



Metropolitan Edison Company
Post Office Box 480
Middletown, Pennsylvania 17057

Writer's Direct Dial Number

February 2, 1981
LL2-81-0020

TMI Program Office
Attn: Mr. Lake Barrett, Deputy Director
U. S. Nuclear Regulatory Commission
c/o Three Mile Island Nuclear Station
Middletown, Pennsylvania 17057

Dear Sir:

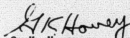
Three Mile Island Nuclear Station, Unit 2 (TMI-2)
Operating License No. DPR-73
Docket No. 50-320
Liner Module Sump Contamination

Forwarded herewith in accordance with our LL2-81-0019 of January 27, 1981, is our report on the Liner Module Sump Contamination.

We will continue to keep you advised of our findings.

If you have any questions on this, please let me know.

Sincerely,


G. K. Hovey
Vice-President and
Director, TMI-2

GKH:RIN:djb

Enclosures

cc: Bernard J. Snyder, Program Director, TMI Program Office

A001
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1/1

THREE MILE ISLAND NUCLEAR STATION

UNIT 2 (TMI-II)

OPERATION LICENSE NO. DPR-73

DOCKET NO. 50-320

SOLID WASTE STAGING FACILITY

SUMP CONTAMINATION REPORT

T. Shelton
January 28, 1981

8102100418

1.0 INTRODUCTION

1.1 General

Liners containing spent ion exchange media from the operation of EPICOR-I and EPICOR-II are stored in an Interim Storage Facility (ISF), and in the Solid Radwaste Staging Facility (SWSF). The latter is provided with drains to a sump from which collected water can be pumped, monitored, and ultimately disposed of in an appropriate manner. Very low levels of radionuclide contamination have been found in this water. This report presents findings to date from investigation of this contamination. In addition, until recently, EPICOR-I and EPICOR II liners were stored in the ISF. Tritium contamination was found in two ISF storage locations after the liners that had been stored were transferred to the SWSF. All the contamination levels are considerable below 10CFR Part 20 limits for discharge to unrestricted areas. However, as the contamination is measurable and above back-ground levels, monitoring of the sump will continue.

1.2 Scope

This report sets forth:

- *Probable sources of water
- *Analytical results
- *Conclusions
- *Future activities

2.0 PROBABLE SOURCES OF WATER

2.1 SWSF

The sump liquid level has been monitored regularly since August of 1980. From that date through January 15, 1981, the sump liquid level has increased 3 inches, which corresponds to approximately 70 gallons. Total water in the sump on January 15, 1981, was about 150 gallons. Visual inspection of the sump indicates that the major constituent of water inleakage to the sump is probably rainwater via a defective gasket in the sump access manhole. This was substantiated by covering the A and B storage module drain inlets to the sump for several weeks with plastic bags and observing the amounts of liquid collected. Periodic observation of water volumes in these bags indicated small amounts of water collected as a function of time (on the order of several ml per week) followed by a large volume collected (on the order of a gallon per day). This larger volume collected coincided with start up and test work related to check out of conductivity probes designed to detect the presence of water in the drain outlets, and negated the validity of any water collected and sample analyses were not performed.

Examination of the storage modules has indicated that small amounts of rainwater may be entering some storage cells (and therefore the sump) via faulty sealing between the shield plugs and gaskets, since nylon lifting straps penetrate the sealing surface in all cells containing 6 x 6 liners or stacking platforms.

2.2

ISF

Liquid has been found in the bottom of a number of the cells of the ISF (cells 2 and 20). While no obvious pathway has been observed, it is postulated that the principal source of this water also is rain.

