

DAVISON CHEMICAL COMPANY
DIVISION OF W. R. GRACE & CO.
BALTIMORE 3, MARYLAND

June 20, 1960

Mr. Lyall Johnson, Chief
Licensing Branch
Division of Licensing and Regulation
U. S. Atomic Energy Commission
Washington 25, D. C.

Reference: 40-86

Dear Mr. Johnson:

We wish to acknowledge your letter of June 6 requesting the status of our application for approval to release source material to unrestricted areas and information concerning plant operations.

Subsequent to our letter of April 11, 1960, we met with Messrs. Rogers, Page and others to review our problem. It was then decided advisable for us to systematically sample the plant effluent and surface run-off to determine the effectiveness of our water treatment plant. It was also suggested that we "core drill" the plant area to appraise the significance of leaching from our tailings pile.

Following the meeting referred to above, we placed orders for equipment to measure the low level of activity involved. This equipment was received on June 16. We are now in a position to gather data at a stepped-up rate. During the year weekly composite samples of effluent, taken at the point of exit from our property, have been analysed by Controls for Radiation, Inc., Cambridge, Massachusetts. The results of these analyses are shown in Exhibit A. All samples except for the week of March 27 - April 2, 1960, are well below the maximum permissible concentration. We feel that these data indicate our water treatment plant is sufficiently effective to permit us to operate within the scope of Appendix "B", Table II, of 10 CFR 20.

For the past several months our health physicist has gathered activity data around the property and taken a limited

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Mr. Lyall Johnson
U. S. AEC
June 20, 1960

number of dust samples. The latter samples were evaluated by Controls for Radiation and for the most part indicate a low level of contamination.

A manual is being prepared that covers sampling procedures, methods of evaluation, time spent by employees at each job location, and other pertinent information. During July we plan to submit a formal report which will include a copy of our annual and additional information requested in the second section of your letter of March 14, 1960. We hope at that time the Commission will be in a position to act favorably on our application for license renewal.

Very truly yours,

DAVISON CHEMICAL COMPANY
Division of W.R. Grace & Co.

T. G. Tongue
T. G. Tongue

TOT:flc
Attachment

cc: Messrs. R.D. Goodall-Page Edmunds
D.F. Barrett
F.C. Dehler
R.M. Mandie - Pompton
Don Hubbard - Erwin
with attachments

EXHIBIT A

Results of weekly composite effluent water samples taken at the point of exit from our property, without additional dilution, analyzed radiochemically for Thorium by Controls for Radiation, Inc.

<u>Sample</u>	<u>dpm/L</u>	<u>SM.P.C.</u>
1/1/60 - 1/31/60	2.6 ± 1.1	2.4
2/1/60 - 2/14/60	7.9 ± 1.4	7.2
2/15/60 - 2/20/60	10.0 ± 5	9.2
2/22/60 - 2/27/60	3.6 ± 1.3	3.3
2/28/60 - 3/5/60	2.6 ± 1.1	2.4
3/6/60 - 3/12/60	4.3 ± 1.4	3.9
3/13/60 - 3/19/60	90 ± 14	81.0
3/20/60 - 3/26/60	66 ± 11	60.0
3/27/60 - 4/2/60	2240 ± 110	218.0
4/3/60 - 4/9/60	30 ± 5.4	27.6
4/10/60 - 4/16/60	91.2 ± 6.7	83.0
4/17/60 - 4/23/60	67.2 ± 6.0	61.0
4/24/60 - 4/30/60	26.6 ± 4.8	25.2
5/1/60 - 5/7/60	79.8 ± 7.9	72.6

TOT:flc
6/20/60

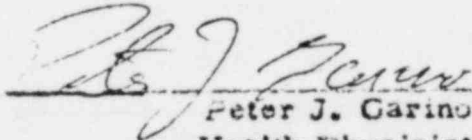
February 5, 1965

FROM: Peter J. Garino
TO: File
SUBJECT: SHIPMENT OF RADIOACTIVE MATERIAL

This shipment of Radioactive Material consisting of thorium-containing products, has been inspected by me and complies with all conditions of the regulation 73.393

Total number of units loaded 24
Milliroentgens per hour 10 ft from sides of truck 2 mR/hr.
Milliroentgens per hour 5 ft from ends of truck 1 mR/hr.
Milliroentgens per hour at driver's position in truck 1.5 mR/hr.
Driver notified of location limit yes

Released Feb. 12, 1965 1965, at Pompton Plains, N.J.


Peter J. Garino
Health Physicist
W. R. GRACE & CO.
DAVISON CHEMICAL DIVISION

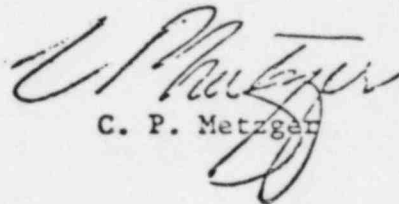
W TO F. SITAW
A-178

DATE: August 22, 1978
FROM: C. P. Metzger
TO: Mr. B.L. Mobley
cc: Mr. O. A. Wunderlich
→ Mr. C. H. Bell
SUBJECT: Inspection by the N.J. State Department
of Environmental Protection

On August 22, we were visited by Mr. Pasquale Ferraro of the Bureau of Solid Waste Management. His purpose was to view the area where burials of radioactive materials have been made and to determine that no building structure enclosure had been placed on top of the burial area.

