

PETROTOMICS COMPANY

DEWATER COMPANY • MANAGING PARTNER
P. O. DRAWER 2450
[REDACTED] • [REDACTED] • [REDACTED]

March 4, 1966

Mr. Donald A. Nussbaumer, Chief
United States Atomic Energy Commission
Division of Licensing and Regulation
Washington, D. C. 20545

Dear Mr. Nussbaumer:

Re: DLR:DFH 40-6659 'File Copy

Petrotomics Company requests the following amendments
to Source Material License No. SUA-551 for your consideration:

ITEM I

With reference to Section 8 (1) of the license, we propose
that surveys for airborne uranium in locations described in attached
Appendix "A" made at quarterly intervals will provide adequate moni-
toring to measure exposure to airborne radiation.

Regular dust surveys have been taken in all regular work-
ing areas since inception of operation for determination of airborne
uranium to which individuals may be exposed. Of thirty-six sampling
areas during the twelve months of 1965, twenty-one were found to be
substantially below 25% of our regularly established M. P. C. limitation
of a $4.6 \text{ ucu} \times 10^{-11} / \text{ml}$. for these areas.

We propose to continue regular monitoring of airborne
uranium concentrations at monthly intervals in areas exhibiting values
of 25% and greater of our established M. P. C., specifically the crushing,
drying, and packaging areas.

We are presently continuing the monitoring of uranium
concentrations in air in all regular working areas within the plant, as
set forth in the original license.

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ITEM II

With reference to 10 (b) of the license, we believe that personnel film monitoring should be excluded from our radiation survey program.

Sixteen film badges measuring Gamma, X-Ray, Beta, and neutron incidence to individuals have been worn regularly since inception of operation. For the calendar year of 1965, only eleven of these films received measureable exposure. (See Appendix "B".) In no single case did total annual exposure exceed 25% of the quarterly M. P. C. limitation of 1.25 rems.

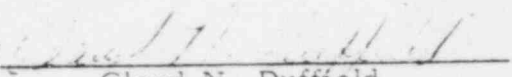
We, therefore, conclude that external radiation incidence to any individual working in a restricted area is well within safe limits. It is our desire, however, to retain film monitoring of individuals whose routine duties require frequent contact with U_3O_8 concentrate materials.

We are presently continuing the film monitoring of all sixteen operators in the eleven job functions.

Very truly yours,

PETROTOMICS COMPANY

By



Claud N. Duffield
Radiologist

CND:lad

APPENDIX "A"

PETROTOMICS COMPANY

Airborne Uranium Dust Samples Below $.25 \text{ ucu} \times 10^{-11}/\text{ml.}$
 1965 Summary

Location - Fine Ore Bins (Tripper)

Month	Sample No.	$\text{ucu} \times 10^{-11}/\text{ml.}$
Jan.	974	.13
Feb.	1017	.14
March	1058	.24
April	1100	.15
May	1142	.21
June	1184	.09
July	1226	.21
August	1268	.42
Sept.	1310	.40
October	1352	.54
Nov.	1394	.22
Dec.	1436	.30
Average		.25

Fine Ore Feeder Floor

Sample No.	ucu x 10 ⁻¹¹ /ml.
975	.29
1019	.24
1059	.25
1101	.19
1143	.03
1185	.05
1227	.09
1269	.06
1311	.29
1353	.31
1395	.31
1437	.06
Average	.18

Location - Sample Prep. Room, Gen. Area

Month	Sample No.	$\text{ucu} \times 10^{-11}/\text{ml.}$
Jan.	977	.16
Feb.	1020	.09
March	1060	.39
April	1103	.12
May	1144	.10
June	1186	.14
July	1228	.09
August	1270	.03
Sept.	1312	.03
October	1354	.18
Nov.	1396	.37
Dec.	1438	.00
Average		.14

Ball Mill Feed

Sample No.	ucu x 10 ⁻¹¹ /ml.
979	.12
1022	.21
1063	.34
1105	.09
1147	.00
1189	.05
1231	.09
1273	.06
1315	.14
1357	.31
1399	.14
1441	.13
Average	.14

