's analysis of milk samples for iodine-131.

The milk collection scheme was divided into three parts. At the initiation of the Three Mile Island accident, there was concern that potentially contaminated milk may reach New Jersey consumers. Milk processors were contacted and samples of milk from counties within 50 miles of Harrisburg, Pennsylvania were collected by the N.J. DOH Consumer Health Services for our analysis. Included in the summary are our routine environmental milk samples from Salem, N.J., near the Salem Generating Station. Some milk samples from northern N.J. dairy farms were collected due to the concern created by New York State's announcement of finding slight traces of iodine-131 in milk from Pennsylvania and New Jersey. We believe the slight traces were due to a combination of short counting time, the different detector used in spectroscopy analysis, and possibly interference from naturally occurring radon-222 in the atmosphere. As of April 23, 1979, we have reduced our analytical frequency to a weekly sample composed of the major milks consumed in New Jersey. This sample is representative of milk consumed by the average N.J. citizen.

The difference in the capability of measuring iodine-131 concentrations is due to variations in counting times for the samples. A minimum detectable level (MDL) of 2 or 3 can be achieved if a sample is analyzed over the weekend, likewise a MDL of 15 is achieved if the sample is counted for four hours. The values of less than 1 pCi/l are achieved if the milk sample is analyzed radiochemically rather than by gamma ray spectroscopy.

I hope this information is useful to you.

Sincerely yours,

Jeanette Eng, Director
Radiation Laboratory Section
Bureau of Radiation Protection

232 061

MILK RESULTS

<u>RHS</u>	<u>DESCRIPTION</u>	<u>DATE OF MILKING OR COLLECTION</u>	<u>¹³¹I CONC. PCI/L</u>
26227	RAW CHRISTIANA, PA	3/29-30/79	< 5
26228	PAST. PA & NJ MIX	3/29-30/79	< 6
26229	RAW - PA	3/29-30/79	< 5
26232	RAW LANCASTER, PA	3/31/79	< 14
26233	RAW CHRISTIANA, PA	3/31/79	< 12
26234	RAW PA & NJ MIX	3/31/79	< 7
26235	RAW SALEM, NJ	3/29-31/79	< 0.2
26236	RAW SALEM, NJ	3/30-31/79	< 0.2
26237	RAW SALEM, NJ	3/29-31/79	< 4
26238	RAW SALEM, NJ	3/30-31/79	< 0.2
26243	RAW LANCASTER & FRANKLIN, PA	4/1/79	< 3
26257	RAW LEBANON, PA	3/28-30/79	< 5
26259	RAW LANCASTER, PA	3/29-31/79	< 5
26273	PAST. CHRISTIANA, PA	4/2/79	< 7
26258	RAW LEBANON, PA	3/29-31/79	< 11
26271	"	4/2/79	< 5
26270	RAW LANCASTER, PA	4/2/79	< 12
26274	RAW ELLIOTSBURG, PA	4/2/79	

232 062

<u>RH#</u>	<u>DESCRIPTION</u>	<u>DATE OF MILKING OR COLLECTION</u>	<u>¹³¹I CONC. PC/L</u>
26272	PAST. - PA & NJ MIX	4/2/79	< 4
26284	RAW - LEBANON, PA	4/3/79	< 6
26305	RAW - LEBANON, PA	4/4/79	< 5
26308	RAW ELLIOTSBURG, PA	4/4/79	< 4
26307	RAW - PA MILK	4/4/79	< 4
26304	RAW CHRISTIANA, PA	4/4/79	< 7
26323	TRENTON COMPOSITE - PAST.	4/6/79	< 0.3
26317	RAW - LEBANON, PA	4/5/79	< 3
26318	RAW LANCASTER, PA	4/5/79	< 2
26285	RAW FRANKLIN, PA	4/3/79	< 1.0
26286	RAW CHRISTIANA, PA	4/3/79	
26287	RAW ELLIOTSBURG, PA	4/3/79	< 1.0
26288	PAST. CHRISTIANA, PA	4/3/79	< 1.0
26306	RAW - PA	4/4/79	
26319	RAW CHRISTIANA, PA	4/5/79	< 1.0
26320	RAW ELLIOTSBURG, PA	4/ 5/79	< 1.0
26321	R/W WAYNE, PA	4/5/79	< 1.0
26322	RAW SALEM, NJ	4/5/79	<15

232 063

<u>RH#</u>	<u>DESCRIPTION</u>	<u>DATE OF MILKING OR COLLECTION</u>	<u>¹³¹I CONC. μC/L *</u>
26332	RAW - LEBANON, PA	4/7-9/79	<1.3
26333	PAST. - LEBANON, PA	4/6-9/79	<1.0
26334	RAW CHRISTIANA, PA	4/7-9/79	<1.3
26335	RAW LANCASTER, PA	4/7-9/79	<1.3
26336	RAW - NJ	4/7-9/79	<1.3
26337	RAW CHRISTIANA, PA	4/6-9/79	<1.0
26338	RAW - PA & NJ MIX	4/6-9/79	<1.0
26339	RAW ELLIOTSBURG, PA	4/7-9/79	<1.3
26340	RAW LANCASTER, PA	4/8-9/79	<0.7
26341	RAW - LEBANON, PA	4/8-9/79	<0.7
26342	RAW - PA & NJ MIX	4/8-9/79	<0.7
26350	RAW WARREN, NJ	4/9-10/79	<5
26351	RAW WAYNE, PA & SULLIVAN, NY	4/9-10/79	<5
26352	RAW - NEW HOLLAND, PA & NY	4/9-10/79	<5
26353	RAW LANCASTER, PA	4/9/79	<8
26354	RAW CHRISTIANA, PA	4/9/79	<6
26355	RAW CHRISTIANA, PA	4/10/79	<11
26356	RAW ELLIOTSBURG, PA	4/9/79	<10
26361	RAW HUNTERDON, NJ	4/10/79	<6

232 064

<u>RA#</u>	<u>DESCRIPTION</u>	<u>DATE OF MILLING OR COLLECTION</u>	<u>¹³¹I CONC. pCi/L</u>
26362	RAW LANCASTER, PA	4/10/79	<5
26363	RAW WAYNE, PA & SULLIVAN, NY	4/10/79	<4
26364	RAW CONESTOGA, PA	4/9/79	<5
26365	RAW WARREN, NJ	4/10/79	<6
26366	RAW CHRISTIANA, PA	4/11/79	<3
26368	RAW ELLIOTSBURG, PA	4/10/79	<2
26369	RAW LEBANON, PA	4/9/79	<6
26370	RAW LEBANON, PA	4/10/79	<3

(continued)

* THE LESS THAN VALUES (<) ARE QUOTED WHEN THE 2σ ERROR EXCEEDS THE CALCULATED ACTIVITY. THE LESS THAN VALUE REPRESENTS 3σ PLUS THE ACTIVITY. THE LESS THAN VALUES QUOTED RANGE FROM A LOW OF 2 TO A HIGH OF 15. THE REASON FOR THIS RANGE OF VALUE IS A RESULT OF INSTRUMENT COUNTING TIME AVAILABLE IN ORDER TO HANDLE THE VOLUME OF SAMPLES BEING ANALYZED.

232 065

<u>PH#</u>	<u>DESCRIPTION</u>	<u>DATE OF MILKING OR COLLECTION</u>	<u>¹³¹I CONC. pCi/L *</u>
26384	RAW WAYNE, PA & SULLIVAN, NY	4/15/79	<7
26385	RAW WARREN, NJ	4/15/79	<13
26386	RAW CHRISTIANA, PA	4/16/79	<6
26387	RAW ELLIOTSBURG, PA	4/13/79	<7
26388	RAW LEBANON, PA	4/13/79	<5
26401	RAW LANCASTER, PA	4/17/79	<0.5
26402	RAW HUNTERDON, NJ	4/17/79	<0.5
26403	RAW WAYNE, PA & SULLIVAN, NY	4/17/79	<0.5
26404	RAW CONESTOGA, PA	4/15/79	<0.4
26405	RAW CONESTOGA, PA	4/16/79	<0.4
26406	RAW WARREN, NJ	4/17/79	<0.5
26407	RAW ELLIOTSBURG, NJ	4/17/79	<0.5
26408	RAW LEBANON, PA	4/17/79	<0.5
26446	RAW WARREN, NJ	4/19/79	<1.9
26447	RAW WAYNE, PA & SULLIVAN, NY	4/19/79	<3.2
26448	RAW LANCASTER, PA	4/19/79	<3.2

232 066 <3.2

<u>RH#</u>	<u>DESCRIPTION</u>	<u>DATE OF MILKING OR COLLECTION</u>	<u>¹³¹I CONC. pCi/L *</u>
26449	RAW HUNTERDON, NJ	4/19/79	<1.9
26450	RAW LEBANON, PA	4/19/79	<3.2
26483	RAW WAYNE, PA & SULLIVAN, NY	4/22/79	<6
26484	RAW WARREN, NJ	4/22/79	<8
26485	RAW CHRISTIANA, PA	4/22/79	<5
26508	RAW LANCASTER, PA	4/24/79	<4
26509	RAW HUNTERDON, NJ	4/24/79	
26510	RAW WAYNE, PA & SULLIVAN, NY	4/24/79	
26511	RAW WARREN, NJ	4/24/79	
26512	RAW LEBANON, PA	4/23/79	

232 067

Schultz & Cohen

AIR SAMPLE SURVEY DATA

DATE: 5-10-79

LOCATION: NORTH GATE

TIME ON: 0302

TIME OFF: 0402

FLOW RATE: 7 CFM

TOTAL VOLUME: 1.19×10^6

NRC SAMPLE NUMBER: 1356

ANALYSIS FINDINGS:

¹³¹I $< 4.8 \times 10^{-12}$ $\mu\text{Ci}/\text{cc}$

232 068

WIND DATA

190°
12 mph
1700

AIR SAMPLE SURVEY DATA

DATE: 5/9/74

LOCATION: Rt 4, East rd. (Revised boat sales)

TIME ON: 1742

TIME OFF: 1842

FLOW RATE: 5 CFM
4.9 CFM
4.97

avg → ~ 4.9 CFM

TOTAL VOLUME: 4.8

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS: I131 < 3.1 E-11 uCi/cc

232 069

Walter
Young

AIR SAMPLE SURVEY DATA

DATE: 5/9/79

LOCATION: west side Point 4

TIME ON: 1030

TIME OFF: 1130

FLOW RATE: 5 cfm

net eff = .94

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1337

ANALYSIS FINDINGS:

$$\frac{3.3E-5}{8.49E^2 \cdot .94}$$

$^{131}I < 4.1 E^{-12} \text{ uci/ml}$

232 070

Schultz & Cohen

AIR SAMPLE SURVEY DATA

DATE: 5-9-79

LOCATION: S. UNION ST. & SUSQUEHANNA ST.
MIDDLETOWN

TIME ON: 0340

TIME OFF: 0440

FLOW RATE: 5.5 CFM

TOTAL VOLUME: $60 \text{ min} \times \frac{5.5 \text{ FT}^3}{\text{min}} \times \frac{28.316 \text{ L}}{\text{FT}^3} = 9.34 \text{ E}6 \text{ ml}$

NRC SAMPLE NUMBER: 1334

ANALYSIS FINDINGS: $< 6.1 \text{ E}^{-12} \text{ MC/ml}$ I-131

232 071

AIR SAMPLE SURVEY DATA

WIND DATA
1650
10 mph
at 2200'

DATE: 5/8/70

LOCATION: Pt #1 (Simon/441)

TIME ON: 2220

TIME OFF: 2320

FLOW RATE: 4.6 CFM

4.3

TOTAL VOLUME: $\frac{4.3}{4.6} \times 7.3 \times 10^6$ ml

Flow rate reading was ~4.3 throughout most of the sampling time. Avg flow ~4.3

NRC SAMPLE NUMBER: 1326

ANALYSIS FINDINGS: I131 < 8E-12 uci/ml

(Ground survey readings → 102)

232 072

Wolther
Young

AIR SAMPLE SURVEY DATA

DATE: 5/8/79

LOCATION: on site, by pump house

TIME ON: 0925

TIME OFF: 1025

FLOW RATE: 5 cfm

TOTAL VOLUME: 8.49 E6 ml

NRC SAMPLE NUMBER: 1315

ANALYSIS FINDINGS: ¹³¹I < 7.2 E-12 $\mu\text{Ci}/\text{ml}$

Shu (H₂)
Cohen

AIR SAMPLE SURVEY DATA

DATE: 5/8/79

LOCATION: Middletown, Pa
End of Union Street at River

TIME ON: 0331

TIME OFF: 0431

FLOW RATE: 5.5 CFM

TOTAL VOLUME: $60 \text{ min} \times \frac{5.5 \text{ FT}^3}{\text{min}} \times \frac{29,300 \text{ ml}}{\text{FT}^3} = 9.34 \text{ E}6 \text{ ml}$

NRC SAMPLE NUMBER: 1302

ANALYSIS FINDINGS: $\text{I}^{131} < 6.1 \text{ E}^{-12} \text{ M Ci/ml}$

232 074

Waltham
Yours

AIR SAMPLE SURVEY DATA

DATE: 5/7/79

LOCATION:

West side, Pt. 4, Intersection of 262 & 392

TIME ON:

10:21

TIME OFF:

11:21

FLOW RATE:

5 cfm

TOTAL VOLUME: $60 \text{ min} \times \frac{5 \text{ ft}^3}{\text{min}} \times \frac{29,300 \text{ ml}}{\text{ft}^3} = 8.49 \text{ E}6 \text{ ml}$

NRC SAMPLE NUMBER: 1303

ANALYSIS FINDINGS: $\text{I}^{131} < 6.7 \text{ E}^{-12}$

232 075

Della Ratta
Sitaris
5/2/74

AIR SAMPLE SURVEY DATA

DATE: 5/2/74
LOCATION: #5 (North Gate)
TIME ON: 1711
TIME OFF: 1811

WIND DATA :-
~~1950~~
10 mph
1630

FLOW RATE: 6 CFM — (air flow readings frequently checked, and re adjustments made to 6 CFM as needed)
TOTAL VOLUME: $60 \text{ min} \times \frac{6 \text{ ft}^3}{\text{min}} = 360 \text{ ft}^3$ $\times \frac{2.8 \times 10^{-6} \text{ Ci}}{\text{ft}^3} = 1.0257 \times 10^{-3} \text{ Ci}$

NRC SAMPLE NUMBER: 1297

ANALYSIS FINDINGS: < 5.6E-12

232 076

Waltham
Yours

AIR SAMPLE SURVEY DATA

DATE: 5/7/79

LOCATION:

Mobile van

TIME ON:

12 02

TIME OFF:

13 02

FLOW RATE:

7 cfm

TOTAL VOLUME: $60 \text{ min} \times \frac{7 \text{ ft}^3}{\text{min}} \times \frac{28,300 \text{ ml}}{\text{ft}^3} = 1.19 \text{E}7 \text{ ml}$

NRC SAMPLE NUMBER: 1300

ANALYSIS FINDINGS:

$I^{131} < 5 \text{E}-12 \text{ } \mu\text{Ci/ml}$

232 077

Slaves
&
Della Patta

AIR SAMPLE SURVEY DATA

DATE: 5/7/79

LOCATION: Pt #3 (R.R. crossing)

TIME ON: 2227

TIME OFF: 2327

WIND DATA
↓

170°
8 mph
at 2200

FLOW RATE: 4.6 CFM
5.0 CFM @ ~ 2245
5.0 CFM @ 2250

TOTAL VOLUME:

(many readings taken during sampling
time and almost all) 5.0 ± 0.1 CFM

NRC SAMPLE NUMBER: 1301

Many readings noted was 5.2 CFM
then " " " 4.9 CFM

ANALYSIS FINDINGS:

I¹³¹ < 6.7E-12

$$\begin{aligned} &60 \text{ min} \times 5 \text{ ft}^3/\text{min} \times \frac{28,300 \text{ ml}}{\text{ft}^3} \\ &= 8.49 \text{E}6 \text{ ml} \end{aligned}$$

252 078

Schultz & Cohen

AIR SAMPLE SURVEY DATA

DATE: 5-7-79

LOCATION: Pt 3 East Side. (RR CROSSING & Rt 441)

TIME ON: 0205

TIME OFF: 0305

FLOW RATE: 5 CFM

TOTAL VOLUME: $60 \text{ min} \times \frac{5 \text{ ft}^3}{\text{min}} \times \frac{28,300 \text{ ml}}{\text{ft}^3} = 8.49 \text{E}6 \text{ ml}$

NRC SAMPLE NUMBER: 1288

ANALYSIS FINDINGS:

¹³¹
 $I < 7.4 \text{E}-12$

232 079

Young + Waltham

Winds

Time 1200

Direction 315° (to E9)

Wind Sp. 6

AIR SAMPLE SURVEY DATA

DATE: 5/6/79

LOCATION: Near Goldsboro (Point 4) Intersection of Rt 262 & Rt 392

TIME ON:

1230

TIME OFF:

1330

} 1 hour

FLOW RATE:

3.75 cfm

TOTAL VOLUME: $60 \text{ min} \times \frac{3.75 \text{ ft}^3}{\text{min}} \times \frac{28,300 \text{ ml}}{\text{ft}^3} = 6.37 \text{ E6 ml}$

NRC SAMPLE NUMBER: 1281

ANALYSIS FINDINGS: L9E-12

232 080

Wolthoven
Young

AIR SAMPLE SURVEY DATA

DATE: 5/6/79

LOCATION: Laurel Rd, Point 6

TIME ON:

1541

TIME OFF:

1641

} 1 hour

FLOW RATE:

5 cfm

TOTAL VOLUME: $60 \text{ min} \times \frac{5 \text{ FE}^3}{\text{min}} \times \frac{28,300 \text{ ml}}{\text{FE}^3} = 8.49 \text{E}6 \text{ ml}$

NRC SAMPLE NUMBER: 1288

ANALYSIS FINDINGS: $I^{131} < 2E-12 \text{ MC/ml}$

232 081

AIR SAMPLE SURVEY DATA

DATE: 5/6/74

LOCATION: #3 E. side (R. Pit / St 441)

TIME ON: 1759

TIME OFF: 1859

FLOW RATE: 5 CFM
7.8 — (Reading soon settled down to ~4.8 CFM for ~ first half hour)

TOTAL VOLUME: 4.6 CFM @ 1833
(~4.6 during 2nd half hour)

$(4.8 \frac{CF}{min} \times 60 \text{ min}) \times 28,300 \frac{ml}{CF} = 8.15 \times 10^6 \text{ ml.}$

NRC SAMPLE NUMBER:

1275

ANALYSIS FINDINGS:

I-131 2.7×10^{-12} $\frac{mCi}{ml.}$

232 082

AIR SAMPLE SURVEY DATA

DATE: 5/6/79

LOCATION: North Gate (E. side)

TIME ON: 19:07¹/₂

TIME OFF: 20:07¹/₂

FLOW RATE: 6 CFM (flow rate held within ± 0.1 CFM during entire run — re-adjusted occasionally back to 6 CFM, as required)

TOTAL VOLUME:

$$\left(\frac{6 \text{ CFM}}{m} \times 60\right) (28,300) = 1.0 \text{ E } 7 \text{ ml.}$$

NRC SAMPLE NUMBER:

1276

ANALYSIS FINDINGS:

I-131 $\leq 5.7 \text{ E-}12 \frac{\mu\text{Ci}}{\text{ml.}}$

232 083

Daily

AIR SAMPLE SURVEY DATA

DATE: 5/5/79

LOCATION: Over Roof to Mobile Lab
of South Gate

TIME ON: 5:43

TIME OFF: 1530 - 5/6/79 23hrs 47min

FLOW RATE: 5.7 cfm

TOTAL VOLUME: $1427 \text{ min} \times \frac{5.7 \text{ ft}^3}{\text{min}} \times \frac{28,300 \text{ } \mu\text{Ci}}{\text{ft}^3} = 232,000$

NRC SAMPLE NUMBER: 1277

ANALYSIS FINDINGS: $I^{131} < 3E-13 \text{ MCi/m}^3$

232 084

AIR SAMPLE SURVEY DATA

DATE:

5/5/79

LOCATION:

SOUTH GATE NRC VAN

TIME ON:

1945 5/5/79

TIME OFF:

1335 5/6/79

~~FLOW RATE:~~

METER READING 63 9630

TOTAL VOLUME:

040660

$1070 \pi^3 = 2.91E7 \text{ cc}$

NRC SAMPLE NUMBER:

1274

ANALYSIS FINDINGS:

$2E-12 \text{ ml/ml} \pm 131$

232 085

Schultz & Cohen

AIR SAMPLE SURVEY DATA

DATE: 3-6-79

LOCATION: Center of Goldsboro near river

TIME ON: 0215

TIME OFF: 0315

FLOW RATE: 5 cfm

TOTAL VOLUME: $60 \text{ min} \times \frac{5 \text{ ft}^3}{\text{min}} \times \frac{28,300 \text{ ml}}{\text{ft}^3} = 8.49 \text{E}6 \text{ ml}$

NRC SAMPLE NUMBER: 1264

ANALYSIS FINDINGS: $\text{I}^{131} < 7 \text{E}-12 \text{ MCi/ml}$

232 086

AIR SAMPLE SURVEY DATA

DATE:

3/5/79

PE#3

LOCATION:

TIME ON:

2144

TIME OFF:

2244

FLOW RATE:

505 m

(many readings taken! 105 m)
all were 5 or 5.105 m

TOTAL VOLUME:

8.49E+6 mls

NRC SAMPLE NUMBER:

1263

ANALYSIS FINDINGS:

< 7E-12

WIND:

165

< 1 mph
at 2100

over

Young & Whitman

AIR SAMPLE SURVEY DATA

DATE: 5/5/79

LOCATION: Rock V. 1500 station parking lot

TIME ON: 1400

} 1 hour

TIME OFF: 1505

FLOW RATE: 4 cfm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1259

ANALYSIS FINDINGS: ¹³¹I < 4.9E-10 mCi/l

wind
Time 1300
300°
8 m/hr.

AIR SAMPLE SURVEY DATA

DATE: 5/5/79

LOCATION: R.F. Hill Farm - front street (R.F. Hill Farm - front street - 410)

TIME ON:

08:50

TIME OFF: -

09:50

} 1 hour

FLOW RATE:

4 cfm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1249

ANALYSIS FINDINGS:

¹³¹I < 8.4E-12 mb/c

AIR SAMPLE SURVEY DATA

DATE: 5-5-79

LOCATION: Substation

TIME ON: 0444

TIME OFF: 0544

FLOW RATE: ~~4 CFM~~ 5 CFMTOTAL VOLUME: $60 \text{ min} \times \frac{5 \text{ ft}^3}{\text{min}} \times \frac{28,300 \text{ ml}}{\text{ft}^3} = 8.49 \text{ E} 6$

NRC SAMPLE NUMBER: 1246

ANALYSIS FINDINGS: $I^{131} < 7 \text{ E} - 12$

Young
Nelly Water
Stations

AIR SAMPLE SURVEY DATA

DATE: 5/4/79

LOCATION: Observation tower

TIME ON: 2048 } 2 hours

TIME OFF: 2248

FLOW RATE: 6 CFM

TOTAL VOLUME: $\frac{6.2}{6.3}$ (adjusted back to 6)
6 - steady at 6 for remainder of sample time

$$\frac{6 \text{ ft}^3}{\text{min}} \times 120 \text{ min} \times \frac{28,300 \text{ ml}}{\text{ft}^3} = 2.04 \text{ E}7 \text{ ml}$$

NRC SAMPLE NUMBER: 1246

ANALYSIS FINDINGS: I^{131} < 2 BE-12

AIR SAMPLE SURVEY DATA

DATE: 5/4/79

LOCATION: #9 Substation

TIME ON: 1343

TIME OFF: 1443

FLOW RATE: 4.8 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1234

ANALYSIS FINDINGS:

$^{131}\text{I} < 7\text{E}-12 \text{ mCi/cc}$

232 092

AIR SAMPLE SURVEY DATA

DATE: 5/4/79

LOCATION: South Gate

TIME ON: 7:57

TIME OFF: 8:57

FLOW RATE: 6 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1228

ANALYSIS FINDINGS:

¹³¹I $\leq 4.6E-12$ $\mu\text{Ci}/\text{cc}$ ✓

232 073

Schultz & Ladum

AIR SAMPLE SURVEY DATA

DATE: 5-4-79

LOCATION: Observation Center Balcony

TIME ON: 0258
TIME OFF: 0358 } 1 HOUR

FLOW RATE: 6.5 CFM

TOTAL VOLUME: $60 \text{ min} \times 6.5 \frac{\text{ft}^3}{\text{min}} \times \frac{28,300 \text{ u}}{\text{ft}^3} = 1.1 \text{E}7 \text{ u}$

NRC SAMPLE NUMBER: 1222

ANALYSIS FINDINGS: $\text{I}^{131} < 5 \text{E}-12 \text{ uCi/ml}$

232 094

AIR SAMPLE SURVEY DATA

DATE: 5/3/79

LOCATION: SOUTH GATE / NRC EQUIPT. VAN

TIME ON: 1730

TIME OFF: 1935 - 5/4/79

FLOW RATE: 60 LPM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1238

ANALYSIS FINDINGS:

$^{131}\text{I} < 4.2 \text{E}-13 \text{ } \mu\text{Ci/cc}$

232 095

Shaub

Holady & Young

AIR SAMPLE SURVEY DATA

DATE: 5/3/79

LOCATION: North gate (TMI) rear guard booth

TIME ON: 2126

TIME OFF: 2226

FLOW RATE: 7 cfm

TOTAL VOLUME: $60 \text{ min} \times \frac{7 \text{ ft}^3}{\text{min}} \times \frac{28,300 \text{ ml}}{\text{ft}^3} = 1.19 \text{ E}7 \text{ ml}$

NRC SAMPLE NUMBER: 1217

ANALYSIS FINDINGS: $< 5.5 \text{ E-}12 \text{ nCi/ml} \pm 131$

252 096

Holady & Young

AIR SAMPLE SURVEY DATA

DATE: 5/2/79

LOCATION: North Gate (TMI)

TIME ON: 1658

} 1 hour

TIME OFF: 1758

FLOW RATE: 6.5 CFM

TOTAL VOLUME: $60 \text{ min} \times \frac{6.5 \text{ ft}^3}{\text{min}} \times \frac{28,300 \text{ ml}}{\text{ft}^3} = 1.1E7 \text{ ml}$

NRC SAMPLE NUMBER: 1213

ANALYSIS FINDINGS: $< 5.9E-12 \text{ } \mu\text{Ci/ml } \frac{1}{13}$

232 098

Turned on by Smith + Jorc
Turned off by Young + Helob

AIR SAMPLE SURVEY DATA

DATE: 5/3/79

LOCATION: North G.R. (T.M.)

TIME ON: 1450
TIME OFF: 1550 } 1 hour

FLOW: 7.5 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1210

ANALYSIS FINDINGS: $^{131}I < 4.5E-12$ mCi/cc

232 098

AIR SAMPLE SURVEY DATA

DATE: 5/3/79

LOCATION: W Location 4

TIME ON: 1030

$t = 60 \text{ min}$

TIME OFF: 1130

FLOW RATE: 5 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1206

ANALYSIS FINDINGS:

$^{131}\text{I} < 6.7\text{E}-12 \text{ mCi/cc}$

232 ~~100~~
099

AIR SAMPLE SURVEY DATA

DATE: 5/3/79

LOCATION: Unit in Security Trailer

TIME ON: 8.30

TIME OFF: 9.30

FLOW RATE: 7 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1199

ANALYSIS FINDINGS:

$^{131}\text{I} < \text{4.8E-12 mB/cc}$

232 100

Schultz & Ladun

AIR SAMPLE SURVEY DATA

DATE: 5-3-79

LOCATION: RR Crossina & Rt 441 (Point 3)

TIME ON: 01:50
TIME OFF: 02:50 } 1 HOUR

FLOW RATE: 5 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1193

ANALYSIS FINDINGS: 131
 $I < 7.1 E-12 \text{ } \mu\text{Ci/ml}$

AIR SAMPLE SURVEY DATA

DATE: 5/2/79

LOCATION: TMI Observation Center (2nd floor Tenda)

TIME ON: 1500 5/2/79

TIME OFF: 1500 5/3/79

t = 24 hrs

FLOW RATE: 60 Lpm

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1208

ANALYSIS FINDINGS:

~~131 I < 6.6E-13 mCi/cc~~

131 I < 6.6E-13 mCi/cc

DAILY
NRC AIR SAMPLES

Following is a summary of the air sample data for the 7 day period of 1979 through _____, 1979.

<u>Date</u>	<u>Location</u>	<u>Sample Time</u>	<u>cfm</u>	<u>Activity uCi/ml</u>
				232 102
NRC Daily Sample				
5/7	Mobile Lab and South Gate	5/6 - 5/7 1430 - 1430	40 lpm	< 6.8 x 10 ⁻¹³ 131I
5/7	Observation Center	5/6 - 5/7 1504 - 1506	40 lpm	< 1.1 x 10 ⁻¹² 131I
5/8	Mobile Lab	5/7 - 5/8 1430 - 1527	30 lpm	< 1.4 x 10 ⁻¹² 131I
5/8	Observation Center	5/7 - 5/8 1407 - 1458	55 lpm	< 7.2 x 10 ⁻¹³ 131I
5/9	Mobile Lab	5/8 - 5/9 1530 - 1530	30 lpm	< 1.5 x 10 ⁻¹² 131I
5/9	Observation Center	5/8 - 5/9 1502 - 1503	50 lpm	< 7.6 x 10 ⁻¹³ 131I
5/9-10		5/9 - 5/10 1506 - 1504	50 lpm	< 1.3 x 10 ⁻¹² 131I
5/9-10	Mobile Lab	5/9 - 5/10 1530 - 1518	30 lpm	< 2.1 x 10 ⁻¹² 131I

DAILY
NRC AIR SAMPLES

Following is a summary of the air sample data for the 24-hour period
of _____, 1979.

