

MMHNEUAC07VVUBG30VYA013

RR RULPAT

DE RULPAT 50

ZNR

R 232250Z

FM USAEC ICANOFALLS IDA

TO USAEC WASHDC

AEC GRNC

BT

UNCLAS FOR W E KRIEGLER, CHM DIVISION OF COMPLIANCE INFO
IDC TRAISSON OFFICER CHM RDD FROM DONALD I VALMER. WITH REF YOUR
REQUEST FOR LIQUID EFFLUENT DATA COLLECTED RECENTLY BY THE URALIAN
REDUCTION COMPANY CHM MOAB UTAH CHM THE FOLLOWING IS FORWARDED. ON
MAY 12 1960 CHM AN ID SAMPLE WAS ALSO COLLECTED AT THE OVERFLOW
WEIR FROM THE LOWER END OF THE BARITE TREATMENT RETENTION POND
AND BARITE HAVING BEEN INTRODUCED CHM HOWEVER TO THE COLORADO
RIVER. THE SAMPLE WAS SPLIT WITH NRC FOR COMPARISON OF ANALYTICAL
METHODS. AEC RESULTS WERE CLN RADIUM-226 CHM 17 PLUS OR MINUS
2.2 TANKS 10 TO THE MINUS 5TH DECIMAL CHM AND THORIUM-230 CHM 1.5

000270

NNNNNEUA007VWUD030VYA013

RR RUEPAE

DE RUWPSA 50

ZNR

R 232250Z

FM USAEC IDAHO FALLS IDA

TO USAEC WASHDC

AEC GRNC

BT

UNCLAS FOR W E KRIEGSMAN CMM DIVISION OF COMPLIANCE INFO
IDO TIAISON OFFICER CMM RDD FROM DONALD I WALKER. WITH REF YOUR
REQUEST FOR LIQUID EFFLUENT DATA COLLECTED RECENTLY BY THE URANIUM
REDUCTION COMPANY CMM MOAB UTAH CMM THE FOLLOWING IS FORWARDED. ON
MAY 12 1960 CMM AN ID SAMPLE WAS ALSO COLLECTED AT THE OVERFLOW
WEIR FROM THE LOWER END OF THE BARITE TREATMENT RETENTION POND
/NO BARITE HAVING BEEN INTRODUCED CMM HOWEVER/ TO THE COLORADO
RIVER. THE SAMPLE WAS SPLIT WITH URC FOR COMPARISON OF ANALYTICAL
METHODS. AEC RESULTS WERE CLN RADIUM-226 CMM 87 PLUS OR MINUS
2.2 TIMES 10 TO THE MINUS 9TH UC/ML CMM AND THORIUM-230 CMM 1.5

000270

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PLUS OR MINUS 0.5 TIMES 10 TO THE MINUS 6TH UC/ML CMH AS COMPARED WITH 94 TIMES 10 TO THE MINUS 9TH UC/ML AND .73 TIMES 10 TO THE MINUS 5TH UC/ML OF RADIUM-226 AND THORIUM-230 CMH RESPECTIVELY CMH AS ANALYZED BY URCS CHEMISTRY LABORATORY. /PARA/ PRIOR TO THE INSPECTION OF MAY 12 CMH URC WAS NOT ANALYZING FOR THORIUM.

HOWEVER CMH RADIUM ANALYSES MADE RECENTLY BY URC UTILIZING THE METHOD USED AT THE NRTS ARE AS FOLLOWS /EXPRESSED IN UC/ML TIMES 10 TO THE MINUS 9TH/ CLN TAILING POND EFFLUENT - 11/12/59 - 405 /LAST ACID TAILINGS EFFLUENT SAMPLE ANALYZED PRIOR TO STARTUP OF THE NEW CARBONATE LEACH PLANT. ALL LIQUID MILL EFFLUENTS ARE NOW COMBINED RESULTING IN AN INCREASE IN PH AND A DECREASE IN RADIUM LEVELS IN MILL EFFLUENTS BEING RELEASED TO COLORADO RIVER./