3.0

ANALYTICAL RESULTS

3.1

Data

Several sets of analytical results are appended hereto:

- | | |
|---------------|---|
| *Table 3.1-1 | SWSF sump sample radioactive analysis results |
| *Table 3.1-2 | SWSF sump sample and TMI environmental groundwater monitoring well sample chemical analysis. |
| *Attachment 1 | Teledyne radioactive analysis results of water and sediment samples from areas near the SWSF. |
| *Attachment 4 | Teledyne radioactive analysis results of SWSF sump water. |

3.2

Discussion

3.2.1

SWSF Sump

Results of SWSF sump liquid samples dating back to April 5, 1980 (see Table 3.1-1) have been obtained and analyzed. Initial sump contamination was observed in a July 2, 1980, sample (Gross Beta-Gamma of $6.35 \text{ E-8 } \mu\text{Ci/ml}$), and was subsequently verified in a July 16, 1980, sample. Tritium has been detected in samples since July 16, 1980, and has remained virtually constant at $\text{E-05 } \mu\text{Ci/ml}$ levels. Early in November 1980, a sump sample was sent off-site to SAI. Results of this analysis indicate the presence of cesium 137 ($1.22 \text{ E-08 } \mu\text{Ci/ml}$). This presence of cesium has not been verified via other sample results; however, other offsite samples to date have not been counted subsequent to sample liquid evaporation. Teledyne has been instructed to boil down the December 5, 1980 sample and analyze the residue.

Possible inleakage of groundwater

The concentrations of radionuclides determined as shown in Attachment 1 are not abnormal when compared to other groundwater and sediment present at the TMI site. Thus, there is no indication of leakage from the sump to groundwater. However, this subject will continue to be pursued as part of the ongoing monitoring program as in Attachment 3.

3.2.3 ISF Cells

In addition to the analytical results attached hereto, analyses were made of samples of the water found in the ISF cells. The tritium content was found to be only 3.4 E-5 μ Ci/ml in Cell No. 2 and 6.0 E-5 μ Ci/ml in Cell No. 20, while results from other cells from which samples were taken indicate no tritium present.

3.3.4 Comparison to Part 20

Important to consideration of the possible hazard related to the sump water contamination is the fact that the 10CFR Part 20, Appendix B, Table II, Column 2 limit for concentration of tritium in water discharged to unrestricted areas is 3x10⁻³, well over an order of magnitude higher than the sump water tritium content. Similarly the Part 20 limit for cesium-137 is 2x10⁻⁵ μ Ci/ml, over two orders of magnitude above the sump water concentration.

4.0 CONCLUSIONS

4.1 Potential hazard

The concentrations of both tritium and cesium-137 in the sump water are significantly below limits in 10CFR Part 20 for water to be discharged to unrestricted areas.

4.2 Source of water

It is probable that the principal source of water found in the sump is rainwater. It is very unlikely that groundwater is leaking into the sump.

4.3 Source of contamination

It is known that air containing water vapor will escape through treaded, plugged connections on the liners at some 2psig. With changes in temperature, the pressure in the liners will fluctuate, making "breathing" a likelihood. This could well be the source of the tritium found. Cesium could come from minor external contamination of the liners carried by water which entered the cell via the nylon lifting straps (Paragraph 2.1, above) and flowing over the liners to the drains and thence to the sump. To date, no conclusive data exist that confirms liner leakage. Neither does conclusive evidence exist that verifies containers not leaking. Based on information to date, it is our opinion that liner "breathing" is the most probable cause of this tritium contamination.

5.0 FUTURE ACTIVITIES

5.1 Water Inleakage

5.1.1 SWSF Sump

In order to limit water inleakage directly into the sump, the sump access manhole gasket will be replaced. Also, the manhole cover will be modified in such a manner so as to limit gasket damage when removing and replacing the manhole cover.

So that contamination sources may be more clearly defined, the A and B module drain inlets to the sump will remain in place and be periodically checked for water collection. If a sufficient amount of water is collected from either drain, the contents will be analyzed and results forwarded to the NRC.

5.1.2 SWSF Modules

As time permits, the nylon straps which penetrate the sealing surface between the shield plugs and gaskets will be modified to alleviate this water transport mode into the storage module cells.

5.2 Monitoring Programs

It is our position that direct leakage of liquid from stored liners can be detected by changes in sump water chemistry and/or radionuclide content. Accordingly, base line information which has been and is being accumulated, can be used for comparison with any future data which might show a marked change in contamination. In support of this, a sampling program has been initiated to obtain periodic onsite and offsite analysis of the SWSF sump liquid. This program will include radioisotopic and chemical analysis of the sump liquid (Attachment 2).