Reported S13

<u>Location</u>	<u>Sample Time</u>	<u>Rem</u>	<u>Activity $\mu\text{Ci/ml}$</u>
MOBILE LAB	5/10 1520 - 5/10 1520	30	<1.9 E-12
OBS. CTR	5/10 1506 - 5/11 1455	50	<1.4 E-12
MOBILE LAB	5/11 1520 5/12 1520	30	<1.9 E-12
OBS CTR	5/11 1455 5/12 1505	~55	<1.1 E-12
NRC Daily Sample			

CONTINUOUS AIR SAMPLE SURVEY DATA

DATE: May 21 and 22, 1979

LOCATION: Mobile Lab

TIME INDICATED ON: 1525 on May 21

TIME INDICATED OFF: 1520 on May 22

FLOW RATE ON: 45 LPM

FLOW RATE OFF: 45 LPM

INDICATED TOTAL FLOW ON: 657830

INDICATED TOTAL FLOW OFF: 659500

PRESSURE ON: 0

PRESSURE OFF: 0

TOTAL VOLUME: 6.5 E7 ml.

NRC SAMPLE NUMBER: 1612

ANALYSIS FINDINGS: I-131 $1.3E-12$ $\frac{\mu\text{Ci}}{\text{ml}}$

232 105

OFFICE
COPY

STEARNS
?
Shank

AIR SAMPLE SURVEY DATA

DATE: 5/14/79

LOCATION: TMT OBSERVATION CENTER

TIME ON: 2100 → A = 2 hrs and 30 mins

TIME OFF: 2300 + 30

FLOW RATE: 6 CFM

TOTAL VOLUME:

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

232 106

~~off~~

li

R. Woodruff
Greg Smith

Continuous AIR SAMPLE SURVEY DATA

DATE: May 13 - 14, 1979

LOCATION: North Gate

TIME ON: 1445 on May 13

TIME OFF: 1448 on May 14

FLOW RATE: 50 l/m

TOTAL VOLUME: 7.2 E 7 ml

NRC SAMPLE NUMBER: 1448

ANALYSIS FINDINGS:

¹³¹ I < 1.2 E - 12 $\mu\text{Ci}/\text{ml}$

232 107

1408

R. Woodruff
Greg Smith

Continuous AIR SAMPLE SURVEY DATA

DATE: 5-11 and 12, 1979

LOCATION: Visitors Center

TIME ON: 1455 on 5-11-79

TIME OFF: 1505 on 5-12-79

FLOW RATE: 60 l/m start, stop at 50 l/m

TOTAL VOLUME: ~~1200 l~~

NRC SAMPLE NUMBER: ~~1408~~ 1408

ANALYSIS FINDINGS:

~~Est 212-5~~ ¹³¹ I < 1.1 E-12 ^{int}/_{cont.}

232 108

R. Woodruff
Greg Smith

Continuous AIR SAMPLE SURVEY DATA

DATE: 5/11+12/79

LOCATION: Mobil Lab

TIME ON: 1520 on 5-11-79

TIME OFF: 1520 on 5-12-79

FLOW RATE: 30 l/m

TOTAL VOLUME: 4.32×10^7 ml

NRC SAMPLE NUMBER: 1412

ANALYSIS FINDINGS:

¹³¹I < 1.9×10^{-12} $\frac{\mu\text{Ci}}{\text{ml}}$

232 100

Pull & file on 5/11/79

Young
Walters
Woodruff
Smith

AIR SAMPLE SURVEY DATA

DATE: 5/10 - 11/79

LOCATION:
Observation Tower

TIME ON:
1506 on 5-10-79

TIME OFF: 1455 on 5-11-79

FLOW RATE:
50 l/m

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1381

ANALYSIS FINDINGS:

131 I $< 1.4 \times 10^{-12}$ $\mu\text{Ci}/\text{ml}$

232 110

Puller filter 5/11/79

Young
Wolter
Swartz
Woodruff

AIR SAMPLE SURVEY DATA

DATE: 5/10-11/79

LOCATION: Mobile Lab

TIME ON: 1520 5/10

TIME OFF: 1520 5/11

FLOW RATE: 30 l/min

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1380

ANALYSIS FINDINGS: 131 I $< 1.9 \times 10^{-12}$ mCi/ml

232 111

Pull & file - 5/11/79

Young
Walters
Smith
Wedroff

AIR SAMPLE SURVEY DATA

DATE: 5/10-11/79

LOCATION:

Mobile Lab

TIME ON:

1520 on 5-10-79

TIME OFF: 1520 on 5-11-79

FLOW RATE:

20 l/m

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1380

ANALYSIS FINDINGS:

¹³¹I < 1.9E-12 uC/ml

232 118

Pull a file on 5/11/79

Young
Waltner
Woodruff
Smith

AIR SAMPLE SURVEY DATA

DATE: 5/10-11/79

LOCATION:
Observation Tower

TIME ON:
1506

TIME OFF: 1455

FLOW RATE:
50 L/min

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1381

ANALYSIS FINDINGS:

$^{131}\text{I} < 1.4 \text{ E} - 12 \text{ } \mu\text{Ci}/\text{m}^3$

232 113

Pull & filter.

110/79

Walter
Young

AIR SAMPLE SURVEY DATA

DATE: 5/9-10/79

LOCATION:

Troble Lab.

TIME ON:

1530 5/9/79

TIME OFF:

1518 5/10/79

FLOW RATE:

30 l/min

TOTAL VOLUME:

4.356 E⁴ liters

NRC SAMPLE NUMBER:

1363

ANALYSIS FINDINGS:

¹³¹I < 2.1 E⁻¹² µCi/ml

[Handwritten signature]

[Handwritten signature]

232 119

Pull & file on 5/10/79

Yours
residing

AIR SAMPLE SURVEY DATA

DATE: 5/9-10/79

LOCATION: observation tower

TIME ON: 1506

TIME OFF: 1504

FLOW RATE: 50 l/m

TOTAL VOLUME: $V = 7.19 \times 10^7$

NRC SAMPLE NUMBER: 1364

ANALYSIS FINDINGS:

$^{131}\text{I} < 1.3 \times 10^{-12} \text{ } \frac{\mu\text{Ci}}{\text{ml}}$

232 115

Pull & file on 5/9/79

Young
Waltrey

AIR SAMPLE SURVEY DATA

DATE: 5/8/79

LOCATION: observation Tower

TIME ON: 1500 hrs

TIME OFF: 1000 hrs

FLOW RATE: 50 l/min

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1341

ANALYSIS FINDINGS:

¹³¹
 $I < 7.6 E - 13 \mu Ci/ml$

232 116

Pull + file on 5/4/79

Young
Wolter

AIR SAMPLE SURVEY DATA

DATE: 5/8 - 9/79

LOCATION: Mobile Lab

TIME ON: 1530 5/8/79

TIME OFF: 1530 5/9/79

FLOW RATE: 30 l ~

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1357

ANALYSIS FINDINGS:

$^{131}\text{I} < 1.5 \text{E} - 12 \text{ uCi/ml}$

232 117

Pull + file on 5/8/79 (days)

Young
Waltner

AIR SAMPLE SURVEY DATA

DATE: 5/7-8/79

LOCATION: Mobile Lab

TIME ON: 1430 5/7/79

TIME OFF: 1527 5/8/79

FLOW RATE: 30

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1320

ANALYSIS FINDINGS:

¹³¹I < 1.4E-12 uCi/ml

232 118

Pull & file on 5/8/79 (on days)

Young
Walther

AIR SAMPLE SURVEY DATA

DATE: 5/7/79

LOCATION: observation Tower

TIME ON: 1407 5/7

TIME OFF: 1458 5/7

FLOW RATE: 55 l/min

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1319

ANALYSIS FINDINGS:

¹³¹I < 7.2E-13 uCi/ml

232 129

Pull + file on 5/7/79 (cc days) Yerr. Cret. area

AIR SAMPLE SURVEY DATA

DATE: 5/6/79

LOCATION: Mobile Lab

TIME ON: ~~1330~~ 1530 Rem (5/6)

TIME OFF: 1430 (5/7)

FLOW RATE 40
l/min.

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1305

ANALYSIS FINDINGS:

$I^{131} < 6.8E-13 \text{ } \mu\text{Ci/ml}$

Pull + fil. on 5/7/79 (2 days) Young
Waltner

AIR SAMPLE SURVEY DATA

DATE: 5/6-7/79

LOCATION: observation Tower

TIME ON: 1504 (5/6)

TIME OFF: 1406 (5/7)

FLOW RATE: 40 l/min

TOTAL VOLUME: 23hr 2min = 1392 min $\times \frac{40 \text{ l}}{\text{min}} \times \frac{10^3 \text{ ml}}{\text{l}} = 5.53 \times 10^7$

NRC SAMPLE NUMBER: 1307

ANALYSIS FINDINGS:

131
 $I < 1.1 \times 10^{-12} \text{ ulc/ml}$

232 121

Young
Wolter

Daily
AIR SAMPLE SURVEY DATA

DATE: 5/5 - 5/6/79

LOCATION: observation tower

TIME ON: 1500

TIME OFF: 1501

FLOW RATE: 40

TOTAL VOLUME: $144 \text{ min} \times \frac{40 \text{ l}}{\text{min}} \times \frac{10^3 \text{ ml}}{\text{l}} = 5.76 \text{ E}7 \text{ ml}$

NRC SAMPLE NUMBER: 1278

ANALYSIS FINDINGS: $\text{I}^{131} < 1 \text{ E}-12 \text{ } \mu\text{Ci/ml}$

232 122

AIR SAMPLE SURVEY DATA

DATE: 5/4/79

LOCATION: SOUTH GATE NRC EQUIPT VAN

TIME ON: 1537 (5/4)

TIME OFF: 1537 (5/5)

FLOW RATE: 57 LPM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1257

ANALYSIS FINDINGS:

^{131}I 6.9E-13 $\mu\text{Ci/cc}$

232 123

AIR SAMPLE SURVEY DATA

DATE:

5/4/79

LOCATION:

Observation Tower

TIME ON:

1515

TIME OFF:

1510

5/5/79

FLOW RATE:

40

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1258

ANALYSIS FINDINGS:

¹³¹I < 5.75E-13 µCi/cc

AIR SAMPLE SURVEY DATA

DATE: 5/3/74

LOCATION: Observation Center

TIME ON: 1500 } 24 hr SA-P

TIME OFF: 1500

FLOW RATE: 35 LPM

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1235

ANALYSIS FINDINGS:

^{131}I C-1 E-12 ml/c

TANK LEVELS

TANK	PRESENT LEVEL	MAX LEVEL	MAX CAPACITY	RATE OF INCREASE
MCWST	5.4	10.0'	19,800	
JT TK A	10.8	10.75'	8780	
NEUT TK B	11.0	10.75'	8780	
RB Sump	0	6.0'	2095	
CON. DEN TK Sump	1.5	3.0'	135	
BS-PIA Sump	2.4	4.0'	359	
BS-PIB Sump	2.4	4.0'	359	
IA-DH Sump	2.1	4.0'	359	
DH-PIB Sump	2.2	4.0'	359	
AUX BLDG Sump	2.1	5.0'	6371	
AX BLDG Sump TK	3.1	4.5'	3085	
CON DEN TK A	.8	5.5'	2660	
CON DEN TK B	4.8	5.5'	2660	
RCBT	10.5	15.5'	83400	
B RCBT	13.5	15.5'	83400	
C RCBT	12.0	15.5'	83400	
RC DRN TK	< 70	92"	7430	
NECTTA	2.2	12.0'	10602	
NECTTB	11.4	12.0'	10602	
CONC WASTE TK	0	12.0'		
RBAT	8.5	10.0'	8255	
SRST A	11.5			
SRST B	9.0			
VENT HDR PRESS (per compound)	0.2			
-TIA PRESS	25			232 126
WDG-TIB PRESS	23			
Waste Gas Compressor Seal Water Temp	80			

5/2/79
90°

MWHT	8.6	5.5
NEUT. TK. 8A	10.7	10.7
VT. TK. 8B	5.9	11
R.B. SUMP	< 2	< 2
CONTAM. DR. TK. SUMP	1.4	1.5
B.S. - PIA SUMP	2.1	2.2
B.S. - PIB SUMP	2.2	2.2
D.H. - PIA SUMP	2.0	2.0
D.H. - PIB SUMP	2.2	2.2
AUX. BLD. SUMP	2.8	2.8
AUX. BLD. SUMP TK.	3	3.1
CONTAM. DR. TK. 11A	5.5	0.7
CONTAM. DR. TK 11B	.75	4.9
A RC.B.T. 1A	10.5	10.5
B RC.B.T. 1B	13.7	13.5
C RC.B.T. 1C	13.4	13.4
RC DRAIN TK.	0	0
W.E.C.T.T. 9A	< 0	11.5
W.E.C.T.T. 9B	0	11.4
CONC. WASTE TK. 2	0	0
R.H.B.T.	8.5	8.4
SPENT RESIN TK. 1A	11.5	11.5
SPENT RESIN TK. 1B	8.5	9
WASTE GAS VENT HDR. PRESS	.3	< 2
W.D.G. DECAY TK. W.D.G.-T-1A	0	1.1
W.D.G. DECAY TK. W.D.G.-T-1B	2.0	< 2

Handwritten note in a cloud: < 0
 0

ASSUME ERROR IN READING 2.1' } 4/21/79
 11.4' }
 9A
 9B
 STR

232 127

DATE 4/22/79 5-2-79 BY _____

TIME 0645 1430

TO SHIFT FOREMAN = 1/SHIFT

MWHT	5.3	10.0'	19,800	
NEUT TK 8A	10.7	10.75'	8780	
NEUT TK 8B	11	10.75'	8780	
R.B. SUMP	4	6.0'	2095	
CONTAM. DR TK SUMP	1.5	3.0'	135	
MS-PIA SUMP	2.3	4.0'	359	
MS-PIB SUMP	2.3	4.0'	359	
DH-PIA SUMP	7.1	4.0'	359	
DH-PIB SUMP	2.2	4.0'	359	
AVX BID SUMP	2	5.0'	6371	
AVX BID SUMP TK	3.05	4.5'	3085	
CONTAM. DR TK 11A	0.75	5.5'	2660	
CONTAM. DR TK 11B	4.75	5.5'	2660	
A REBT 1A	10.6	15.5'	83,400	
B REBT 1B	13.4	15.5'	83,400	
C REBT 1C	1.2	15.5'	83,400	
KL DRAIN TK	—	92"	7430	
WECTT 9A	2.1	12.0'	10,602	
WECTT 9B	11.4	12.0'	10,602	
COMB. WASTE TK 2	0	12.0'	9,646	
R/BHT	8.4	10.0'	8255	
SPENT RESIN TK 1A	11.5		3,861	
SPENT RESIN TK 1B	9		3,861	
WASTE GAS VENT HDR PRESS	< 0	2.5PSI		232 128
W.D.G. DECAY TK (W.D.G.-T-11)	25	110 PSI	19374.	R 11A
W.D.G. DECAY TK (W.D.G.-T-15)	21	110 PSI	19370.	Auto Low

JATE: 5-2-79
 TIME: 0245

TANK LEVELS 5-1-77 1830

TANK	PRESENT LEVEL	MAX. LEVEL	MAX CAPACITY	RATE OF INCREASE
MWST	5.3	10.0'	19,800	
WT TK A	10.7	10.75'	8780	
NEUT TK B	10.9	10.75'	8780	
RB Sump	< 2	6.0'	2095	
CON. DEN TK Sump	1.6	3.0'	135	
BS-PIA Sump	2.3	4.0'	359	
BS-PIB Sump	2.3	4.0'	359	
IA-DH Sump	2.1	4.0'	359	
DH-PIB Sump	2.2	4.0'	359	
Aux BLDG Sump	1.9	5.0'	6371	
AX BLDG Sump TK	3.1	4.5'	3085	
CON DEN TK A	0.75	5.5'	2660	
CON DEN TK B	4.25	5.5'	2660	
CBT	10.6	15.5'	83400	
B RCBT	13.4	15.5'	83400	
C RCBT	12	15.5'	83400	
RC DRN TK	< 70	92"	7430	
NECTT A	2.2	12.0'	10602	
NECTT B	11.4	12.0'	10602	
CON WASTE TK	0	12.0'		
RBAT	8.3	10.0'	8255	
SRST A	9		3861	232 129
SRST B	0		3861	
VENT HDR PRESS	0	BY GAUGE -.2		SIGHTGLASS
-TIA PRESS	25			8.5"
UDG-TIB PRESS	21			7"

TANK LEVELS 5-1-79 1830

TANK	PRESENT LEVEL	MAX LEVEL	MAX CAPACITY	RATE OF INCREASE
MCWST	5.3	10.0'	19,800	
TK A	10.7	10.75'	8780	
NEUT TK B	10.9	10.75'	8780	
RB Sump	< 2	6.0'	2095	
CON. DEN TK Sump	1.6	3.0'	135	
BS-PIA Sump	2.3	4.0'	359	
BS-PIB Sump	2.3	4.0'	359	
IA-DH Sump	2.1	4.0'	359	
DH-PIB Sump	2.2	4.0'	359	
AUX BLDG Sump	1.9	5.0'	6371	
AX BLDG Sump TK	3.1	4.5'	3085	
CON DEN TK A	.75	5.5'	2660	
CON DEN TK B	4.25	5.5'	2660	
CBT	10.6	15.5'	83400	
B RCBT	13.4	15.5'	83400	
C RCBT	12	15.5'	83400	
RC DEN TK	< 70	92"	7430	
NECTTA	2.2	12.0'	10602	
NECTTB	11.4	12.0'	10602	
CONC WASTE TK	0	12.0'		
RBAT	8.3	10.0'	8255	
SRST A	9		3861	
SRST B	0		3861	
VENT HDR PRESS	0	BY GAUGE -.2		SIGHTGLASS
TIA PRESS	25			8.5"
WDG-TIB PRESS	21			7"

232 130

LIQUID RADWA E TRANSFER LOG

TO

FROM

DATE	UNIT	TIME START	TIME FINISH	FROM TANK	SAMPLE NO.	INITIAL LIQ. LEVEL	FINAL LIQ. LEVEL	VOLUME TRANSFERRED GAL.	VAA PUMP	TANK	UNIT	INITIAL LIQUID LEVEL	FINAL LIQUID LEVEL	VOLUME RECEIVED GAL.	OPER	
5/5/79	CG	0530	0956	HARRINGTON #1	32856		Empty	2987		WDL-T-11B	I	2.0'	7.1'	2987		

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LIQUID RADWAL E TRANSFER LOG

P.5

FROM → TO ↓

DATE	UNIT	TIME START	TIME FINISH	FROM TANK	SAMPLE NO.	INITIAL LIQ. LEVEL	FINAL LIQ. LEVEL	VOLUME TRANSFERRED GAL	VAA PUMP	TANK	UNIT	INITIAL LIQUID LEVEL	FINAL LIQUID LEVEL	VOLUME RECEIVED GAL.	OFF
5-1-79	1	1210	1620	HAL #1				1,000	C.G.	WEST -11A	1	0.1	12'	1000	
5-1-79	1	1210	1530	Neut Stig. T-10	2702	2245		2,000	C.G.	Hal#2	1			2000	
5-1-79	1	1800	2200	WDL-T-9	5.5		0.5	2200	CG	Hal#2	CG			2000	
5/1/79	CG	2015		Halib#2	17,000	941				Halib#1				17000	
5/2/79	1		0400	WEST T-11B				~ 7,000		RIVER				7000	
5/2/79		1700	2315	WEST WDL-T-11A	3134	11.6'	0.4	6800		RIVER	1	~ 12'		6800	
5/2/79	1	2000	2355	MWST WDL-T-2	2362	3.4'	0.5	4160		WDL-T-9	1	0.2'	3.9'	1650	
5/3/79	1	0800	0945	Neut Feed WDL-T-9	2362	3.4'		1700		Cap-Gum Halib#2	CG	0.5'	5.7'	0500	
5/3/79	1	1015	1420	Neut Stopp WDL-T-10	6.0		~ 0.0	2700		Cap-Gum Halib#2	CG			2700	
5/3/79	CG	0000	1045	Cap Gum Halib#1	4328	6		6400		WEST#1B	1	0.6	11.7	~ 6400	
5/3/79	U-1	1511	2130	U-1 AUX SUP P	3321	6.10'		6000	CG	Halib#2	2CG			~ 5400	
5/3/79	U-2	2200	2400	U-2 CDT 11B	2184	4.75	1.75	1740		NFT T-9	U-1	?	4.3	1740	
5/3/79	CG	1400	1930	Halib#1				~ 6000 gal		WEST 11A	U-1	0.4			
5/4/79	1	0900	0945	WEST T-11B	3393	11.6'		~ 7500		RIVER	1			7500	
5/5/79	1	0857		WEST 11A	3438	11.8'		~ 7500		RIVER	1				
5/5/79	1	1050	1415	NEUT FEED TC T-9	3184	4.3'	0	1928		HALIB #1	CG		0	1928	

P.5

1 MJ UNITS 1-4-2

LIQUID RADWASTE TRANSFER LOG

FROM

TO

DATE	UNIT	TIME START	TIME FINISH	TANK	SAMPLE NO.	INITIAL LIQ. LEVEL	FINAL LIQ. LEVEL	VOLUME TRANSFERRED GAL	VAA PUMP	TANK	UNIT	INITIAL LIQUID LEVEL	FINAL LIQUID LEVEL	VOLUME RECEIVED GAL.	OPI
5-1-79	1	1210	1620	HAL #1				4,000	C.G.	WECST-11A	1	0.1	12'	7000.	
5-7-79	1	1210	1530	Next Stg. #10				2,000	C.G.	Hal#2	1			2000	
5-1-79	1	1800	2:20	WDL-T-9	2702	2245	0.5	2200	CG	Hal#2	CG			2000	
5/1/79	CG	2015		Halib#2		17,000				Halib#1					
5/2/79	1		0400	WECST T-11B				~ 7,000		RIVER					
5/2/79		1700		WECST WDL-T-11A	3134	11.6				RIVER	1	~ 12'			

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LIQUID RADWAS: E TRANSFER LOG

FROM _____ TO _____

DATE	UNIT	TIME START ----- FINISH	FROM TANK	SAMPLE NO.		VOLUME TRANSFERRED GAL	VAA PUMP	TO TANK	UNIT	INITIAL LIQUID LEVEL	FINAL LIQUID LEVEL	VOLUME RECEIVED GAL.	OPI
				INITIAL LIQ. LEVEL	FINAL LIQ. LEVEL								
5-1-79	1	1210 ----- 1620	HAL#1			4,000	C.G.	WECST -11A	1	0.1	12'	21000.	
5-1-79	2	1210 ----- 1530	Newt Strig. 7-10			2,000	C.G.	Hal#2	1				
5-1-79	1	1800 -----	WDL-T-9	2702 2245 5.5	0.5	2200	CG	Hal#2	CG			22000	
5/1/79	CG	/	Halib#2			17,000 gal		Halib#1					
		/											
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232 134

GAMMA ANALYSIS SUMMARY SHEET

ME No. 1 _____ No. 2 _____ B&W _____ SAI _____ RMC _____ EG&G _____ NRC

Title 1-2 Spent Fuel Pool Sample No. 8589

Time/Date Sample 1500 6/3/79 Time/Date Analysis 7400 6/4/79

Geometry 500ml poly Counting Time 700 sec

Volume 500 ml Analyst T. Jackson

Air _____ (1) Liquid (2) Other _____

1. Report MDA's for I-131 on charcoal cartridges and for Cs-134, Cs-137, Co-58 and Co-60 on particulate filters for those isotopes which are not detected in sample.
2. Report MDA's for I-131, Cs-134, Cs-137, Co-58 and Co-60 for those isotopes which are not detected in sample.

Isotope	Concentration	MDA $\mu\text{g/ml}$	Uncertainty
¹³¹ I		< 6.3E-7	
¹³⁷ Cs		< 5.5E-7	
¹³⁴ Cs		< 5.4E-7	
⁵⁸ Co		< 5.3E-7	
⁶⁰ Co		< 6.2E-7	
⁵⁴ Mn		< 5.6E-7	
⁹⁵ Nb		< 4.3E-7	
⁹⁵ Zr		< 8.3E-7	
¹⁴¹ Ce		< 7.0E-7	
¹⁴⁴ Ce		< 5.1E-5	

Water

~~VEGETATION~~ SAMPLE SURVEY DATA

DATE: 6-3-79

LOCATION: Unit 1 Sec Neut Tank

TYPE OF VEGETATION:

VOLUME OR AREA COLLECTED: 1000ml

TIME OF COLLECTION: 0810 A.M. P.M.

WIND DIRECTION: SPEED:

NRC SAMPLE NUMBER: 1814

RESULTS:

$^{137}\text{I} < 6.3 \text{ E-7 } \mu\text{Ci/ml}$

<MDA for all isotopes

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Water

~~LABORATORY~~ SAMPLE SURVEY DATA

DATE: 5-24-79

LOCATION: RML - 7 composite

TYPE OF VEGETATION:

VOLUME OR AREA COLLECTED: 450 ml

TIME OF COLLECTION: 0800

A.M.

P.M.

WIND DIRECTION:

SPEED:

NRC SAMPLE NUMBER: 1811

RESULTS:

¹³¹
 $\pm < 1.8 E-7 \text{ uCi/ml}$

AIR SAMPLE SURVEY DATA

DATE: ~~4~~ 5-28-79

LOCATION: RML-7 composite, γ scan & I^{131}

TIME ON:

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1775 (Geli) & 1776 (NaI)

ANALYSIS FINDINGS:

Geli (500 ml) — No peaks found
 $^{131}I < 2E-7$

NaI (5 l)

$^{131}I < 12.3 \mu Ci/l$

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W47872
AIR SAMPLE SURVEY DATA

(. - 2m 4m)

DATE: 5/12/72

LOCATION: Rm 67 Com. Bldg

TIME ON: 1300 - 1600

~~TIME OFF:~~

~~FLOW RATE:~~

TOTAL VOLUME: 7.571 liters

NRC SAMPLE NUMBER: 1509

ANALYSIS FINDINGS: $A = 1.7 \pm 5.2$ f₂₃₅/ml

DA,

12/79

TANK OR SUMP	START TIME & DATE	STOP TIME & DATE	GALLONS DISCHARGED	¹³¹ I CONC. (uCi/cc)	TANK OR SUMP FRACTION OF MPC
IWS	1000 5/7/79	1900 5/8/79	50360 START 305840	9.3 x 10 ⁻¹¹	.00031
A WEST	1422 5/11/79	5-8-79 1305	7568	1.7 e ⁻⁵	4.1 Per HP 1621.
Unit I Sump Tank	0100 5/8/79	5-8-79 1440	53400	1.34 E ⁻²	1.025
Unit I WEST UPL. T. 115	5/7/79 0000	1140 5-9-79	4900	2.8 E ⁻⁵	4.1 Per HP 1621
F West TK	1135 5-9-79	1840 5-9-79	51,600	2.4 x 10 ⁻⁸	.101
IWTS	1005 5-9-79	1230	START 305840	2.3 E ⁻⁷	0.76
IWFS	0755 5/10/79	5/10/79	2085.25 20060	< 2.85 E ⁻⁸	-0.95
Unit 2 URB Bldg Sump	0925 5/10/79	1130 5/10/79	18750	< 3 E ⁻⁷	1
Unit 1 NOT TANK	1030 5/10/79			< 5.9 E ⁻⁹	.019

LIQUID IN

IN CONTAINER

DATE: 5/7/79

TANK OR SUMP	START TIME & DATE	STOP TIME & DATE	GALLONS DISCHARGED	¹³¹ I CONC. (uCi/cc)	TANK OR SUMP FRACTION OF MPC
WXS	1000 5/7/79	1900 5/8/79	50360	9.3×10^{-11}	.00031
A West	1422 5/7/79	5-8-79 1305	7568	1.7×10^{-5}	4.1 Per HP 1621
INT. SUMP TANK	0105 5/8/79	5-8-79 1440	53400	1.34×10^{-2}	.1075
INT. I. WEST W.P. TANK	5120 0000	1140 5-9-79	4900	2.8×10^{-5}	4.1 per HP 1621
I. West TK	1135 5-9-79		81,000	2.4×10^{-8}	.101

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1675

Present Date	START DATE	THICKNESS (in)	PLATE AREA (sq in)	W (lbs)	I (in)	2-131 to 2-131 (sq ft)	1-131 APC	Combined Fraction of APC	System Direct
5/1/79	5/1/79	56	150	373	3.3×10^{-8}	8.17×10^{-11}	.0007	.0007	YES
5/1/79	5/1/79	46	150	301	4.3×10^{-8}	9.7×10^{-11}	.0003	.0003	YES
5/1/79	5/1/79	46	150	307	4.3×10^{-8}	1.1×10^{-10}	.0003	.0003	YES
5/1/79	5/1/79	46	150	307	7×10^{-8}	2.2×10^{-10}	.0007	.0007	YES
5/1/79	5/1/79	46	150	301	1.2×10^{-7}	3.3×10^{-10}	.001	.001	YES
5/1/79	5/1/79	54	150	373	4×10^{-8}	1.1×10^{-10}	.003	.003	YES
5/1/79	5/1/79	30	150	313	7×10^{-8}	5.3×10^{-10}	.002	.002	YES
5/1/79	5/1/79	30	150	317	6.3×10^{-8}	1.6×10^{-10}	.003	.003	YES
5/1/79	5/1/79	50	150	333	6.3×10^{-8}	1.5×10^{-10}	.004	.004	YES
5/1/79	5/1/79	50	150	333	1.1×10^{-7}	3.3×10^{-10}	.001	.001	YES
5/1/79	5/1/79	50	150	333	1.5×10^{-7}	4.5×10^{-10}	.001	.001	YES
5/1/79	5/1/79	50	150	333	1.6×10^{-7}	4.8×10^{-10}	.001	.001	YES
5/1/79	5/1/79	50	150	333	1.4×10^{-7}	4.2×10^{-10}	.001	.001	YES
5/1/79	5/1/79	50	150	333	1.6×10^{-7}	4.8×10^{-10}	.001	.001	YES
5/1/79	5/1/79	52	150	347	3.1×10^{-8}	8.9×10^{-11}	.0003	.001	YES
5/1/79	5/1/79	52	150	347	3.1×10^{-8}	8.9×10^{-11}	.0003	.001	YES
5/1/79	5/1/79	52	150	347	3.1×10^{-8}	8.9×10^{-11}	.0003	.001	YES
5/1/79	5/1/79	52	150	347	2.3×10^{-8}	8.9×10^{-11}	.0003	.001	YES
5/1/79	5/1/79	50	150	333	2.3×10^{-8}	9.3×10^{-11}	.0003	.102	YES
5/1/79	5/1/79	50	150	333	4.2×10^{-7}	1.2×10^{-10}	.004	.1052	Yes
5/1/79	5/1/79	50	150	333	7×10^{-7}	1×10^{-10}	.007	.003	Yes

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TWES

Percent	DATE	SAMPLE TIME	INCH	INCH	I (30)	I (100)	I (173)	Combined Fraction	System
			(in)	(in)	(415, kcal)	(in)	(in)	of 100	Det.
1/4 700	5/3	0730	56	150	3733 $\times 10^8$	9.3 $\times 10^{11}$	.00027	.0027	Yes
5/4 0900	5/3	0730	56	150	4316 $\times 10^8$	8.3 $\times 10^{10}$	.00027	de.1099	Yes
5/4 0930	5/6/79	1000	50	150	3353 $\times 10^8$	9.3 $\times 10^{11}$	.00031	.1025	yes
5-8-79 1235	5-7-79	403	50	150	4266 $\times 10^8$	7.8 $\times 10^{11}$	.00026	.1023	Yes

L. LIQUID D. 7
E. SUMMARY

DATE: 5/17/79

TANK OR SUMP	START TIME & DATE	STCP TIME & DATE	GALLONS DISCHARGED	¹³¹ I CONC. (uCi/cc)	TANK OR SUMP FRACTION OF MPC
WXS	1000 5/7/79			9.3×10^{-11}	,00031
"A" West unit section Tank	1422 5/7/79	5-8-79 1305	7568	1.7×10^{-5}	4.1 Per 14P1621
	0100 5/8/79	5-8-79 1440	53,400	1.34×10^{-2}	

TANK OR SUP	START TIME & DATE	STOP TIME & DATE	GALLONS OF SUP	I-131 CONC. (uCi/cc)	TANK OF SUP FRACTION OF MPC
7-76-L	1800 5/1/79	5/2/79 5/4/79	25,655	6.9 x 10 ⁻⁴	4 G.I. per HP 1621
Neut. Tank	1801 5/1/79	0620 5/2/79	54,400	< 3.1 x 10 ⁻⁷	< 0.0134
IWF S	2111 5/1/79	0300 5/2/79		< 3.1 x 10 ⁻⁸	< 0.0003
5-76-L					
5-76-L	5/2/79				
Neutralization Tank	2155 5/2/79	1434 5/4/79	72,600	2.31 x 10 ⁻⁵ < 3 x 10 ⁻⁷	4.1 per HP 1621 ,007
IWF S	0800 5/4/79	1320 5/4/79	56,430	< 3.1 x 10 ⁻⁸	.00827
WECFF "B" 69-79-L	0900 5/4/79	1115 5/4/79	7568 gal <i>Triggered to drain factory floor, which is to have flooded Revaline 5/4/79</i>	2.24 x 10 ⁻⁵	≤ .1 per HP 1621
Unit 1 A waste Grav. Cond Storage Tank	5/7/79 1422 hrs			1.7 x 10 ⁻⁵	≤ 0.1 MPC

LIQUID DISCHARGES

TO J. ROY 'EVER' DAYS.

