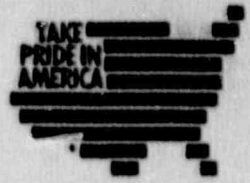




# United States Department of the Interior



BUREAU OF LAND MANAGEMENT  
SPOKANE DISTRICT OFFICE  
EAST 217 MAIN  
SPOKANE, WASHINGTON 99202  
(509) 353-2570

IN REPLY REFER TO:  
14-20-0503-823  
14-20-0503-824

August 6, 1990

Mr. Vandy Miller, Assistant Director for Agreement Programs  
Office of Governmental Affairs  
Nuclear Regulatory Agency  
Washington, DC 20555

Dear Mr. Miller:

The purpose of this letter is to request your cooperation and technical assistance in resolving some important issues related to the disposal of filter cake generated from water treatment at the Midnite Uranium Mine.

Recently Dawn Mining Company (DMC) has been evaluating both on-site and off-reservation alternatives for filter cake disposal. The State of Utah recently eliminated the option of transporting filter cake to Umetco's mill for processing.

Relative to these proposed actions it is important to cite the following Federal Regulations:

#### 10 CFR 40.1 Purpose

"(a) The regulations in this part establish procedures and criteria for the issuance of licenses to receive title to, receive, possess, use, transfer, or deliver source and byproduct materials, as defined in this part, and establish and provide for the terms and conditions upon which the Commission will issue such licenses. The regulations in this part also establish certain requirements for the physical protection of import, export, and transient shipments of natural uranium."

9009100060 900806  
PDR STPRG ESGWY  
PDR

10 CFR 40.3 License requirements

"No person subject to the regulations in this part shall receive title to, own, receive, possess, use transfer, or deliver byproduct material as defined in this part or any source material after removal from its place of deposit in nature, except as authorized in a specific or general license issued by the Commission pursuant to the regulations in this part."

10 CFR 40.4 Definitions

"Source Material" means: (1) Uranium or thorium, or any combination thereof, in any physical or chemical form or (2) ores which contain by weight one-twentieth of one percent (0.05%) or more of: (i) Uranium, (ii) thorium or (iii) any combination thereof."

The chemical analyses performed on two separate samples of filter cake processed by the Bureau of Mines and DMC indicate that filter cake contains 0.07% uranium. These samples, after filtering, contain approximately 15 percent solids and 85 percent water. Based upon these results it appears that the filter cake is source material as suggested by Paul Lohaus in a memorandum dated May 15, 1989.

Based upon recent conversations between our District Mining Engineer, Kelly Courtright, and Leo Wainhouse, Washington State Division of Radiation Protection, we are aware that the State of Washington is preparing a response to a letter written by Dawn Mining Company (DMC) dated March 17, 1989 (Attached). This letter concerns DMC's request for a mill license modification to place filter cake in the lined tailings pond at Ford, Washington.

We would appreciate your answers to the following questions:

1. What jurisdiction does the NRC have regarding review and approval of any plans prepared by DMC which address any aspects of filter cake disposal on or off the Spokane Indian Reservation? Disposal in this case is very broadly defined and refers to, but is not limited to, transportation, siting of an impoundment facility, environmental considerations including documentation, facility design, operations, monitoring, closure, etc. "Disposal" here also means the NRC definition (10 CFR 61.2), "the isolation of radioactive wastes from the biosphere inhabited by man and containing his food chains by emplacement in a land disposal facility."
2. On October 16, 1989 Lee Gronemeyer from the State of Washington informed Kelly Courtright in a phone conversation that the State of Washington would not have any involvement or jurisdiction related to filter cake disposal within the reservation. If DMC's mill license must be modified to place filter cake into the Ford mill wouldn't any disposal of filter cake on or off the reservation fall within the requirements of NRC licensing?
3. In the event that it is determined the NRC does not have jurisdiction regarding filter cake would the NRC be willing to review, comment, and make recommendations for approval of filter cake disposal? The BLM would appreciate your technical assistance with this project. A copy of DMC's on-site disposal alternative is attached.

Mr. Vandy Miller  
P. 3

4. What is the status of the position paper that is being reviewed within the NRC that would allow filter cake like material to be placed into uranium mill tailings ponds?
5. In a memorandum dated May 15, 1989, Paul L. Lohaus, NRC, wrote to you stating that the filter cake "...does not constitute byproduct material." He also stated, "Finally, it should be noted that the analytical information you included in your transmittal indicates that the filter-cake residues may constitute source material, which may be licensable by the State of Washington."

