

HL BASCOCK & WILCOX COMPANY
POWER GENERATION GROUP



Batell
3/29/79
appears
anomalous
can we re-analyze

J. D. PHINNEY, SERVICE OPERATIONS MANAGER, TMI-2 RECOVERY PROGRAM

J. M. HICKS, RADIOCHEMISTRY GROUP

WDS 657.3

TMI-2

File No.
or Ref.

ANALYSIS OF 5/2 RC SAMPLE

Date

MAY 3, 1979 (1130)

THE FOLLOWING IS THE RESULTS OF THE LRC ANALYSES OF THE RC SAMPLE TAKEN AT

MAY 2 MAY 5
RCS PZR

pH—7.9 ± 0.1	7.85
Boron—2960 ± 20 ppm	3030 ppm
H ₂ —18.6 cc/kg	4.5 cc/kg
F ₂ —<5.0 cc/kg	ND
O ₂ —Not detected	ND
Cl ⁻ —<10 ppm / l	2.9 ppm

GAS PHASE ACTIVITY

Rn - 131 L	4.1 uCi/cc	~ 1.0
Ne - 133	1.6 uCi/cc	- 0.23
I - 131	0.02 uCi/cc	-

LIQUID PHASE ACTIVITY

I - 131	710 uCi/g	630 uCi/g
Cs-134	35 uCi/g	40 uCi/g
Cs - 136	15 uCi/g	14 uCi/g
Cs - 137	170 uCi/g	180 uCi/g
Na - 140	225 uCi/g	56 uCi/g
SODIUM	270 ppm	370 ± 60 ppm

POOR ORIGINAL

242 325

ROISHAN 74-98

50-320

7906210211

JHE/EN

cc: RADIOCHEMISTRY GROUP

look at
How much Tritium?

P

2100 5/ 4/ 79

U-2 R_x Bldg Gas

2130 5/ 5/ 79 D Skimes

-----PRELIMINARY PEAK DATA-----

COUNT TIME = 1.6666 MINUTES
VOLUME = 1 MILLILITERS

DECAY TIME = 1470

5.6(10)

2.2(6) μ Y³

CHANNEL	PEAK ENERGY (KEV)	FWHM (KEV)	PEAK AREA (COUNTS)	+ OR - (1 SIG)
160.29	80.4673	2.1961	640707.0	917.0
319.44	159.9960	2.0897	1496.8	146.3
325.21	163.8787	2.6653	317.6	125.2
604.71	302.5418	2.5907	49.0	11.5
728.76	364.5255	2.5426	229.4	18.1
826.92	513.5127	1.4081	210.0	15.9

+ PRELIMINARY PEAK IDENTIFICATION +

EFFICIENCY TABLE USED = 44

NUCLIDE	OBSERVED ENERGY	LIBRARY ENERGY	GAMMAS PER MIN.	UCI PER ML.
KR-85	710.51	514.00	5999.69	6.285E-01
I-131	364.53	364.49	5061.22	2.780E-03
XE-131M	162.88	163.97	3055.66	6.881E-02
XE-133	80.47	81.00	7684510.61	9.890E+00

-----UNIDENTIFIED PEAKS-----

ENERGY	GAMMAS/MIN. AT COUNT TIME
160.00	13344.17
302.54	822.06

+ FINAL SUMMARY OF NUCLIDES OBSERVED +

DATE: 5/ 5/ 79

NUCLIDE	WEIGHTED MEAN ACTIVITY	+ OR - 1 SIGMA
KR-85	6.285E-01	9.012E-02
XE-131M	6.881E-02	2.838E-02
XE-133	9.890E+00	1.203E+00

POOR ORIGINAL
242 326