5

TANK	START	STOP	GALLONS	AVERAGE DURING DISCHARGE I 131 (1/4 cc) I-133	FRACTION OF MPC
WECST (B)	4/26/79 @ 2130	4/27/79 @ 1515	5,875	* PER HP 1621	<.1*
I.W.T.S.	4/27/79 @ 1200				.
I.W.F.S.	4/27/79 @ 1400	4/28/79 @ 0015	54510	<MIDL	.103
U1 Sec. Went. Tank	4/27/79 @ 2005	4/28/79 @ 0425	277,000	3.95 x 10 ⁻⁸ <MIDL	.132
WECST (A)	4/27/79 @ 2115	4/28/79 @ 1515	5,875	* PER HP 1621	* <.1
U1 Sec. Went. Tank	4/28/79 @ 2050	4/29/79 @ 0830	277,000	3.1 x 10 ⁻⁸ <MIDL	.103
U1 Sec. Went. Tank	4/30/79 @ 0745	4/30/79 @ 1550	60,714		
WECST (A)	4/30/79 @ 1810	5/1/79 1123	6345	per HP 1621 * 66 per HP 1621 * 66	* <.1

C. R. Arnold
J. Herlein
L. Lawyer
E. Blake
P. Long
Data Reduction
Blair Fabron
→ NRC

215-696-3353

①

SWP Porter, J.

Porter-Gertz Consultants, Inc.

Radiological Protection and
Environmental Services

STEVEN M. GERTZ, PhD

3 RITTENHOUSE PLACE
ARDMORE, PA. 19003

SUBJECT: STATUS OF THREE MILE ISLAND NUCLEAR STATION OFFSITE EMERGENCY
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM May 1, 1979
1315 Hours

The Three Mile Island Nuclear Station offsite emergency radiological environmental monitoring program consists of daily samples of drinking water at five downstream and one upstream location, surface water at one upstream and one downstream location, and milk at five local dairy farms. Samples are also taken every three days at twenty TLD locations, eight air particulate locations, and eight air iodine locations. Fishes, aquatic sediment, aquatic plant life, chickens, beef, eggs, vegetation, game, and rain water are taken as available.

Surface and drinking water samples continue to show normal tritium and gross beta activities. Low levels of radioiodine were found in two downstream surface water and one downstream drinking water sample. Radioiodine levels in cows milk are remaining low and constant; elevated radioiodine levels were found in goats milk. Air iodine samples continue to show low and relatively constant radioiodine levels.

4/27

W. R. Gillespie for S. M. G.
Steven M. Gertz, PhD
Coordinator - TMINS Emergency Environmental
Sample Collection & Statistical Analysis

run
E-10 4/27
3.7 ± 2 E-10 4/27
withheld 5.5 ± 1.2 E-10
4.9 = 1.1 E-10 4/27

4/23 cooling tower water
13.2
1.8 ± 1.2 E-10 4/23

4/23 ?
4/24

Note: Letter dictated over the telephone by SMG to Med-Ed RS&EE Personnel.

METROPOLITAN EDISON COMPANY Subsidiary of General Public Utilities Corporation

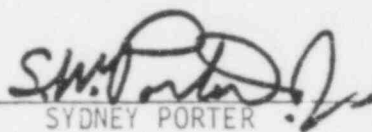
Subject IODINE - 131 IN EAST DIKE AND EAST DIKE
DISCHARGE CHANNEL - UPDATE

Location TMI

Date May 1, 1979

To J. G. HERBEIN

1. Reference is made to:
 - a. Letter from Effluent Assessment Group, April 27, 1979
 - b. Letter from Effluent Assessment Group, April 28, 1979,
subject: Iodine - 131 in East Dike and East Dike
Channel Discharge
2. The Attachment is a summary that tabulates the concentration of ¹³¹I in the East Dike and East Dike Discharge Channel for the period 4/10 thru 4/30/79.
3. It should be noted that starting on 4/24/79 all samples have been taken from the East Dike Discharge Channel.


SYDNEY PORTER

pme

Attach

cc: R. W. Dubiel
J. R. Floyd
L. L. Lawer
Data Reduction
R. Bores, NRC Region I

<u>SAMPLE IDENTIFICATION NUMBER</u>	<u>DATE & TIME SAMPLED</u>	<u>CONCENTRATION (μCi/ml)</u>	<u>FRACTION of (MPC) W</u>
0070 (ED) *	4/10/79 0552	$< 3.0E - 8$ **	< 0.1
0177 (ED)	4/12/79 0500	$< 3.05E - 9$	< 0.01
0228 (ED)	4/12/79 1700	$< 8.85E - 9$	< 0.03
0326 (ED)	4/13/79 1705	$< 3.05E - 8$	< 0.1
0372 (ED)	4/14/79 0500	$< 3.05E - 9$	< 0.01
0457 (ED)	4/14/79 1700	$< 5.12E - 8$	< 0.17
0494 (ED)	4/15/79 0500	$< 3.05E - 8$	< 0.01
0601 (ED)	4/15/79 1700	$7.93E - 8$	0.26
0664 (ED)	4/16/79 0500	$< 4.58E - 8$	< 0.15
0762 (ED)	4/16/79 1700	$< 5.12E - 8$	< 0.171
0829 (ED)	4/17/79 0500	SAMPLE LOST	
0929 (ED)	4/17/79 1700	$1.51E - 7$	0.5
0972 (ED)	4/18/79 0500	$1.85E - 7$	0.62
1094 (ED)	4/18/79 1700	$2E - 7$	0.67
1120 (ED)	4/18/79 2130	$2.01E - 7$	0.67
1148 (ED)	4/19/79 0500	$1.98E - 7$	0.66

*EAST DIKE (ED)

**MINIMUM DETECTABLE ACTIVITY

<u>SAMPLE IDENTIFICATION NUMBER</u>	<u>DATE & TIME SAMPLED</u>	<u>CONCENTRATION (μCi/ml)</u>	<u>FRACTION OF (MPC) W</u>
1160 (ED VALVE LEAK OFF)	4/19/79 0203	1.5E - 7	0.5
1255 (ED)	4/19/79 2049	1.48E - 7	0.49
1267 (ED)	4/19/79 1400	1.5E - 7	0.5
1268 (ED VALVE LEAK OFF)	4/19/79 1400	1.42E-7	0.47
1308 (ED Discharge)	4/19/79 1820	7.32E - 8	0.244
1311 (East Dike Channel Run Off)	4/19/79 1940	1.68E - 7	0.56
1439 (ED)	4/21/79 0500	1.39E - 7	0.46
1531 (ED)	4/21/79 1700	< 4.58E - 8	< 0.15
1574 (ED)	4/22/79 0500	1.4E - 7	0.47
1688 (ED)	4/22/79 1700	SAMPLE LOST	
1744 (ED Valve Leak Off)	4/22/79 1820	1.12E - 7	0.37
1746 (ED)	4/22/79 1825	< 4.58E - 8	< 0.15
1729 (ED)	4/23/79 0500	1.0E - 7	0.33
1854 (ED)	4/23/79 1820	< 3.1E - 8	< 0.10
1880 (ED)	4/24/79 0556	4.6E - 8	0.15
1989 (ED Channel Run Off)	4/24/79	< 3.1E - 8	< 0.10

<u>SAMPLE IDENTIFICATION NUMBER</u>	<u>DATE & TIME SAMPLED</u>	<u>CONCENTRATION (μ Ci/ml)</u>	<u>FRACTION of (MPC) W</u>
2153 (ED)	4/25/79 1700	< 4.6E - 8	< 0.15
2223 (ED)	4/26/79 0547	1.25E - 7	0.42
2313 (ED)	4/26/79 1700	< 4.6E - 8	< 0.15
2338 (ED)	4/27/79 0500	< 4.58E - 8	< 0.15
2466 (ED)	4/27/79 1700	1.2E - 7	0.4
2545 (ED)	4/28/79 0500	< 4.68E - 8	< 0.16
2641 (ED)	4/28/79 1700	< 4.6E - 8	< 0.15
2687 (ED)	4/29/79 0500	< 3.1E - 8	< 0.1
2777 (ED)	4/29/79 1700	6E - 8	0.2
2838 (ED)	4/30/79 0500	< 3.05E - 8	< 0.1
2936 (ED)	4/30/79 1700	< 4.6E - 8	< 0.15

LIQUID DI
 SUMMARY

TANK OR SUMP	START TIME & DATE	STCP TIME & DATE	GALLONS DISCHARGED	I ¹³¹ CONC. (uCi/cc)	TANK OR SUMP FRACTION OF MPC
I WFS	1000 5/7/79	1300 5/8/79	50360	9.3 x 10 ⁻¹¹	.00031
A west	1422 5/7/79	5-8-79 1305	7568	1.7 e ⁻⁵	4.1 Per HP 1621
Unit I sec. neut - tank	0100 5/8/79	5-8-79 1440	53400	1.34 E ⁻²	4.1 Per HP 1621
Unit I West	5/7/79	1140	4100	2.8 E ⁻⁵	4.1 Per HP 1621
Unit I West	0000	5-9-79	81,600	2.4 x 10 ⁻⁸	.101
I Neut TK	1135 5-9-79	1840 5-9-79	235830	2.3 E ⁻⁷	0.76
I WTS	1095 5-9-79	1010 5-11-79	START - 5746100 STOP - 6236150	< 2.85 E ⁻⁸	.095
I WFS	0755 5/10/79	1230 5/10/79	START 305820 STOP 3085020	< 2.85 E ⁻⁸	
Unit 2	0925 5/10/79	1130 5/10/79	26060	4.3 E ⁻⁷	1
Unit 1	5/10/79	5/10/79	18750	4.59 E ⁻⁹	.019
Neut Tank	1030	2215	73326	2.4 E ⁻⁵	4.1 Per HP 1621
A west	5/10/79 1925	5/11/79 0750	5463	< 2.4 E ⁻⁸	.0006
Unit 1 Sec Neut TK	5/11/79 1605	6/11/79 2110	34996		

232 152

TABLE 1. AECB SUMMARY

D. 15, 179

TANK OR SUMP	START TIME & DATE	STOP TIME & DATE	GALLONS DISCHARGED	131 CONC. (M/L/CC)	TANK OF SUMP FRACTION OF AECB
7-1	5/1/79	5/2/79	29,605	4.0 x 10 ⁻⁵	4 Gal out H2O + R
7-2	5/1/79	5/2/79	54,400	3.1 x 10 ⁻⁵	0.24
7-3	5/1/79	5/2/79	27,670	3.1 x 10 ⁻⁵	0.0003
7-4	5/1/79	5/2/79	6,510	2.31 x 10 ⁻⁵	0.1 per HP 1621
7-5	5/1/79	5/2/79	92,000	4.3 x 10 ⁻⁵	0.07
7-6	5/1/79	5/2/79	36,430	3.1 x 10 ⁻⁵	0.0827
7-7	5/1/79	5/2/79	66,200	2.24 x 10 ⁻⁵	0.1 per HP 1621
7-8	5/1/79	5/2/79	6,310	2.20 x 10 ⁻⁵	0.1 per HP 1621
7-9	5/1/79	5/2/79	77,700	6.3 x 10 ⁻⁵	0.002
7-10	5/1/79	5/2/79	94,510	5.07 x 10 ⁻⁵	0.1 per HP 1621
7-11	5/1/79	5/2/79	53,280	0.8 x 10 ⁻⁵	0.002
7-12	5/1/79	5/2/79	53,280	0.8 x 10 ⁻⁵	0.002

Water

WATER SAMPLE SURVEY DATA

DATE: 6-3-79

LOCATION: 1 WFS

TYPE OF VEGETATION:

VOLUME OR AREA COLLECTED: 1000 ml

TIME OF COLLECTION: 1420 A.M. P.M.

WIND DIRECTION: SPEED:

NRC SAMPLE NUMBER: 1815

RESULTS:

$^{131}\text{I} < 6.3 \times 10^{-7} \text{ } \mu\text{Ci/ml}$

232 156

Water

WATER SAMPLE SURVEY DATA

DATE: 5-31-79

LOCATION: IWFS eff pt #104

TYPE OF VEGETATION:

VOLUME OR AREA COLLECTED: 500 ml ramelli

TIME OF COLLECTION: 1200 A.M. P.M.

WIND DIRECTION: SPEED:

NRC SAMPLE NUMBER: 1758

RESULTS:

131 I < 2 E - 7

Water

VEGETATION SAMPLE SURVEY DATA

DATE: 5-31-77

LOCATION: IWFS

TYPE OF VEGETATION:

VOLUME OR AREA COLLECTED:

TIME OF COLLECTION: 1620

A.M.

P.M.

WIND DIRECTION: 1

SPEED:

NRC SAMPLE NUMBER: 1777

RESULTS:

17%
 $I < 2E-7 \mu\text{Ci/ml}$

232 158

Water

VEGETATION SAMPLE SURVEY DATA

DATE: 5-30-79

LOCATION: IWTS 107

TYPE OF VEGETATION:

VOLUME OR AREA COLLECTED:

TIME OF COLLECTION: 1345 A.M. P.M.

WIND DIRECTION: SPEED:

NRC SAMPLE NUMBER: 1756

RESULTS:

$^{131}I < 2E^{-7} \mu Ci/ml$

Water

WATER SAMPLE SURVEY DATA

DATE: 5-31-79

LOCATION: 1 WFS off pt #109

~~TYPE OF VEGETATION:~~

~~VOLUME OR AREA COLLECTED:~~

TIME OF COLLECTION: 1200

A.M.

P.M.

WIND DIRECTION:

SPEED:

NRC SAMPLE NUMBER: 1758

RESULTS:

$^{131}\text{I} < 2\text{E}-7 \mu\text{C}/\text{ml}$

water

SAMPLE SURVEY DATA

DATE: 5-30-79

LOCATION: I WTS off pt 107

TIME ON: 0800

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1757

ANALYSIS FINDINGS:

$^{131}\text{I} < 2\text{E}-7 \mu\text{Ci/ml}$

Water

SAMPLE SURVEY DATA

DATE: 5-29-79

LOCATION: 1WFS 104

TIME ON: 0930

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1753

ANALYSIS FINDINGS: 121 $I < 2E-9$ $\mu\text{Ci}/\text{ml}$

Water

SAMPLE SURVEY DATA

DATE: 5-29-79

LOCATION: I WTS 107

TIME ON:

TIME OFF: 0930

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1755

ANALYSIS FINDINGS:

131
I < 2E-7

232 163

Water

SAMPLE SURVEY DATA

DATE: 5-29-79

LOCATION: J WTS AH# 107

TIME ON: 0415

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1754

ANALYSIS FINDINGS:

131 IC2E-9 ug/ml

~~IWTS~~
AIR SAMPLE SURVEY DATA

DATE: 5/28/79

LOCATION: IWTS Point 67

TIME ON: 1245

~~TIME OFF:~~

~~FLOW RATE:~~

TOTAL VOLUME: 500mc (from 1 gal)

NRC SAMPLE NUMBER: 1707

ANALYSIS FINDINGS: ¹³¹I < 2E-7 $\mu\text{Ci}/\text{ml}$

232 165

SAMPLE SURVEY DATA

DATE:

5/16/79

LOCATION:

Unit 1 B1 cooling tower basin

TIME ON:

1543

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1491

ANALYSIS FINDINGS:

$\bar{I}^{131} = 3.9 \pm 4.9 \text{ } \mu\text{Ci/l}$

232 166

RM-L-7

AIR SAMPLE SURVEY DATA

DATE:

5/15/79

LOCATION:

TIME ON:

0100, 0200, 0300, 0400 composite

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1462

ANALYSIS FINDINGS:

$\bar{I}^{131} < 1.4E-7 \mu Ci/m^3$

2321167

WATER

AIR SAMPLE SURVEY DATA

DATE: 5/26/79

LOCATION: TM-EW-105-1 Composite RM 6-7

TIME ON: 1300 - 125 To 1200 (5/26)

~~TIME OFF:~~

~~FLOW RATE:~~

TOTAL VOLUME: 6 liters

NRC SAMPLE NUMBER: /

ANALYSIS FINDINGS:

$$^{131}\text{I} = 3 \pm 6 \text{ } \frac{\text{pCi}}{\text{l}}$$

232 168

WATER
AIR SAMPLE SURVEY DATA

DATE: 5/25/79 ~~Pr~~ Cont'd 5/26/79

LOCATION: IWF S Pr 104

TIME ON: Not specified

~~TIME OFF:~~

~~FLOW RATE:~~

TOTAL VOLUME: 500 ml out of 1 gallon

NRC SAMPLE NUMBER: 1676

ANALYSIS FINDINGS: $^{131}\text{I} < 2 \text{ E} - 7 \text{ } \mu\text{Ci}/\text{ml}$

WATBA
AIR SAMPLE SURVEY DATA

DATE: 5/24/79 2100 Counted 5/26

LOCATION: IWTB Point 47

~~TIME ON:~~

~~TIME OFF:~~

~~FLOW RATE:~~

TOTAL VOLUME: 500ml out of ~~1 liter~~ 1 gallon

NRC SAMPLE NUMBER: 1675

ANALYSIS FINDINGS: ¹³¹I L 26-7 $\mu\text{g}/\text{ml}$

232 170

DWTS

AIR SAMPLE SURVEY DATA

DATE: 5/23/79

LOCATION: EWTS Point 107

TIME ON: 1600

TIME OFF:

FLOW RATE: /

TOTAL VOLUME: /

NRC SAMPLE NUMBER: 1643

ANALYSIS FINDINGS: $^{131}\text{I} < 26 - 7 \frac{\mu\text{Ci}}{\text{m}^3}$

232 171

WATER

~~AIR~~ SAMPLE SURVEY DATA

DATE: 5/22

LOCATION: #107 - FWTS

TIME ON: 0900

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 500 ml.

NRC SAMPLE NUMBER: 1623

ANALYSIS FINDINGS: I-131 ← 2E-7 μCi
ml.

232 172

WATER
~~AIR~~ SAMPLE SURVEY DATA

DATE: 5/22

LOCATION: # 107 - IWTS

TIME ON: 0400

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 500 ml.

NRC SAMPLE NUMBER: 1625

ANALYSIS FINDINGS: I-131 \leq 2E-7 $\frac{\mu\text{Ci}}{\text{ml}}$

232 173

7-53

AIR SAMPLE SURVEY DATA

Sample taken -

DATE: 5/21/79

LOCATION: 4107

TIME ON: 1200

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 530.00 l/min (60.00 min) -

NRC SAMPLE NUMBER: 4021

ANALYSIS FINDINGS: 187K 20-7 1/121

Lu TS

AIR SAMPLE SURVEY DATA

Sample taken

DATE: *5/21/74*

LOCATION: *Lu TS #107*

TIME ON: *100*

TIME OFF:

FLOW RATE:

TOTAL VOLUME: *500 ml (out of 1500)*

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

13' I < 2 E - 2 pc/ml

232 175

Water

~~W~~ SAMPLE SURVEY DATA

DATE: 5-18-79

LOCATION: IWTS

TIME ON: 1033 by L. Cohen

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 500 ml

NRC SAMPLE NUMBER: 1553

ANALYSIS FINDINGS:

¹³¹I < 1.6 E-7 uCi/ml

232 176

WATER
~~III~~ SAMPLE SURVEY DATA

DATE: 5/18

LOCATION: #107- IWTS

TIME ON: 0130

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 500 ml.

NRC SAMPLE NUMBER: 1624

ANALYSIS FINDINGS: I-131 $2E-7 \frac{\mu\text{C}}{\text{ml}}$

232 177

Water

~~WTS~~ SAMPLE SURVEY DATA

DATE: 5-17-79

LOCATION: IWTS SP #107

TIME ON:

TIME OFF: 2100

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1522

ANALYSIS FINDINGS:

¹³¹I < 1.4E-7 uCi/ml

232 178

WATER

AIR SAMPLE SURVEY DATA

DATE: 5-17

LOCATION: 107- IWTS

TIME ON: 1600

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 500ml.

NRC SAMPLE NUMBER: 1626

ANALYSIS FINDINGS: I-131L 2E-7 $\frac{\mu\text{Ci}}{\text{ml}}$

232 179

IWTS

NRC SAMPLE SURVEY DATA

DATE:

5/17/79

LOCATION:

TIME ON:

0000 hrs

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1502

ANALYSIS FINDINGS:

$I^{131} < 1.4E-7 \mu Ci/ml$

232 180

IWTS

WATER SAMPLE SURVEY DATA

DATE:

5-16-79

LOCATION:

IWTS

TIME ON:

TIME OFF:

1200 hrs

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1503

ANALYSIS FINDINGS:

I¹³¹ < 1.4E-7 μ Ci/l

232 181

IATS
AIR-SAMPLE SURVEY DATA

Sample taken
DATE: 5/15/79

LOCATION: #107 (tent)

TIME ON: 0800

~~TIME OFF:~~

FLOW RATE:

TOTAL VOLUME: 500 ml. (from 1 gallon)

NRC SAMPLE NUMBER: 1027

ANALYSIS FINDINGS: 151 I c 2 E-7 cc/ml

AIR SAMPLE SURVEY DATA

DATE: 5-14-79

LOCATION: 1WFS

TIME ON: 2000

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 500 ml

NRC SAMPLE NUMBER: 1452

ANALYSIS FINDINGS:

$^{131}\text{I} < 1.4 \text{E-7} \text{ mCi/ml}$

232 1,83

IWFS

SAMPLE SURVEY DATA

DATE: 5/14/79

LOCATION:

TIME ON: 1400

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1461

ANALYSIS FINDINGS: $I^{131} < 1.4E-7 \mu\text{Ci}/\mu\text{D}$

232 184

AIR SAMPLE SURVEY DATA

DATE:

5-13-79

LOCATION:

1 WTS SP 107

TIME ON:

1000

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

~~100 ml~~ 500 ml

NRC SAMPLE NUMBER:

ANALYSIS FINDINGS:

¹³¹I 2 1.4 E-7 ml/ml

232 185

IWTE

AIR SAMPLE SURVEY DATA

DATE: 5/23/79

LOCATION: Pant 107

TIME ON: 400

~~TIME OFF:~~

~~FLOW RATE:~~

TOTAL VOLUME: 580 ml

NRC SAMPLE NUMBER: 1632

ANALYSIS FINDINGS:

¹³¹I
5 C 2 G - 7 $\mu\text{Ci}/\text{ml}$

232 186

DWTS Water

AIR SAMPLE SURVEY DATA

DATE: 5/23/79

LOCATION: DWTS

TIME ON: 1200

~~TIME OFF:~~

~~FLOW RATE:~~

TOTAL VOLUME: 530 ml out of 1 gallon

NRC SAMPLE NUMBER: 1642

ANALYSIS FINDINGS: ¹³¹I $< 2E-7$ $\mu\text{Ci}/\text{ml}$

232 187

DITS WATER

AIR SAMPLE SURVEY DATA

Sample taken

DATE: 5/21/29

LOCATION: Rt 107 #633

~~TIME ON: 1800~~

~~TIME OFF:~~

~~FLOW RATE:~~

TOTAL VOLUME: 500ml (out of 1gal)

NRC SAMPLE NUMBER: 1632

ANALYSIS FINDINGS: 18 I c 2 G-7 per 7 ml

Rad waste

(Confirmatory
measurements)

SAMPLE SURVEY DATA

DATE: 5/20/79

LOCATION: WECST "A"

TIME ON: 1300

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 1000 ml

NRC SAMPLE NUMBER: 1573

ANALYSIS FINDINGS: La-140 = $5.9 E^{-5} \mu\text{Ci/ml} \pm 5\%$

I 131 = $4.0 E^{-6} \mu\text{Ci/ml} \pm 16\%$

Ru 103 = $2.5 E^{-6} \mu\text{Ci/ml} \pm 27\%$

Co 58 = $4.3 E^{-5} \mu\text{Ci/ml} \pm 3\%$

Co 60 = $7.1 E^{-6} \mu\text{Ci/ml} \pm 9\%$

Cs 134 = $1.1 E^{-5} \mu\text{Ci/ml} \pm 7\%$

Cs 137 = $4.6 E^{-5} \mu\text{Ci/ml} \pm 3\%$

Ag 110m = $1.9 E^{-5} \mu\text{Ci/ml} \pm 5\%$

232 189

Water

AIR SAMPLE SURVEY DATA

DATE: 5-6-79

LOCATION: 1WTS SP 107

TIME ON: 0400

TIME OFF:

FLOW RATE:

TOTAL VOLUME: 500 ml

NRC SAMPLE NUMBER: 1272

ANALYSIS FINDINGS:

$^{131}\text{I} < 8.1\text{E}-8 \mu\text{Ci/ml}$

232 190

IWTS

AIR SAMPLE SURVEY DATA

DATE:

5/5/79

LOCATION:

IWTS

TIME ON:

1600 hrs

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1261

ANALYSIS FINDINGS:

$I^{131} < 2.6 E^{-7} \text{M Ci/l}$

ewater

SAMPLE SURVEY DATA

DATE: 5-4-79

LOCATION: IWTS

TIME ON:

1600 hrs

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1242

ANALYSIS FINDINGS: $< 2.6 \times 10^{-7}$ $\mu\text{Ci}/\text{ml}$ I¹³¹

WATER

AIR SAMPLE SURVEY DATA

DATE:

5-4-79

LOCATION:

1 WFS

TIME ON:

1200

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

500 ml

NRC SAMPLE NUMBER:

1231

ANALYSIS FINDINGS:

$^{131}\text{I} < 2.6\text{E}-7 \text{ mCi/ml}$

Water

SAMPLE SURVEY DATA

DATE: 5-4-79

LOCATION: IWTS

~~TIME ON:~~

0001 hrs

~~TIME OFF:~~

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1223

ANALYSIS FINDINGS:

< 2.6 E-7 MG / ml I¹³¹

232 194

IWTS

SAMPLE SURVEY DATA

DATE: 5-3-79

LOCATION: IWTS

TIME ~~ON~~:

