J. Stewart

5 1/2 KENT

TONEY ANAYA
GOVERNOR

HEALTH ENVIRONMENT department

STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT DIVISION
DISTRICT I - P.O. Box 2536
Milan, NM 87021 Tel. #287-8845
RUSSELL F. RHOADES, Director

February 4, 1983

Mr. Thomas M. Hill
Director of Environmental Affairs
UNC Mining and Milling
P.O. Drawer QQ
Gallup, NM 87301

Dear Mr. Hill:

This letter reports on a routine inspection cn December 8, 1982 of activity at your Ambrosia Lake facility authorized by AEC License SUA-1082, now under extended expiration date as provided by New Mexico Radiation Protection Regulations, Section 3-430B.

The inspection was an examination of activities authorized under the license as they relate to radiation safety; compliance with the Health and Environment Department's rules and regulations, and adherence to activities detailed in the license application.

During the inspection the following deficiencies were found:

1. Part of the fence was down on the west side of the old tailings pile and should be re-erected. The downed fence is a violation of the principle of containing releases to an unrestricted area as low as reasonably achievable (Radiation Protection Regulations, Section 4-100B) and of RPR Section 4-160A.

2. Tailings have been eroded from the western side of the tailings pile and have been washed beyond the fence into the surrounding prairie. This material should be picked up and returned to the inside of the fence line and the eroded cut repaired. This release of material is a violation of the Radiation Protection Regulations, Sections 4-150 and 4-440A-5.

3. Tailings material has blown from the pile to the east to such an extent that part of the restricted area signs are obscured and entrance to the pile can be gained by simply stepping over the fence (a single strand shows). This duning destroys the effectiveness of the restrictive fence and is a violation of Radiation Protection Regulations, Sections 4-100B and 4-160A.

4. No record could be found of any sampling of airborne materials and/or radon near the tailings piles since sometime in 1980. After the inspection of August 23 to September 16, 1977 (letter from R. Blubaugh, EID to Mr. D. Turberville, of September 28, 1977), UNC agreed to take at least annual surveys in the vicinity of the Ambrosia Lake site, including the tailings pile, hence this lack of sampling is considered a violation.

We understand that items 1 and 4 have been taken care of, and action on items 2 and 3 are being planned (depending on weather). We would appreciate a written response concerning your completed or planned actions to prevent a repetition of the above violations.

Please respond within 20 working days of the receipt of this letter.

Thank you and your staff, especially Mr. Elmer Martinez, for the courtesy and cooperation extended to us during the inspection.

Sincerely,

Theodore G. Brough

Theodore G. Brough
Environmental Scientist

jq

xc: Elmer Martinez, UNC
Jerry Stewart, Santa Fe (2)
File

Al Topp

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT
BUREAU OF MINE INSPECTION
2340 MENAUL, N.E., SUITE 106
ALBUQUERQUE, NEW MEXICO 87107

SAFETY FIRST

MANUEL DURAN
STATE MINE INSPECTOR

OFFICE TELEPHONE
841-6346
Home: 865-4492

RADIATION

REPORT OF INSPECTION

I.D. No. 2901678-Churchrock Mill
UNC Mining and Milling (Name) { Mill } TY: April 3, 1984
March 22, 1984 (Date of Inspection)

Uranium mill (Classification of Mine) | McKinley (County in which located) | Boyd Spitz, General Surface Foreman (Company representative present at inspection)

Pursuant to the Mining Laws of the State of New Mexico, Section 69-5-10, an inspection, as designated above, has been made. During this inspeciton the following was noted:

INTRODUCTION

The primary purpose of this inspection was to check radon-daughter concentrations in each working place of the mill, to measure quantity of air supplied to each man working underground and to calculate a weighted exposure for each of the various classes of mine personnel.

The above is in compliance with the Federal Metal and Nonmetallic Mine Safety Act (Public Law 89-57, 30 U.S.C. 725) and the State Plan Agreement between the U. S. Department of Labor, Mine Safety and Health Administration Division, and the State of New Mexico as of February 3, 1972.