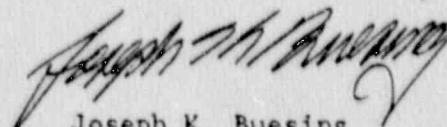
Would you please clarify for us specifically how the NRC classifies filter cake off the reservation, as well as on the reservation. For example, do you classify the filter cake as licensable material, byproduct material, source material, low level radioactive waste, NARM (naturally occurring or accelerator generated material), or what?

It is absolutely critical to our Trust Management Responsibility that we promptly obtain specific clarification on this issue so that all parties can have a technical as well as legal basis by which to evaluate proposals by DMC. We believe that classification of radioactive materials similar to the filter cake, or the radioactive components within the filter cake, is clearly within the responsibility of the Washington State Division of Radiation Protection and/or the NRC. These agencies are clearly recognized and delegated experts in this area and we would appreciate your coordination with the State in answering these questions.

Currently there is approximately 400 million gallons of contaminated water impounded at the mine site and BLM, as well as all other parties, would like to see the water treatment plant commence operation prior to the end of the 1990 construction season. Therefore, it would very much be appreciated if you could respond to our letter within two weeks, or by August 21, 1990. Attached is a copy the analytical results for the filter cake.

If you have any questions concerning the contents of this letter, or need additional information, please contact Kelly Courtright or Dave Sinclair at (509) 353-2570 or FTS 439-2570.

Sincerely yours,

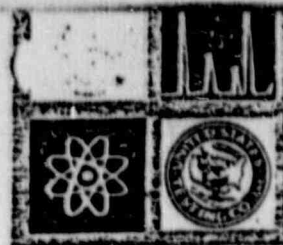


Joseph K. Buesing  
District Manager

cc: Eric Hoffman, BLM  
Joe Flett, Spokane Tribe  
Michael Whitelaw, BIA  
Ed Hawkins, NRC  
Colleen Kelly, Solicitors Office  
Gary Robertson, State of Washington

**United States Testing Company, Inc.**  
**Richland Division**

2800 GEORGE WASHINGTON WAY  
RICHLAND, WASHINGTON 99352 (509) 375-3131



RADIOCHEMISTRY  
EXTERNAL DOSIMETRY  
NUCLEAR SERVICES  
RADIOMETRICS  
AGRICULTURAL SERVICE  
ANALYTICAL CHEMISTRY  
POLLUTION CONTROL  
HAZARDOUS SUBSTANCE  
ANALYSIS

February 2, 1989

Kelly D. Courtright  
District Mining Engineer  
Bureau of Land Management  
U. S. Department of the Interior  
East 4217 Main  
Spokane WA 99202

Dear Mr. Courtright:

Enclosed are the results of our analyses on the two samples from the lime neutralization plant at Midnite Uranium Mine received December 16, 1988. The radium and strontium results are not yet available due to the high level of uranium in the sample which complicated the separation chemistry. We expect to be finished by February 10.

Should you have any questions, please call the appropriate person at (509) 375-3131. Please refer to sample numbers 13647 (sample 1) or 13648 (sample 2) in your inquiry.

Sincerely,

UNITED STATES TESTING COMPANY, INC.

Lee Scott  
Inorganic Analysis

**RECEIVED**

**FEB 06 1989**

**Bureau Of Land Management  
Spokane, Wa.**

Robert G. Swoboda  
Environmental Radiochemistry Analysis

LS: lm

Enclosure

xc: File

DR71(245)