1600

~~TIME OFF~~

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1218

ANALYSIS FINDINGS: $< 2.6E-7 \mu\text{Ci}/\text{ml}$ I¹³¹

232 195

L.IQUID RADW. T. TRANSFER LOG

P.5

FROM → TO ↓

DATE	UNIT	TIME START	TIME FINISH	FROM TANK	SAMPLE NO. INITIAL LIQ. LEVEL	FINAL LIQ. LEVEL	VOLUME TRANSFERRED GAL.	VIA PUMP	TANK	UNIT	INITIAL LIQUID LEVEL	FINAL LIQUID LEVEL	VOLUME RECEIVED GAL.
5-1-79	1	1210	1620	HAL #1			1,000	C.G.	WECS T-11A	1	0.1	12'	1,000
5-1-79	1	1210	1530	Newt Stig. T-10			2,000	C.G.	Hal #2	1			2,000
5-1-79	1	1800	2200	WDL T-9	2702 2245	0.5	2200	C.G.	Hal #2	C.G.			2,200
5/1/79	CG	2015		Halib #2	17,000 gal				Halib #1				17,000
5/2/79	1		0400	WECS T-11B			~ 7,000		RIVER				7,000
5/2/79		1700	2315	WECS WDL-11A	3134 11.6'	0.4	6800		RIVER	1	~ 12'		6800
5/2/79	1	2000	2355	MUST WDL T-2	2362 3.9'	0.5	4150		WDL T-9	1	0.2	3.9'	1650
5/3/79	1	0800	0945	Newt Fuel WDL T-9	2362 3.9'	0	1700		WDL T-10	1	0.5	5.9'	2500
5/3/79	1	0945		Newt Fuel WDL T-9	2362 3.9'				Cap-Gum Halib #2	CG			~ 1700
5/3/79	1	1015	1420	Newt Stig WDL T-10	3,9 2362	2.0	2700		Cap-Gum Halib #2	CG			2700
5/3/79	CG	0800	1045	Cap Gum Halib #1	6.0 3286		6400		WECS T-11B	1	0.6	16.7	~ 6400
5/3/79	U-1	1511	2130	U-1 AUX SUMP	# 3321 61% 4.75			C.G.	WECS T-11B	1			~ 5400
5/3/79	U-2	2200	21	U-2 CDT 11B	3184 4.75				WECS T-9	U-1			
5/3/79	CG	1400	1930	Halib #1			~ 600 gal		WECS T-11A	U-1	0.4	232	196
5/4/79		0900		WECS T-11B	3393 11.6'				RIVER	1			

POOR ORIGINAL

232
196

SAMPLE ANALYSIS RESULTS

RADIATION
MANAGEMENT #3445
CORPORATION 5/4/10

SAMPLE ID RML-7

SAMPLE TYPE liquid

VOLUME 3000 ml TIME: 0400 DATE 5/4/10 OF SAMPLING

TIME OF ANALYSIS: DATE 5/4/10 TIME:

GEOMETRY Thannelli Beaker

COUNTING TIME 1000 sec

ANALYST RPL

REFERENCE SPECORA: TMI 2213

ORA 3445

RESULT

<u>NUCLIDE</u>	<u>ACTIVITY</u> ($\mu\text{Ci/cc}$)	<u>ERROR ESTIMATE</u>
I-131	MDL $< 3.05 \text{ E-}8$	

232 197

SAMPLE ANALYSIS RESULTS

RADIATION
MANAGEMENT
CORPORATION

3483
5/4 1700

SAMPLE ID RMC-7

SAMPLE TYPE liquid

VOLUME 3000 ml TIME: 1200 DATE: 5/4/79 OF SAMPLING

TIME OF ANALYSIS: DATE: 5/4/79 TIME:

GEOMETRY Mainelli Beaker

COUNTING TIME 1000 sec

ANALYST RPL

REFERENCE SPECTRA: TMI 2227

OBA# 3483

RESULT

<u>NUCLIDE</u>	<u>ACTIVITY</u> ($\mu\text{Ci/cc}$)	<u>ERROR ESTIMATE</u>
<u>I 131</u>	<u>LMOL</u>	<u>$3.05 \text{ E}-8$</u>

232 198

RADIATION MANAGEMENT CORPORATION #3513
5/4 1610

SAMPLE ANALYSIS RESULTS

SAMPLE ID | WTS (107)

SAMPLE TYPE liquid

VOLUME 3000 ml TIME: 0600 DATE 5/4/79 OF SAMPLING

TIME OF ANALYSIS: DATE: 5/4/79 TIME:

GEOMETRY γ Naikelli Beaker

COUNTING TIME 1000 sec

ANALYST RPL

REFERENCE SPECTRA: TMA ⁷⁰²⁴
OBA-3513

RESULT

<u>NUCLIDE</u>	<u>ACTIVITY</u> ($\mu\text{Ci/cc}$)	<u>ERROR ESTIMATE</u>
I-131	5E-8	70%

RADIATION
MANAGEMENT
CORPORATION

#3517
5/4/79

SAMPLE ANALYSIS RESULTS

SAMPLE ID 1 WTS Discharge Point 107

SAMPLE TYPE liquid

VOLUME 3000 ml TIME: 0800 DATE: 5/4/79 OF SAMPLING

TIME OF ANALYSIS: DATE: 5/4/79 TIME:

GEOMETRY Mainelli Beaker

COUNTING TIME 1000 sec

ANALYST RM

REFERENCE SPECTRA: TMI 2225

OBA 35.7

RESULT

NUCLIDE

ACTIVITY ($\mu\text{Ci/cc}$)

ERROR ESTIMATE

I-131

MDL < 3.05E-8

232 200

MI ON SITE WORK

#3542
5/4 1730

Sampled at 550 5/ 4/ 79
Counted at 1637 5/ 4/ 79

Time = 2000 seconds Decay Time = 647 minutes

Sample Volume - ¹/₁₀ milliliters

Chnl. No.	Energy	FWHM	Pl. Area	Std. Dev.
2346.46	1173.47	4.43	62.20	8.71
1620.65	810.75	3.09	775.00	28.03
1590.83	795.85	2.76	230.00	17.20
1322.16	661.58	2.84	842.20	21.72
1203.04	604.55	2.82	372.40	26.97
1020.54	510.85	4.94	452.70	28.01

Efficiency Table - 8

Nuclide	Obs. E	Lib. E	Gamma/90	uCi/90
Co-58	810.75	810.60	5.524E 01	1.533E-03
Co-60	1173.47	1173.21	6.883E 00	1.891E-04 ← B. Legend
Sb-124	604.55	602.71	1.964E 01	5.340E-04
Cs-134	604.55	604.73	1.881E 01	5.275E-04
Cs-134	795.85	795.84	1.590E 01	4.964E-04
Cs-137	661.58	661.64	1.924E 01	6.149E-04

PEAK HAS BEEN PREVIOUSLY MATCHED

UNIDENTIFIED PEAKS

ENERGY GAMMAS/90
at Count Time

510.85 1.848E 02

POOR ORIGINAL

SUMMARY

NUCLID	uCi/90	Std. Dev.
Co-58	1.533E-03-2	1.437E-04
Cs-134	5.128E-04-3	8.198E-05
Cs-137	6.149E-04-3	6.573E-05

232 201

#3141 UNIT 2A HP CONTROL POINT CHARCOAL

#3141
5/4 1500

SAMPLE TIME
1500 5 1 79

COUNT TIME
120 5 4 79

-----PRELIMINARY PEAK DATA-----

COUNT TIME = 30.0000 MINUTES
MINUTES
SAMPLE VOLUME = 56000 MILLILITERS
DECAY TIME = 3690

CENTROID CHANNEL	PEAK ENERGY (KEV)	FWHM (KEV)	PEAK AREA (COUNTS)	+ OR - 1 SIG
169.70	80.6700	2.2480	611.0	32.00
327.70	164.1214	1.6700	71.0	15.00
703.26	351.7535	2.2700	225.4	10.7
728.82	364.9560	1.8800	42.0	17.7
1024.06	661.9898	1.9100	42.0	9.5

-----PRELIMINARY PEAK IDENTIFICATION-----

EFFICIENCY TABLE USED = 43

NUCLIDE	OBSERVED ENERGY	LIBRARY ENERGY	GAMMAS PER MIN.	UCI PER ML.
<u>I-131</u>	364.56	364.49	236.70	2.289E-10
XE-131M	164.12	163.97	89.75	1.179E-09
XE-133	80.67	81.00	369.71	8.377E-10
<u>CS-137</u>	661.99	661.64	67.07	6.164E-11
FR-226	351.70	351.90	28.97	5.710E-11
U-235	164.12	165.00	25.57	4.056E-10

Background Corrected

1.2 x 10⁻¹⁰

2.6 x 10⁻¹¹

* PEAK HAS BEEN PREVIOUSLY MATCHED
ALL PEAKS MATCHED WITH LIBRARY VALUES

-----FINAL SUMMARY OF NUCLIDES OBSERVED-----

DATE: 5/4/79

NUCLIDE	WEIGHTED MEAN ACTIVITY	+ OR - 1 SIGMA
XE-131M	1.179E-09	3.965E-10
XE-133	8.377E-10	1.110E-10
CS-137	6.164E-11	1.965E-11

-----MINIMUM DETECTABLE ACTIVITIES-----
* BASIS: 95% C.L. AT COUNT TIME *

232 202

NUCLIDE	ENERGY (KEV)	ABS. EFF.	BKGD	MDA (UCI/ML)
CP-51	3.201E+02	4.159E-02	9.800E+00	1.138E-10
MH-54	8.345E+02	1.477E-02	1.000E+02	2.094E-11
CO-57	1.221E+02	9.064E-02	8.700E+01	8.765E-12
CO-58	6.166E+02	1.526E-02	9.900E+01	2.047E-11
FE-59	1.099E+03	1.084E-02	5.640E+01	3.478E-11
CO-60	1.173E+03	1.013E-02	1.000E+02	2.778E-11
FR-95	7.567E+02	1.647E-02	5.460E+01	3.537E-11
NE-95	7.859E+02	1.626E-02	9.900E+01	1.234E-11
NA-24	1.367E+03	8.874E-03	1.000E+02	2.596E-11
KR-85	5.140E+02	2.438E-02	4.300E+01	3.830E-09
I-131	3.645E+02	3.515E-02	8.200E+01	3.950E-11
I-130	5.299E+02	2.376E-02	8.900E+01	1.180E-11
CS-134	6.847E+02	2.899E-02	9.800E+01	1.919E-11
CS-136	8.185E+02	1.518E-02	1.000E+02	1.315E-11
MO-99	1.493E+02	8.985E-02	9.500E+01	7.828E-12
CE-141	1.454E+02	6.900E-02	4.800E+01	1.361E-11

POOR ORIGINAL

3141 HP CONTROL RT PART

#3141
514.1500

SAMPLE TIME
1000 5 1 79

COUNT TIME
925 5 4 79

-----PRELIMINARY PEAK DATA-----

COUNT TIME = 35.3333 MINUTES
MINUTES
SAMPLE VOLUME = 56600 MILLILITERS

DECRV TIME = 3815

CENTROID CHANNEL	PEAK ENERGY (KEV)	FWHM (KEV)	PEAK AREA (COUNTS)	+ OR - (1 SIG)
147.01	74.2337	1.3526	43.000	19.720
148.990	80.3114	1.0530	56.000	17.720
150.980	86.4514	1.4671	101.000	15.4
152.970	861.9498	1.9730	10.000	760.0
154.960	1460.8447	2.2524	25.000	71.1

+ PRELIMINARY PEAK IDENTIFICATION -

EFFICIENCY TABLE USED = 41

NUCLIDE	OBSERVED ENERGY	LIBRARY ENERGY	GAMMAS PER MIN.	%I PER ML.
K-40	1460.84	1460.00	70.01	5.048E-10
I-131	364.57	364.49	61.85	5.991E-11
CE-137	80.31	81.00	10.30	4.146E-11
CS-137	661.95	661.84	30.56	2.818E-11

UNIDENTIFIED PEAKS

ENERGY GAMMAS MIN.
 AT COUNT TIME

74.23 **

** PEAK IS OUTSIDE CALIBRATED REGION

+ FINAL SUMMARY OF NUCLIDES OBSERVED -

DATE: 5/ 4/ 79

NUCLIDE	WEIGHTED MEAN ACTIVITY	+ OR - 1 SIGMA
K-40	5.048E-10	1.192E-10
CE-137	4.146E-11	1.291E-11
CS-137	2.818E-11	7.130E-12

* MINIMUM DETECTABLE ACTIVITIES *
* BASIS: 99% C.L. AT COUNT TIME *

232 203

NUCLIDE	ENERGY (KEV)	ABS.EFF.	BR(%)	MDA (UCI/ML)
CR-51	0.201E+02	8.421E-02	9.500E+00	5.035E-11
MN-54	0.343E+02	2.817E-02	1.000E+02	8.445E-12
CO-57	1.221E+02	1.796E-01	8.700E+01	3.415E-12
CO-58	8.10E+01	2.821E-02	9.900E+01	1.130E-11
FE-59	1.099E+02	2.840E-02	5.64E+01	1.530E-11
CO-60	1.173E+02	1.902E-02	1.000E+02	1.251E-11
FE-65	7.568E+01	3.176E-02	5.400E+01	1.371E-11
NI-63	7.535E+01	3.132E-02	3.900E+01	5.372E-12
NA-24	1.369E+02	1.622E-02	1.000E+02	1.467E-12
KR-85	5.140E+01	5.100E-02	4.300E+01	1.752E-09
I-131	3.647E+01	7.431E-02	8.200E+01	1.488E-11
I-133	5.295E+01	4.920E-02	8.900E+01	6.857E-12
CS-134	6.047E+01	4.192E-02	9.800E+01	9.771E-12
CS-136	8.185E+01	2.856E-02	1.000E+02	5.770E-12
MO-99	1.403E+02	1.708E-01	9.300E+01	3.409E-12
CE-141	1.451E+02	1.675E-01	4.800E+01	6.575E-12

POOR ORIGINAL

TRI ON SITE WORK

Sample No. 3740
 Count No. 1514

#3518
 5/4/1610

Count Time = 5000 seconds

Dead Time = 100 minutes

Sample Volume = 10 milliliters

Chnl. No.	Energy	FEHT	Net Area	Std. Dev.
100	110.00	4.10	40.40	1.0
101	110.00	4.10	40.40	1.0
102	110.00	4.10	40.40	1.0
103	110.00	4.10	40.40	1.0
104	110.00	4.10	40.40	1.0
105	110.00	4.10	40.40	1.0
106	110.00	4.10	40.40	1.0
107	110.00	4.10	40.40	1.0
108	110.00	4.10	40.40	1.0
109	110.00	4.10	40.40	1.0
110	110.00	4.10	40.40	1.0
111	110.00	4.10	40.40	1.0
112	110.00	4.10	40.40	1.0
113	110.00	4.10	40.40	1.0
114	110.00	4.10	40.40	1.0
115	110.00	4.10	40.40	1.0
116	110.00	4.10	40.40	1.0
117	110.00	4.10	40.40	1.0
118	110.00	4.10	40.40	1.0
119	110.00	4.10	40.40	1.0
120	110.00	4.10	40.40	1.0
121	110.00	4.10	40.40	1.0
122	110.00	4.10	40.40	1.0
123	110.00	4.10	40.40	1.0
124	110.00	4.10	40.40	1.0
125	110.00	4.10	40.40	1.0

Efficiency Table - 5

Nuclide	Obs. E	Lib. E	Geom. e	Adj. e
✓Mn-54	924.79	834.23	9.001E-01	1.000E-01
✓Co-57	121.82	111.82	7.522E-00	1.000E-01
✓Co-58	910.74	810.74	7.403E-01	2.077E-01
Co-60	1171.50	1171.50	5.246E-01	1.737E-01
✓Co-60	1002.56	1002.47	6.210E-01	1.709E-01
<i>Co-60</i>	121.82	101.18	7.522E-00	1.121E-01
✓Nb-95	765.88	765.79	2.377E-01	6.597E-04
Re-110m	655.48	655.74	5.447E-01	1.505E-01
Re-110m	677.79	677.61	1.550E-01	1.705E-01
Re-110m	705.50	705.61	0.110E-01	9.244E-01
✓Re-110m	864.64	864.67	1.267E-01	6.000E-01
Re-110m	937.44	937.48	7.403E-01	4.000E-01
Re-110m	1084.09	1084.56	4.604E-01	4.000E-01
Re-110m	1505.00	1504.96	2.169E-01	4.000E-01
✓Sb-124	604.64	602.71	2.241E-02	6.100E-03
I-130	705.50	705.65	6.689E-01	1.100E-01
I-134	677.79	677.61	1.640E-00	5.071E-05
I-134	834.64	834.10	1.492E-10	5.211E-05
✓Cs-134	569.32	569.35	4.016E-01	7.000E-03
✓Cs-134	604.64	604.79	0.018E-02	6.210E-03
Cs-134	795.83	795.94	1.963E-02	6.066E-03
✓Cs-137	661.67	661.64	2.748E-02	6.799E-03
Cs-144	102.09	103.50	4.550E-00	1.166E-01
<i>Cs-144</i>	102.09	100.50	4.640E-00	1.090E-01
<i>Cs-144</i>	569.32	569.60	4.012E-01	1.125E-03

*FEHT HAS BEEN PREVIOUSLY MATCHED

POOR ORIGINAL

232 205

RADIATION

MANAGEMENT #3545
CORPORATION 5/4 2230

SAMPLE ANALYSIS RESULTS

SAMPLE ID East Dike

SAMPLE TYPE liquid

VOLUME 3000 ml TIME: 1700 DATE: 5/4/79 OF SAMPLING

TIME OF ANALYSIS: DATE: 5/4/79 TIME:

GEOMETRY Mainelli Beaker

COUNTING TIME 1000 sec

ANALYST RPL

REFERENCE SPECTRA: TMI 2236

GBA 3545

RESULT

NUCLIDE

ACTIVITY ($\mu\text{Ci/cc}$)

ERROR ESTIMATE

I-137

~~6.6E-8~~ 6.6%

MDL $< 3.05 \text{E}-8$

232 206

23 RUY BLDG 305' CHAR

#3223
5/4 22:30

SAMPLE TIME
2051 5/ 1/ 79

COUNT TIME
1820 5/ 4/ 79

-----PRELIMINARY PEAK DATA-----

UNT TIME = 16.6666 MINUTES DECAY TIME = 4169

UTES
AMPLE VOLUME = 1130000 MILLILITERS

ATROID ANHEL	PEAK ENERGY(KEV)	FWHM (KEV)	PEAK AREA (COUNTS)	+ OR - (1 SIG)
160.56	80.6012	2.2403	11500.6	126.4
227.19	163.8671	1.0930	1339.0	65.5
368.42	284.4036	1.9146	1706.1	50.7
728.84	364.5635	1.5708	19430.3	142.3
503.32	503.2192	1.5848	57.8	13.0
637.57	637.2602	1.5109	887.2	30.7
723.30	723.0715	1.6405	202.8	15.0

* PRELIMINARY PEAK IDENTIFICATION *

EFFICIENCY TABLE USED = 41

NUCLIDE	OBSERVED ENERGY	LIBRARY ENERGY	GAMMAS PER MIN.	UCI PER ML.
ZR-95	723.07	724.18	373.35	3.461E-10
SB-124	723.07*	722.76	374.32	1.408E-09
I-131	284.40	284.31	1405.00	1.037E-08
I-131	364.56	364.49	20144.51	9.793E-09
I-131	637.26	637.01	1738.35	1.019E-08
I-131	723.07*	722.92	464.67	1.158E-08
NE-131M	163.87	163.97	618.41	1.233E-08
NE-133	80.60	81.00	7631.43	8.692E-09
U-235	163.87*	165.00	521.54	4.158E-09

232 207

* PEAK HAS BEEN PREVIOUSLY MATCHED

 UNIDENTIFIED PEAKS

ENERGY GAMMAS/MIN.
 AT COUNT TIME

503.22 66.32

 * FINAL SUMMARY OF NUCLIDES OBSERVED *

DATE: 5/ 4/ 79

NUCLIDE	WEIGHTED MEAN ACTIVITY	+ OR - 1 SIGMA
I-131	9.884E-09	1.648E-09
XE-131M	1.233E-08	1.616E-09
XE-133	8.692E-09	1.062E-09

 * MINIMUM DETECTABLE ACTIVITIES *
 * BASIS: 99% C.L. AT COUNT TIME *

NUCLIDE	ENERGY (KEV)	ABS.EFF.	BR(%)	MDA (UCI/NL)
CR-51	3.201E+02	8.421E-02	9.800E+00	1.199E-10
MN-54	8.348E+02	2.817E-02	1.000E+02	4.451E-12
CO-57	1.221E+02	1.796E-01	8.700E+01	1.192E-11
CO-58	8.106E+02	2.921E-02	9.900E+01	6.376E-12
FE-59	1.099E+03	2.043E-02	5.640E+01	1.088E-11
CO-60	1.173E+03	1.902E-02	1.000E+02	1.124E-11
ZR-95	7.567E+02	3.178E-02	5.460E+01	8.541E-12
NB-95	7.658E+02	3.132E-02	9.900E+01	5.400E-12
NA-24	1.369E+03	1.622E-02	1.000E+02	9.138E-12
KR-85	5.140E+02	5.100E-02	4.300E-01	1.960E-09
I-133	5.299E+02	4.920E-02	8.900E+01	8.575E-12
CS-134	6.047E+02	4.192E-02	9.800E+01	8.585E-12
CS-136	8.185E+02	2.886E-02	1.000E+02	5.801E-12
CS-137	6.616E+02	3.753E-02	8.600E+01	9.634E-12
MO-99	1.403E+02	1.708E-01	9.500E+01	1.185E-11
CE-141	1.454E+02	1.675E-01	4.800E+01	2.368E-11

232 208

323 AUX BLDG 305' PART

#3223

SAMPLE TIME
2051 5/ 1/ 79

COUNT TIME
1922 5/ 4/ 79

-----PRELIMINARY PEAK DATA-----

COUNT TIME = 16.6666 MINUTES DECAY TIME = 4231 MINUTES
SAMPLE VOLUME = 1130000 MILLILITERS

CHANNEL	PEAK ENERGY (KEV)	FWHM (KEV)	PEAK AREA (COUNTS)	+ OR - (1 SIG)
159.17	79.9072	1.7149	703.2	48.8
568.42	284.4071	1.2221	1197.8	43.2
728.92	364.6064	1.6089	14473.7	122.7
974.13	487.1322	1.8949	78.4	13.7
1.11	537.5926	2.3985	38.0	10.5
4.40	605.1933	1.4634	30.4	7.0
374.62	637.2852	1.5699	655.0	25.9
324.10	662.0097	1.6071	89.8	12.0
446.93	723.3863	1.9930	154.0	10.5
592.62	796.1057	3.0568	17.9	6.0
927.26	1463.088	2.9346	7.1	7.9

* PRELIMINARY PEAK IDENTIFICATION *

EFFICIENCY TABLE USED = 41

NUCLIDE	OBSERVED ENERGY	LIBRARY ENERGY	GAMMAS PER MIN.	UCI PER ML.
GA-72	1463.08	1464.00	903.71	9.736E-09
ZR-95	723.39	724.18	283.79	2.631E-10
SB-124	723.39*	722.76	284.54	1.070E-09
I-131	284.41	284.31	990.14	7.309E-09
I-131	364.61	364.49	15063.25	7.323E-09
I-131	637.29	637.01	1288.21	7.552E-09
I-131	723.39*	722.92	354.36	8.829E-09
XE-133	79.91	81.00		

232 209

CS-134	605.20	604.73	43.67	
CS-134	796.19	795.84	36.07	1.776E-11
CS-137	662.01	661.64	143.70	1.604E-11
LA-140	487.13	487.02	292.63	6.661E-11
BA-140	537.59	537.30	55.30	2.509E-10
				6.483E-11

++ PEAK IS OUTSIDE CALIBRATED REGION
 * PEAK HAS BEEN PREVIOUSLY MATCHED

ALL PEAKS MATCHED WITH LIBRARY VALUES

 * FINAL SUMMARY OF NUCLIDES OBSERVED *

DATE: 5/ 4/ 79

NUCLIDE	WEIGHTED MEAN ACTIVITY	+ OR - 1 SIGMA
I-131	7.363E-09	1.324E-09
CS-134	1.709E-11	5.834E-12
CS-137	6.661E-11	1.222E-11
BA-140	6.483E-11	1.956E-11

 * MINIMUM DETECTABLE ACTIVITIES *
 * BASIS: 99% C.L. AT COUNT TIME *

NUCLIDE	ENERGY (KEV)	ABS. EFF.	BR (%)	MDA (UCI/ML)
CR-51	3.201E+02	8.421E-02	9.800E+00	1.020E-10
MN-54	8.348E+02	2.817E-02	1.000E+02	5.260E-12
CO-57	1.221E+03	1.796E-01	8.700E+01	1.030E-11
CO-58	8.106E+02	2.921E-02	9.900E+01	7.846E-12
FE-59	1.099E+03	2.043E-02	5.640E+01	1.088E-11
CO-60	1.173E+03	1.902E-02	1.000E+02	1.319E-11
ZR-95	7.567E+02	3.178E-02	5.460E+01	1.446E-11
NB-95	7.658E+02	3.132E-02	9.900E+01	6.441E-12
NA-24	1.369E+03	1.622E-02	1.000E+02	9.138E-12
KR-85	5.140E+02	5.100E-02	4.300E-01	2.254E-09
FE-133	8.100E+01	1.334E-01	3.500E+01	4.990E-11
4133	5.299E+02	4.920E-02	8.900E+01	8.575E-12
-136	8.185E+02	2.886E-02	1.000E+02	8.287E-12
19	1.400E+02	1.708E-01	9.500E+01	1.051E-11
1	1.454E+02	1.675E-01	4.800E+01	2.152E-11

232 210

SAMPLE ANALYSIS RESULTS

RADIATION #260/
MANAGEMENT 5/4 20:30
CORPORATION

SAMPLE ID # 2 Turbine Bldg 328

SAMPLE TYPE A1 + P

VOLUME 1.41 EB TIME: 1:10-1:15 DATE: 4/27/79 OF SAMPLING

TIME OF ANALYSIS: DATE: 5/4/79 TIME:

GEOMETRY A1 @ contact

COUNTING TIME 302 sec

ANALYST KR

REFERENCE SPECORA: TMI 2233

OBA 2601

RESULT

<u>NUCLIDE</u>	<u>ACTIVITY</u> ($\mu\text{Ci/cc}$)	<u>ERROR ESTIMATE</u>
I-131	6.5 E-10	60%

232 211

SAMPLE ANALYSIS RESULTS

RADIATION
MANAGEMENT #2624
CORPORATION 5/42030

SAMPLE ID # 2 COUNT Room

SAMPLE TYPE AI + P

VOLUME 1.68 ESAL TIME: 020-1023 DATE: 9/25/79 OF SIMMING

TIME OF ANALYSIS: DATE: 5/4/79 TIME:

GEOMETRY AI @ center

COUNTING TIME 300 sec

ANALYST RPL

REFERENCE SPECTRA: TMI 2235

OBA- 2624

RESULT

NUCLIDE

ACTIVITY ($\mu\text{Ci/cc}$)

ERROR ESTIMATE

I-131

MDL $< 1.7E-10$

232 212

SAMPLE ANALYSIS RESULTS

RADIATION
MANAGEMENT CORPORATION #2723
5/4/2030

SAMPLE ID #2 Control Room

SAMPLE TYPE A1 + P

VOLUME 1.132 E6 ml TIME: 0017-0037 DATE: 5/4/79 OF SAMPLING

TIME OF ANALYSIS: DATE: 5/4/79 TIME:

GEOMETRY A1 @ contact

COUNTING TIME 300 sec

ANALYST RML

REFERENCE SPECORA: TMI 2234

OBA= 2723

RESULT

<u>NUCLIDE</u>	<u>ACTIVITY</u> (µCi/cc)	<u>ERROR ESTIMATE</u>
I-131	MDL < 4.3 E -10	

232.213

3353
5/4 20:30



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 3353

SAMPLE ID: 3353 #1 Aux BLOWDOWN Sump

DATE: 5/4 TIME: 1700 OF SAMPLING

SAMPLE VOLUME: 500 ML

ANALYZED ON DATE: 5/4 AT TIME: 1920

GEOMETRY: 9457

COUNTING TIME: 1000S

ANALYST: RJB

REFERENCE SPECTRA:

RESULTS:	<u>Nuclide</u>	<u>Concentration ($\mu\text{Ci/ml}$)</u>	<u>Estimated Uncertainty</u>
	I-131	$< 3 \text{E}^{-7}$	
	I-133	$< 5 \text{E}^{-7}$	
	Cs-137	$< 1 \text{E}^{-6}$	

232 214

#3439
5/4/15:00



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 2711

SAMPLE ID: 3439 #2 Diesel Bldg Sump West

DATE: 5/3 TIME: 2035 OF SAMPLING

SAMPLE VOLUME: 500

ANALYZED ON DATE: 5/4 AT TIME: 1436

GEOMETRY: 9451

COUNTING TIME: 1000

ANALYST: GJD

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci}/\text{ml}$)	Estimated Uncertainty
	I-131	$< 3 \times 10^{-7}$	
	I-133	$< 5 \times 10^{-7}$	
	Cs-137	$< 1 \times 10^{-6}$	

232-215

#3455

5/4 19:00



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 2707

SAMPLE ID: 3455 #2 SLUDGE COLLECT. SUMP

DATE: 5/4 TIME: 0530 OF SAMPLING

SAMPLE VOLUME: 500 ML

ANALYZED ON DATE: 5/4 AT TIME: 1349

GOMETRY: 9451

COUNTING TIME: 1800 S

ANALYST: *[Signature]*

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci/ml}$)	Estimated Uncertainty
	I-131	$< 3E^{-7}$	
	I-133	$< 5E^{-7}$	
	Cs-137	$< 1E^{-6}$	

232.216

SAMPLE ANALYSIS RESULTS

RADIATION
MANAGEMENT #3539
CORPORATION 5/4 2030

SAMPLE ID A41

SAMPLE TYPE A1 + P

VOLUME 8.68 E 4 ul TIME: 8004-1100 DATE: 5/4/79 OF SAMPLING

TIME OF ANALYSIS: DATE: 5/4/79 TIME:

GEOMETRY A1 @ contact

COUNTING TIME 300 ¹⁵⁰ see

ANALYST RPL

REFERENCE SPECTRA: TMI 2232

OBA-3539

RESULT

<u>NUCLIDE</u>	<u>ACTIVITY</u> ($\mu\text{Ci/cc}$)	<u>ERROR ESTIMATE</u>
<u>I-131</u>	<u>1.4 E-9</u>	<u>70%</u>
<u>Te-133</u>	<u>8.6 E-7</u>	<u>25%</u>