For collecting the alpha particles, the M.S.A. Model "S" air sampler, U.S. Bureau of Mines approval No. 2G-2239-2 was used. For counting the alpha disintegration, the PRM-4R Eberline pulse rate meter in combination with the SPA-1 Eberline millipore filter radon probe and the PS-1 Eberline pulse rate meter was used.

GENERAL INFORMATION

The operation is located approximately 20 miles northeast of Gallup, NM, at the end of NM Hwy. No. 566. The operation is owned and operated by UNC Mining and Milling.

Previous radiation inspection: Initial

Employment: 15

Work Schedule:
Hours per shift 8
Shifts per day 1
Hours per week 40

Company Officials:
Tom Bailey, President
Gus Swanquist, General Manager
Vinc Tonc, General Manager, Western Mines
Boyd Spitz, General Surface Foreman

State Mine Inspector

ONE COPY OF THIS REPORT SHALL BE POSTED IN A CONSPICUOUS PLACE AT THE MINE.

Type of operation: Stand-by

First-aid training to date: 80%

Mining method: N/A

Mine Rescue trained: N/A

Lost-time injuries to date: None

The inspector was accompanied by Boyd Spita, General Surface Foreman, during the entire inspection. No duplicate samples were taken for comparison purposes.

VENTILATION

The mill was ventilated by natural flow throughout the entire operation.

RADON-DAUGHTER CONCENTRATIONS

Listed below are the radon-daughter concentrations. All of these were only possible with the data obtained during this inspection.

Sample No.	Sample Location	Working Level
1	Machine Shop	Nil
2	Ball Mill	Nil
3	CCD Building	Nil
4	Neutralization Plant	Nil

ACKNOWLEDGEMENT

The courtesy and cooperation of the staff and personnel of the UNC Mining and Milling's Churchrock Mill is greatly appreciated.

Inspected and Reported by:
Edwin E. Dickens, Jr.
Dust and Mine Gas Inspector

jld

Approved: Manuel Duran
Manuel Duran
State Inspector of Mines

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT
BUREAU OF MINE INSPECTION
2340 MENAUL, N.E. SUITE 106
ALBUQUERQUE, NEW MEXICO 87107

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STATE INSPECTOR OF MINES

OFFICE TELEPHONE 842-3066

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MAR 01 1982
RADIATION PROTECTION BUREAU

RADIATION

REPORT OF INSPECTION

I.D. No. 2901726-Old Churchrock Mine
United Nuclear Corporation (Name) { Mine } Ty: Feb. 23, 1982
February 4,11, 1982 (Date of Inspection)

Underground Uranium (Classification of Mine) | McKinley (County in which located) | Roger Siegmann, Safety Officer (Company representative present at inspection)

Pursuant to the Mining Laws of the State of New Mexico, Section 69-5-10, an inspection, as designated above, has been made. During this inspection the following was noted:

GENERAL INFORMATION

Owner & Operator: United Nuclear Corporporation

Location: Approximately 16 miles NE of Gallup, NM, off Hwy. 566

Employment: 60

Work Schedule:
8 hrs/shift
2 shifts/day
5 days/week

Previous radiation inspection: April, 1981

Principal product: Uranium ore

Company Officials:
T. Bailey, President, Mining & Milling
V. Tonc, General Manager of Western Mines
J. Popovich, Director of Shaft Construction
J. Fletcher, Manager of Engineering Services of Shaft Construction
E. Ebright, Mine Foreman
S. White, Mine Foreman
J. Farley, Manager of Safety
E. Marble, Safety Officer

Type of Operation: Underground uranium

Method of Mining: Modified room & pillar

Inspection Party: United Nuclear Corporation
E. Ebright, Mine Foreman
R. Siegmann, Safety Officer

NM Bureau of Mine Inspection
Chris Aragon, Deputy Inspector of Mines
George Henckel, Dust and Mine Gas Inspector

State Inspector of Mines

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VENTILATION

The mine is ventilated by air delivered and exhausted through the following:

Opening	ID	Air Direction	CFM	HP	Fan	Depth of Opening
Shaft	10.5'	Intake	140,000	(2)60	Joy	850'
No. 1 BH	42"	Exhaust	33,000	150	Joy	650'
No. 2 BH	7'	Exhaust	107,000	200	Jet Air	812'

Main fans are surface mounted, electrically powered, axial-flow type units. The air underground was distributed to the working places by directing the primary air flow towards the working places with the aid of auxiliary fans and vent tubing. Air flow underground was controlled by the use of bulkheads.