5.2.2 An environmental monitoring program has also been initiated to periodically sample surface water and sediments in the south drainage ditch and water from excavation areas near the SWSF. Additionally, installation of monitoring wells in the SWSF area is currently being studied (Attachment 3).

TABLE 3.1-1 SWSF SUMP SAMPLE RADIOACTIVE ANALYSIS RESULTS

| <u>SAMPLE NO.</u> | <u>DATE</u> | <u>TRITIUM ($\mu\text{Ci}/\text{ml}$)</u> | <u>GROSS BETA-GAMMA ($\mu\text{Ci}/\text{ml}$)</u> | <u>GAMMA-SCAN ($\mu\text{Ci}/\text{ml}$)</u> | <u>COMMENTS</u> |
|-------------------|-------------|--|---|---|---|
| 36790 | 4/5/80 | LLD | -- | LLD | |
| 36791 | 4/5/80 | LLD | -- | LLD | |
| 42443 | 6/12/80 | LLD | LLD | LLD | |
| 43365 | 6/25/80 | -- | -- | LLD | |
| 43366 | 6/25/80 | -- | -- | LLD | |
| 44275 | 7/2/80 | LLD | 6.35E-08 | -- | |
| 44276 | 7/2/80 | -- | -- | LLD | |
| 44935 | 7/9/80 | LLD | LLD | LLD | |
| 44936 | 7/10/80 | -- | -- | LLD | |
| 45483 | 7/15/80 | -- | -- | LLD | |
| 45484 | 7/15/80 | LLD | LLD | -- | |
| 45619 | 7/16/80 | 7.75E-05 | 1.68E-07 | LLD | |
| 46068 | 7/22/80 | -- | -- | LLD | |
| 49144 | 9/8/80 | -- | 1.34E-07 | LLD | |
| 50243 | 9/29/80 | 5.4E-05 | -- | LLD | |
| 50244 | 9/29/80 | 7.2E-05 | LLD | -- | |
| 51687 | 10/29/80 | 3.9E-05 | -- | 1.2E-08 (Cs-137) | Gross Beta 1.4E-07 $\mu\text{Ci}/\text{ml}$ sent to SAI-- BOILED |
| 52898 | 11/25/80 | 2.8E-05 | LLD | LLD | |
| 77121 | 12/5/80 | 2.6E-05 | -- | LLD | TELEDYNE-NOT BOILED |

The symbol "--" denotes no analysis of the designated type

TABLE 3.1-2 SWSF SUMP SAMPLE AND TMI ENVIRONMENTAL GROUNDWATER
MONITORING WELL SAMPLE CHEMICAL ANALYSIS

| <u>ANALYSIS</u> | <u>SWSF SUMP</u> | <u>GROUNDWATER(RANGE)</u> |
|-----------------------------|-----------------------------|---------------------------|
| ph | 7.93 | 6.47-9.91 |
| CONDUCTIVITY umho/cm | 960 | |
| TOTAL SOLIDS mg/l | 562 | 1070 |
| TOTAL DISSOLVED SOLIDS mg/l | 555 | |
| TOTAL SUSPENDED SOLIDS mg/l | 7 | |
| SULFATE mg/l | 58 | 0.10-0.35 |
| CHLORIDE mg/l | 9.7 | 9-23 |
| SILICA mg/l | 13.5 SiO_2 | 3.5-13.6 |
| TOTAL PHOSPHORUS mg/l | 0.51 $\text{PO}_4\text{-P}$ | 0.01-4.16 |
| AMMONIA NITROGEN mg/l | 3.63 $\text{NH}_3\text{-N}$ | |
| NITRATE NITROGEN mg/l | 16.0 $\text{NO}_3\text{-N}$ | |
| SODIUM mg/l | 50.0 | 11-107 |
| TOTAL IRON mg/l | 1.82 | 1.1-11 |
| TOTAL CALCIUM mg/l | 27.2 | 107-1070 |
| TOTAL MAGNESIUM mg/l | 7.3 | 11-107 |
| TOTAL ALUMINUM mg/l | 0.1 | 11-107 |
| TOTAL ZINC mg/l | 0.50 | 0.11-1.1 |