232 218

SAMPLE ANALYSIS RESULTS

RADIATION
MANAGEMENT #3540
CORPORATION 5/4 19:45

SAMPLE ID AM 2

SAMPLE TYPE A1 + P

VOLUME 8.4 E 4 ml TIME: CAS-9101 DATE 5/4/79 OF SAMPLING

TIME OF ANALYSIS: DATE: 5/4/79 TIME:

GEOMETRY A1 @ contact

COUNTING TIME 300 sec

ANALYST RRM

REFERENCE SPECTRA: TMI 2230
OBA 3540

RESULT

<u>NUCLIDE</u>	<u>ACTIVITY</u> ($\mu\text{Ci/cc}$)	<u>ERROR ESTIMATE</u>
I-131	MDL < 7.8E-10	
Xc-133	1.4E-6	25%

232 218

RADIATION #3541
MANAGEMENT 5/4 1945
CORPORATION

SAMPLE ANALYSIS RESULTS

SAMPLE ID HP 01

SAMPLE TYPE A1 @ ~~contact~~ + P

VOLUME 1.1 E 5 ml TIME: 0005-1118 DATE: 5/4/79 OF SAMPLING

TIME OF ANALYSIS: DATE: 5/4/79 TIME:

GEOMETRY A1 @ contact

COUNTING TIME 300 sec

ANALYST RPL

REFERENCE SPECTRA: TMI 2229 / 2230
OBA-3541

RESULT

<u>NUCLIDE</u>	<u>ACTIVITY</u> ($\mu\text{Ci/cc}$)	<u>ERROR ESTIMATE</u>
I-131	$6.2 \text{ E}-6$	25%

232 219

#3548

5/4 20:30



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 2722

SAMPLE ID: 3548 #2 COND. POLISH. Sump

DATE: 5/4 TIME: 1600 OF SAMPLING

SAMPLE VOLUME: 500 ML

ANALYZED ON DATE: 5/4 AT TIME: 1857

GEOMETRY: 9451

COUNTING TIME: 1070 S

ANALYST: [Signature]

REFERENCE SPECTRA:

RESULTS:	<u>Nuclide</u>	<u>Concentration ($\mu\text{Ci}/\text{ml}$)</u>	<u>Estimated Uncertainty</u>
	I-131	$< 3 \text{E}^{-7}$	
	I-133	$< 5 \text{E}^{-7}$	
	Cs-137	$< 1 \text{E}^{-6}$	

232 220

#3550
5/4 19:45



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 221

SAMPLE ID: #2 SLUDGE COLLECT SUMP 3550

DATE: 5/4 TIME: 1600 OF SAMPLING

SAMPLE VOLUME: 500 ML

ANALYZED ON DATE: 5/4 AT TIME: 1829

GOMETRY: 9451

COUNTING TIME: 1000 S

ANALYST: *[Signature]*

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci}/\text{ml}$)	Estimated Uncertainty
	I-131	$< 3 \times 10^{-7}$	
	I-133	$< 5 \times 10^{-7}$	
	Cs-137	$< 1 \times 10^{-6}$	

232 221

#3566

5/4 19:45



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 2720

SAMPLE ID: 3566 Contr. Serv Bldg Base

DATE: 5/4 TIME: ⁰⁸²⁰₁₂₁₂ OF SAMPLING

SAMPLE VOLUME: 1.31E7

ANALYZED ON DATE: 5/4 AT TIME: 1805

GOMETRY: 9CE1

COUNTING TIME: 1000.8

ANALYST: *[Signature]*

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci}/\text{cc}$)	% Estimated Uncertainty
	I-131	2.85E^{-11}	6.1
	I-133	$< 1.6 \text{E}^{-12}$	
	Cs-137	$< 2 \text{E}^{-12}$	

232 222

#3579

5/4/94



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 948

SAMPLE ID: #2 HP ~~AWX~~ 328

DATE: 5/4 TIME: 1320-23 OF SAMPLING

SAMPLE VOLUME: 1.7E5

ANALYZED ON DATE: 5/4 AT TIME: 1635

GEOMETRY: SVFI

COUNTING TIME: 1000S

ANALYST: RS

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci}/\text{ml}$)	% Estimated Uncertainty
	I-131	4.11 E^{-8}	1.5
	I-133	$< 2.51 \text{ E}^{-10}$	
	Cs-137	$< 8.26 \text{ E}^{-11}$	

232-223

3516

5/4 19:15



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 2710

SAMPLE ID: 3516 #2 SS-2

DATE: 5/4 TIME: 1230 OF SAMPLING

SAMPLE VOLUME: 500

ANALYZED ON DATE: 5/4 AT TIME: 1410

GOMETRY: 9451

COUNTING TIME: 1000

ANALYST: 6JD

REFERENCE SPECTRA:

RESULTS:	<u>Nuclides</u>	<u>Concentration (µCi/ml)</u>	<u>Estimated Uncertainty</u>
	I-131	$< 3 \times 10^{-7}$	
	I-133	$< 5 \times 10^{-7}$	
	Cs-137	$< 1 \times 10^{-6}$	

232 224

SAMPLE ANALYSIS RESULTS

RADIATION #3528
MANAGEMENT 5/4 79:00
CORPORATION

SAMPLE ID WTS (Discharge pt. 147)

SAMPLE TYPE liquid

VOLUME 3000 ml TIME: 10:20 DATE: 5/4/79 OF SAMPLING

TIME OF ANALYSIS: DATE: 5/4/79 TIME:

GEOMETRY *Thomson Baker*

COUNTING TIME 1000 sec

ANALYST RR

REFERENCE SPECIMEN: TMR2228

OBA-3528

RESULT

NUCLIDE

ACTIVITY ($\mu\text{Ci/cc}$)

ERROR ESTIMATE

I-131

MDL $< 3.05 \text{E}-8$

232 275

#3531

5/4/90



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 941

SAMPLE ID: 3531 SSE-32

DATE: 5/4 TIME: 0445 OF SAMPLING
0518

SAMPLE VOLUME: 1.45⁶ cc

ANALYZED ON DATE: 5/7 AT TIME: 1328

GOMETRY: 5x5

COUNTING TIME: 1000

ANALYST: GJD

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci}/\text{cc}$)	Estimated Uncertainty
	I-131	5.0×10^{-11}	18.3%
	I-133	$< 3 \times 10^{-11}$	
	Cs-137	$< 7.8 \times 10^{-12}$	

232 226

#3533

5/4/49:00



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 447

SAMPLE ID: 3533 #2 Personnel Containment Hatch

DATE: 5/4 TIME: ¹⁰⁴⁸₁₂₅₇ OF SAMPLING

SAMPLE VOLUME: 5.155 CC

ANALYZED ON DATE: 5/4 AT TIME: 1601

GOMETRY: SVF 1

COUNTING TIME: 100c

ANALYST: GJD

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci}/\text{cc}$)	Estimated Uncertainty
	I-131	2.1×10^{-11}	13.8%
	I-133	$< 8.4 \times 10^{-11}$	
	Cs-137	$< 2.3 \times 10^{-11}$	

232 227

#3534

5/4/19:00



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 2713

SAMPLE ID: 3534 #2 HP Laundry

DATE: 5/4 TIME: ¹⁰²⁵/₁₀₃₅ OF SAMPLING

SAMPLE VOLUME: 5.1E⁵

ANALYZED ON DATE: 5/4 AT TIME: 1535

GEOMETRY: 9CE1

COUNTING TIME: 1000

ANALYST: GJD

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci}/\text{cc}$)	Estimated Uncertainty
	I-131	2.1×10^{-10}	51.5%
	I-133	$< 7.3 \times 10^{-11}$	
	Cs-137	$< 5.2 \times 10^{-11}$	

232 228

#3535

5/4 19:05



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 946

SAMPLE ID: 3535 #2 HP Highway

DATE: 5/4 TIME: 1015
1024 OF SAMPLING

SAMPLE VOLUME: 5.1E⁵

ANALYZED ON DATE: 5/4 AT TIME: 1537

GEOMETRY: SVFI

COUNTING TIME: 1000

ANALYST: GJA

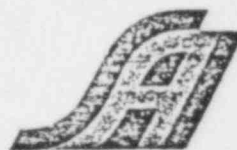
REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci}/\text{m}^3$)	Estimated Uncertainty
	I-131	$< 1.8 \times 10^{-11}$	
	I-133	$< 8.3 \times 10^{-11}$	
	Cs-137	$< 1.9 \times 10^{-11}$	

232 229

#3537

5/4 19:00



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 2717

SAMPLE ID: 3537 SECOND. CHEM LAB

DATE: 5/4 TIME: 0951-1000 OF SAMPLING

SAMPLE VOLUME: 5.1 ES

ANALYZED ON DATE: 5/4 AT TIME: 1722

GOMETRY: 9CE1

COUNTING TIME: 1808

ANALYST: RS

REFERENCE SPECTRA:

RESULTS:	<u>Nuclide</u>	<u>Concentration ($\mu\text{Ci}/\text{ml}$)</u>	<u>Estimated % Uncertainty</u>
	I-131	6.2 E^{-11}	30.3
	I-133	$< 4.14 \text{ E}^{-11}$	
	Cs-137	$< 5.22 \text{ E}^{-11}$	

232 230



Nuclear Environmental Services,
a division of Science Applications, Inc.

#3538
5/4 19:00

ANALYTICAL RESULTS

TAG # 2712

SAMPLE ID: 3538 #2 Sample Rm

DATE: 5/4 TIME: 0939 OF SAMPLING
0948

SAMPLE VOLUME: 5.1 E⁵ cc

ANALYZED ON DATE: 5/4 AT TIME: 1510

GEOMETRY: 9CE1

COUNTING TIME: 1000

ANALYST: GJD

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci}/\text{cc}$)	Estimated Uncertainty
	I-131	3.2×10^{-10}	33.3%
	I-133	$< 7.3 \times 10^{-11}$	
	Cs-137	$< 5.2 \times 10^{-11}$	

232 231

#3553

5/4 1915



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 2706

SAMPLE ID: 3453 Pretreatment Sump

DATE: 5/4 TIME: 0500 OF SAMPLING

SAMPLE VOLUME: 500

ANALYZED ON DATE: 5/4 AT TIME: 1322

GOMETRY: 9451

COUNTING TIME: 1000

ANALYST: GJD

REFERENCE SPECTRA:

RESULTS:	<u>Nuclide</u>	<u>Concentration ($\mu\text{Ci}/\text{ml}$)</u>	<u>Estimated Uncertainty</u>
	I-131	$< 3 \times 10^{-7}$	
	I-133	$< 5 \times 10^{-7}$	
	Cs-137	$< 1 \times 10^{-6}$	

232 232

#3564

5/4 19:00



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 2716

SAMPLE ID: 3564 CAP GUN #6 DEM.IN.

DATE: 5/4 TIME: 1200 OF SAMPLING

SAMPLE VOLUME: (~~950ML~~) 500ML

ANALYZED ON DATE: 5/4 AT TIME: 1654

GEOMETRY: 9457

COUNTING TIME: 1000S

ANALYST: *RS*

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci/ml}$)	Estimated Uncertainty
	I-131	$< 3 \times 10^{-7}$	
	I-133	$< 5 \times 10^{-7}$	
	Cs-137	$< 1 \times 10^{-6}$	

232 233

#3565
5/4/19:15



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 942

SAMPLE ID: 3565 VAR 748

DATE: 5/4 TIME: 0023 OF SAMPLING
1208

SAMPLE VOLUME: $4.4E^7$ cc

ANALYZED ON DATE: 5/4 AT TIME: 1357

GOMETRY: SVF 1

COUNTING TIME: 500 s

ANALYST: GJD

REFERENCE SPECTRA:

RESULTS:	<u>Nuclide</u>	<u>Concentration ($\mu\text{Ci}/\text{cc}$)</u>	<u>Estimated Uncertainty</u>
	I-131	6.5×10^{-9}	0.3%
	I-133	$< 9.7 \times 10^{-13}$	
	Cs-137	$< 5.9 \times 10^{-13}$	

232 234

#3573

5/4 19:00



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 945

SAMPLE ID: 3573 #2 APX Bldg 281 c1

DATE: 5/4 TIME: 1233 OF SAMPLING
1236

SAMPLE VOLUME: 1.7E⁵ cc

ANALYZED ON DATE: 5/4 AT TIME: 1509

GOMETRY: 5VE1

COUNTING TIME: 500

ANALYST: GJD

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci}/\text{cc}$)	Estimated Uncertainty
	I-131	4.8×10^{-7}	0.6%
	I-133	$< 2.5 \times 10^{-10}$	
	Cs-137	2.1×10^{-9}	11.9%
	B _g ¹⁴⁰	3.2×10^{-9}	22.4%

232 235

#3574



5/4/19:00

Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 943

SAMPLE ID: 3574 Decay Heat Vault # 2

DATE: 5/4 TIME: 1227 OF SAMPLING
1230

SAMPLE VOLUME: 1.7E⁵ cc

ANALYZED ON DATE: 5/4 AT TIME: 1411

GOMETRY: SVFI

COUNTING TIME: 500

ANALYST: GJD

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci}/\text{cc}$)	Estimated Uncertainty
	I-131	2.1×10^{-7}	1.0%
	I-133	$< 2.5 \times 10^{-10}$	
	Cs-137	9.7×10^{-10}	14.9%
	Bg ¹⁴⁰	2.3×10^{-9}	23.6%
	Cs ¹³⁴	4.6×10^{-10}	25.4%
	Co ⁶⁰	2.8×10^{-10}	23.0%

232 236

#3575
5/4 19:00



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 944

SAMPLE ID: 3575 #2 Aux Bldg 305 el

DATE: 5/4 TIME: ¹²⁴²/₁₂₄₅ OF SAMPLING

SAMPLE VOLUME: 1.7E⁵ cc

ANALYZED ON DATE: 5/4 AT TIME: 1430

GEOMETRY: 5KFI

COUNTING TIME: 500

ANALYST: GJD

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci}/\text{g}$)	Estimated Uncertainty
	I-131	3.7×10^{-7}	0.7%
	I-133	$< 2.5 \times 10^{-10}$	
	Cs-137	3.9×10^{-10}	19.2%

232 237

#3584
5/4/49:00



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 2715

SAMPLE ID: 3584 CAP 6LN#6 DEMIN.

DATE: 5/4 TIME: 1300 OF SAMPLING

SAMPLE VOLUME: 500 ML

ANALYZED ON DATE: 5/4 AT TIME: 1625

GOMETRY 27481

COUNTING TIME: 1000S

ANALYST: RAJ

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci/ml}$)	% Estimated Uncertainty
	I-131	2.99×10^{-5}	2.8
	I-133	$< 5 \times 10^{-7}$	
	Cs-137	$< 1 \times 10^{-6}$	232 238
	Cs-136	6.77×10^{-5}	2.1
	BA-140	1.24×10^{-5}	17.5

#2447
5/4 19:15

447 NE 01 Part

11 ON SITE WORK

Sampled at 239 4/ 27/ 79
Counted at 1717 5/ 4/ 79

Count Time = 2000 seconds Decay Time = 10950 minutes

Sample Volume = 1400000 milliliters

Chnl. No.	Energy	FWHM	Pk. Area	Std. Dev.
2345.46	1172.97	3.83	33.20	6.84
726.87	364.09	3.36	75.20	11.87

Efficiency Table - 11

Nuclide	Obs. E	Lib. E	Gamma/cm	uCi/cm
Co-60	1172.97	1173.21	9.650E-05	Background 2.752E-09
I-131	364.09	364.49	1.020E-04	Background 3.417E-09 → 1.51E-7

UNIDENTIFIED PEAKS

ENERGY GAMMAS/MIN
at Count Time

232 239

SAMPLE # 2447 Char NE 01

#2447

JN-SITE WORK

Sampled at 239 4/ 27/ 79
Counted at 724 5/ 4/ 79

Count Time = 1000 seconds

Decay Time = 10365 minutes

Sample Volume = 140000 milliliters

Chan. No.	Energy	FWHM	PK. Area	Std. Dev.
726.92	364.17	2.07	25.20	8.05

Efficiency Table - 12

Nuclide	Obs. E	Lib. E	Gamma/90	uCi/90
I-131	364.17	364.49	1.413E-05	4.784E-10

Background

UNIDENTIFIED PEAKS

ENERGY GAMMAS/MIN
 at Count Time

~~232~~ 240

~~232~~ 239

2649 WSW II PPPT

#2649
5/4 19:15

SAMPLE TIME
440 4/28/79

COUNT TIME
1649 5/4/79

-----PRELIMINARY PEAK DATA-----

COUNT TIME = 33.3333 MINUTES DECAY TIME = 9369 MINUTES
SAMPLE VOLUME = 1416000 MILLILITERS

CENTROIL CHANNEL	PEAK ENERGY (KEV)	FWHM (KEV)	PEAK AREA (COUNTS)	+ OR - (1 SIG)
151.72	76.1845	5.2567	14.8	19.8
723.17	364.7293	1.7580	<u>60.0</u> Bck	13.1
2923.75	1461.3342	1.7589	60.0	8.1

+ PRELIMINARY PEAK IDENTIFICATION +

EFFICIENCY TABLE USED = 41

NUCLIDE	OBSERVED ENERGY	LIBRARY ENERGY	GAMMAS PER MIN.	UCI PER ML.
I-131	364.73	364.49	58.49	2.269E-11 B-legend

-----UNIDENTIFIED PEAKS-----

ENERGY	G. HAS/MIN. AT COUNT TIME
76.18	++
1461.33	116.37

++ PEAK IS OUTSIDE CALIBRATED REGION

* MINIMUM DETECTABLE ACTIVITIES *
* BASIS: 99% C.L. AT COUNT TIME *

232 241

NUCLIDE	ENERGY (KEV)	ABS. EFF.	BR (%)	MDA (UCI/ML)
CP-51	3.201E+02	8.421E-02	9.800E+00	1.587E-11
NH-54	8.348E+02	2.817E-02	1.000E+02	2.611E-12
CO-57	1.321E+02	1.796E-01	8.700E+01	1.550E-12
CO-58	8.106E+02	2.921E-02	9.900E+01	3.760E-12
FE-59	1.093E+03	2.043E-02	5.640E+01	5.799E-12
CO-60	1.173E+03	1.902E-02	1.000E+02	5.493E-12
ZP-95	7.567E+02	3.178E-02	5.460E+01	4.592E-12
NB-95	7.658E+02	3.132E-02	5.900E+01	3.223E-12
HA-24	1.369E+03	1.622E-02	1.000E+02	5.259E-12
FP-85	5.140E+02	5.100E-02	4.100E+01	7.218E-10
RE-133	8.100E+01	1.334E-01	3.500E+01	6.608E-12
I-131	3.645E+02	7.431E-02	8.200E+01	5.017E-12
I-133	5.299E+02	4.920E-02	3.900E+01	2.914E-12
CS-134	6.047E+02	4.192E-02	9.800E+01	3.349E-12
CS-136	8.185E+02	2.896E-02	1.000E+02	3.136E-12
CS-137	6.616E+02	3.753E-02	8.500E+01	4.731E-12
MO-99	1.463E+02	1.708E-01	9.500E+01	1.255E-12
CE-141	1.454E+02	1.675E-01	4.800E+01	2.561E-12

3649 NSW 11 (HAW)

#2649

SAMPLE TIME
440 4 01 79

COUNT TIME
1500 5 4 79

-----PRELIMINARY PEAK DATA-----

COUNT TIME = 33.3333 MINUTES DECAY TIME = 9260
MINUTES
SAMPLE VOLUME = 1416000 MILLILITERS

CENTROID CHANNEL	PEAK ENERGY (KEV)	FWHM (KEV)	PEAK AREA (COUNTS)	+ OR - (1 SIG)
160.04	80.3419	0.7894	10.9	23.8
160.59	80.5180	2.4403	273.0	23.2
729.05	364.0198	1.9967	79.8	14.1
1021.50	510.3044	2.3601	88.0	11.7
2324.01	1461.4643	1.8049	96.8	10.9

-----PRELIMINARY PEAK IDENTIFICATION-----

EFFICIENCY TABLE USED = 41

NUCLIDE	OBSERVED ENERGY	LIBRARY ENERGY	GAMMAS PER MIN.	UCI PER ML.
I-131	364.82	364.49	56.19	2.178E-11
XE-133	80.34	81.00	5.79	5.262E-10
XE-133	80.62	81.00*	144.35	1.011E-10

Big

* LIBRARY ENERGY HAS PREVIOUSLY MATCHED A PEAK ENERGY

UNIDENTIFIED PEAKS

ENERGY	GAMMAS MIN. AT COUNT TIME
510.30	80.87
1461.46	190.99

-----FINAL SUMMARY OF NUCLIDES OBSERVED-----

DATE: 5 4 79

NUCLIDE	WEIGHTED MEAN ACTIVITY	+ OR - 1 SIGMA
XE-133	6.818E-11	1.945E-11

B. Johnson
4.8E-11

-----MINIMUM DETECTABLE ACTIVITIES-----
* BASIS: 99% C.L. AT COUNT TIME

232 24?

NUCLIDE	ENERGY (KEV)	ABS. EFF.	BR(%)	MDA (UCI ML)
CP-51	0.201E+02	8.421E-02	9.800E+00	2.870E-11
MN-54	8.048E+00	2.817E-02	1.000E+02	4.141E-12
CO-57	1.221E+02	1.796E-01	3.700E+01	1.204E-10
CO-58	8.186E+00	2.921E-02	9.300E+01	3.760E-10
FR-89	1.092E+03	3.043E-02	5.640E+01	6.916E-10
CO-60	1.173E+03	1.902E-02	1.000E+02	3.011E-10
ZP-83	7.567E+00	3.173E-02	3.480E+01	4.911E-11
NR-85	7.567E+00	3.132E-02	9.900E+01	4.507E-11
HA-84	1.268E+03	1.622E-02	1.000E+02	4.111E-10
KP-85	5.140E+02	5.193E-02	4.300E-01	3.125E-10
I-131	3.647E+02	7.433E-02	0.200E+01	3.194E-10
I-133	8.299E+00	4.920E-02	8.900E+01	3.180E-10
CO-134	9.047E+02	4.132E-02	9.800E+01	3.501E-10
CS-136	8.187E+00	2.386E-02	1.000E+02	3.713E-10
CS-137	6.610E+02	3.733E-02	8.600E+01	6.247E-10
MO-99	1.483E+02	1.788E-01	9.500E+01	1.470E-10
CE-141	1.454E+02	1.675E-01	4.800E+01	2.612E-10

#3577
5/4 19:00

SAMPLE TIME
1400 5 4

COUNT TIME
1734 5 4 75

-----PRELIMINARY PEAK DATA-----

COUNT TIME = 1 MINUTES DECAY TIME = 214 MINUTES
SAMPLE VOLUME = 1000 MILLILITERS

CENTROID CHANNEL	PEAK ENERGY (KEV)	FWHM (KEV)	PEAK AREA (COUNTS)	+ OR - (1 SIG)
100.40	79.5369	2.0484	6501.4	208.8
100.40	139.4574	1.80297	513.0	159.7
100.40	162.3744	1.74005	548.9	170.8
100.40	179.3300	1.73358	681.1	167.7
100.40	204.0500	1.73000	1300.3	196.1
100.40	206.0784	1.69807	1000.7	141.8
100.40	240.4655	2.01514	1331.0	130.7
100.40	240.4655	2.01514	14090.0	413.0
100.40	240.4655	2.01514	3174.0	114.0
100.40	240.4655	2.01514	168.7	70.1
100.40	240.4655	2.01514	1471.4	70.1
100.40	240.4655	2.01514	302.4	70.1
100.40	240.4655	2.01514	818.4	101.0
100.40	240.4655	2.01514	745.9	108.0
100.40	240.4655	2.01514	1073.0	118.0
100.40	240.4655	2.01514	1578.0	148.0
100.40	240.4655	2.01514	203.0	48.0
100.40	240.4655	2.01514	365.0	111.0
100.40	240.4655	2.01514	338.4	111.0
100.40	240.4655	2.01514	548.4	133.4
100.40	240.4655	2.01514	173.0	69.0
100.40	240.4655	2.01514	323.0	41.0
100.40	240.4655	2.01514	1142.0	48.4
100.40	240.4655	2.01514	170.0	38.1
100.40	240.4655	2.01514	2475.4	98.0

-----* PRELIMINARY PEAK IDENTIFICATION *-----

EFFICIENCY TABLE USED = 46

NUCLIDE	OBSERVED ENERGY	LITERARY ENERGY	GAMMAS PER MIN.	UCI PER ML.
GR-72	1596.40	1596.30	2424016.26	2.482E-02
NL-99	139.46	140.30	61615.69	2.922E-05
TC-99M	139.46+	140.30	69469.13	4.479E-05
SB-122	563.22	564.07	118941.20	8.504E-05
SB-124	722.94	722.76	687790.24	2.923E-03
I-131	284.05	284.31	2498182.44	2.064E-02
I-131	284.07	284.49	34104055.83	1.073E-02
I-131	536.97	537.01	2963808.50	1.963E-02
I-131	722.94+	722.92	695469.16	1.958E-02
I-132	284.05+	284.71	7242041.31	3.198E-02
I-133	1235.35	1236.53	127689.05	3.833E-03
CS-134	569.22	569.38	286994.40	9.266E-04
CS-134	604.04	604.70	1992263.53	9.105E-04
CS-134	745.06	745.34	1720997.89	8.809E-04
CS-134	802.08	801.60	159016.50	7.859E-04
CS-136	176.39	176.00	112778.65	3.913E-04
CS-136	348.47	348.60	387685.87	3.115E-04
CS-136	818.36	818.50	286778.95	1.320E-04
CS-136	1048.24	1048.10	677967.45	3.794E-04
CS-136	1235.35+	1235.40	114338.53	2.614E-04
CS-137	661.63	661.64	7571782.48	3.966E-02
LA-140	328.68	328.77	414271.45	6.633E-04
LA-140	488.88	487.02	1006563.59	1.005E-03
LA-140	751.67	751.69	97006.82	9.713E-04
LA-140	867.84	867.85	92964.89	7.347E-04
LA-140	925.20	925.20	102191.24	1.225E-03
LA-140	1596.40+	1596.17	2162611.29	1.809E-03
BR-140	537.25	537.38	497988.19	6.598E-04
PA-233	340.47+	340.50	386421.42	3.539E-03

232 2.13

#3577

UNIDENTIFIED PEAKS

ENERGY	GAMMA MIN. AT COUNT TIME
79.54	++
102.87	48504.49
502.09	52738.70

++ PEAK IS OUTSIDE CALIBRATED REGION

- FINAL SUMMARY OF NUCLIDES OBSERVED -

DATE: 5-4-79*

NUCLIDE	WEIGHTED MEAN ACTIVITY	+ OR - 1 SIGMA
U-231	1.000E-02	0.555E-03
Co-114	0.001E-04	1.500E-04
Co-110	0.004E-04	5.400E-05
Co-113	0.000E-07	4.000E-04
Co-140	0.000E-04	0.007E-05

#3580

#3580

5/4 19:15

220 HPR 222 Char

TMI ON SITE WORK

Sampled at 1000 5/ 4/ 79
Counted at 1806 5/ 4/ 79

Count Time = 400 seconds

Decay Time = 336 minutes

Sample Volume -16000000 milliliters

Chnl. No.	Energy	FWHM	*Pl. Area	Std. Dev.
1444.50	720.73	0.47	599.40	0.5
1284.30	840.97	0.00	0.00	0.0
1270.20	800.00	0.00	0.00	0.0
1004.44	500.00	0.10	0.00	0.0
710.00	0.00	0.01	0.00	0.0
500.40	0.00	0.00	0.00	0.0
300.00	0.00	0.00	0.00	0.0
170.00	0.00	0.00	0.00	0.0
100.00	0.00	0.00	0.00	0.0
70.00	0.00	0.00	0.00	0.0
40.00	0.00	0.00	0.00	0.0
140.44	0.00	0.00	0.00	0.0

Efficiency Table - 13

Nuclide	Obs. E	Lib. E	Count/ea	uCi/ea
Zr-95	720.73	724.18	1.098E-04	7.017E-07
Sb-124	720.73 +	722.76	1.098E-04	8.047E-08
I-131	280.73	284.01	4.206E-04	2.151E-07
I-131	500.40	504.40	0.773E-03	1.700E-07
I-131	700.00	707.01	4.573E-04	1.700E-07
I-131	720.73 +	727.93	1.129E-04	1.300E-07
I-132	280.73 +	284.71	6.184E-03	1.666E-05
Cs-136	176.15	176.00	9.124E-06	1.857E-09
Yb-169	176.15 +	177.20	9.020E-06	1.137E-09

+PEAK HAS BEEN PREVIOUSLY MATCHED

UNIDENTIFIED PEAKS

ENERGY	GAMMAS MIN at Count Time
70.93	0.550E 04
70.94	4.439E 04
80.40	1.103E 04
80.60	1.056E 03
80.60	0.650E 00
80.60	0.074E 03
82.97	9.041E 02

SUMMARY

NUCLIDE	uCi/ea	Std. Dev.
I-131	1.790E-07	1.130E-08

232 245

3581 HPP 228

TMI ON-SITE WORK

Sampled at 1256 S/ 4/ 79
Counted at 1813 S/ 4/ 79

#3581
5/4 19:15

Count Time = 800 seconds

Decay Time = 317 minutes

Sample Volume -156+41600 milliliters

Chnl. No.	Energy	FWHM	Pk. Area	Std. Dev.
1444.76	722.85	3.65	395.40	20.75
1284.27	642.65	3.45	39.50	3.81
1272.78	636.91	3.67	1751.50	43.00
1004.56	502.87	3.62	134.00	16.00
726.90	364.11	3.15	44558.20	215.00
642.65	325.36	3.48	150.00	19.00
366.50	183.09	3.00	4631.90	66.00
301.00	176.55	3.97	353.00	26.00
224.64	117.09	3.61	643.70	51.00
157.16	79.39	3.46	708.60	57.00