I was able to show him, in general, where the materials were buried and to assure him that nothing has been placed above this area. Also, to assure him that nothing would be placed there in the future.

I believe he is totally satisfied with the results of his inspection, therefore, no further action is required on our part, at this time.


C. P. Metzger

CPM:db

RECEIVED
AUG 31 1978
ENERGY ADMIN.



ENVIRONMENTAL SAFEGUARDS DIVISION
 4 RESEARCH PLACE
 ROCKVILLE, MARYLAND 20850
 301 948-7010

cc → BLM

A-179

ESD-78-92 (R&LU)
 August 28, 1978
 File 2358-01
 Report #1I

W. R. Grace P. O. 4566

W. R. Grace & Co.
 Davison Chemical Division
 10 E. Baltimore Street
 Baltimore, MD 21202

Attention: Mr. Fred V. Shaw

Dear Mr. Shaw:

The results of gross alpha and beta counting of your two water samples submitted 8/9/78 are as follows:

<u>Sample ID</u>	<u>Gross Alpha pCi/l \pm 2σ</u>	<u>Gross Beta pCi/l \pm 2σ</u>	<u>Weight of Solids g/200 ml sample</u>
1st Pit (well on site)	4.4 ± 2.3	9.4 ± 3.0	0.0533
Sump			
a) Suspended	1295 ± 37	2087 ± 31	0.6012
b) Dissolved	91 ± 9	141 ± 8	0.1252

Also enclosed is the summary of the EPA drinking water requirements for radioactivity, as we understand them.

Sincerely,

Mr. Charles Marcinkiewicz
 Marjorie S. Malmberg

Marjorie S. Malmberg, Ph.D.
 Section Leader
 Environmental Radiological
 Monitoring Services

cc: D. J. Ditunno

RECEIVED

AUG 31 1978

ENERGY ADMIN.

EPA INTERIM PRIMARY
DRINKING WATER REGULATIONS

This table is drawn from FR 41:28403-5, July 9, 1976; 40CFR 141.2, .15, .16, .25, and .26. It represents our current understanding of the National Interim Primary Drinking Water Regulations as they apply to radioanalytical requirements. We do not assume responsibility for the completeness nor accuracy of interpretation of these regulations as expressed in this table, nor do we represent that this laboratory is certified to perform these analyses for community drinking water supplies.

Marjorie S. Malmberg

Marjorie S. Malmberg, Ph.D.
Laboratory Supervisor
Radiological Laboratory
Environmental Safeguards Division

EPA DRINKING WATER

<u>Analysis/ Isotope</u>	<u>Limit of Detection</u>	<u>Maximum Contaminant Level</u>	<u>Action Level</u>
5 Ra-226/228 combined	1 pCi/l	5 pCi/l	Ann. avg. of 4 qtrs > 5pCi/l: report to state & public
1 Gross alpha particle activity (incl. Ra-226, excluding U and Rn)	3 pCi/l	15 pCi/l	* > 5 pCi/l, analyse for Ra-226 if Ra-226 > 3 pCi/l analyse for Ra-228 (recommend 226 and/or 228 when Gross alpha > 2 in areas known to have Ra-228 in drinking water.
Gross beta	4 pCi/l	50 pCi/l	If > 50, identify major radioactive constituents.
a. Recommended for all	3H-1000 89Sr-10	single, or combined to give no greater than 4 mrem/yr total body or any internal organ.	
b. Required for:	90Sr-2	NBS Handbook 69 (1963)	
1. Communities > 100,000 using surface water	131I-1 134Cs-10 Other 1/10 of applic. limit.	3H - 20,000 pCi/l 90Sr 8 pCi/l	
2. Others as required by state			
3. In case of nuclear facility contamination in effluent. **			> 15, analyze for Sr-89, Cs-134

Notes:

- * Measured gross alpha must not exceed 5 pCi/l at a confidence level of 95% (1.65σ) (i.e. C + 1.65σ < 5)
- ** Recommend monthly Gross Beta, average quarterly; I-131 quarterly (5 day comp.)

 $\left. \begin{array}{l} \text{Sr-90} \\ \text{H-3} \end{array} \right\}$
quarterly, av. annual

Monitoring requirements
Gr- α , Ra-226/228

Initiate by 6/24/79

Within 2 years of effective date (6/24/77)

Complete within 3 yrs. (6/24/77)

Analysis of (1) annual composite of 4 consecutive quarterly samples
or

(4) consecutive quarterly samples analyzed and averaged.

- Do this at least once every 4 years. If first year has shown Ra-226/228 < 2.5 pCi/l and gross alpha < 7.5 pCi/l, then a single sample may be analyzed instead of above procedure at discretion of the State.
- State may order more frequent sampling and analysis if cause exists (mining, etc.)
- New water source for a community water system -
Monitored 1st year as above.
More frequently if ordered by State.
- Later monitoring need not include Ra-228 if initial monitoring indicates absence and State agrees.
- If Ra-226 > 3 pCi/l annual monitoring may be required by State.
- If maximum is exceeded, supplier of water must notify State and the public and continue quarterly monitoring.