The following is a list of radon-daughter concentrations, ventilation volumes, and average weighted exposures.

Sample No.	Sample Location	Ventilation C.F.M.	Working Level	M&M	Stopes	Haulages
1	C+45N L.H.Drill	4500	0.31	0.5	1.0	
2	B41N Development	9000	0.43	0.5	1.0	
3	1W-C41S Development	6000	0.31	0.5	1.0	
4	C2.5E-C-39 Development	2500	0.43	0.5	1.0	
5	C41 Haulage	25000	0.38	0.5		4.0
6	144W Haulage repair	8000	3.4	0.5	2.0	
7	D-25 Development	3500	0.67	0.5	1.0	
8	C-23 Development	8000	0.53	0.5	1.0	
9	144E Haulage	ADQ	0.20	0.5		4.0
10	C-21 Shop	ADQ	0.35	3.0		
11	Machine Doctor Shop	Nat. flow	Nil	1.0		
12	B39.5N Development	Convection	Nil	0.5	1.0	
13	2-1 track	ADQ	Nil	0.5		2.0
14	1-4 trench slusher	ADQ	Nil	0.5	2.0	
				10	11	10

The average weighted exposures for the various classes of mine personnel were as follows:

Maintenance and Management = 0.44 x working level
Stopes and Developments = 0.86 x working level
Haulages = 0.23 x working level
Total Mine Exposure Index = 0.52 x working level

The 144W area was shut down with a reading of 3.4 working levels on February 4, 1982. It was understood by all present at the meeting on February 4, 1982, that this area would be resampled the following morning so as to reopen the area. The area was not resampled until February 11, 1982, when the inspector returned to conduct a dust survey. At the time, the reading was still above 1.0 working level (2.25 W.L.). A crew had worked in the area on at least one shift during the time period between samples. Later on February 11, 1982, a sample of 0.5 W.L. was obtained and the area could be reopened.

RECOMMENDATIONS

Recommendation No. 1: In order to help prevent a similar situation from occuring in the future, it is recommended by this inspector that sampling for radon-daughters be done (3) three times a week instead of the present (1) one time a week. Besides preventing a similar situtation, this could probably reduce the workers' exposures by reducing the time between samples and identifying potential ventilation problems before they become major problems.

Recommendation No. 2: A ventilation map showing air volumes and directions should be available to help the ventilation sampler and production personnel help detect ventilation volume losses or gains other than expected. This should be updated monthly.

The inspection was discussed with Messrs. Popovich, Ebright, Siegmann, Farley, Marble, and Gonzales.

ACKNOWLEDGEMENT

The courtesy and cooperation extended by the staff and personnel of the Old Churchrock Mine was appreciated.

Inspected and Reported by:
George C. Henckel
Dust and Mine Gas Inspector
Deputy Inspector of Mines

jlj

Approved: Manuel Duran
Manuel Duran
Acting State Inspector of Mines

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
BUREAU OF MINE INSPECTION
2340 MENAUL, N.E., SUITE D
ALBUQUERQUE, NEW MEXICO 87107

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STATE INSPECTOR OF MINES

OFFICE TELEPHONE 842-3055

RADIATION

REPORT OF INSPECTION

I.D. No. 2900573-Northeast Churchrock Mine
United Nuclear Corporation (Name) { Mine } Ty: Feb. 24, 1982
Feb. 1,2,5, 1982 (Date of Inspection)

Underground Uranium (Classification of Mine) | McKinley (County in which located) | Roger Siegmann, Safety Officer (Company representative present at inspection)