UNITED STATES TESTING RICHLAND DIVISION

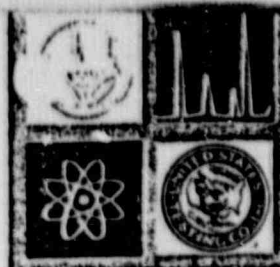
BUR. OF MINES  
13647

DMC  
13648

Analyte	Method	Detection Limit*		Result ug/g	Confidence Limit +/- %	Detection Limit*		Result ug/g	Confidence Limit +/- %
		ug/g	ug/g			ug/g	ug/g		
Aluminum	6010	3000	160000	15	15	1500	50900	10	
Antimony	6010	20	<20	20	20	10	<10	20	
Barium	6010	1	1180	15	15	1	<1	55	
Beryllium	6010	1	44	15	15	1	20	15	
Boron	6010	2	<2	100	100	1	6	20	
Cadmium	6010	1	25	15	15	1	13	15	
Calcium	6010	1000	54800	15	15	500	126000	15	
Chromium	6010	2	55	15	15	1	22	15	
Cobalt	6010	4	1320	10	10	2	571	10	
Copper	6010	2	742	15	15	1	129	15	
Iron	6010	10	1050	10	10	500	2370	10	
Lithium	6010	20	88	10	10	10	<10	100	
Magnesium	6010	1000	288000	20	20	500	130000	20	
Manganese	6010	100	178000	10	10	50	87800	10	
Molybdenum	6010	8	<8	20	20	4	<4	20	
Nickel	6010	200	3370	10	10	1	940	10	
Silver	6010	2	21	10	10	1	9	10	
Sodium	6010	20	490	15	15	10	429	15	
Titanium	6010	12	62	20	20	6	30	20	
Vanadium	6010	1	<1	100	100	1	<1	100	
Zinc	6010	100	126	50	50	50	4030	15	
PRICE	6010		\$165				\$165		
* Detection Limits are adjusted for sample size and dilution.									
Arsenic	7060	500	3800	15	15	2.5	2.9	80	
PRICE			\$25				\$25		
Lead	7421	0.5	3.7	30	30	2.5	14	30	
PRICE			\$25				\$25		
Selenium	7740	1	<1	100	100	1	<1	100	
PRICE			\$25				\$25		
Mercury	7470	0.2	0.27	20	20	0.2	0.23	20	
PRICE			\$55				\$55		
Chloride	300.0	500	1430	10	10	5	21	10	
Fluoride	300.0	10	<10	15	15	15	26	10	
Nitrate	300.0	10	198	10	10	25	175	10	
Nitrite	300.0	20	<20	15	15	10	<10	15	
Sulfate	300.0	1000	23300	10	10	500	9710	10	
PRICE			\$60				\$60		
Ammonium	ASTM	15	61	15	15	15	40	15	
Ion	D1426 D								
PRICE			\$15				\$15		
pH	9040	NA	8.3	.1 pH UNIT	NA	8.9	.1 pH UNIT		
PRICE			\$10			\$10			
Tot.Org.C	9060	50	111	10	10	50	<50	100	
Tot.C.	9060	50	237	10	10	50	96	10	
PRICE			\$30				\$30		
Uranium	20u02	1	6930	12	12	1	7030	12	
PRICE			\$50						
Thorium230	20Th01	.1 pCi/g	24 pCi/g		6	.1 pCi/g	22 pCi/g	4	
PRICE			\$150				\$150		

**United States Testing Company, Inc.**  
**Richland Division**

2800 GEORGE WASHINGTON WAY  
RICHLAND, WASHINGTON 99352 (509) 375-3131



LABORATORY SERVICES:  
RADIOCHEMISTRY  
EXTERNAL DOSIMETRY  
NUCLEAR SERVICES  
RADIOBIOASSAY  
AGRICULTURAL SERVICES  
ANALYTICAL CHEMISTRY  
POLLUTION CONTROL  
HAZARDOUS WASTE ANALYSIS

February 14, 1989

Kelly D. Courtright  
District Mining Engineer  
Bureau of Land Management  
U.S. Department of the Interior  
East 4217 Main  
Spokane WA 99202


Dear Mr. Courtright:

Enclosed are the radium-226 and strontium-90 results of our analyses on the two samples from the lime neutralization plant at Midnite Uranium Mine received December 16, 1988. The high level of uranium complicated the initial analysis of both therefore the aliquot size was reduced on the subsequent reanalysis.

Should you have any questions, please call the appropriate person at (509) 375-3131. Please refer to sample numbers 13647 (sample 2) or 13648 (sample 2) in your inquiry.

Sincerely,

UNITED STATES TESTING COMPANY, INC.

  
Robert G. Swoboda  
Environmental Radiochemistry Analysis

LS:lm

Enclosure

xc: F. England  
File

**RECEIVED**

FEB 15 1989

Bureau Of Land Management  
Spokane, Wa.