Efficiency Table - 11

Nuclide	Obs. E	Lib. E	Count/yr	uCi/yr
Zr-95	722.85	724.18	1.367E-05	8.353E-10
Sr-124	722.85 +	722.76	1.368E-05	8.390E-09
I-131	364.11	364.31	4.630E-05	2.453E-08
I-131	364.11	364.49	6.432E-04	3.155E-08
I-131	636.91	637.01	5.274E-05	2.131E-08
I-131	722.85 +	722.92	1.357E-05	8.331E-09
Xe131m	163.09	163.97	2.460E-06	6.380E-09
I-132	364.11 +	364.71	1.749E-03	4.711E-07
Xe-133	79.39	81.00	++ **	
Cs-136	176.55	176.00	1.759E-06	3.580E-10
Ib-169	176.55 +	177.20	1.732E-06	2.183E-10
U-235	163.09 +	165.00	2.390E-06	1.313E-09

++PEAK OUTSIDE CALIBRATED REGION
-PEAK HAS BEEN PREVIOUSLY MATCHED

UNIDENTIFIED PEAKS

ENERGY	GAMMAS MIN at Count Time
325.36	2.836E 02
502.87	4.712E 02
642.65	1.834E 02

SUMMARY

232 246

NUCLIDE	uCi/yr	Std. Dev.
I-131	2.174E-08	1.084E-09
Xe131m	3.380E-09	6.779E-10

3583 HPR 2218

ON SITE WORK

#3583
E/Y 20:00

Sampled at 1257 5/ 4/ 79
Counted at 1852 5/ 4/ 79

Count Time = 600 seconds

Decay Time = 355 minutes

Sample Volume -144516960 milliliters

Chnl. No.	Energy	FWHM	Pl. Area	Std. Dev.
1444.60	722.78	0.78	1763.80	44.10
1281.99	643.01	0.60	152.40	20.04
1272.60	636.03	0.64	3004.40	92.05
1304.12	582.65	0.43	564.20	39.34
726.76	364.04	0.21	19031.90	446.30
649.11	307.00	0.40	759.50	31.11
568.14	287.77	0.16	20630.00	172.80
412.99	207.04	0.50	93.50	13.60
351.64	176.53	0.17	1457.60	171.00
186.02	78.97	1.96	17557.40	230.46
145.06	73.49	0.90	512.90	147.07

Efficiency Table - 11

Nuclide	Obs. E	Lib. E	Count/gm	uCi/gm
Zr-95	722.78	724.10	6.434E-05	4.112E-09
Sr-124	722.78 +	722.76	6.437E-05	1.669E-09
I-131	283.77	284.31	2.277E-04	1.159E-07
I-131	364.04	364.49	3.045E-03	1.020E-07
I-131	582.65	587.01	2.665E-04	1.077E-07
I-131	722.78 +	722.92	6.634E-05	1.150E-07
I132	283.77 +	284.71	9.972E-03	2.686E-06
Cs-136	176.53	176.00	7.988E-06	1.626E-09
Yb-169	176.53 +	177.20	7.860E-06	9.907E-10

+PEAK HAS BEEN PREVIOUSLY MATCHED

UNIDENTIFIED PEAKS

ENERGY	GAMMAS MIN at Count Time
73.49	++
78.97	++
287.04	7.901E 01
325.23	1.417E 02
582.65	1.990E 03
643.01	7.081E 02

at Count Time

SUMMARY

NUCLIDE	uCi/gm	Std. Dev.
I-131	1.034E-07	6.418E-09

232 247

3590 Cap Gun #46 Demin Eff

TMI ON SITE WORK

#3590
5/4 20:00

Sampled at 1625 S 4 79
Counted at 1917 S 4 79

Count Time = 1800 seconds

Decay Time = 172 minutes

Sample Volume = 250 milliliters

Chnl. No.	Energy	FWHM	Pl. Area	Std. Dev.
3191.55	1595.79	4.02	556.00	24.00
1849.65	925.19	3.48	78.40	13.10
1735.09	867.94	###	55.50	11.07
1630.75	815.80	3.07	294.60	20.40
1620.50	810.60	3.30	135.30	15.24
1500.09	751.50	3.02	50.60	11.35
970.97	486.78	2.50	96.00	13.19
863.71	432.48	###	77.00	13.00
726.74	364.03	2.00	320.00	20.40
658.35	328.35	0.69	750.40	30.10

Efficiency Table - 5

Nuclide	Obs. E	Lib. E	Count/ev	uCi/ev
Co-58	810.68	810.60	1.236E 00	3.431E-05
I-131	364.03	364.49	1.248E 00	4.182E-05
La-140	328.35	328.77	2.974E 00	8.783E-04
La-140	486.78	487.02	8.152E 00	2.633E-04
La-140	815.80	815.74	3.250E 00	9.721E-04
La-140	867.94	867.95	7.778E-01	2.758E-04
La-140	925.19	925.20	1.805E 00	4.123E-04
La-140	1595.79	1596.17	1.319E 01	3.757E-04

UNIDENTIFIED PEAKS

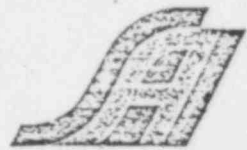
ENERGY	CANMAS-MIN at Count Time
432.48	8.714E 01
751.50	1.108E 02

SUMMARY

NUCLIDE	uCi/ev	Std. Dev.
Co-58	3.431E-05	5.842E-06
La-140	3.739E-04	2.581E-05

232-248

3103
5/2 2000



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 850

SAMPLE ID: 3103 #2 TURB. Bldg 3051

DATE: 5/1 TIME: ¹⁰²⁰1040 OF SAMPLING

SAMPLE VOLUME: 1.13E6

ANALYZED ON DATE: 5/2 AT TIME: 1747

GOMETRY: 5CE1

COUNTING TIME: 1080S

ANALYST: RRS

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration (uCi/ml)	Estimated Uncertainty
	<u>I-131</u>	<u>< 1E-10</u>	
	<u>I-133</u>		
	<u>Cs-137</u>		

232 249

SAMPLE ANALYSIS RESULTS

RADIATION
MANAGEMENT
CORPORATION

3185
5/2/2000

SAMPLE ID RML-7

SAMPLE TYPE Liquid

VOLUME 3000 ml TIME: 0730 DATE: 5/2/79 OF SAMPLING

TIME OF ANALYSIS: DATE: 5/2/79 TIME:

GEOMETRY Marinelli beaker

COUNTING TIME 1000sec

ANALYST *ajg*

REFERENCE SPECTRA: TMI 2139

~~3185~~ 3185

RESULT

<u>NUCLIDE</u>	<u>ACTIVITY</u> ($\mu\text{Ci/cc}$)	<u>ERROR ESTIMATE</u>
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I-131	MDL < 3.1 E-8	
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232 250

TURBINE BLDG 328' 3216 CHAR

#3216
5/2 2015

SAMPLE TIME
216 5/ 2 79

COUNT TIME
1630 5/ 2 79

-----PRELIMINARY PEAK DATA-----

COUNT TIME = 33.3333 MINUTES DECAY TIME = 954 MINUTES
SAMPLE VOLUME = 14273300 MILLILITERS

CENTROID CHANNEL	PEAK ENERGY (KEV)	FWHM (KEV)	PEAK AREA (COUNTS)	+ OR - (1 SIG)
728.69	174.3761	2.1557	84.4	12.3
2346.96	1173.5036	2.0282	32.2	7.2

+ PRELIMINARY PEAK IDENTIFICATION +

EFFICIENCY TABLE USED = 32

NUCLIDE	OBSERVED ENERGY	LIBRARY ENERGY	GAMMAS PER MIN.	UCI PER ML.
CO-60	78.50	1173.20	1609.16	5.078E-11
I-131	364.38	364.49	1094.13	4.211E-11

ALL PEAKS MATCHED WITH LIBRARY VALUES

+ MINIMUM DETECTABLE ACTIVITIES +
+ BASIS: 95% C.L. AT COUNT TIME +

232 251

NUCLIDE	ENERGY (KEV)	ABS. EFF.	BR (%)	MDA (UCI-ML)
CR-51	3.201E+02	2.847E-03	9.300E+00	6.448E-11
MN-54	8.348E+02	9.180E-04	1.000E+02	8.610E-12
CO-57	1.231E+02	9.462E-03	8.700E+01	4.103E-12
CO-58	8.100E+02	9.473E-04	9.900E+01	1.421E-11
FE-59	1.093E+03	6.482E-04	5.640E+01	2.314E-11
CO-60	1.173E+03	6.006E-04	1.000E+02	2.995E-11
ZP-95	7.567E+02	1.012E-03	5.460E+01	1.633E-11
NB-95	7.553E+02	1.001E-03	9.900E+01	5.901E-12
NA-94	1.363E+03	4.988E-04	1.000E+02	1.323E-11
KR-85	5.140E+02	1.606E-03	4.300E+01	1.780E-09
KE-133	8.100E+01	5.343E-03	3.500E+01	3.160E-11
I-131	3.643E+02	2.407E-03	8.200E+01	1.504E-11
I-133	5.129E+02	1.640E-03	8.900E+01	7.871E-12
CS-134	5.947E+02	1.287E-03	9.800E+01	1.107E-11
CS-136	8.185E+02	9.378E-04	1.000E+02	7.782E-12
CS-137	5.616E+02	1.156E-03	8.600E+01	1.165E-11
MO-99	1.403E+02	7.982E-03	9.500E+01	4.054E-12
CE-141	1.454E+02	7.554E-03	4.800E+01	9.307E-12

SAMPLE ANALYSIS RESULTS

RADIATION
MANAGEMENT CORPORATION #3217
5/2 1900

SAMPLE ID #2 TWTS #107

SAMPLE TYPE Liquid

VOLUME 3000ml TIME: 0800 DATE: 5/2/79 OF SAMPLING

TIME OF ANALYSIS: DATE: 5/2/79 TIME:

GEOMETRY Marinelli beaker

COUNTING TIME 1000sec

ANALYST *gh*

REFERENCE SPECTRA: TMI 2136

~~DBA~~ 3217

RESULT

NUCLIDE

ACTIVITY ($\mu\text{Ci/cc}$)

ERROR ESTIMATE

I-131

MDL $< 4.6\text{E}-8$

232 252

#3231
5/2 2000



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # R563

SAMPLE ID: 3231 # 2 CONTR. # SERV. SUMP

DATE: 5/2 TIME: 1630 OF SAMPLING

SAMPLE VOLUME: 500 ML

ANALYZED ON DATE: 5/2 AT TIME: 1813

GOMETRY: 9451

COUNTING TIME: 1000S

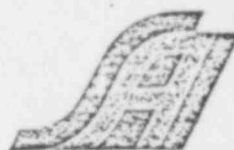
ANALYST: ARS

REFERENCE SPECTRA:

RESULTS:	<u>Nuclide</u>	<u>Concentration (µCi/ml)</u>	<u>Estimated Uncertainty</u>
	I-131	$1.67E^{-4}$	.9%
	I-133	$<5E^{-7}$	
	Cs-137	$7.3E^{-6}$	6.2%

232 253

3232
5/2 2000



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 2564

SAMPLE ID: 3232

DATE: 5/2 TIME: 1640 OF SAMPLING

SAMPLE VOLUME: 500 ML

ANALYZED ON DATE: 5/2 AT TIME: 1844

GOMETRY: 9451

COUNTING TIME: 1000 S

ANALYST: RRS

REFERENCE SPECTRA:

RESULTS:	<u>Nuclide</u>	<u>Concentration ($\mu\text{Ci/ml}$)</u>	<u>Estimated Uncertainty</u>
	I-131	2.6 E^{-6}	8.1%
	I-133		
	Cs-137		

232 254



Nuclear Environmental Services,
a division of Science Applications, Inc.

#3250
5/2 1900

ANALYTICAL RESULTS

TAG # 2557

SAMPLE ID: 3250 WSW-11

DATE: 5/2 TIME: 04⁰¹ 0434 OF SAMPLING

SAMPLE VOLUME: ~~1.4~~ 1.4E⁶ cc

ANALYZED ON DATE: 5/2 AT TIME: 1629

GOMETRY: 9CE1

COUNTING TIME: 1000

ANALYST: GJD

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration (uCi/ml)	Estimated Uncertainty
	I-131	$< 1 \times 10^{-11}$	
	I-133		
	Cs-137		

232-255



Nuclear Environmental Services,
a division of Science Applications, Inc.

#3252
5/2 1900

ANALYTICAL RESULTS

TAG # 848

SAMPLE ID: WSW-11

DATE: 5/1 ²¹⁴⁰ ~~2213~~ TIME: — OF SAMPLING

SAMPLE VOLUME: 1/4 EG

ANALYZED ON DATE: 5/2 AT TIME: 1700

GOMETRY: SCE1

COUNTING TIME: 1000 S

ANALYST: RRS

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration (uCi/ml)	Estimated Uncertainty
	I-131	$< 1 \times 10^{-10}$	
	I-135		
	CS-137		

232 256



Nuclear Environmental Services,
a division of Science Applications, Inc.

#3257
5/2 1900

ANALYTICAL RESULTS

TAG # 2560

SAMPLE ID: 3257 #2 SS-2

DATE: 5/2 TIME: 1230 OF SAMPLING

SAMPLE VOLUME: 500 ML

ANALYZED ON DATE: 5/2 AT TIME: 1650

GOMETRY: 9451

COUNTING TIME: 1000 S

ANALYST: RRS

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci/ml}$)	Estimated Uncertainty
	I-131	$< 3 \times 10^{-7}$	
	I-133	$< 5 \times 10^{-7}$	
	Cs-137	$< 1 \times 10^{-6}$	

232 257

#3264
5/2 400



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 849

SAMPLE ID: 3264 #2 TURB BLDG 330'

DATE: 5/2 TIME: 1513 OF SAMPLING

SAMPLE VOLUME: 1.13E6

ANALYZED ON DATE: 5/2 AT TIME: 1718

GOMETRY: SCEI

COUNTING TIME: 1000S

ANALYST: *RS*

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci}/\text{ml}$)	Estimated Uncertainty
	I-131	$< 1 \text{E}^{-10}$	
	CI-133		
	CS-137		

232 258



Nuclear Environmental Services,
a division of Science Applications, Inc.

3265
5/2 1900

ANALYTICAL RESULTS

TAG #2561

SAMPLE ID: 3265 #2 TURB BLDG. 230'

DATE: 5/2 TIME: 1425-1445 OF SAMPLING

SAMPLE VOLUME: 1.13E6

ANALYZED ON DATE: 5/2 AT TIME: 1726

GEOMETRY: GCEI

COUNTING TIME: 1070 S

ANALYST: RAS

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci}/\text{ml}$)	Estimated Uncertainty
	I-131	$< 1 \text{E}^{-10}$	
	I-133	$< 1 \text{E}^{-10}$	
	Cs-137	$< 1 \text{E}^{-10}$	

232 259

#3266
5/2 1900



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 2562

SAMPLE ID: #3266 #2 TURB. BID9, 305'

DATE: 5/2 TIME: 1405-25 OF SAMPLING

SAMPLE VOLUME: 1.13E6

ANALYZED ON DATE: 5/2 AT TIME: 1751

GOMETRY: 90E1

COUNTING TIME: 1000S

ANALYST: *RS*

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration (uCi/ml)	Estimated Uncertainty
	I-131	$< 1 \times 10^{-10}$	
	I-133	$< 1 \times 10^{-10}$	
	Cs-137	$< 1 \times 10^{-10}$	

232 260

3270
5/2 2000



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 853

SAMPLE ID: 3270 1 HP HALLWAY

DATE: 5/2 TIME: 0736-56 OF SAMPLING

SAMPLE VOLUME: 1.4 EB

ANALYZED ON DATE: 5/2 AT TIME: 1911

GEOMETRY: SCE1

COUNTING TIME: 1000S

ANALYST: RJS

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci/ml}$)	Estimated Uncertainty
	I-131	< 1E-10	
	I-133		
	Cs-137		

232 261

3271
5/2/2000



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 2565

SAMPLE ID: 3271 # 2 INSIDE TENT

DATE: 5/1-5/2 TIME: 1723-0420 OF SAMPLING

SAMPLE VOLUME: 3.35 EC

ANALYZED ON DATE: 5/2 AT TIME: 1913

GEOMETRY: 90C1

COUNTING TIME: 1000 S

ANALYST: *[Signature]*

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci/ml}$)	Estimated Uncertainty
	I-131	$< 1 \text{ E}^{-10}$	
	I-133	$< 1 \text{ E}^{-10}$	
	Cs-137	$< 1 \text{ E}^{-10}$	

232 262

#3274
5/2 2000



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 851

SAMPLE ID: 3274 GE-7

DATE: 5/2 TIME: 1310-24 OF SAMPLING

SAMPLE VOLUME: 1.4E6

ANALYZED ON DATE: 5/2 AT TIME: 1810

GOMETRY: SCE1

COUNTING TIME: 1000S

ANALYST: RRS

REFERENCE SPECTRA:

RESULTS:	<u>Nuclide</u>	<u>Concentration (uCi/ml)</u>	<u>Estimated Uncertainty</u>
	<u>I-131</u>	<u>< 1E-10</u>	
	<u>I-133</u>		
	<u>Cs-137</u>		

232 263



Nuclear Environmental Services,
a division of Science Applications, Inc.

3275
5/2 2000

ANALYTICAL RESULTS

TAG # 852

SAMPLE ID: 3275 SSE 01

DATE: 5/2 TIME: 1257-1314 OF SAMPLING

SAMPLE VOLUME: 1.4 $\text{E}6$

ANALYZED ON DATE: 5/2 AT TIME: 1835

GEOMETRY: SCE1

COUNTING TIME: 100 S

ANALYST: RRS

REFERENCE SPECTRA:

RESULTS:	<u>Nuclide</u>	<u>Concentration ($\mu\text{Ci}/\text{ml}$)</u>	<u>Estimated Uncertainty</u>
	I-131	$< 1 \text{E}^{-10}$	
	I-133		
	Cs-137		

232 264

#2955
1610 5/2-



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 839

SAMPLE ID: 2955 GE-6

DATE: 4/30 TIME: 1106-1126 OF SAMPLING

SAMPLE VOLUME: 1.4E6

ANALYZED ON DATE: 5/2 AT TIME: 1439

GOMETRY: 5CEI

COUNTING TIME: 1000S

ANALYST: RRS

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration (uCi/ml)	Estimated Uncertainty
	I-131	$< 1E-10$	
	I-133		
	Cs-137		

232 235

#2978

1610 5/2



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 837

SAMPLE ID: 2978

DATE: 4/50

TIME: 1458-1518 OF SAMPLING

SAMPLE VOLUME: 1.27 EG

ANALYZED ON DATE: 5/2

AT TIME: 1327

GEOMETRY: SCEI

COUNTING TIME: 1000 S

ANALYST: RRS

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci/ml}$)	Estimated Uncertainty
	I-131	$< 1 \text{E}^{-10}$	
	I-133		
	Cs-137		

232 266

#2995

1610

5/2



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 2551

SAMPLE ID: 2995 GE-2

DATE: 4/30 TIME: 1701 OF SAMPLING
1721

SAMPLE VOLUME: 1.4E⁶ CC

ANALYZED ON DATE: 5/2 AT TIME: 1344

GEOMETRY: 9CE1

COUNTING TIME: 1000

ANALYST: GJD

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci}/\text{L}$)	Estimated Uncertainty
	I-131	3.4×10^{-10}	19.6%
	I-133		
	Cs-137		

232 267

#2996

1610 5/2



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 838

SAMPLE ID: 2996 N. GATE DELTA

DATE: 4/30 TIME: 1642-1659 OF SAMPLING

SAMPLE VOLUME: 1.4E6

ANALYZED ON DATE: 5/1 AT TIME: 1355

GEOMETRY: SCE1

COUNTING TIME: 1000S

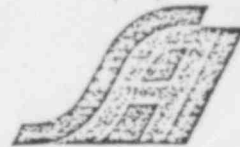
ANALYST: QRS

REFERENCE SPECTRA:

RESULTS:	<u>Nuclide</u>	<u>Concentration (uCi/ml)</u>	<u>Estimated Uncertainty</u>
	<u>I-131</u>	<u>< 1E-10</u>	
	<u>I-133</u>		
	<u>C-137</u>		

232 268

#3109
1610 5/2



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 2550

SAMPLE ID: SE-21 3109

DATE: 4/30 TIME: 1012 OF SAMPLING
1032

SAMPLE VOLUME: $1.4E^6$ cc

ANALYZED ON DATE: 5/2 AT TIME: 1321

GOMETRY: 9 CC 1

COUNTING TIME: 1000

ANALYST: GJD

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci}/\text{cc}$)	Estimated Uncertainty
	I-131	$< 1 \times 10^{-11}$	
	I-137		
	Cs-137		232 269

3111

16/10

5/2



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 2553

SAMPLE ID: 3111 GEOS ECHU

DATE: 5/1

TIME: ~~1058~~ 0942
~~0959~~ 0959 OF SAMPLING

SAMPLE VOLUME: ~~8.4E⁶ CC~~
1.4E⁶ CC

ANALYZED ON DATE: 5/2 AT TIME: 1449

GEOMETRY: 9CE1

COUNTING TIME: 1000

ANALYST: GJD

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci}/\text{CC}$)	Estimated Uncertainty
	I-131	$< 1 \times 10^{-11}$	
	I-133		
	Cs-137		

232 270

#3165

1610

5/2



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 83C

SAMPLE ID: 3165 HP office Area

DATE: 5/1 TIME: 2138 OF SAMPLING
2148

SAMPLE VOLUME: 1.27E⁶

ANALYZED ON DATE: 5/2 AT TIME: 1333

GOMETRY: 5CE1

COUNTING TIME: 1000

ANALYST: GJD

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration (uCi/g)	Estimated Uncertainty
	I-131	7.0×10^{-11}	13.9%
	I-133		
	Cs-137		

232.271

SAMPLE ANALYSIS RESULTS

RADIATION
MANAGEMENT
CORPORATION

#3210

SAMPLE ID HPR-228

1610 5/2

SAMPLE TYPE AI

1307 (5/1)

VOLUME 2.45 E8 ml TIME: 0617 DATE: 5/2/79 OF SAMPLING

TIME OF ANALYSIS: DATE: 5/2/79 TIME:

GEOMETRY AI @ 12"

COUNTING TIME 300sec

ANALYST HCN

REFERENCE SPECTRA: TMI 2133

OBA-3210

RESULT

NUCLIDE

ACTIVITY ($\mu\text{Ci/cc}$)

ERROR ESTIMATE

I-131

2.1 E-7

25%

232 272

SAMPLE ANALYSIS RESULTS

RADIATION
MANAGEMENT
CORPORATION #3211

SAMPLE ID HPR-221B

1610 5/2

SAMPLE TYPE AI

1307 (5/1)

VOLUME 2.18 E8 ml

TIME: 0615 DATE: 5/2/79 OF SAMPLING

TIME OF ANALYSIS: DATE: 5/2/79 TIME:

GEOMETRY AI @ 12"

COUNTING TIME 300 sec

ANALYST *[Signature]*

REFERENCE SPECTRA: TMI 2132

OBA-3211

RESULT

NUCLIDE

ACTIVITY ($\mu\text{Ci/cc}$)

ERROR ESTIMATE

I-131

2.0 E-8

25%

232 273

SAMPLE ANALYSIS RESULTS

RADIATION
MANAGEMENT
CORPORATION #3213

SAMPLE ID HPR 221A 1610 5/2

SAMPLE TYPE AI 1307(5/1)

VOLUME 2.11E8 TIME: 0614 DATE: 5/2/79 OF SAMPLING

TIME OF ANALYSIS: DATE: 5/2/79 TIME:

GEOMETRY AI @ 12"

COUNTING TIME 300 sec

ANALYST HGH

REFERENCE SPECTRA: TMI 2134
OBA-3213

RESULT

NUCLIDE

ACTIVITY ($\mu\text{Ci/cc}$)

ERROR ESTIMATE

I-131

1.2E-8

25%

232 274

SAMPLE ANALYSIS RESULTS

RADIATION
MANAGEMENT
CORPORATION #3220

SAMPLE ID #1 RMA-6

1610 5/2

SAMPLE TYPE AI+P

0135 4/30

VOLUME 1.19E8

TIME: 0340 DATE: 5/2/79 OF SAMPLING

TIME OF ANALYSIS: DATE: 5/2/79 TIME:

GEOMETRY AI @ contact

COUNTING TIME 300 sec

ANALYST *AGW*

REFERENCE SPECTRA: TMI 2135

OBA-3220

RESULT

NUCLIDE

ACTIVITY ($\mu\text{Ci/cc}$)

ERROR ESTIMATE

I-131

2.8E-9

25%

232 275

SAMPLE ANALYSIS RESULTS

RADIATION
MANAGEMENT
CORPORATION #3220

SAMPLE ID #1 RMA-6

1610 5/2

SAMPLE TYPE AI+P

0135 4/30

VOLUME 1.19E8

TIME: 0340 DATE: 5/2/79 OF SAMPLING

TIME OF ANALYSIS: DATE: 5/2/79 TIME:

GEOMETRY AI@ contact

COUNTING TIME 300 sec

ANALYST *[Signature]*

REFERENCE SPECTRA: TMI 2135

OBA-3220

RESULT

NUCLIDE

ACTIVITY ($\mu\text{Ci/cc}$)

ERROR ESTIMATE

I-131

2.8E-9

25%

232 276

#3228

1610

5/2



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 2547

SAMPLE ID: 3228 #2 Hallway off SOP

DATE: 5/2 TIME: 0904
0914 OF SAMPLING

SAMPLE VOLUME: 5.7E⁵

ANALYZED ON DATE: 5/2 AT TIME: 1301

GEDOMETRY: ~~9~~CEI

COUNTING TIME: 1000

ANALYST: GJD

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci}/\text{g}$)	Estimated Uncertainty
	I-131	5.0×10^{-11}	37.0%
	I-135		
	Cs-137		

232 277



Nuclear Environmental Services,
a division of Science Applications, Inc.

#3114
5/2 1745
1745

ANALYTICAL RESULTS

2554

ID: 3114 #2 M-20 Area

5/1 TIME: 1158
1213 OF SAMPLING

LE VOLUME: 8.47 E⁵ CC

YZED ON DATE: 5/2 AT TIME: 1513

OMETRY: 9 CE 1

ANTING TIME: 1000

ALYST: GJD

REFERENCE SPECTRA:

TS:	Nuclide	Concentration (uCi/ CC)	Estimated Uncertainty	ty
	I-131	8.0×10^{-11}	17.9%	
	I-133			
	G-131			

232278



Nuclear Environmental Services,
a division of Science Applications, Inc.

