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UNITED STATES GOVERNMENT

# Memorandum

*805*

TO : R. G. Page, Chief, Enforcement Branch  
Division of State and Licensee Relations, Hq.

DATE: NOV 7 1964

FROM : Roger T. Woolsey, Radiation Specialist (Review)  
Division of Compliance, Region IV, Denver

*R. T. Woolsey*

SUBJECT: PETROTOMICS COMPANY, CASPER, WYOMING - LICENSE NO. SUA-551  
DOCKET NO. 40-6659 - SUPPLEMENT TO INSPECTION REPORT

CO:IV:LCR

Listed below are the analytical results of independent air and liquid samples collected during the inspection of the subject licensee on August 10-11, 1964.

The licensee collected simultaneous air samples and these results are also tabulated. As noted in the table, in one instance air samples were exchanged for analysis. With the exception of the samples from the secondary crusher building, the air sample data are reasonably comparable. The exception was anticipated since the licensee experienced difficulty with his air sampler during the collection of this sample. It is noted that the results of the breathing zone samples obtained during yellow cake packaging operations are substantially higher than the results previously recorded for this operation by the licensee. This is probably attributable to the fact that the yellow cake sample mechanism malfunctioned while the air samples were being collected. The malfunction required some adjustments by the operator and several attempts before he was able to withdraw the yellow cake sample from the barrel.

The analytical results reported to the licensee by Tracerlab for liquid samples collected at the same time as those obtained for independent analysis are also listed. Some disparity is noted in the thorium-230 data, but the results tend to confirm previous analyses of samples from the small creek that originates below the secondary tailings dam.

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Air Samples

<u>Sampling Location</u>	<u>Sample Results (uc Nat. U/cc)</u>	
	<u>AEC</u>	<u>Licensee</u>
Breathing zone sample during clean-up of secondary crusher building	$2.3 \times 10^{-11}$	$0.5 \times 10^{-11}$
General air sample in area over the fine ore bins	$<0.1 \times 10^{-11}$	$<0.1 \times 10^{-11}$
Breathing zone sample during yellow cake packaging operations	$17.8 \times 10^{-11}$	$19.8 \times 10^{-11}$
General air sample during yellow cake packaging operations	$*2.9 \times 10^{-11}$	$**4.7 \times 10^{-11}$
General air sample in yellow cake dryer room	$0.4 \times 10^{-11}$	$0.4 \times 10^{-11}$

\*Sample collected by licensee - analyzed by AEC.

\*\*Sample collected by AEC - analyzed by licensee.

Liquid Samples

<u>Sample Location</u>	<u>AEC Sample Results (uc/cc)</u>		
	<u>Ra-226</u>	<u>Th-230</u>	<u>U nat</u>
Mill drinking water - Sample #1	$<3 \times 10^{-8}$	$<2 \times 10^{-8}$	$4.8 \times 10^{-7}$
Mill drinking water - Sample #2	$<3 \times 10^{-8}$	$<2 \times 10^{-8}$	$4.4 \times 10^{-7}$
Creek below tailings dam - Sample #1	$<3 \times 10^{-8}$	$4.8 \times 10^{-8}$	$2.8 \times 10^{-6}$
Creek below tailings dam - Sample #2	$<3 \times 10^{-8}$	$1.9 \times 10^{-6}$	$2.8 \times 10^{-6}$
Secondary tailings pond	$7 \times 10^{-8}$	$1.3 \times 10^{-6}$	$2.4 \times 10^{-6}$

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R. G. Page

-3-

<u>Sample Location</u>	<u>Licensee Sample Results (uc/cc)</u>		
	<u>Ra-226</u>	<u>Th-230</u>	<u>U nat</u>
Mill drinking water	$<1 \times 10^{-9}$	$<5 \times 10^{-11}$	$4 \times 10^{-7}$
Creek below tailings dam	$2.5 \times 10^{-9}$	$1.3 \times 10^{-5}$	$1.6 \times 10^{-6}$
Secondary tailings pond	$<1 \times 10^{-9}$	$2.8 \times 10^{-5}$	$1.7 \times 10^{-6}$

cc: CO:HQ

MEMO ROUTE SLIP Form AEC-88 (Rev. May 14, 1947)		See me about this. Note and return.	For concurren. For signature.	For action. For information.
1	TO (Name and unit): D. A. Russbauer DML: S&SAD	INITIALS  DATE	REMARKS RE: PETROTOMICS COMPANY CASPER, WYOMING LICENSE NO. SUA-551 (DOCKET NO. 40-6659)	
2	TO (Name and unit): File Room	INITIALS  DATE	REMARKS Attached for your information is a supplement to inspection report for subject licensee by Region IV, CO, which lists the analytical results of air and liquid samples collected during the inspection on August 10 and 11, 1964.	
	TO (Name and unit):	INITIALS  DATE	REMARKS	
	FROM (Name and unit): R. G. Page SLR:EB	REMARKS Attachment Supplement to Inspection Report, dated 11-27-64		
	PHONE NO. 7422	DATE 12-4-64		

USE OTHER SIDE FOR ADDITIONAL REMARKS

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