TELETYPE ISOTOPE

REPORT OF ANALYSIS

ROR DATE 12/11/80

PAGE 2

WORK ORDER NUMBER

CUSTOMER P.O. NUMBER

DATE RECEIVED

DELIVERY DATE

3-1956

P77121

12/05/80

12/31/80

MR & BIRTHS III
METROPOLITAN EDISON COMPANY
THREE MILE ISLAND NUCLEAR STA
PWR IMPACT ASSESSMENT GROUP
P O BOX 880 - TRAILER 18617057
MIDLETON PA

SEDIMENT/SILT

TELETYPE
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(pCi/gm DRY)NUCL-UNIT-S
U/M

MID-COUNT
TIME
DATE TIME

VOLUME - UNITS
ASH-WGT-%

LAB.

05120 TW-55-SO.DRNG DTCH 2

12/08 1400

CS-134
CS-137
PA-140
L.T. 5. E-02
CP-141
CP-144
L.T. 9. E-01
PA-236
TH-232
5.21E-052E-01

L.T. 9. E-02
1.08E-039E-01
L.T. 5. E-02
L.T. 7. E-02
L.T. 9. E-01
5.21E-052E-01

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CO-58
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CO-60
TH-61
TH-91
RU-103
RU-106
I-131
CS-134
CS-137
PA-140
CP-141
CP-144
PA-236
TH-232

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1.14E-012E 01
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L.T. 9. E-02
L.T. 7. E-02
4.04E-065E-02
L.T. 8. E-02
L.T. 3. E-01
2.58E-094E 00
9.08E-098E-01

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DELIVERY DATE 12/11/80

CUSTOMER P.O. NUMBER
P77121

WORK ORDER NUMBER
3-3056

PR 8 B BATTLE III
ATMOSPHERIC POLSON COMPANY
TERRACE HILL ISLAND HUCKLAR STA
EAST INDIACT ASSAULT GROUP
PO BOX 800 - TAILORING 1611057
HICKORY FA

SENDING/ILT

| TELETYPE NUMBER | CUSTOMER'S IDENTIFICATION | STA NUMBER | COLLECTION-DATE | | | NUCLIDE | ACTIVITY (pCi/gm ore) | NUCL-UNIT-1 U/M | MID-COUNT | | VOLUME - CMITS DATE TIME ASH-MONT-1 | LAB. |
|--------------------|------------------------------|---------------|-----------------|------|------|---------|--------------------------|--------------------|-----------|------|--|------|
| | | | START | STOP | TIME | | | | TIME | DATE | | |
| 02122 | TS-55-50.1 UST ST PHD | | 12/08 | 1400 | | FE-7 | L.T. 3. E-01 | | 12/08 | 1230 | | |
| | | | | | | K-40 | 5.4E-055E-00 | | 12/08 | | | |
| | | | | | | HR-58 | L.T. 3. E-02 | | 12/08 | | | |
| | | | | | | CO-58 | L.T. 4. E-02 | | 12/08 | | | |
| | | | | | | CO-60 | L.T. 4. E-02 | | 12/08 | | | |
| | | | | | | TH-65 | L.T. 7. E-02 | | 12/08 | | | |
| | | | | | | TH-95 | L.T. 3. E-02 | | 12/08 | | | |
| | | | | | | TH-103 | L.T. 3. E-01 | | 12/08 | | | |
| | | | | | | TH-106 | L.T. 3. E-02 | | 12/08 | | | |
| | | | | | | TH-111 | L.T. 3. E-02 | | 12/08 | | | |
| | | | | | | CS-134 | L.T. 4. E-02 | | 12/08 | | | |
| | | | | | | CS-137 | L.T. 3. E-02 | | 12/08 | | | |
| | | | | | | EA-140 | L.T. 4. E-02 | | 12/08 | | | |
| | | | | | | CE-141 | L.T. 4. E-02 | | 12/08 | | | |
| | | | | | | CE-144 | L.T. 2. E-01 | | 12/08 | | | |
| | | | | | | BA-226 | L.T. 2. E-01 | | 12/08 | | | |
| | | | | | | TH-226 | 4.91E-055E-01 | | 12/08 | | | |

