

PDR

M-12

LAW OFFICES
EDWARD J. McGRATH
4TH FLOOR
51 MONROE STREET
ROCKVILLE, MARYLAND 20850
(301) 340-0400

July 20, 1979

Dr. Ray Cooperstein
U.S. Nuclear Regulatory Commission
1915 Eastern Avenue
Silver Spring, Maryland 20907

POOR ORIGINAL

Re: Cotter Corporation
Canon City Mill Expansion

Dear Dr. Cooperstein:

Pursuant to our conversation of today, I enclose a copy of the letter prepared by Tim Smith of Cotter Corporation for the Colorado Department of Health, with enclosures, compiling uranium, radium, molybdenum and selenium data available to us for the Arkansas River.

I will furnish an additional, clearer, copy of Table 1 as soon as received.

I have also arranged today to have the Colorado University study excerpts sent to you.

Sincerely yours,

Edward J. McGrath

EJM:jcb

Encls.

cc: James Montgomery
Colorado Department of Health

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FEE EXEMPT

7908220180

Cotter Corporation
General Office

D. I. A. L. C. O. R. P. O. R. A. T. I. O. N.
9305 WEST ALAMIDA PARKWAY, SUITE 200
LAKEWOOD, COLORADO 80227

July 6, 1979

Mr. Richard Gamewell
Senior Health Physicist
Colorado Department of Health
4210 E. 11th Ave.
Denver, Colorado 80220

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Dear Mr. Gamewell,

In accordance with your request of May 31, I have attached a compilation of the measured uranium concentrations in the Arkansas River at the Four-Mile Bridge and at Grape Creek. Additionally, the Radium-226, Selenium and Molybdenum concentrations in the Arkansas River at these locations are given below.

<u>Date of Sample</u>	<u>Location</u>	<u>Mo, mg/e</u>	<u>Se, ug/e</u>	<u>Ra-226, pci/e</u>	
9/30/75	Four-mile	0.05	3.0	0.11+	0.10
	Grape Creek	0.05	2.0	0.20 +	0.11
6/9/76	Four mile	0.05	1.0	0.08 +	0.08
	Grape Creek	0.05	2.0	0.13 +	0.10

Molybdenum data taken from table 5.3.1, Nalco Report, Sept. 1977
Selenium data taken from table 5.3.2, Nalco Report, Sept. 1977
Ra-226 data taken from table 2.9.12, Nalco Report, Sept. 1977

Referring to Table 1 and Figure 1, attached, a time series analysis of the uranium concentrations indicates no secular trend, and only slight, but not consistent, seasonality. The significant point, however, is the lack of any trend.

Should you have any questions regarding these data, please contact me at your earliest convenience.

Yours truly,

COTTER CORPORATION

Tim Smith

Tim Smith
Supervising Environmental
Engineer

Enclosure

TS/ms

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URANIUM CONCENTRATIONS, $\mu\text{Ci} \times 10^{-7}/\text{m}$

MONTH/YEAR	STANDARD, 10 CFR 20 APPENDIX B	FOUR-MILE BRIDGE	GRAPE CREEK
67 Jan.	3×10^{-5}	.0020	.0007
67 Feb.	"	.0021	.0005
67 March	"	.0014	.0020
67 April	"	.0002	.0001
67 May	"	.0005	.0003
67 June	"	.0003	.0001
67 July	"	.0	.0004
67 August	"	.0	.0002
67 Sept.	"	.0004	.0002
67 October	"	.0044	.0042
67 November	"	.0009	.0007
67 December	"	.0001	.0004
68 January	"	.0007	.0003
68 February	"	.0	.0001
68 March	"	.0005	.0003
68 April	"	.0	.0
68 May	"	.0010	.0
68 June	"	.0004	.0009
68 July	"	.0008	.0003
68 August	"	.0032	.0032
68 September	"	.0029	.0031
68 October	"	.0	.0
68 November	"	.0	.0
68 December	"	.0019	.0021

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URANIUM CONCENTRATIONS, $\mu\text{Ci} \times 10^3/\text{ml}$

MONTH/YEAR	STANDARD, 10CFR 20 APPENDIX B	FOUR-MILE E.RIDGE	GRAPE CREEK
1969 January	3×10^{-5}	.0002	.0
1969 February	"	.0014	.0012
1969 March	"	.0005	.0005
1969 April	"	.0002	.0032
1969 May	"	.0023	.0014
1969 June	"	.0005	.0011
1969 July	"	.0001	.0010
1969 August	"	.0007	.0005
1969 September	"	.0014	.0010
1969 October	"	.0002	.0002
1969 November	"	.0003	.0001
1969 December	"	.0	.0
1970 January	3×10^{-5}	.0001	.0005
1970 February	"	.0268	.0268
1970 March	"	.0021	.0025
1970 April	"	.0019	.0021
1970 May	"	.0010	.0010
1970 June	"	.0020	.0026
1970 July	"	.0032	.0023
1970 August	"	.0	.0
1970 September	"	.0026	.0024
1970 October	"	.0016	.0020
1970 November	"	.0	.0
1970 December	"	.0	.0