DR71[245]

UNITED STATES TESTING COMPANY INC.  
2600 GEORGE WASHINGTON WAY, RICHLAND, WA  
RADIOCHEMICAL ANALYSIS REPORT  
Results reported on 890214

SAMPLE TYPE: SOIL    CUST#: RA-226DA    ISOTOPE: 101    RESULT: 1.54E+01    COUNTING OVERALL ERROR: 4.46E-01    ANALYSIS SIZE: 1.14E-01    PERCENT MOIST: 881213    SAMPLE DATE: 1200    DATE: 881213    TIME: 1200    GROUP: 136170

4 Records listed

SOIL #1	SOIL #2	SOIL #1	SOIL #2	SOIL #1	SOIL #2	SOIL #1	SOIL #2	SOIL #1	SOIL #2	SOIL #1	SOIL #2	SOIL #1	SOIL #2
101	121	101	121	101	121	101	121	101	121	101	121	101	121
1.54E+01	2.24E+01	6.89E+00	9.08E+00	1.12E+01	2.54E-01	1.34E+01	2.54E-01	1.34E+01	2.54E-01	1.34E+01	2.54E-01	1.34E+01	2.54E-01
1.14E-01	5.00E-01	1.34E-01	5.00E-01	1.34E-01	5.00E-01	1.34E-01	5.00E-01	1.34E-01	5.00E-01	1.34E-01	5.00E-01	1.34E-01	5.00E-01
881213	881213	881213	881213	881213	881213	881213	881213	881213	881213	881213	881213	881213	881213
1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
136170	136170	136170	136170	136170	136170	136170	136170	136170	136170	136170	136170	136170	136170

4 Records listed

e Denotes a result less than the overall error(mS) specifies the level of error. 1 sigma or 2 sigma

UNITED STATES TESTING COMPANY INC.  
2500 GEORGE WASHINGTON WAY, RICHMOND, VA  
RADIOCHEMICAL ANALYSIS REPORT  
Results reported on 890214

SAMPLE TYPE CUST# ISOTOPE RESULT COUNTING OVERALL ANALYSIS PERCENT SAMPLE ON H  
ERROR ERROR SIZE MOIST DATE TIME DATE TIME C GROUP USE

\*\* Reported on 890214

SOIL	%	RA-226DA	101	1.56E+01	PCI/G	4.46E-01	2.63E+00(25)	1.14E-01	G	881213	1200	881213	1200	I	341	136470
SOIL	#1	SR-90	121	2.24E+01	PCI/G	1.17E+01	1.38E+01(25)	5.00E-01	G	881213	1200	881213	1200	I	341	136470
SOIL	#2	RA-226DA	101	6.89E+00	PCI/G	2.54E-01	1.13E+00(25)	1.54E-01	G	881213	1200	881213	1200	I	341	136480
SOIL	#2	SR-90	121	9.08E+00	PCI/G	4.54E+00	3.45E+00(25)	5.00E-01	G	881213	1200	881213	1200	I	341	136490

4 Records listed

\* Denotes a result less than the overall error (nS) specifies the level of error, 1 sigma or 2 sigma



UNITED STATES TESTING COMPANY INC.  
2800 GEORGE WASHINGTON WAY, RICHLAND, WA  
RADIOCHEMICAL ANALYSIS REPORT Contract no. B-A1064-A-1  
Results reported on 890202

SAMPLE TYPE CUST# ISOTOPE RESULT COUNTING OVERALL ANALYSIS PERCENT SAMPLE ON H  
ERROR ERROR SIZE MOIST DATE TIME DATE TIME C GROUP USE