Attachment 1

D. J. O. U

POOR ORIGINAL

TELETYPE ISCTOPS

REPORT OF ANALYSIS

WORK ORDER NUMBER

MR B P BICKLE III

PRINCIPALTON EDISON COMPANY
 2800 N. HILL ISLAND NOCLPAR STA
 FRY IMPACT ASSESSMENT GROUP
 P O BOX 480 - TRAILER 18617057
 NISCELETOJA PA

3-1956

P77121

CUSTOMER P.O. NUMBER

DATE RECEIVED

12/05/80

DELIVER DATE

12/31/80

FOR DATE 12/11/80

PAGE 2

Attachment 1

p. 4 of 6

WATER - SURFACE

| TELETYPE NUMBER | CUSTOMER'S IDENTIFICATION | STA NUM | COLLECTION-DATE START STOP DATE TIME DATE TIME | WCLJEE | ACTIVITY (PC/L/ILLES) | NUCL-UNIT-1 U/M * | MID-COAST TIME | VOLUME - UNITS DATE TIME ASM-WENT-1 * | LAB. |
|--------------------|------------------------------|------------|--|--------|---------------------------|----------------------|-------------------|--|------|
| 03117 | TH-SU-SF.DRNG DYCH 2 | | 12/08 1130 | PC-7 | L.T. 5. E 01 | | 12/08 0106 | | |
| | | | | R-40 | L.T. 2. E 02 | | 12/08 | | |
| | | | | PA-SM | L.T. 7. E 00 | | 12/08 | | |
| | | | | CO-SE | L.T. 6. E 00 | | 12/08 | | |
| | | | | PC-SM | L.T. 1. E 01 | | 12/08 | | |
| | | | | CO-6C | L.T. 7. E 00 | | 12/08 | | |
| | | | | PA-SM | L.T. 1. E 01 | | 12/08 | | |
| | | | | TH-92 | L.T. 7. E 00 | | 12/08 | | |
| | | | | NU-1C2 | L.T. 6. E 00 | | 12/08 | | |
| | | | | NU-1C2 | L.T. 6. E 01 | | 12/08 | | |
| | | | | CO-13H | L.T. 7. E 01 | | 12/08 | | |
| | | | | CO-13H | L.T. 7. E 00 | | 12/08 | | |
| | | | | PA-180 | L.T. 7. E 00 | | 12/08 | | |
| | | | | CF-181 | L.T. 1. E 01 | | 12/08 | | |
| | | | | CF-181 | L.T. 6. E 01 | | 12/08 | | |
| | | | | BA-226 | L.T. 2. E 02 | | 12/08 | | |
| | | | | TH-228 | L.T. 1. E 01 | | 12/08 | | |
| | | | | H-3 | 4.8 -1.0 E 02 | | 11/09 0310 | | |
| 03118 | TH-SU-WST STON AN PHD | | 12/08 1130 | PC-7 | L.T. 5. E 01 | | 12/08 0106 | | |
| | | | | R-40 | L.T. 1. E 02 | | 12/08 | | |
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| | | | | CO-SE | L.T. 6. E 00 | | 12/08 | | |
| | | | | PC-SM | L.T. 1. E 01 | | 12/08 | | |
| | | | | CO-6C | L.T. 6. E 00 | | 12/08 | | |
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| | | | | TH-92 | L.T. 1. E 01 | | 12/08 | | |
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| | | | | NU-1C2 | L.T. 6. E 01 | | 12/08 | | |
| | | | | H-3 | L.T. 4. E 00 | | 12/08 | | |

POOR ORIGINAL

EXP. DATE 12/31/00

REPORT OF ANALYSIS

CUSTOMER P.O. NUMBER

PAGE

DELIVERY DATE

NOT RECORDED

WORK CASES W0020

12/31/80

13,05,80

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9561-1

MR W F RITNER III
METROPOLITAN EDISON COMPANY
THREE FIFTH AVENUE NEW YORK NY 10001
ENVIRONMENTAL IMPACT ASSESSMENT GROUP
P O BOX 480 - TRAILER 18A17057
WILKES BARRE PA