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URANIUM CONCENTRATIONS, $\mu\text{Ci} \times 10^{-5}/\text{ml}$

MONTH/YEAR	STANDARD, 10CFR 20 APPENDIX B	FOUR-MILE BRIDGE	GRAPE CREEK
1971 January	3×10^{-5}	.0006	.0008
1971 February	"	.0001	.0
1971 March	"	.0003	.0004
1971 April	"	.M	M
1971 May	"	.0005	.0007
1971 June	"	.0004	.0003
1971 July	"	.0006	.0006
1971 August	"	.0001	.0001
1971 September	"	.0015	.0025
1971 October	"	.0028	.0022
1971 November	"	.0020	.0020
1971 December	"	.0039	.0011
1972 January	3×10^{-5}	.0014	.0012
1972 February	"	.0005	.0017
1972 March	"	.0002	.0012
1972 April	"	.0004	.0003
1972 May	"	.0002	.0001
1972 June	"	.0004	.0003
1972 July	"	.0008	.0006
1972 August	"	.0004	.0
1972 September	"	.0	.0002
1972 October	"	.0	.0002
1972 November	"	.0	.0
1972 December	"	.0	.0

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URANIUM CONCENTRATIONS, $\mu\text{Ci} \times 10^{-6}/\text{ml}$

MONTH/YEAR	STANDARD, 10CFR 20 APPENDIX B	FOUR-MILE BRIDGE	GRAPE CREEK
1973 January	3×10^{-5}	.0	.0
1973 February	"	.0	.0
1973 March	"	.0	.0
1973 April	"	.0	.0
1973 May	"	.0	.0
1973 June	"	.0	.0
1973 July	"	.0011	.0010
1973 August	"	.0011	.0014
1973 September	"	.0	.0
1973 October	"	.0	.0005
1973 November	"	.0	.0
1973 December	"	.0002	.0
1974 January	3×10^{-5}	.0	.0
1974 February	"	.0	.0
1974 March	"	.0005	.0
1974 April	"	.0013	.0006
1974 May	"	.0	.0
1974 June	"	.0	.0
1974 July	"	.0	.0
1974 August	"	.0005	.0
1974 September	"	.0	.0
1974 October	"	.0	.0003
1974 November	"	.0003	.0006
1974 December	"	.0	.0

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URANIUM CONCENTRATIONS, $\mu\text{Ci} \times 10^{-6}/\text{ml}$

STANDARD,
10 CFR 20
APPENDIX B

MONTH/YEAR	STANDARD, 10 CFR 20 APPENDIX B	FOUR-MILE BRIDGE	GRAPE CREEK
75 January	3×10^{-5}	.0	.0007
75 February	"	.0	.0
75 March	"	.0008	.0003
75 April	"	.0	.0
75 May	"	.0	.0
75 June	"	.0	.0005
75 July	"	.0005	.0002
75 August	"	.0	.0
75 September	"	.0	.0002
75 October	"	.0	.0002
75 November	"	.0005	.0
75 December	"	.0007	.0007
76 January	3×10^{-5}	.0007	.0007
76 February	"	.0	.0002
76 March	"	.0002	.0012
76 April	"	.0	.0005
76 May	"	.0007	.0012
76 June	"	.0004	.0007
76 July	"	.0012	.0007
76 August	"	.0002	.0
76 September	"	.0002	.0
76 October	"	.0002	.0
76 November	"	.0	.0
76 December	"	.0	.0

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URANIUM CONCENTRATIONS, $\mu\text{Ci} \times 10^{-6}/\text{ml}$

MONTH/YEAR	STANDARD, 10CFR 20 APPENDIX B	FOUR-MILE BRIDGE	GRAPE CREEK
77 January	3×10^{-5}	.0	.0
77 February	"	.0012	.0014
77 March	"	.0012	.0014
77 April	"	.0007	.0007
77 May	"	.0006	.0002
77 June	"	.0005	.0005
77 July	"	.0009	.0022
77 August	"	.0002	.0
77 September	"	.0	.0005
77 October	"	.0	.0002
77 November	"	.0002	.0002
77 December	"	.0002	.0002
78 January	3×10^{-5}	.0002	.0002
78 February	"	.0002	.0002
78 March	"	.0002	.0002
78 April	"	.0	.0007
78 May	"	.0	.0
78 June	"	.0	.0
78 July	"	.0	.0
78 August	"	.0	.0
78 September	"	.0	.0
78 October	"	.0005	.0
78 November	"	.0	.0
78 December	"	.0	.0005

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