Pursuant to the Mining Laws of the State of New Mexico, Section 69-5-10, an inspection, as designated above, has been made. During this inspection the following was noted:

GENERAL INFORMATION

Owner & Operator: United Nuclear Corporation

Location: Approximately 20 miles N.E. of Gallup, NM, at the end of Highway 566

Employment:
Underground	230
Total	317

Work Schedule:
8 hr./shift
3 shifts/day
5 days/week

Company Officials:
T. Bailey, President Mining & Milling
V. Tonc, General Manager of Western Mines
G. Thornton, General Superintendent
J. Farley, Manager of Safety
R. Siegmann, Safety Officer

Previous radiation inspection:
February, 1981

Type of operation: Underground uranium

Mining method: Modified room & pillar

Principal product: Uranium ore

Inspection Party: United Nuclear Corporation
Roger Siegmann, Safety Officer
Ed Marble, Safety Officer
Joe Gurule, Ventilation Technician

NM Bureau of Mine Inspection
Chris Aragon, Deputy Inspector of Mines
George C. Henckel, Dust and Mine Gas Inspector

Duplicate radon-daughter samples were taken for comparison purposes.

State Inspector of Mines

ONE COPY OF THIS REPORT SHALL BE POSTED IN A CONSPICUOUS PLACE AT THE MINE

VENTILATION

The mine is ventilated by air delivered and exhausted through the following:

Opening	I.D.	Air Direction	CFM	HP	Fan	Depth of Opening
No. 1 Shaft	16'	Intake	334,000	-	-	1700'
No. 2 Shaft	12'	Intake	215,000	-	-	1700'
No. 5 V.H.	30"	Intake	17,000	-	-	1500'
No. 1 V.H.	60"	Exhaust	50,000	150	Hartzell	1500'
				200	Hartzell	
No. 3 V.H.	12'	Exhaust	257,000	2-400	Joy	1700'
No. 6 V.H.	60"	Exhaust	22,000	200	Hartzell	1500'
No. 7 V.H.	60"	Exhaust	77,000	2-200	Hartzell	1500'
No. 8 V.H.	60"	Exhaust	95,000	2-200	Hartzell	1600'
No. 9 V.H.	60"	Exhaust	65,000	200	Hartzell	1500'

Total intake: 566,000 C.F.M. Total exhaust: 566,000 C.F.M.

The main fans are surface mounted, electrically powered, axial-flow type units. The vent holes are cased throughout the length of the opening. Air is distributed to the working areas by directing the primary air flow and by use of auxilliary fans and vent tubing. Air flow is controlled by use of air doors and bulkheads.

The following is a list of radon-daughter concentrations and ventilation volumes obtained during the inspection:

Sample No.	Sample Location	Ventilation C.F.M.	Working Level State	Working Level K.M.	Exposures M&M	Exposures Stopes	Exposures Haulages
1	A2-97 Machine Doctor Shop	1,000	0.05	0.05	0.5	2	
2	A2-97 Shifter Shack	Nat.flow	0.09	0.06	0.5	1	
3	A2-66.5 Vent Drift	8,000	0.07	0.09	0.5	4	
4	A2-64.5 Truck Shop	Nat.flow	0.08	0.08	12	1	
5	A2-117 New truck shop	8,000	0.23	0.30	0.5	8	
6	A2-129.5 #1 Slusher set-up	7,000	0.43	0.43	0.5	4	
7	A2-131.5 #2 Slusher set-up	Nat.flow	0.52	0.55	0.5	4	
8	A2-48.75 Drill	6,000	0.22	0.22	0.5	2	
9	A2-119.5 Slusher	Nat.flow	0.25	0.25	0.5	2	
10	58 Area Access	60,000	0.24	0.14	0.5	1	
11	A-3 track	60,000	Nil	Nil	0.5		1.5
12	A-1 track	150,000	Nil	Nil	0.5		1.5
13	1700 Locy shop	Nat.flow	Nil	Nil	4		