TAILINGS POND EFFLUENT - 1/21/60 - 29

TAILINGS POND EFFLUENT - 3/11/60 - 47

TAILINGS POND EFFLUENT - 3/24/60 - 40

TAILINGS POND EFFLUENT COMPOSITE - JAN 60 - 40

TAILINGS POND EFFLUENT COMPOSITE - FEB 60 - 42

TAILINGS POND EFFLUENT COMPOSITE - MARCH 60 - 47

DOLORES RIVER ABOVE CONFLUENCE WITH COLORADO - 3/11/60 - 3

COLORADO RIVER ABOVE CONFLUENT WITH DOLORES - 3/11/60 - .5

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COLORADO RIVER AT DEWEY BRIDGE - 3/11/60 - 1.6

COLORADO RIVER AT MOAB BRIDGE - 3/11/60 - 1.9

COLORADO RIVER 1/4 MILE BELOW BRIDGE - 3/11/60 - 3.0

COLORADO RIVER 1/2 MILE BELOW BRIDGE - 3/11/60 - 2.6

COLORADO RIVER 5 MILES BELOW BRIDGE - 3/11/60 - 2.5

COLORADO RIVER 10 MILES BELOW BRIDGE - 3/11/60 - 3.2

COLORADO RIVER 20 MILES BELOW BRIDGE - 3/11/60 - 4.7

COLORADO RIVER 10 MILES ABOVE CONFLUENCE WITH GREEN RIVER - 3/11/60
- 3.7

COLORADO RIVER 1 MILE ABOVE CONFLUENCE WITH GREEN RIVER - 3/11/60
- 4.4

COLORADO RIVER 1 MILE BELOW CONFLUENCE WITH GREEN RIVER - 3/11/60
- 3.8

GREEN RIVER 1 MILE ABOVE CONFLUENCE WITH COLORADO RIVER - 3/11/60
- 1.1

▶ COLORADO RIVER ABOVE CONFLUENCE WITH DOLORES RIVER - 3/24/60 - 1.5

▶ DOLORES RIVER ABOVE CONFLUENCE WITH COLORADO RIVER - 3/24/60 - 3.1

▶ COLORADO RIVER AT DEWEY BRIDGE - 3/24/60 - .9

▶ COLORADO RIVER AT MOAB BRIDGE - 3/24/60 - 1.2

▶ COLORADO RIVER 1 MILE BELOW MILL - 3/24/60 - 1.3

END REF LI CLN RTK

BT

23/2305Z

Uranium Reduction Co.

Since Feb. 27, 1959 monthly samples
1 mi. upstream, 5 + 10 mi downstream
R₂ determination by Combustion Eng. Corp.
on samples from Feb. 27 to June 23,
1959.

River water - Feb. 20, 59 - Analysis by Winchester

River - 1 mile up	6.4×10^{-9}	R ₂
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5 below	6.8×10^{-9}	
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10 "	7.7×10^{-9}	
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Tailings pond effluent	5.3×10^{-6}	~1300x mpc
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(After neutralization of tailings)	3.1×10^{-6}	763x mpc
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Uranium Reduction

Discharge ~ 1500 gal/min. to Colorado river.

Colorado flow = 1,600 to 25,000 ft³/sec.
Ave. = 13,300 ft³/sec.

$$1 \text{ ft}^3 = 7.5 \text{ gal}$$

$$1,600 \text{ ft}^3/\text{sec} \times 60 \text{ min} \times 7.5 \text{ gal}/\text{ft}^3 = 7.2 \times 10^5 \text{ gal/min.}$$

$$\frac{7.2 \times 10^5 \text{ gal/min}}{1.5 \times 10^3 \text{ gal/min}} = 4.8 \times 10^2 \text{ dilution} \\ = 480$$

$$13,300 \text{ ft}^3/\text{sec} \times 60 \text{ min} \times 7.5 \text{ gal}/\text{ft}^3 = 6 \times 10^6 \text{ gal/min.}$$

$$\frac{6 \times 10^6 \text{ gal/min}}{1.5 \times 10^3 \text{ gal/min}} = 4 \times 10^3 \text{ dilution} \\ = 4,000$$

from Feb. 20, 60 samples

Effluent 1300 x mpc

1300 x mpc

4,000

$$\frac{1300 \text{ x mpc}}{4,000} = 0.3 \text{ x mpc in Colo. River.}$$

Effluent 763 x mpc

$$\frac{763 \text{ x mpc}}{4,000} =$$

$$\frac{763 \text{ x mpc}}{4,000} = 0.2 \text{ x mpc in Colo. River}$$