Location - Ball Mill Discharge

Month	Sample No.	ucu x 10 ⁻¹¹ /ml.
Jan.	981	.09
Feb.	1023	1.65
March	1064	.31
April	1106	.12
May	1148	.00
June	1190	.11
July	1232	.03
August	1274	.06
Sept.	1316	.14
October	1358	.09
Nov.	1400	.06
Dec.	1442	.19
Average		.24

Leach Feed

Sample No.	ucu x 10 ⁻¹¹ /ml.
982	.23
1024	.21
1065	.36
1107	.09
1149	.24
1191	.09
1233	.09
1275	.23
1317	.09
1359	.12
1401	.26
1443	.16
Average	.18

Location - #2 Thickener Top

Month	Sample No.	ucu x 10 ⁻¹¹ /ml.
Jan.	984	.03
Feb.	1026	.03
March	1067	.19
April	1109	.03
May	1151	.00
June	1193	.06
July	1235	.09
August	1277	.17
Sept.	1319	.12
October	1361	.09
Nov.	1403	.00
Dec.	1445	.03
Average		.07

#5 Thickener Top

Sample No.	ucu x 10 ⁻¹¹ /ml.
985	.09
1027	.10
1068	.09
1110	.00
1152	.00
1194	.03
1236	.12
1278	.06
1320	.06
1362	.09
1404	.00
1446	.06
Average	.06

Location - Thickener Tunnel

Month	Sample No.	ucu x 10 ⁻¹¹ /ml.
Jan.	987	.00
Feb.	1028	.07
March	1069	.19
April	1111	.03
May	1153	.00
June	1195	.09
July	1237	.09
August	1279	.00
Sept.	1321	.00
Oct.	1363	.06
Nov.	1405	.03
Dec.	1447	.00
Average		.05

Tails Pumphouse

Sample No.	ucu x 10 ⁻¹¹ /ml.
988	.09
1029	.10
1070	.31
1112	.00
1154	.00
1196	.03
1238	.06
1280	.00
1322	.03
1364	.00
1406	.08
1448	.00
Average	.06

Location - SX Laboratory

Month	Sample No.	ucu x 10 ⁻¹¹ /ml.
Jan.	989	.06
Feb.	1030	.03
March	1071	.12
April	1114	.06
May	1156	.00
June	1198	.06
July	1240	.03
August	1282	.06
Sept.	1324	.19
October	1366	.40
Nov.	1408	.25
Dec.	1450	.00
Average		.11

SX - Outside Door

Sample No.	ucu x 10 ⁻¹¹ /ml.
990	.00
1031	.07
1072	.00
1115	.06
1157	.03
1199	.09
1241	.15
1283	.22
1325	.03
1367	.09
1409	.00
1451	.00
Average	.06

Location - Reagent Deck

Month	Sample No.	ucu x 10 ⁻¹¹ /ml.
Jan.	991	.19
Feb.	1033	.30
March	1074	.12
April	1116	.12
May	1158	.06
June	1200	.03
July	1242	.18
August	1284	.47
Sept.	1326	.22
October	1368	.15
Nov.	1410	.25
Dec.	1452	.24
Average		.19

Shift Office

Sample No.	ucu x 10 ⁻¹¹ /ml.
1004	.00
1046	.03
1087	.04
1129	.16
1171	.12
1213	.06
1255	.00
1297	.06
1339	.12
1381	.06
1423	.23
1465	.18
Average	.09

Location - Foreman's Office

Month	Sample No.	ucu x 10 ⁻¹¹ /ml.
Jan.	1005	.11
Feb.	1047	.12
March	1088	.07
April	1130	.03
May	1172	.03
June	1214	.06
July	1256	.00
August	1298	.17
Sept.	1340	.21
October	1382	.25
Nov.	1424	.07
Dec.	1466	.18
Average		.11

Met. Office

Sample No.	ucu x 10 ⁻¹¹ /ml.
1006	.06
1048	.15
1089	.10
1131	.06
1173	.00
1215	.06
1257	.03
1299	.14
1341	.03
1383	.48
1425	.46
1467	.52
Average	.17