Sample No.	Sample Location	Ventilation C.F.M.	Working Level State	Working Level K.M.	Exposures M&M	Exposures Stopes	Exposures Haulages
14	C-7 truck shop	Nat. flow	Nil		4		
15	C-181 bolting	Nat.flow	Nil		0.5	2	
16	C-165.5 haulage	Nat. flow	Nil		0.5		4
17	C-2 track	100,000	Nil		0.5		3
18	C-3 development	8,000	Nil	Nil	0.5	4	
19	A2-105 slusher	Nat. flow	0	0	0.5	4	
20	A2-103 development	6,000	Nil	Nil	0.5	4	
21	A2-105 Area haulage	Nat. flow	0.13	0.15	0.5	1	2
22	A2-115.5 slusher	Nat. flow	0.22	0.24	0.5	2	
23	A5-47 Control Sample		7.0	6.7			
24	A5-53 Vent. raise	Nat. flow	1.3	1.5	0.5	4	
25	A5-53 Access	60,000	Nil	0.06	0.5	1	2
26	B-53(c-71) haulage	80,000	Nil	Nil	0.5		4
27	C-48 drill	Nat. flow	0.37	0.38	0.5	2	
28	C-2N Access	Nat. flow	Nil	Nil	0.5	1	
29	1500 Locy shop	Nat. flow	Nil	Nil	1		
30	1500 Station area	ADQ	Nil	Nil	1		
					30	54	18

The average weighted exposure for the various classes of mine personnel and the total mine exposure index were as follows:

Maintenance and Management= 0.10 x working level
Stopes and Developments = 0.26 x working level
Haulage = 0.04 x working level
Total Mine Exposure Index = 0.19 x working level

No Cease Work Orders were issued for high radiation as employees were withdrawn from the area until ventilation correction could be made. Upon completion of the work, the radiation readings dropped from 6 working levels to 0.2 working levels.

The inspection was discussed with Gerry Thornton, Jack Farley, Joe Gonzales, Roger Siegmann, Ed Marble, and Chris Aragon.

ACKNOWLEDGEMENT

The courtesy and cooperation extended by the staff and personnel of the Northeast Churchrock Mine were greatly appreciated.

Inspected and Reported by:
George C. Henckel
Dust and Mine Gas Inspector
Deputy Inspector of Mines

jlj

Approved: Manuel Duran
Manuel Duran
Acting State Inspector of Mines

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STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT
BUREAU OF MINE INSPECTION
2340 MENAUL, N.E., SUITE 106
ALBUQUERQUE, NEW MEXICO 87107

SAFETY FIRST

KENT

DESI APODACA
STATE INSPECTOR OF MINES

OFFICE TELEPHONE 842-3055

RADIATION

REPORT OF INSPECTION

I.D. No. 2900575
Sandstone Mine (United Nuclear Corporation) { Mine } Typed June 22, 1982
(Name) June 9, 1982
(Date of Inspection)

Metal - Uranium (Classification of Mine) | McKinley (County in which located) | John Visarraga, Ventilation Foreman (Company representative present at inspection)

Pursuant to the Mining Laws of the State of New Mexico, Section 69-5-10, an inspection, as designated above, has been made. During this inspection the following was noted:

GENERAL INFORMATION

Owner and Operator: United Nuclear Corporation

Location: 14 miles on Highway 53 North, then 4.5 miles on Highway 509 then 15 miles east on graveled road.

Company Officials:
T. Bailey, President
V. Tonc, Manager of Western Operations
Nash Tafoya, Maintenance Superintendent
Marty Martinez, Mine Foreman
John Visarraga, Ventilation Foreman
Charlie Forse, Hoistman

Employment: 4

Work Schedule:
Hours per day 8
Days per week 5

Previous radiation inspection: June, 1980

Type of operation: leaching with ion exchange plant

check mill

Mr. John Visarraga accompanied the inspector.