WATER - SURFACE

COLLECTION-DATE

| TELETYPE | CUSTOMER'S | STA |
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• N/D

ACTIVITY
ICL/11ter)

| MID-COUNT | VOLUME - UNITS | LAB. |
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| TIME | ASCH-NCNT-Y | |
| 0000 | 0000 | |
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| 0007 | 0007 | |
| 0008 | 0008 | |
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| CS-128 | L.T. | 6. | E | 00 |
| CS-177 | L.T. | 7. | E | 00 |
| CA-180 | L.T. | 8. | E | 00 |
| CE-181 | L.T. | 1. | E | 01 |
| CS-188 | L.T. | 5. | E | 01 |
| HA-226 | L.T. | 1. | E | 02 |
| TH-228 | 1.06 | -0.55 | 01 | |
| n-7 | 1.1 | -0.82 | 02 | |

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APPROVED BY L.D. MARTIN 12/11/00

O. S. Martin

3 COPIES TO HQ 7905 AM W E BIRTHLE III

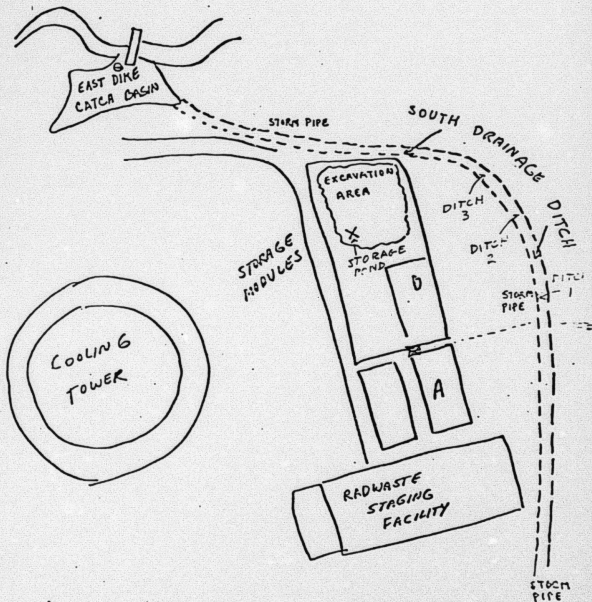
3 - GAS LAP.
1 - ACID CHEMISTRY LAB.

Q - GO (LI) CAP-EX SPEC LANE

4 - TRITON GAS/L.S. LAB.

POOR ORIGINAL

Approximate Locations
Where Samples Were Taken



POOR ORIGINAL

METROPOLITAN EDISON COMPANY

Subsidiary of General Public Utilities Corporation

Subject Long-Term Storage Modules (A & B)
Sump - Sampling Program

Location TMI-II-R-47000
TMI/U-2 Site Ops

To B. D. Elam
K. L. Harner

Date January 20, 1981

Due to recent GPU and NRC concerns with respect to the Long-Term Storage Modules (A & B) sump contamination and Epicor liner integrity, please initiate a sampling program. As a minimum, the sampling program should be in accordance with the following:

1. Liquid - Storage Module (A & B) Sump; One gallon
Frequency - Once per week
Location - On site
Analysis - Tritium, Gamma Scan, Gross Beta Gamma. Then boil down sample and perform another Gamma Scan and Gross Beta Gamma count on the residue.
2. Liquid - Storage Module (A & B) Sump; One gallon
Frequency - Once per month
Location - Off site (SAI)
Analysis - Same as in (1.) above.
3. Liquid - Storage Module (A & B) Sump; One gallon
Frequency - Once per month
Location - Off site (SAI)
Analysis - Chemical (per Attachment 1)

Please provide copies of the results for the above samples, as well as any other samples you deem necessary, to J. Daniel and myself in a timely manner. If you have any questions concerning this program please feel free to contact the undersigned at X-8329.

T.A. Shelton

T. A. Shelton

TAS/jw
attach.