#3114
5/2 1745

ANALYTICAL RESULTS

TAG # 2554

SAMPLE ID: 3114 #2 M-20 Area

DATE: 5/1 TIME: 1158 OF SAMPLING
1213

SAMPLE VOLUME: 8.47 F^S CC

ANALYZED ON DATE: 5/2 AT TIME: 1513

GEOMETRY: 9 CE 1

COUNTING TIME: 1000

ANALYST: GJD

REFERENCE SPECTRA:

RESULTS	Nuclide	Concentration ($\mu\text{Ci}/\text{cc}$)	Estimated Uncertainty
	I-131	8.0×10^{-11}	17.9%
	I-133		
	Cs-137		

232 279

FUEL BLDG 305' ELE 3259 *chan*

#3259
5/2 1795

SAMPLE TIME
12 5 2/79

COUNT TIME
1415 5 2/79

-----PRELIMINARY PEAK DATA-----

COUNT TIME = 33.3333 MINUTES DECAY TIME = 83 MINUTES
SAMPLE VOLUME = 3964800 MILLILITERS

CENTROID CHANNEL	PEAK ENERGY (KEV)	FWHM (KEV)	PEAK AREA (COUNTS)	+ OR - (1 SIG)
147.36	73.7361	1.8267	344.0	141.9
157.97	73.9200	1.5435	12431.4	159.9
353.13	173.5950	1.6236	1137.2	159.9
410.00	205.0000	0.8041	28.0	132.0
420.00	205.0000	1.5410	15468.0	150.1
430.00	205.0000	2.0080	549.0	70.5
1000.47	502.9900	2.1106	145109.0	359.0
1000.90	502.9900	1.6570	418.0	359.0
1001.40	502.9900	2.0084	6001.2	359.0
1440.40	714.0000	1.4505	184.0	17.4
1440.10	714.0000	1.8789	1226.0	16.1
2347.05	1170.0000	1.9461	39.0	7.0

UNIDENTIFIED PEAKS

ENERGY	GAMMAS MIN. AT COUNT TIME
73.73	3130.03
73.92	7535.00
205.00	173.84
502.99	7596.90

-----+ FINAL SUMMARY OF NUCLIDES OBSERVED +-----

DATE: 5/2/79

NUCLIDE	WEIGHTED MEAN ACTIVITY	+ OR - 1 SIGMA
I-131	2.515E-07	3.116E-08

+ MINIMUM DETECTABLE ACTIVITIES +
+ BASIS: 99% C.L. AT COUNT TIME +

232 280

NUCLIDE	ENERGY (KEV)	ABS. EFF.	BR (%)	MDA (UCI-ML)
CP-51	3.201E+02	2.847E-03	9.800E+00	1.504E-09
MN-54	8.348E+02	9.180E-04	1.000E+02	3.713E-11
CO-57	1.221E+02	9.462E-03	8.700E+01	1.174E-10
CO-58	8.196E+02	9.473E-04	9.900E+01	4.853E-11
FE-59	1.099E+03	6.462E-04	5.640E+01	7.383E-11
CO-60	1.173E+02	6.006E-04	1.000E+02	1.173E-10
ZP-95	7.567E+02	1.912E-03	5.460E+01	4.213E-11
NB-95	7.658E+02	1.001E-03	9.900E+01	2.767E-11
NA-24	1.368E+03	4.966E-04	1.000E+02	2.704E-11
KR-85	5.140E+02	1.606E-03	4.300E+01	2.098E-09
NE-133	8.100E+01	5.343E-03	3.500E+01	7.33E-10
I-133	5.299E+02	1.540E-03	8.900E+01	9.233E-11
CS-134	6.647E+02	1.287E-03	9.300E+01	6.654E-11
CS-136	6.183E+02	9.378E-04	1.000E+02	4.086E-11
CS-137	6.810E+02	1.156E-03	8.600E+01	5.768E-11
NO-99	1.403E+02	7.982E-03	9.500E+01	1.305E-10
CE-141	1.454E+02	7.554E-03	4.800E+01	2.817E-10

FUEL BLDG 305 3259 PART

SAMPLE TIME
1352 5/ 2/ 79

COUNT TIME
1500 5/ 2/ 79

-----PRELIMINARY PEAK DATA-----

COUNT TIME = 33.3333 MINUTES DECAY TIME = 120 MINUTES
SAMPLE VOLUME = 3964000 MILLILITERS

CENTROID CHANNEL	PEAK ENERGY (KEV)	FWHM (KEV)	PEAK AREA (COUNTS)	+ OR - (1 SIG)
159.03	79.0530	1.6205	1462.4	67.8
567.94	284.0339	1.5839	1722.4	50.3
723.55	364.3066	1.3802	16270.0	129.9
1374.18	637.1155	2.0536	670.0	27.3
1446.22	723.1336	1.9486	131.1	12.8

79.05 9344.77

* FINAL SUMMARY OF NUCLIDES OBSERVED *

DATE: 5/ 2/ 79

NUCLIDE	WEIGHTED MEAN ACTIVITY	+ OR - 1 SIGMA
I-131	2.823E-08	4.168E-09

232 281

* MINIMUM DETECTABLE ACTIVITIES *
* BASIS: 99% C.L. AT COUNT TIME *

NUCLIDE	ENERGY (KEV)	ABS. EFF.	BR (%)	MDA (UCI-ML)
CP-51	3.201E+02	2.847E-03	9.800E+00	5.108E-10
MN-54	8.348E+02	9.180E-04	1.000E+02	3.099E-11
CO-57	1.321E+02	9.462E-03	8.780E+01	4.135E-11
CO-58	8.198E+02	9.473E-04	9.900E+01	3.243E-11
FE-59	1.099E+03	6.482E-04	5.640E+01	5.778E-11
CO-60	1.173E+03	6.006E-04	1.000E+02	9.735E-11
ZP-95	7.567E+02	1.012E-03	5.460E+01	6.169E-11
NB-95	7.658E+02	1.001E-03	9.900E+01	2.652E-11
NA-24	1.363E+03	4.986E-04	1.000E+02	6.836E-12
YR-85	5.140E+02	1.606E-03	4.300E+01	9.742E-09
TE-133	8.190E+01	5.343E-03	3.500E+01	2.547E-10
I-133	5.299E+02	1.540E-03	8.900E+01	3.668E-11
CS-134	6.047E+02	1.287E-03	9.800E+01	3.896E-11
CS-136	8.135E+02	9.378E-04	1.000E+02	3.447E-11
CS-137	6.516E+02	1.156E-03	8.600E+01	5.488E-11
MO-99	1.403E+02	7.982E-03	9.500E+01	4.477E-11
CE-141	1.454E+02	7.554E-03	4.800E+01	9.566E-11

#3262
5/2 1745

RAD WASTE CITY HALLIBURTON 2 SP 11 3262

SAMPLE TIME
1520 5/ 2/ 79

COUNT TIME
1544 5/ 2/ 79

-----PRELIMINARY PEAK DATA-----

COUNT TIME = 33.3333 MINUTES
SAMPLE VOLUME = 250 MILLILITERS

DECAY TIME = 24 MINUTES

CENTROID CHANNEL	PEAK ENERGY (KEV)	FWHM (KEV)	PEAK AREA (COUNTS)	+ OR - (1 SIG)
147.34	73.7091	2.5120	107.4	51.4
159.24	79.6560	2.0701	234.4	59.7
657.07	328.5674	1.6593	832.0	42.9
728.43	364.2456	1.3706	571.0	36.0
974.08	487.0689	1.7298	1131.9	41.5
1021.74	510.8984	3.5771	416.1	34.6
1139.03	569.5401	1.9377	129.4	26.5
1209.61	604.8313	1.7700	715.6	36.1
1323.80	661.9250	1.4330	655.4	34.0
1500.07	796.1570	2.0550	423.0	28.0
1621.97	811.0067	1.6311	640.0	32.0
1633.89	816.9665	1.8838	152.0	16.0
1706.51	868.2754	1.5792	58.0	10.0
1769.45	884.7450	2.7107	42.0	10.0
1850.58	925.3891	1.5160	87.4	15.0
2047.40	1173.7385	2.6944	58.0	12.1
2263.94	1333.9800	1.7751	48.0	10.0
2422.69	1505.3491	2.1566	591.0	28.0

-----+ FINAL SUMMARY OF NUCLIDES OBSERVED +-----

DATE: 5/ 2/ 79

NUCLIDE	WEIGHTED MEAN ACTIVITY	+ OR - 1 SIGMA
CO-58	7.902E-05	1.029E-05
CO-10	1.070E-05	3.225E-06
CS-134	6.205E-05	7.715E-06
CS-137	7.390E-05	9.773E-06

232 282

-----+ MINIMUM DETECTABLE ACTIVITIES +
+ BASIS: 99% C.L. AT COUNT TIME +-----

NUCLIDE	ENERG. (KEV)	ABS. EFF.	BR(%)	MDA (UCI-ML)
CR-51	3.201E+02	1.262E-03	9.800E+00	2.633E-05
MN-54	8.343E+02	4.230E-04	1.000E+02	2.936E-06
CO-57	1.221E+02	3.239E-03	8.700E+01	1.744E-06
FE-59	1.099E+03	3.100E-04	5.640E+01	5.473E-06
ZR-95	7.567E+02	4.796E-04	5.460E+01	4.450E-06
NB-95	7.658E+02	4.730E-04	9.900E+01	3.483E-06
NR-24	1.364E+03	2.435E-04	1.000E+02	4.381E-06
KR-85	5.140E+02	7.322E-04	4.000E-01	8.267E-04
NE-133	8.100E+01	1.993E-03	3.500E+01	7.586E-06
I-131	3.645E+02	1.092E-03	8.200E+01	5.187E-06
I-133	5.299E+02	7.080E-04	8.900E+01	3.142E-06
CS-136	8.135E+02	4.381E-04	1.000E+02	5.034E-06
MO-99	1.403E+02	3.045E-03	9.500E+01	1.679E-06
CE-141	1.454E+02	2.970E-03	4.800E+01	3.400E-06

SAMPLE ANALYSIS RESULTS

RADIATION
MANAGEMENT
CORPORATION

~~2892~~
2730
512

SAMPLE ID / WTS (107)

SAMPLE TYPE liquid

VOLUME 3000 ml TIME: 0600 DATE: 4/30/79 OF SAMPLING

TIME OF ANALYSIS: DATE: 4/30/79 TIME: ~~20100~~

GEOMETRY Marinelli Beaker

COUNTING TIME 1000 sec

ANALYST RPL

REFERENCE SPECTRA: TMI ~~2050~~ 2059 2060

OBA- 2892

RESULT

<u>NUCLIDE</u>	<u>ACTIVITY</u> ($\mu\text{Ci/cc}$)	<u>ERROR ESTIMATE</u>
I-131	$2E-7$	30%

232-283

SAMPLE ANALYSIS RESULTS

RADIATION
MANAGEMENT
CORPORATION

3148
5/2 2230

SAMPLE ID East Dike

SAMPLE TYPE Liquid

VOLUME 3000 ml TIME: 0555 DATE: 5/2/79 OF SAMPLING

TIME OF ANALYSIS: DATE: 5/2/79 TIME:

GEOMETRY Marinelli beaker

COUNTING TIME 1000 sec

ANALYST *gh*

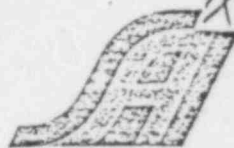
REFERENCE SPECTRA: TMI 2137

~~DBA~~ 3148

RESULT

<u>NUCLIDE</u>	<u>ACTIVITY</u> ($\mu\text{Ci/cc}$)	<u>ERROR ESTIMATE</u>
I-131	$8 \text{ E} - 8$	60%

232 284



Nuclear Environmental Services,
a division of Science Applications, Inc.

#3233
5/2 2230

ANALYTICAL RESULTS

TAG # 2570

SAMPLE ID: 3233 * 2 COND. PUSH SUMP

DATE: 5/2 TIME: 1830 OF SAMPLING

SAMPLE VOLUME: 500 ML

ANALYZED ON DATE: 5/2 AT TIME: 9035

GOMETRY: 9457

COUNTING TIME: 1000 S

ANALYST: RS

REFERENCE SPECTRA:

RESULTS:	<u>Nuclide</u>	<u>Concentration (uCi/ml)</u>	<u>Estimated Uncertainty</u>
	I-131	$< 3E^{-7}$	
	I-133	$< 5E^{-7}$	
	Cs-137	$< 1E^{-6}$	

232 285



Nuclear Environmental Services,
a division of Science Applications, Inc.

#3235
5/2 230

ANALYTICAL RESULTS

TAG # RS67

SAMPLE ID: 3235 #2 SLUDGE COLLECT.

DATE: 5/2 TIME: 1830 OF SAMPLING

SAMPLE VOLUME: 500 ML

ANALYZED ON DATE: 5/2 AT TIME: 2008

GEOMETRY: 9451

COUNTING TIME: 1000 S

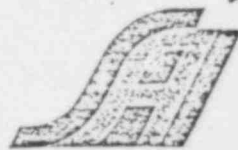
ANALYST: RS

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci/ml}$)	Estimated Uncertainty
	I-131	$< 3 E^{-7}$	
	I-133	$< 5 E^{-7}$	
	Cs-137	$< 1 E^{-6}$	

232 286

#3236
5/2 2230



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 2566

SAMPLE ID: 3236 # 2 TURB Bldg SUMP

DATE: 5/2 TIME: 1830 OF SAMPLING

SAMPLE VOLUME: 500 ML

ANALYZED ON DATE: 5/2 AT TIME: 1947

GEOMETRY: 9457

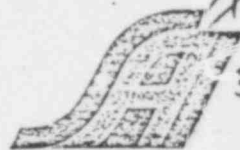
COUNTING TIME: 1080 S

ANALYST: *RS*

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci/ml}$)	Estimated Uncertainty
	I-131	$< 3 \text{E}^{-7}$	
	I-133	$< 5 \text{E}^{-7}$	
	Cs-137	$< 1 \text{E}^{-6}$	

232 287



Nuclear Environmental Services,
a division of Science Applications, Inc.

#3231
5/2 2230

ANALYTICAL RESULTS

TAG # 2571

SAMPLE ID: 3237 #1 PRETREAT SUMP

DATE: 5/2 TIME: 1800 OF SAMPLING

SAMPLE VOLUME: 500 ML

ANALYZED ON DATE: 5/2 AT TIME: 2104

GEOMETRY: 9452

COUNTING TIME: 1000S

ANALYST: *AB*

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci/ml}$)	Estimated Uncertainty
	I-131	$< 3 \text{E}^{-7}$	
	I-133	$< 5 \text{E}^{-7}$	
	Cs-137	$< 1 \text{E}^{-6}$	

232 288

SAMPLE ANALYSIS RESULTS

RADIATION
MANAGEMENT
CORPORATION

#3256
2230
5/2

SAMPLE ID TWTS #107

SAMPLE TYPE Liquid

VOLUME 3000 ml TIME: 1200 DATE: 5/2/79 OF SAMPLING

TIME OF ANALYSIS: DATE: 5/2/79 TIME:

GEOMETRY Marinelli beaker

COUNTING TIME 1000 sec

ANALYST HJD

REFERENCE SPECTRA: TMI ~~2140~~ 2140

OBA 3256

RESULT

<u>NUCLIDE</u>	<u>ACTIVITY</u> ($\mu\text{Ci/cc}$)	<u>ERROR ESTIMATE</u>
I-131	1 E-7	50%

232 289

SAMPLE ANALYSIS RESULTS

RADIATION
MANAGEMENT #13267
CORPORATION 5/2 2230

SAMPLE ID CAP GUN #1 SOUTH END of HALLIBORTON #1
SAMPLE TYPE SOIL

VOLUME — TIME: 1620 DATE: 5/2/79 OF SAMPLING

TIME OF ANALYSIS: DATE: 5/2/79 TIME:

GEOMETRY Paper cup (8 oz.)

COUNTING TIME 300 sec

ANALYST RPL

REFERENCE SPECORA: TMI 244

OBA = 3267

RESULT

<u>NUCLIDE</u>	<u>ACTIVITY</u> ($\mu\text{Ci}/\text{cc}$)	<u>ERROR ESTIMATE</u>
I-131	$1\text{E}-4$	TOTAL ACTIVITY IN SAMPLE

~~ESTIMATE~~
EQUIVALENT TO
 $\approx 4 \times 10^{-7} \mu\text{g}/\text{ml}$
JKR

252 290

#3276
5/2 2230

Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 855

SAMPLE ID: 3276 #2 Aux Bldg 328'

DATE: 5/2 / TIME: 1630-33 OF SAMPLING

SAMPLE VOLUME: 1.69 L

ANALYZED ON DATE: 5/2 AT TIME: 2003

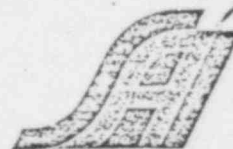
GEOMETRY: BCEL

COUNTING TIME: 1000 S

ANALYST: *RS*

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci}/\text{ml}$)	Estimated Uncertainty
	I-131	1.54×10^{-8}	2.6%
	I-133		
	Cs-137		232 300



Nuclear Environmental Services,
a division of Science Applications, Inc.

#3278
5/2 2330

ANALYTICAL RESULTS

TAG # 854

SAMPLE ID: #2 HPR-221A

DATE: 5/2 TIME: 0624 OF SAMPLING
1620

SAMPLE VOLUME:

ANALYZED ON DATE: AT TIME:

GOMETRY:

COUNTING TIME:

ANALYST:

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci/ml}$)	Estimated Uncertainty
	I-131	9.4 E^{-9}	.1%
	I-133		
	Cs-137		232 301



Nuclear Environmental Services,
a division of Science Applications, Inc.

#3219
5/2 2230

ANALYTICAL RESULTS

TAG # 858

SAMPLE ID: ~~#2~~ HPR 221 B #3279

DATE: 5/2 TIME: 0624-1620 OF SAMPLING

SAMPLE VOLUME: 1.26 E8

ANALYZED ON DATE: 5/2 AT TIME: 2057

GEOMETRY: 5CE4

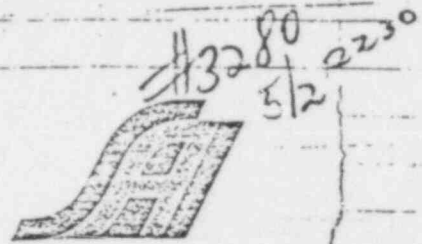
COUNTING TIME: 400 S

ANALYST: RRS

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci/ml}$)	Estimated Uncertainty
	I-131	2.07 E^{-8}	.5 %
	I-133		
	Cs-137		

232 302



Nuclear Environmental Services,
a division of Science Applications, Inc.

ANALYTICAL RESULTS

TAG # 856

SAMPLE ID: # 2 HPR 222

DATE: 5/2 TIME: 0624-1620 OF SAMPLING

SAMPLE VOLUME: 1.5E8

ANALYZED ON DATE: 5/2 AT TIME: 2027

GEOMETRY: SCE4

COUNTING TIME: 300S

ANALYST: *PLS*

REFERENCE SPECTRA:

RESULTS:	<u>Nuclide</u>	<u>Concentration (uCi/ml)</u>	<u>Estimated Uncertainty</u>
	I-131	1.64 E-7	.2%
	I-133		
	Cs-137		232 303



Nuclear Environmental Services,
a division of Science Applications, Inc.

#3281
5/2

ANALYTICAL RESULTS

TAG # 859

SAMPLE ID: 3281 #2 HPR 228

DATE: 5/2 TIME: 0624-1620 OF SAMPLING

SAMPLE VOLUME: 1.26E8

ANALYZED ON DATE: 5/2 AT TIME: 2110

GEOMETRY: SCE2

COUNTING TIME: 400 S

ANALYST: RS

REFERENCE SPECTRA:

RESULTS:	Nuclide	Concentration ($\mu\text{Ci/ml}$)	Estimated Uncertainty
	I-131	5.4×10^{-9}	.4%
	I-133		
	Cs-137		

232 304

ATX. SAMPLE SURVEY DATA

DATE: 5-11-79

LOCATION: JANTS SP#107

TIME ON: 0200

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1402

ANALYSIS FINDINGS:

¹³¹I < 1.8 E-7 uCi/ml

232 305

AIR SAMPLE SURVEY DATA

DATE: 5-11-79

LOCATION: I W T S SP#107

TIME ON: 1000

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1401

ANALYSIS FINDINGS:

¹³¹I < 1.7E-7 mCi/ml

232 306

AIR SAMPLE SURVEY DATA

DATE:

5-9-79

LOCATION:

1 WTS SP #107

TIME ON:

1400

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1400

ANALYSIS FINDINGS:

$^{131}\text{I} < 2.6 \text{E}^{-7} \text{ } \mu\text{Ci}/\text{ml}$

232 307

Water

~~SR~~ SAMPLE SURVEY DATA

DATE:

5-3-79

LOCATION:

1 WTS SP 107

TIME ON:

0200

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

500 ml

NRC SAMPLE NUMBER:

1211

ANALYSIS FINDINGS:

131

$I < 3.6E-7 \text{ nCi/ml}$

232 308

Water

WATER SAMPLE SURVEY DATA

DATE:

5-3-79

LOCATION:

1 WTS S.P. 107

TIME ON:

1000

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

500 ml

NRC SAMPLE NUMBER:

1212

ANALYSIS FINDINGS:

$17 \frac{1}{2} I < 3.6 E-7 \text{ ml/ml}$

232 309

AIR SAMPLE SURVEY DATA

DATE:

5-3-79

LOCATION:

1 WTS SP 107

TIME ON:

0200

TIME OFF:

FLOW RATE:

TOTAL VOLUME:

500 ml

NRC SAMPLE NUMBER:

1198

ANALYSIS FINDINGS:

¹³¹I < 4.5 E-7 μ Bi/ml

232 310

Water

~~SEE~~ SAMPLE SURVEY DATA

DATE: 5/2/79

LOCATION: IWTS #107

TIME ON:

TIME OFF: 2200

TOTAL VOLUME: 500

SAMPLE COUNTED BY - ANL NRC

NRC SAMPLE NUMBER: 1192

ANALYSIS FINDINGS:

¹³¹I < 4.5E-7 μ C/ml

Water

~~WATER~~ SAMPLE SURVEY DATA

DATE: 5-1-79

LOCATION: 1 WTS

TIME ON:

TIME OFF: 2000

FLOW RATE:

TOTAL VOLUME: 500

NRC SAMPLE NUMBER: 1168

ANALYSIS FINDINGS:

¹³¹I < 4.5E-7 uCi/ml

Water

WATER SAMPLE SURVEY DATA

DATE:

5-1-79

LOCATION:

FATS effluent sample point 107

TIME ON:

TIME OFF:

1000

FLOW RATE:

TOTAL VOLUME:

500

NRC SAMPLE NUMBER:

1159

ANALYSIS FINDINGS:

131

I

2.6×10^{-7} ali/ml

232 313

water

AIR SAMPLE SURVEY DATA

DATE: 5-1-79

LOCATION: IWTS SP 107

TIME ON:

TIME OFF: 0200

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1143

ANALYSIS FINDINGS: 13' $I < 4.5E-7$

232 314

Water

SAMPLE SURV. Y DATA

DATE: 4-30-79

LOCATION: J WTS off point 107

TIME ON:

TIME OFF: 1800

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER: 1142

ANALYSIS FINDINGS:

13' I < 3.2E-7

232 315

Water

AIR SAMPLE SURVEY DATA

DATE:

4-29-79

LOCATION:

East Basin Sump

TIME ON:

TIME OFF:

1400

FLOW RATE:

TOTAL VOLUME:

18.5 l

NRC SAMPLE NUMBER:

1100

ANALYSIS FINDINGS:

$$\begin{aligned} &^{131}\text{I} = 28.1 \pm 2.5 \text{ } \mu\text{Ci/l} \\ &= 2.8 \times 10^{-8} \text{ } \mu\text{Ci/ml} \\ &= 10\% \text{ of } 10 \text{ CFR } 20 \text{ } \text{MPC}_w \end{aligned}$$

232 316

Water

SAMPLE SURVEY DATA

DATE: 4-30-79

LOCATION: IWTS

TIME ON:

TIME OFF: 0200

FLOW RATE:

TOTAL VOLUME:

NRC SAMPLE NUMBER:

1106

ANALYSIS FINDINGS:

13' I < $4.5E-7$ ul/ml

232 317

SOLID WASTE

Shipment #	DESCRIPTION	DESTINATION	DATE
27	Laundry	UTICA New York	3-25-79
79-28 (79-C-26) 0.363 ^{ci}	SOLID WASTE - 190ft ³	Barrow	4-1-79
79-29 (79-C-27) 0.363 ^{ci}	"	"	4-5-79
79-30 (79-C-28) 0.363 ^{ci}	"	"	4-5-79
79-31 (79-C-29) 0.363 ^{ci}	"	"	4-5-79 ^{mic}
79-32 (79-C-30) 0.363 ^{ci}	"	"	4-6-79
79-33 (79-C-31) 5.4 ^{ci}	SPENT RESIN	BARNWELL SC	4-11-79
79-34 (79-C-32) 1.3 ^{ci}	SOLIDIFIED WASTE	Richland Washington	4-9-79 4/17/79
79-35 (79-C-32) 1.3 ^{ci}	"	"	4-9-79 9/17/79
79-36 (8m ^{ci})	Laundry	Utica, New York	4-16-79
79-37 (342m ^{ci})	RC 4/D DEGAS LIQ SAMPLE	B+W, LYNCHBURG, VA	4-17-79
79-38 (0.3m ^{ci}) 0.7 ^{ci}	CONTAM. PAPER	Cher Noe	4-19-79
(0.97)	Solidified Rad Waste	Richland Wash	4-19-79
79-38 (79-D-168) 170m ^{ci}	Compacted Waste	Barrow SC	4/26/79
79-39 (342m ^{ci})	DEGAS LIQUID SAMPLE	B+W	4-22-79
79-40 (342m ^{ci})	DEGAS LIQUID SAMPLE	B+W LYNCHBURG	4-25-79
79-41 (45m ^{ci})	Contaminated Laundry	Utica, New York	4/30/79
	Spent Filters	Richland Wash	
79-42 (342m ^{ci})	RC 4/D LIQ SAMPLE	B+W, LYNCHBURG, VA.	5/2/79
79-43 (0.8m ^{ci})	U-I MWST, CWST "A" & U-II MWHT. SAMPLE	OAKRIDGE, TENN	5/4/79
79-44 (342m ^{ci})	RC 4/P LIQ SAMPLE	B+W Lynchburg	5-5-79
79-45 (21m ^{ci})	CHARCOAL FILTERS (3)	NUCLEAR CONSULTING, INC	5-9-79
79-46 (342m ^{ci})	RC 4/P Press LIQ SAMPLE	B+W Lynchburg, VA.	5-10-79
79-47 (0.3m ^{ci})	Unit II Neut TK "A" LIQUID SAMPLE	B+W Lynchburg, VA.	5-10-79
79-48 (0.4m ^{ci})	Unit II Neut TK "B"	B+W Lynchburg, VA.	5-10-79

May 14, 1979

Stohr

TO: TMI SECURITY PERSONNEL
HEALTH PHYSICS CONTROL POINTS, UNIT I AND II

RE: REMOVAL OF MATERIAL FROM WITHIN THE PROTECTED AREA

Effective immediately, no material may be removed from within the protected area without prior clearance by Health Physics. (The only exceptions are obvious personal items such as brief cases, lunch boxes, thermoses, etc. and radioactive samples which are transported to external counting labs under controlled procedures.) This restriction applies to trucks as well as hand carried material.

Certain materials may be pre-cleared by Health Physics in which case, a CONTAMINATION AND RADIATION CLEARANCE green tag or a form (enclosure) may be utilized in lieu thereof.

All trucks and their contents shall be surveyed prior to leaving the protected area. No exceptions to this.

In order to have material/trucks cleared, call Health Physics (Extension 341)

For Health Physics personnel, surveys of trucks and other bulk material to be cleared at the security fence will be performed with a Ludlum Model 3 or 16 with a NaI crystal detector. Clearance criteria is nothing greater than background. Material which is to be attached a clearance tag will be surveyed with normal survey instruments.

No trash will be removed from the protected area till further notice.

D. F. Linn
D. F. Linn

cc: NRC (Environmental)

:djh

*Permission given to Hellums by Bob Jones
(both NSS) to use E-500 in place of
Ludlums (5/15/79) -232 319*

*Responsible individual to implement this procedure
is NSS Foreman in cap - guard trailer - guards
are instructed to call for release*

NOTE TO J. P. STORR
FROM 5/14 - Eve. Shift, Millon

Subject: Rad. MATL. In Dump

AT ~ 2230 HRS., I DISCUSSED THIS MATTER WITH DWG
LIMBOTH AND TOM MULLIGAN. THE FOLLOWING INFO. WAS
RELATED:

- ① There are no written procedures to transfer of materials to landfill. Also, there is no procedure for current methods of matl. transfer on site.
- ② Two laborers have been posted at the landfill tonight with instruction to keep anyone out.
- ③ ^{Verbal} Orders have been given to guards that no matl. is to leave the site until notified.
- ④ A formal memo is being drafted which requires green tag clearance for all matls leaving. Also for survey of trucks with matl. on landfill, and survey requirements.
- ⑤ No idea how the matl. got there.

I discussed transfers of matl. on site with various people and found ~~no~~ nobody with a logical explanation.

B. SMITH (Shift Supv.) STATED THAT A TRUCK WOULD BE AT THE LANDFILL AT 7:30 AM TO REMOVE LOOSE MATL. HE REQUESTED THAT AN NRC REPRESENTATIVE BE PRESENT.

232 520

5/14/79 at ~1800

Stearns & Shaul

SURVEY OF LAND-FILL WASTE DISPOSAL
AREA

All readings at surface of earth \rightarrow ~ 0.02 $\mu\text{m/l}$

All items of trash showed ~ 0.02 $\mu\text{m/l}$
except the following:

Two plastic trash bags whose contents
apparently included yellow plastic boots, etc.

Max reading ^{near surface of} ~~on~~ the hottest bag
was > 1.5 $\mu\text{m/l}$ gamma mds
~~at 1800~~

232 321

TABLE 1

NRC AIR SAMPLING LOCATIONS

<u>East Points</u>	<u>(Degrees) Azimuth</u>	<u>Miles Distance</u>	<u>Location</u>
E3	360	1.90	Rail road crossing & Rt. 441
E5	22.5	0.75	Geyer Church Rd. & Rt. 441
E6	58.5	0.45	Laurel Rd. & Rt. 441
E8	110	0.40	TMI Observation Center on Rt. 441
E9	130	0.45	Access Rd. Substation Parking on Rt. 441 (500 KV Station)
E10	127	0.85	Red Hill Plaza & Rt. 441
E11	153	1.15	Engle Rd. & Rt. 441
E12	160	1.60	South Gate & Rt. 441
E13	162.5	2.30	Falmouth Rd. & Rt. 441
E14	160	2.5	Collins Rd. & Rt. 441
F15	152	2.85	Keener Rd. & Rt. 441
E16	25	0.7	North Gate & Rt. 441
E18	35	0.8	Intersection Geyers Church & Gingrick Rds.
E40	355	3.0	Rt. 230 & Rt. 441
E47	110	1.5	Covered Bridge Rd. & Engle Rd.
E55	350	2.2	Ann & Catherine
E60	175	0.8	Guard Shack at Island end of S. Bridge
E61	145	1.8	Falmouth Rd. $\frac{1}{2}$ mile east of Rt. 441
E78	100	2.0	Hillsdale & Creek
E104	330	3.5	Airport
E105	157	1.95	Cemetery S. of Falmouth Rd. on Rt. 441
E107	3	2.55	Hoffer Park in Middletown
E108	350	2.15	Mouth of canal
E114	335	3.3	Olmstead Plaza
E124	151	1.0	Rt. 441 - Red Hill Farm Fruit Stand
E106	320	3.5	Air Force Base (Olmstead)

<u>West Points</u>	<u>(Degrees) Azimuth</u>	<u>Miles Distance</u>	<u>Location</u>
W1	268	1.35	River & Winebago (Goldsboro)
W2	264	1.35	Center of Goldsboro
W3	261	1.65	Rt. 262/Bridge
W4	300	2.4	Rt. 262/Rt. 392
W5	304	2.55	Rt. 262/Curve
W13	298	7.6	Rt. 262 & Rt. 76 (Bridge)
W14	256	1.35	Frazer St. & Rt. 252
W19	192	2.80	Rt. 382 (Beer Rd.) & Rt. 262
W21	167	3.25	North End Brunners Isl.
W25	288	2.15	.6 miles south of W4
W26	200	1.8	262 East (CLY Township)
W17	226	1.85	River Rd. & Rt. 262
W18	197.5	2.20	Rt. 295/Reeser (Hill Rd.)

232 322

50-320

Miscellaneous documents from the IRACT and EMT files dated 3/28/79, 3/31/79, 4/4/79, 4/7/79 and 4/27/79

232 325

790620006

ROSMAN 79-98

[] Exb

LEAD

Morris Howard

BNL	Bricks	44 T
NL Industries	$3\frac{1}{8} \times 3\frac{1}{8} \times 8\frac{1}{2}$ Ballast Bricks	105 T
Bettis	600 Bricks	7 $\frac{1}{2}$ T
NBS	1000 2x4x8 Bricks	13 T
	160 $1\frac{1}{2} \times 3 \times 6$ Bricks	1 T
	~20 slts. $3' \times 8' \times \frac{3}{8}"$	5 T
AFRI	450 Bricks	6 T
Nine Mile Point	1200 2x4x8 Bricks	15 T
	550 2x4x4 Bricks	3 T
	Subtotal	199 T
WMCC (Mechanicsburg)	4x4x24 (incl 2'ears) Ingots	21 T
	Total	220 T

As of 1230, 3/31, this quantity is at site or on the way.