\*\* Reported => 890202

SAMPLE TYPE	CUST#	ISOTOPE	RESULT	COUNTING OVERALL ANALYSIS PERCENT SAMPLE ON H	ERROR ERROR SIZE MOIST DATE TIME DATE TIME C GROUP USE	
SOIL	#1	U-CHEM	124	6.93E+03 UCM/G	0.00E+00 1.66E+03(29) 9.70E-01 0	881213 1200 881213 1200 I 341 136470
SOIL	#1	TH230	219	2.39E+01 PCI/G	1.37E+00 2.57E+00(25) 8.56E-02 0	881213 1200 881213 1200 I 341 136470
SOIL	#1	TH232	231	1.95E-01 PCI/G	1.35E-01 1.36E-01(25) 8.56E-02 0	881213 1200 881213 1200 I 341 136470
SOIL	#1	TH228	232	7.78E-01 PCI/G	3.73E-01 3.82E-01(25) 8.56E-02 0	881213 1200 881213 1200 I 341 136470
SOIL	#2	U-CHEM	124	7.03E+03 UCM/G	0.00E+00 1.69E+03(25) 9.70E-01 0	881213 1200 881213 1200 I 341 136480
SOIL	#2	TH230	218	2.18E+01 PCI/G	7.88E-01 2.17E+00(25) 2.78E-01 0	881213 1200 881213 1200 I 341 136480
SOIL	#2	TH232	231	2.70E-01 PCI/G	8.78E-02 9.12E-02(29) 2.78E-01 0	881213 1200 881213 1200 I 341 136480
SOIL	#2	TH228	232	6.28E-01 PCI/G	1.71E-01 1.80E-01(25) 2.78E-01 0	881213 1200 881213 1200 I 341 136480

B Records listed

\* Denotes a result less than the overall error(nS) specifies the level of error, 1 sigma or 2 sigma

DAWN MINING COMPANY  
PO BOX 260  
ECRD. WASHINGTON 99013

March 17, 1989

Mr. Lee Gronemyer  
DSHS  
Uranium Mills Program  
LE-13  
Olympia, WA 98504

Dear Lee:

This is in response to our discussion on March 13th on the availability of Tailings Pond 4 at the millsite as a disposal location for the precipitate generated at the mine water treatment plant.

Bogle & Gates attorney, Chuck Blumenfeld, has investigated the legality of this proposal and has determined that the Washington State statutes specifically authorize such use of our tailings disposal area. (Please see attachment I.)

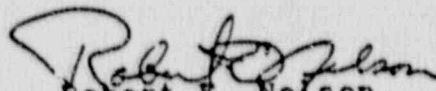
We are therefore requesting a modification to our license condition 9A to allow us to dispose of the solids discharge from our mine water treatment plant, which is the direct result of the mining of uranium.

Included as attachment II is an analysis of the plant precipitate to be disposed of in the tailings pond.

Please give this your immediate attention as the need for a disposal location is imminent.

Sincerely,

DAWN MINING COMPANY



Robert E. Neason  
Operations Superintendent

REN/jc

cc: Kelly Courtright ✓  
M. F. DeGuire  
Chip Clark  
Chuck Blumenfeld

**RECEIVED**

MAR 20 1989

Bureau Of Land Management  
Spokane, Wa.

# BOGLE & GATES

LAW OFFICES

The Bank of California Center  
Seattle, WA 98164

Anchorage  
Bellevue  
Portland  
Tacoma  
Washington, D.C.  
Yakima

CHARLES R. BLUMENFELD

(206) 682-6181  
Telex: 82-1087  
Fax: (206) 628-4828

18438/38446

March 16, 1989

Mr. Robert Nelson  
Dawn Mining Company  
P.O. Box 25  
Ford, WA 98013

Re: Tailings Disposal Pond

Dear Bob:

We are writing in response to your inquiry regarding Dawn Mining Co.'s ("Dawn") ability to place wastewater treatment residues from the wastewater treatment system at the Midnight Mine in the Dawn Tailings Disposal Pond.

We have reviewed the applicable State law and regulations and only find one provision which imposes restrictions on what material may be disposed of in a uranium tailings pond. WAC 402-52-090, adopted August 13, 1986 by the Department of Social and Health Services provides:

Uranium mill tailing areas shall be used only for disposal of radioactive wastes originating from the exploration, mining and milling of uranium.

The wastewater treatment system is specifically designed to handle wastewater resulting from the uranium mining activities at the Midnight Mine. Therefore, it is clear that the wastes from the wastewater treatment plant originated from the exploration and mining of uranium.

Based on the above, it is our opinion that there are no provisions of State law or regulation which prohibit the disposal of radioactive wastewater treatment residues from a

Mr. Robert Nelsc  
March 16, 1989  
Page 2

uranium mine into a uranium tailings pond. In fact, it is our opinion that WAC 402-52-090 explicitly authorizes such disposal.

Please let us know if you have any questions.

Very truly yours,

BOGLE & GATES

*Chuck*

Charles R. Blumenfeld

cc: Graham Clark, Jr., Esq.

BOGLE & GATES