CC: J. J. Barton, J. A. Daniel, C. P. Deltete, J. Hess
G. K. Hovey, File

INTER-OFFICE MEMORANDUM

Date January 6, 1981
WLR-791

GPU Service

Subject THREE MILE ISLAND NUCLEAR STATION
LINER STORAGE MODULE ENVIRONMENTAL MONITORING

To W. E. Riethle

Location Hbg. Int'l Airport

In response to recent concern expressed by the NRC relative to potential environmental contamination of ground and surface water originating from the above referenced facilities, the following steps have been initiated:

1. As of December 8, 1980, sampling of surface water and sediments in the south drainage ditch was incorporated into the weekly groundwater monitoring program. Sampling locations are presented in Figure 1 (attached).
2. Monitoring of the East Dike Catch Basin (EDCB) has been enforced on a weekly basis since early November and will be continued as part of this monitoring regime. The EDCB serves as the monitoring point prior to intercept with the river.
3. On a monthly basis, the "excavation pond" adjacent to the storage module will also be sampled as water is available.
4. The installation of monitoring wells around the storage module is being examined by Groundwater Technology. Their recommendations are due to us by January 10, 1981. At this time the necessary steps will be taken to implement Tec's recommendations.
5. Water and sediment samples obtained from this program will be sent to Teledyne Isotopes for gamma scan analysis and tritium.

This program will provide the necessary information relative to any environmental contamination of the water pathways from the storage modules.


G. G. Baker, Ph.D.

GGB/klt

Attachment

cc: P. Deltete
R. I. Newman
M. B. Roche
T. J. Walsh

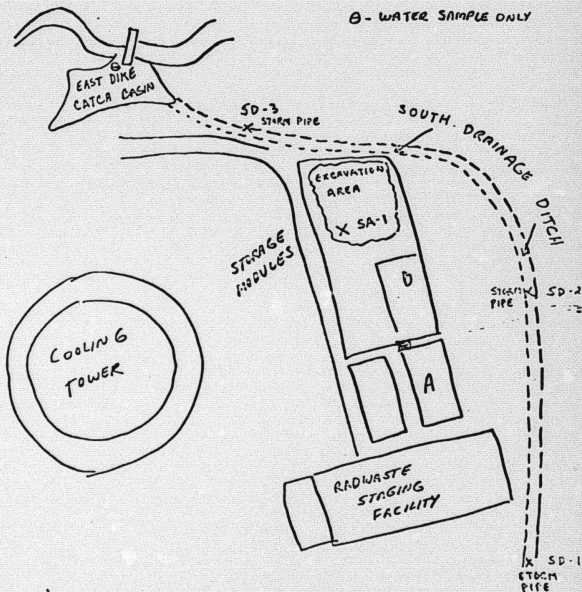
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POOR ORIGINAL

THOMAS J. WAISH

X - WATER AND SEDIMENT SAMPLE

Θ - WATER SAMPLE ONLY



POOR ORIGINAL

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CUSTOMER P.O. NUMBER

12/06/00 01/07/01

MR V E BENTLER III
METROPOLITAN EDISON COMPANY
THREE HILL ISLAND WOLCAN STA
PMA IMPACT ASSESSMENT GROUP
P O BOX 880 - TOWLER 18017057
TOWLER PA

WATER

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|-----------------|-----------------------|-------------------------|------------------------|
| RELATIVE | CUSTOMER'S | STA | COLLECTION-DATE |
| SAMPLE | -COMMUNICATION | HUN | START STOP |
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ACTIVITY
U/N⁶
NUCL-UNIT-1

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02261 TR-GV-ACD MODULE SDRP

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Attachment 4

LAST PAGE OF REPORT

APPROVED BY J.D. HANTIM 12/11/80

Exploration

2 COPIES TO 427905 HQ V E RIETHLE III

SP4D 7 COPIES TO "RT7905 MM V 2 NICHINLE 1
J - RADIO CHEMISTRY LAB.

4 - GILLI GAPP SPEC LAB.

4 - TRITIUM GAS/L.S. LAB.

2 - GAS LAB.

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POOR ORIGINAL