Listed below are the ventilation boreholes and shafts used to ventilate the mine:

Opening	Size I.D.	Air Direction	Ventilation c.f.m.	Make of Fan	Fan HP	Depth of Opening
Sandstone Shaft	9'x16'	intake	60,000	-	-	973'
John Billy Shaft	60"	intake	10,000	-	-	880'
No. 1 B.H.	40"	capped	-	-	-	912'
No. 2 B.H.	51"	exhaust	40,000	Jet Air	150	878'
No. 3 B.H.	48"	capped	-	Hartzell	60	870'
No. 4 B.H.	36"	exhaust	30,000	Joy	125	910'
No. 5 B.H.	49"	capped	-	Hartzell	100	822'

Desi Apodaca

DESI APODACA
State Inspector of Mines

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Surface fans are electrically powered, axial flow type units. Boreholes are steel lined the length of the opening.

The mine is also connected to the Section 27 Mine. These boreholes at Sandstone also can effect the Section 27 Mine.

Listed below are the readings obtained during the inspection:

Sample No.	Sample Location	Ventilation c.f.m.	Working Level
1	pump station	nat. flow	nil
2	access to pump station	nat. flow	nil
3	shaft area	nat. flow	nil

The inspection was discussed with Mr. Tafoya and Mr. Visarraga.

ACKNOWLEDGEMENT

The courtesy and cooperation of the personnel at the Sandstone Mine was greatly appreciated.

Inspected and Reported by:
George C. Henckel
Dust and Mine Gas Inspector
Deputy Inspector of Mines
jmz

Approved:
DESI APODACA
State Inspector of Mines

Jopp
5/7
KENT

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BUREAU OF MINE INSPECTION
2340 MENAUL, N.E., SUITE 106
ALBUQUERQUE, NEW MEXICO 87107

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OFFICE TELEPHONE 842-3055

DESI APODACA
STATE INSPECTOR OF MINES

7/1/82

RADIATION

REPORT OF INSPECTION

I.D. No. 2900569
Ann Lee Mine (United Nuclear Corporation) { Mine } Typed June 22, 1982 / June 9, 1982
(Name) (Date of Inspection)

Metal - Uranium (Classification of Mine) | McKinley (County in which located) | John Visarraga, Ventilation Foreman (Company representative present at inspection)

Pursuant to the Mining Laws of the State of New Mexico, Section 69-5-10, an inspection, as designated above, has been made. During this inspection the following was noted:

GENERAL INFORMATION

Owner and Operator: United Nuclear Corporation

Location: 14 miles on Highway 53 North, then 4.5 miles on Highway 509 then 1 mile east on gravel road.

Company Officials:
T. Bailey, President
V. Tonc, Manager
Nash Tafoya, Maintenance Superintendent
Marty Martinez, Mine Foreman
John Visarraga, Ventilation Foreman
Charlie Forse, Hoistman

Employment: 4

Type of Operation: leaching with ion exchange plant

Work Schedule:
Hours per day 8
Days per week 5

Mr. John Visarraga accompanied the inspector.

Listed below are the openings used to ventilate the mine:

Opening	Size I.D.	Air Direction	Ventilation c.f.m.	Make of Fan	Fan HP	Depth of Opening
Shaft	9'x16'	intake	40,000	-	-	770'
No. 1	60"	capped	-	-	-	710'
No. 2	48"	capped	-	-	-	692'
No. 3	36"	exhaust	40,000	Hartzell	150	692'

The main fan is a surface mounted, electrically powered axial flow-type unit. Boreholes are steel lined the length of the opening.

Desi Apodaca

DESI APODACA
State Inspector of Mines

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Listed below are the readings obtained during the inspection:

Sample No.	Sample Location	Ventilation c.f.m.	Working Level
1	pump station area	nat. flow	Nil
2	station area	nat. flow	Nil

ACKNOWLEDGEMENT

The courtesy and cooperation of the personnel of the Ann Lee Mine was greatly appreciated.