Location - Met. Laboratory		
Month	Sample No.	ucu x 10 ⁻¹¹ /ml.
Jan.	1007	.11
Feb.	1049	.18
March	1090	.07
April	1132	.13
May	1174	.12
June	1216	.03
July	1258	.03
August	1300	.03
Sept.	1342	.15
October	1384	.25
Nov.	1426	.76
Dec.	1468	.21
Average		.17

<u>Change Room</u>	
<u>Sample No.</u>	<u>ucu x 10⁻¹¹/ml.</u>
1009	.17
1050	.17
1092	.10
1134	.07
1176	.03
1218	.00
1260	.16
1302	.17
1344	.14
1386	.15
1428	.13
1470	.07
Average	.11

Location - Leach Discharge		
Month	Sample No.	ucu x 10 ⁻¹¹ /ml.
Jan.	983	.19
Feb.	1025	.24
March	1066	.39
April	1108	.00
May	1150	.20
June	1192	.05
July	1234	.82
August	1276	.49
Sept.	1318	.20
October	1360	.67
Nov.	1402	.51
Dec.	1444	.03
Average		.32

Precipitation Main Floor	
sample No.	ucu x 10 ⁻¹¹ /ml.
992	.14
1034	1.71
1075	.24
1117	.07
1159	.53
1201	.11
1243	.15
1285	.24
1327	.48
1369	.29
1411	.88
1453	.47
Average	.48

Location - Precipitation Mezzanine		
Month	Sample No.	ucu x 10 ⁻¹¹ /ml.
Jan.	994	.37
Feb.	1035	.16
March	1076	.21
April	1118	.00
May	1160	.22
June	1202	.08
July	1244	.57
August	1286	.19
Sept.	1328	.03
October	1370	.29
Nov.	1412	1.10
Dec.	1454	.28
Average		.29

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APPENDIX "B"

PETROTOMICS COMPANY

Personnel Monitoring Summary, 1965

<u>Name</u>	<u>(Badge #)</u>	<u>Area</u>	<u>1st Qtr.</u>	<u>2nd Qtr.</u>	<u>3rd Qtr.</u>	<u>4th Qtr.</u>
Bittle, C.	(3)	Precipitation				.150
Black, L.	(10)	Leach				.110
Cazier, D.	(3)	Precipitation	.055			
Enders, R.	(2)	Packaging			.004	.236
Farquhar	(2)	Packaging	.063			
Foster, D.	(1)	Packaging				.042
Foreman, B.	(10)	Leach	.037			
Giesler, J.	(5)	Precipitation				.190
Gregory, R.	(9)	Thickeners	.280*			
Langston, J.	(11)	Helper	.176			
Manning, W.	(4)	Precipitation	.172		.047	.052
Olson, C.	(15)	Mechanic	.032			
Patton, J.	(6)	Precipitation			.059	
Plummer, D.	(8)	SX	.097			
Schall, E.	(11)	Helper		.044		
Wilson, M.	(5)	Precipitation	.099	.005	.175	

Note:

All values illustrated are the total in rems of Gamma, X-Ray, and Beta particles. No neutron exposures were found for the year in any area.

- * The .280 rems noted were received during a two-week period. Since no other exposures for this area were noted for the twelve-month period, and the area is a low radiation area, the film is believed to have been contaminated.

McGraw-Hill Company
Casper, Wyoming
(Clara M. Raffield)

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CONCURRENCE ☐

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COMMENT ☐

BY:

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DOCKET: 40-4659

DESCRIPTION: (Must Be Unclassified)

Ltr. req. amendments to SUA-551 relative to their monitoring of uranium concentrations; personnel film monitoring, etc.....and trans:

ENCLOSURES:

(2 cys. ea)

Appendix "A" - Airborne Uranium Dust Samples Below .25 ucu x 10-11/ml."

Appendix "B" - Personnel Monitoring Summary, 1965

REMARKS:

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