Other sources:

1. NL Industries, Altoona, Mr Hewitt, 814-946-1161 (o) or (H) — Ballast Bricks.
2. Mr. Miles, Adm. Pickover's office, (H), 557-5581 (o), 557-2411 (o), 692-8711 (o) — Ballast Bricks, Machined Bricks, Ingots, Wool.
3. Mark Kokosinski, Mechanicsburg, 717-790-3486 or 3335 (o) — Ingots.

POOR ORIGINAL

232.324

Contacts:

1. Gen. Scholtes, Nat'l Military Command Center (NMCC), 521-1014, OX-73229, 697-5644.
2. Maj. Westphal, NMCC, 521-1014.
3. Howard Hewitt, NL Ind, 814-946-1161 (o), [] (H).
4. Mr. Young, BNL, FTS -666-2231 or 516-345-2231 or 2235.
5. Mr. Flood, Ditto.
6. Jay Earls, Nine Mile Point 1, 315-342-3046 x 1321.
7. AFRI, Command Duty Officer, 703-569-1103.
8. O.J. Woodruff, Bettis, 412-462-5000 x 497.
9. Mr. Beasley, NBS, 921-3548.
10. Met Ed:

Richard Sieglitz	}	717-367-0518
Tom Hawkins		717-367-4644
Pete Snyder		
11. Mike Slobodien, RI, 488-1361
12. Bill Madden, RI rep at site.

POOR ORIGINAL

Status at 1330, 3/31:

1. BNL, 44T, to be airlifted at 1500 from Suffolk AP to Harrisburg Int'l AP (HIAP).
2. NL Ind, 60T^(3 trucks), on road under police escort to plant, ETA 1600. 40T being loaded ²³² on 2 trucks.

3. Bettis, 7½ T, airlifted to HIAP in three C-123s, should have arrived at 1030, 1045 & 1100.
4. NBS, 19 T, to be picked up by truck at 1300.
5. AFRT, 6 T, to be picked up by truck at 1300.
6. Nine Mile Point, 18 T, to be airlifted from Syracuse AP at 1500.
7. NMCC, 21 T, should have arrived at plant at 1200.

POOR ORIGINAL

232-526

Sternberg 4/7/79

MILE 8 JOB X

IRACT DOCUMENT FILE AND LOG SYSTEM

1. During the course of the Three Mile Island 2 event, the IRACT generated and received large numbers of documents of a diverse nature. It is essential that all records of this event be retained as a matter of public record as well as aiding in reconstructing events so that problems with the functioning of the IRACT can be identified and avoided in the future.
2. A system of filing and logging is described below which will provide a method of which all pertinent records will be kept and logged.
3. Types of Records
 - a. Phone line tape recordings and phone log sheets
 - b. Individual phone tape recordings
 - c. Log books and log sheets
 - d. PN's
 - e. IE Bulletins
 - f. Facsimile documents from other locations and agencies
 - g. Plant status sheets, core maps (thermocouples)
 - h. Technical analysis and estimates
 - i. General loose pieces of paper including phone notes
 - j. Transcripts of phone calls
 - k. Incident message forms
 - l. Memos from other agencies, messages, etc.

232 327

4. Method of Filing

A file cabinet with a lock shall be used to provide a central location for all relevant records. Separate folders will be used for all the different types of records described in Paragraph 3 above. For bulky items (such as the large telephone tapes) a folder will be placed in the file cabinet with a record showing where the actual documents are located.

A log sheet of documents which can be identified will be prepared. For those items which have no title they shall be assigned a sequential number which will be used if the item is typed to provide a cross reference to the original document. These miscellaneous papers will be filed by this sequence number.

5. Action

All individuals who have worked on the IRACT are directed to review their records and eliminate non-pertinent papers, and to organize those records in their possession for filing. This shall include putting their name and the date if known on handwritten records so they can be contacted if necessary to explain or amplify the contents.

The file cabinet will serve as a central document center until a final location and disposition of these documents is established.

232 328

HYDROLOGIC ENGINEERING SECTION

Sheet
of

Project TMI UNIT 2 Calc by _____ Date _____

Docket No. _____ Subject _____ Ckd by _____ Date _____

METEOROLOGICAL CONDITIONS @ HARRISBURG

@ 2100 3/28 WIND FROM 160° (SSE-S) 8 kts

FORECAST THROUGH NIGHT:

WIND FROM 150°-180° (SSE-S) 8-10 kts

WINDS WILL DIMINISH TO ABOUT 5 kts EARLY MORNING

FORECAST FOR 3/29:

WINDS FROM 190°-240° (SSW-SW) 10-20 kts

HQ DOWNWIND - ASSUME $E \approx 4m/s$

	CENTRALINA	SECRET CANAL
@ 600m	8 E - 5 sec/m ²	6 E - 5 sec/m ²
@ 1600m	3 E - 5	1 E - 5
@ 3200m	1.2 E - 5	3.5 E - 6
@ 16000m	1.5 E - 6	3 E - 7

$V_L = 10 \frac{m^2}{sec}$

FAIROBENT 703 437 6018

GOLL 703 660 3868

HARRISBURG NWS FTS 590 3927

POOR ORIGINAL

232 329

EMT QUESTION CONTROL SHEET

NUMBER

TIME

ORIGINATOR

QUESTION

Who is at site, what are skills?

POOR ORIGINAL

REPLY

Jim Higgins (Team leader)	HP
Carl Planley	HP
Ron Nimitz	Rx Ups
Charles Galina	HP
Roy Smith } on way	HP, Inv.
Walt Baumach }	Rx Ops

232 330

IRACT STAFF

IRACT DIRECTOR

TIME OF REPLY

4-6

9/8/78

EMT QUESTION CONTROL SHEET

NUMBER 1.

TIME

9:05

ORIGINATOR

Davis

QUESTION

Has state been notified?

REPLY

Yes helicopter from state police
is dispatched

POOR ORIGINAL

IRACT STAFF

IRACT DIRECTOR

4-6

232 331
9:15
TIME OF REPLY

9/8/78

EMT QUESTION CONTROL SHEET

NUMBER

2

TIME

9:05

ORIGINATOR

Davis

QUESTION

What is "General Emergency"

REPLY

A General Emergency is an incident which involves areas external to the site boundary and will require assistance from off-site support groups.

POOR ORIGINAL

232 332

Higgenbotham

IRACT STAFF

IRACT DIRECTOR

4-6

9:15

TIME OF REPLY

9/8/78

EMT QUESTION CONTROL SHEET

NUMBER 3

TIME 9:05

ORIGINATOR Davis

QUESTION

- a. Has there been an out of containment release?
- b. If so has it been terminated?

REPLY

- a. Yes Iodine $< 6 \times 10^{-2}$ $\mu\text{Ci/ml}$ measured at perimeter at ground (min detectable)
- b. Not known

POOR ORIGINAL

232 333

Suzzek

IRACT STAFF

9:13

TIME OF REPLY

IRACT DIRECTOR

4-6

9/8/78

EMT QUESTION CONTROL SHEET

NUMBER

TIME

11:25

ORIGINATOR

Davis

QUESTION:

ARMs is moving closer
where? Cumberland

Does Region know where they
are? Contacted Bob Cross keeper
left & will contact him at
state.

REPLY

Cumberland

Yes

POOR ORIGINAL

232 334

IFACT STAFF

IRACT DIRECTOR

TIME OF REPLY

4-6

9/8/78

Region I - 1600 Releases & Transfers

Waste gas tank releases - less than MPC -

• releases: 0900 & 1400

Waste evaporator condensate tank - less than MPC

• releases 0800 - ~1630 -

Unit 2 A & B Neutralizer tank contents transferred to Misc waste tank of Unit 1

Unit 1 Misc tank dumped to bleed tank room to make room for transfer

Unit 1 now evaporating contents of bleed tank for possible receipt of Unit 2 bleed tank contents

At 230pm - two misc waste tanks of 25,000 gal each arrived at the site from CP DL (Sharon Harris site).

POOR ORIGINAL

232-335

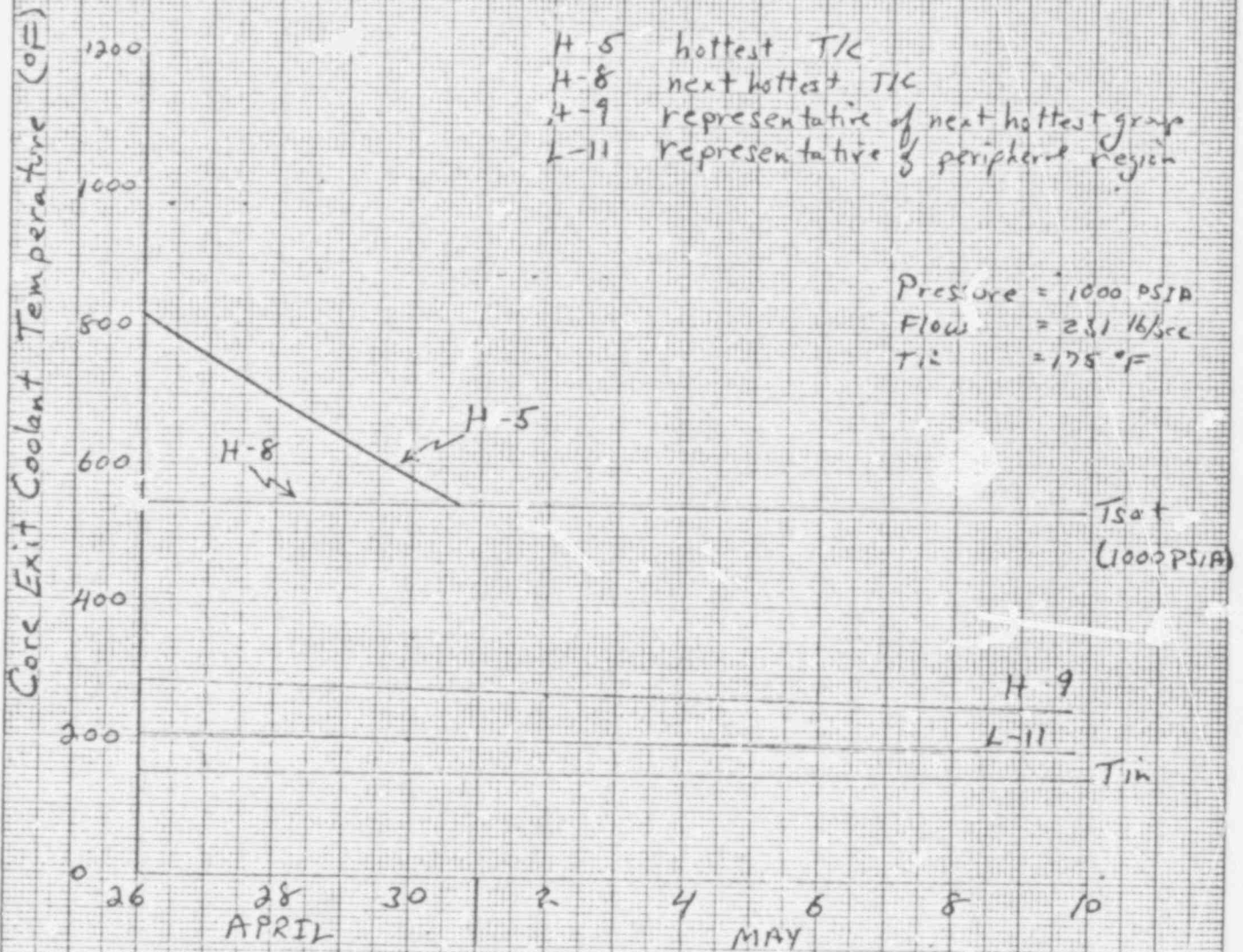
Core Exit Coolant Temperatures

Time

during Natural Circulation
with one Steam Generator
in a water Solid Condition

- H-5 hottest TIC
- H-8 next hottest TIC
- H-9 representative of next hottest group
- L-11 representative of peripheral region

Pressure = 1000 PSIA
Flow = 2.51 lb/sec
Tic = 175 °F



232 336

POOR ORIGINAL

IF your name is NOT on this List
Please Add it.

Rm 322

NRK

4/27/29

Roger Mattson
Frank Ish
Scott Newberry
Ray Woods
Bert Adesco
Don Davis
Larry Holstun
Larry Phillips
Randy Schroeder
Ding Ross
Ralph Meyer
JOHN VOGLEWED
Tad Marsh
Carl H. Berlinger
~~Edward [unclear]~~
Bruce Wilson
H. R. Denton

POOR ORIGINAL

232 337

4-27-79

Factors under advisement by Bethesda

1. We have a team of four engineers (Halahan, Phillips, Meyer, Voglweide) following the core response. They will be obtaining core outlet thermocouple temperature data and inferring core thermal and mechanical conditions.

We have briefed the fuels portion of the Industry Advisory Group, who are ~~to~~ located temporarily in 3rd floor, IE bldg. We will give them info as it becomes available.

2. We have a team of four engineers (Marsh, Woods, Newberry, S. Rubin) ~~to~~ who are following the system response. They will be following the time-dependent vessel ΔT to observe the efficiency of natural circulation. They also will be following the makeup tank conditions so as to have an ~~area~~ extrapolation of ppr level.

The site (Mord) has also asked us to provide an algorithm on the change in ^{primary} system volume per unit change in primary system temperature.

POOR ORIGINAL

232 338

4. The IAG asked us to obtain ex-core ~~and~~ detector info as it might indicate loading of vessel.

5. Assisting work in control room

5. In TMI control room at this time (noon Fri) is Saul Levy, Brent Ackerman, and Ed Zebroski

6. Other considerations

a. if ~~it~~ when vessel heats up prior to starting natural circ, how will this affect Pwr level? We can't do this on the basis of any ex-vessel measurement.

b. Will we have a gross δ on lab lines line?

c. How will we know if pwr goes solid? what do we do if we think it does?

d. With both both OTSG steaming, if we want to restart ECP, what is the indicated start order? (Does it make a difference?)

e. Do we need an updated core melt analysis?

f. Do we need analysis capability instant, on-line, for any

unanticipated correct TLC
patterns

g. What is recommendation
if nat'l inv isn't working,
by whatever customs, and
RCP won't start? (Should
DH be used, or first
exhaust BWS at some point,
then reconvert to sump?)

h. If we start getting H₂ again,
how will we know it?

POOR ORIGINAL

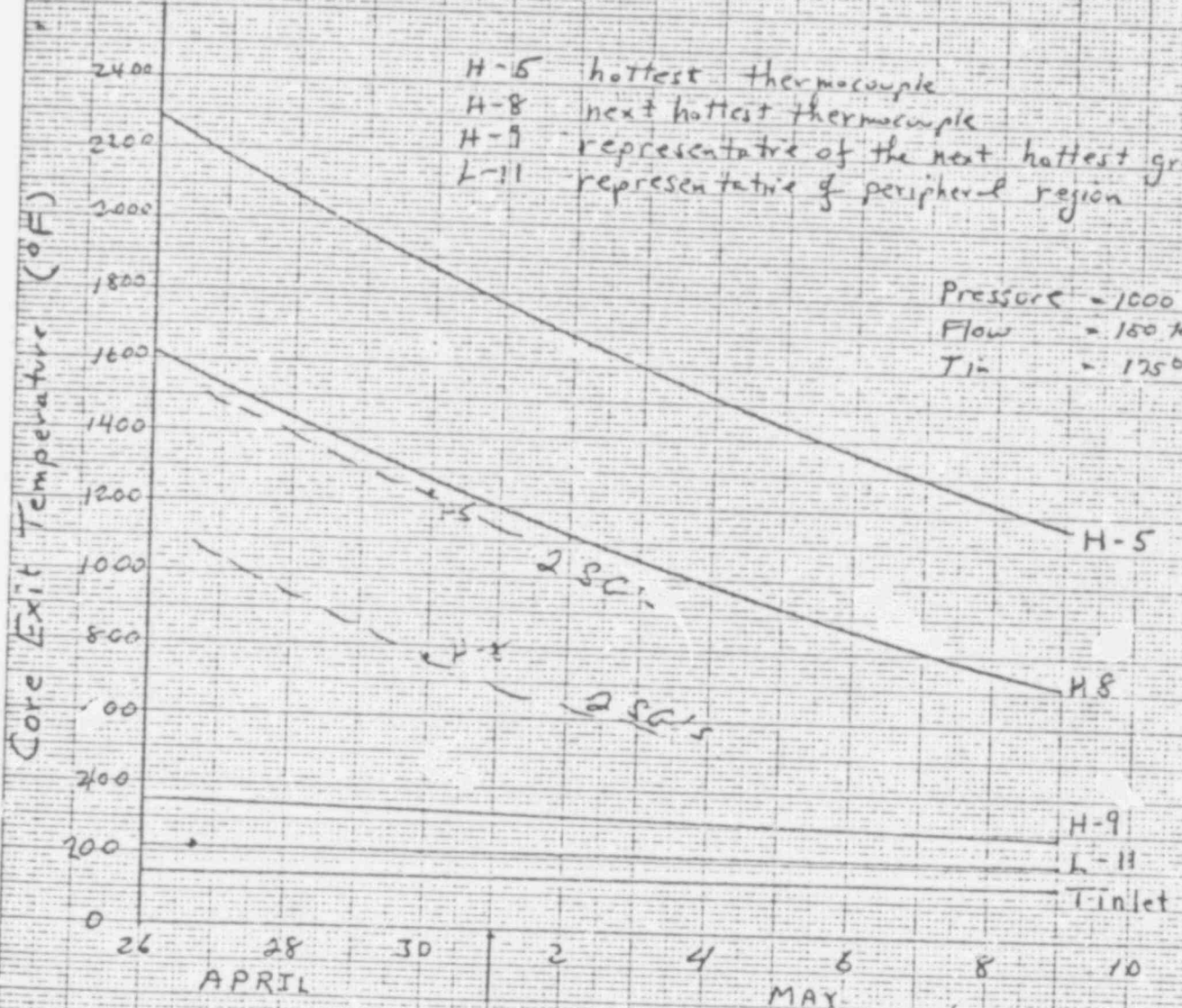
232 340

461510

K-E 10 X 10 TO THE CENTIMETER IN N.P.M. NEUFEL & ESSER CO. MADE IN U.S.A.

Core Exit Coolant Temperature vs Time

during Natural Circulation
with one Steam Generator Steaming
and one Steam Generator Isolated



POOR ORIGINAL

232 341

Figure 1-2

SYSTEM TEMP.

TIME	TAA	T _{H,B}	T _{COLD}	Pres	T _{SAT}
10:10				900 psi	537°F

POOR ORIGINAL

Using better $\frac{\text{ft}^3}{\text{in}}$ value for pressurizer

And assuming ($\approx 80 \text{ ft}^3$) in pressurizer does not cool

for $224^\circ\text{F} \rightarrow 160^\circ\text{F}$

average level drop in Press. is

$$\underline{\underline{1.42 \frac{\text{in}}{^\circ\text{F}}}}$$

for whole primary system (except Press) cooling

$$1.42 \times 64^\circ = \underline{\underline{91'' \text{ drop}}}$$

$$\underline{\underline{0.51 \frac{\text{in}}{^\circ\text{F}}}}$$

for just vessel water cooling

$$0.51 \times 64^\circ = \underline{\underline{33'' \text{ drop}}}$$

POOR ORIGINAL

Presunje Lina Infa. (EP/21)

Time	L_p	T_p	L_{MU}	T_{MU}	T_{CUD}	(PACS)	T_{SAT}
10:10	243 IN	<u>537°F</u>	54 IN	95°F	223.4°F	9.10 psi	532

POOR ORIGINAL

219 A 217 B
223 B 221 B

THA
T11-0
T
T20
T3A
T3B

1425
1430
1440
1445
1500
1505
1510
1520
1550

POOR ORIGINAL

232 345

1.55 (what we want)

224 → 160

~~(0.016805 - 0.016395)~~ ~~337~~
~~() + ()~~ ~~476~~
~~30~~
~~11,000~~
~~11,800~~

$$\left[(0.016805) - (0.016395) \right] \frac{ft}{in} \times 2 \times 11,000 \frac{ft}{in} \times \frac{in}{3ft} \times \frac{(224 - 160)^{\circ}F}{64}$$

.0166

1.42 $\frac{in}{8^{\circ}F}$
for whole
system

0.51 $\frac{in}{^{\circ}F}$
for just
vessel

POOR ORIGINAL

$$224 \rightarrow 212 \quad \left(\frac{0.016805 - 0.016719}{224 - 212} \right) \times \frac{11,200}{0.0168} \times \frac{1}{2.9}$$

.01676

1.74 $\frac{\text{in}}{\text{of}}$

$$212 \rightarrow 200 \quad \left(\frac{0.016719 - 0.016637}{(5)} \right) \times \frac{11,200}{0.0166} \times \frac{1}{2.9}$$

1.66 $\frac{\text{in}}{\text{of}}$

$$200 \rightarrow 188 \quad \left(\frac{0.016637 - 0.016559}{.0166} \right) \times \frac{11,200}{0.0166} \times \frac{1}{2.9}$$

1.59

$$188 \rightarrow 176 \quad \left(\frac{0.016559 - 0.016486}{.0166} \right) \times \frac{11,200}{0.0166} \times \frac{1}{2.9}$$

1.49

$$176 \rightarrow 164 \quad \left(\frac{0.016486 - 0.016417}{0.01644} \right) \times \frac{11,200}{0.01644} \times \frac{1}{2.9}$$

1.42

- 224 → 212 1.74 $\frac{\text{in}}{\text{of}}$
- 212 → 200 1.66 $\frac{\text{in}}{\text{of}}$
- ~~212 → 200~~
- 200 → 188 1.58 $\frac{\text{in}}{\text{of}}$
- 188 → 176 1.50 $\frac{\text{in}}{\text{of}}$
- 176 → 164 1.42 $\frac{\text{in}}{\text{of}}$

POOR ORIGINAL

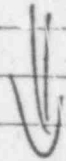
<u>Temp Range</u>	ΔL_p <u>all Prim Syst.</u>	ΔL_p <u>Vessel Only</u>
224°F → 212°F	1.74 $\frac{1}{\circ F}$	0.59 $\frac{1}{\circ F}$
212°F → 200°F	1.66 $\frac{1}{\circ F}$	0.56 $\frac{1}{\circ F}$
200°F → 188°F	1.58 $\frac{1}{\circ F}$	0.54 $\frac{1}{\circ F}$
188°F → 176°F	1.50 $\frac{1}{\circ F}$	0.51 $\frac{1}{\circ F}$
176°F → 164°F	<u>1.42 $\frac{1}{\circ F}$</u>	0.48 $\frac{1}{\circ F}$

220 → 160

POOR ORIGINAL

232 348

532°F



$$\frac{11,800 \text{ ft}^3}{0.021 \text{ ft}^3/\text{ft}^3} \times \frac{1 \text{ ft}^3}{16 \text{ m}}$$

$$\frac{3 \text{ ft}^3}{\text{mi}}$$

22 gal

8.5

$$0.02123 - 0.02091$$

12°F

$$\frac{1 \text{ ft}^3}{16 \text{ m}} \times$$

$$\frac{1}{0.021} \times \frac{1 \text{ ft}^3}{16 \text{ m}}$$

~~11,800 ft³~~
~~0.021~~ × ~~16~~ = ~~192,800~~ ft³

$$\frac{11,800}{0.021} \times \frac{1 \text{ ft}^3}{16 \text{ m}}$$

$$\frac{5.62 \text{ ft}^3}{\text{OF}}$$

$$\times \frac{1 \text{ mi}}{3 \text{ ft}^3}$$

$$\frac{1.87 \text{ mi}}{\text{OF}}$$

POOR ORIGINAL

10:10

2.4 gpm leak from
Piping system

$L_p = 243'' \pm 5'' \text{ or } \pm 10''$

Temp pwy 537 °F

Measuring Tank 54"

"Temp 95 °F

Temp 222.4 °F

~~Flow~~ Press RCS = 900 psi

$\frac{10}{10}$

11,800 ft³

10,000 ft³ loss
11,800 ft³
1000

POOR ORIGINAL

232 350

4/4/79

Call to Regions to determine if they are forwarding TMi-2 to all other operating facilities.

0920 E. Brunner, RI -Yes. PN's are sent by FAX to all operating facilities and to Resident Inspectors. Requested that we send PN's to the Region more promptly since they are sometimes almost a day late.

0925 C. Upinght, R II Yes. The PN is read over telephone to operating facilities. It is then sent by FAX to those facilities with compatible FAX equipment and mailed to remainder. PN's are also discussed by telephone with State representatives and representatives of other Federal agencies.

0945 W. Vetter, R IV Yes. By FAX.

0955 J. Keppler, R III PN's through 3/31/79 sent to all plants. Updates since that time have been sent only to Davis Besse (FAX). At my request, they will now FAX PN's to all operating facilities (21).

232 351

4/4/79

2

0957 John Alexander, R V Yes. PN's have been sent by mail and when requested by a utility, by FAX.

1100 Bob Engelten, R V PN's are being FAXED to Rancho Seco. Those facilities that receive PN's by mail ar contacted by telephone and contents of PN is discussed.

1410 Anderson to Woodruff

1. IE invited to Westinghouse customers meeting at Nuclear Center in Monroeville. W contacts Tom Anderson and John McAdoo 4123735766.
2. Starts 0800 on 4/5. Tentatively 2 days.
3. Accomodations HoJo 1/4 mi 412-372-5500 Holiday 1/4 mi 412-372-1022 Sheraton 1 mi 412-373-7300
4. IE Audit only Handouts

1205 Snyder, OPE to Woodruff INVESTIGATION TEAM 1.
Synder: Has team been formed?
Yes, for limited scope. May expand or another team may be

232 352

formed for additional work.

2. Snyder: Tape or notes? Yes.

3. Snyder: Size?

I believe six people.

4. Snyder: Composition? Appropriate people from regions and headquarters.

5. Snyder: Are they interviewing? Have not departed HQ. However, have had taped operator interviews by others.

0919 Woodruff to Ray Smith, Standards 1

Requested Standards to identify HPs, Reactor type and environmental type, to relieve HPs at site.

2. Need a list of these individuals this morning.
3. Need point of contact in Standards.
4. He will have someone call me of 28111.

1130 Ray Smith to Woodruff

1. Faxing list of 24 HPs, 6 of whom, are at site and are identified on list. Certification is also identified.
2. Smith is point of contact for request for their services.

232 353

4/4/79

4

Call from Keppler (414179)

Re: W Meeting

Keppler not sending Heishman. Sending Darwin Hunter. Told Keppler to have Hunter stay in touch with Region III and bring extra clothes in case he is dispatched elsewhere.

HDT Caller Keppler @ 3:00 PM

RE: Man from R III to cover W Meeting on 4/5/79.

Told him to send Heishman. He said Heishman had volunteered to go, but Norm had said to hold off. Woodruff said he wasn't aware of the hold on the R III man. I told him to get Heishman in motion on the basis that we could not afford not to cover the meeting.

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232 354

4/4/79

get Heishman in motion on the basis that we could not
not afford not to cover the meeting.

232 355

Sample taken - 12:00 3/30?

10:00

3/31

	Coolant Conc (uCi/cc)	Coolant Inventory	Core Inventory	Fraction (%)
I-131	1.3×10^4	4.3×10^6	6.2×10^7	6.9
I-133	6.5×10^3	2.1×10^6	3.5×10^7	6
r 89/90	5.3×10^0	1.7×10^3	2×10^7	.009
S-134	6.3×10^1	2×10^4	1.3×10^6	~2
S-136	1.3×10^2	5.4×10^4	3×10^6	2
- 7	2.8×10^2	9.2×10^4	8×10^5	~10?
~ 140	2.0×10^2	6.6×10^4	1.1×10^8	0.06

POOR ORIGINAL

Bettis Conclusions

Gap to core activity ratios of Ba & Sr indicate

No fuel releases But I & Cs ratios indicate
release from the fuel

Containment Air Sample (taken 0700 Sat) 232 356

$H_2 = 1.7\%$, $O_2 = 16.5\%$, $N_2 = 81.8\%$

25 cc sample is 350 mm contact ~ 50 uCi/cc

Containment Air Sample (taken 0945 Sat): $H_2 = 1\%$ I

15:00 3/31 Bettis Analysis of 1st
Primary Coolant Sample (Henderson)

Rb-86	$< 4.4 \times 10^8$	DPM/ml	no peak
In-114m	$< 4.0 \times 10^8$	DPM/ml	no peak
Cd-115m	$< 8.3 \times 10^7$	"	" "
A ₁ -110m	$< 4.8 \times 10^7$	"	" "

Ru 106 4.4×10^8 DPM/ml saw peak

but is fission product

into taken by L. Barrett

POOR ORIGINAL

232-357

3-31-78

1230

Krypton in Control Room reported - Unit #2 Control Room knows nothing about this. No masks in Control Room, In plant masks are donned periodically as wind shifts, more as a precaution than necessity.

Status of slow release. Licensee believes leak is from Waste Gas Tank Relief valve into relief valve vent header which exits via stack, unfiltered. Personnel are waiting down relief valve vent header w/survey meters to attempt to locate source of in-leakage of radiation. Survey results not done yet. No word on Steam Generator samples yet.

POOR ORIGINAL

232 358

FORECAST 1400 March 31, 1978 FROM WSFO PHILADELPHIA

Winds from West and Northwest thru Harrisburg area

Cold front in West. Pa.

As front approaches, winds will be from West and Southwest

Frontal passage expected between 1900 - 2400

Winds tonight will be from Northwest ~ 10 Kts.

Tomorrow - April 1, 1979

Winds beginning from Northeast 5-10 kts. becoming more easterly and increasing to 10-12 kts during afternoon

Sunday night - winds from Southeast ~ 15 kts.

PRECIPITATION:

Rain showers ahead of front

Good change of rain showers thru Sunday night into Monday

WIND PATTERN C5000'

Westerly 15-20 kts Saturday afternoon

From West and Southwest 15-20 Saturday evening.

From Southwest 15-20 Sunday Afternoon

MIXING HEIGHTS:

Saturday afternoon 1500 m Avg. windspeed 6m/s

Sunday Morning 200 m, Avg. windspeed 2m/s, increasing to 900 m,

Avg. windspeed 5m/s

232 359