Inspected and Reported by:
George C. Henckel
Dust and Mine Gas Inspector
Deputy Inspector of Mines

jmz

Approved:
DESI APODACA
State Inspector of Mines

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BUREAU OF MINE INSPECTION
2340 MENAUL N.E., SUITE 106
ALBUQUERQUE, NEW MEXICO 87107

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JOE D. LONGACRE, SR.
STATE INSPECTOR OF MINES

OFFICE TELEPHONE 842-3065
RESIDENCE PHONE 344-1129

RADIATION

REPORT OF INSPECTION

I.D. No. 2901775-Churchrock 1 East Mine
Kerr-McGee Corporation (Name) { Mine } typed May 19, 1981 / May 13, 1981 (Date of Inspection)
Underground Uranium (Classification of Mine) McKinley (County in which located) M. Thomas, Environmental Technician (Company representative present at inspection)

Pursuant to the Mining Laws of the State of New Mexico, Section 69-5-10, an inspection, as designated above, has been made. During this inspection the following was noted:

GENERAL INFORMATION

Owner: Bureau of Indian Affairs

Operator: Kerr-McGee Corp.

Employment: 107

Work Schedule:
- Hours per shift 8
- Shifts per day 2
- Days per week 5

Company Officials:
B. Young, Manager of Operations
R. Saccany, Mine Supt.
D. Baer, Mine Foreman
P. Dominquiz, Safety Director

Previous radiation inspection:
Dec. 1980

Inspection Party: Kerr-McGee Corporation
M. Thomas, Environmental Technician

NM Bureau of Mine Inspection
George C. Henckel, Dust & Mine Gas Inspector

Duplicate samples were taken for comparison purposes.

The mine is ventilated by air delivered and exhausted through the following:

Opening	I.D.	Air Direction	cfm	HP	Fan
No. 4 BH	60"	Exhaust	77,000	400	Westinghouse Centri-fugal
No. 5 BH	60"	Exhaust	53,000	400	Westinghouse Centri-fugal
CR 1 E Shaft	12'	Intake	140,000	---	----------

JOE D. LONGACRE, SR.
State Inspector of Mines

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Main fans were surface mounted, electrically powered-centrifugal type units. Boreholes are steel cased-the length of the opening.

Air to the working places was distributed by use of auxilliary fans & vent tubing. Air door, air lock, bulkheads, curtains, and parachutes were used to control underground airflow.

Listed below are the radon-daughters concentrations, ventilation volumes and average weighted exposures.

Sample No.	Location	cfm	Working Level State	Working Level KMC	M&M	Stopes	Haulages
1	2705 Drill	500	0.08	0.17	1	2	
2	2705 Slusher	1500	0.18	0.09	1	2	
3	2704 Slusher	4000	0.75	1.1	1	2	
4	2704 Drill	n.f.	0.56	0.68	1	2	
5	2702 Slusher	1200	0.05	0.04	1	2	
6	2601 Drill	n.f.	0.67	0.60	1	2	
7	2601 Slusher	1200	0.21	0.37	1	2	
8	2602 Slusher	1800	Nil	0.04	1	2	
9	2602 Drill	1000	Nil	0.05	1	2	
10	2604 Drill	1000	0.54	0.44	1	0.5	
11	2604 #2 Slusher	n.f.	0.70	1.45	1	0.5	
12	2604 #1 Slusher	1500	Nil	0.04	1	1	
13	2399 Lunchroom	n.f.	0.06	0.10	1	1	
14	3001 Raise Develop	n.f.	Nil	0.05	1	2	
15	1000 Haulage	100000	Nil		1		4
16	0199 Lunchroom	conv.	Nil	0.01	1	1	
17	Station Area	ADQ	0	0	1		4
18	0100 C.P. Drill	2000	0.14	0.13	1		1
19	0200 Haul. Develop	8000	Nil	0.11	1	2	
20	1111 Slusher	n.f.	0.31	0.32	1	2	
21	1111 Drill	800	0.41	0.46	1	2	
22	1111 L.H. Drill	1200	0.07	0.05	1	1	
23	1101 Slusher	1000	0.07	0.17	1	2	
24	1101 Drill	1500	0.30	0.37	1	2	
				24	31	9	

The average weighted exposures for the various classes of mine personnel were as follows:

Maintenance and Management	=0.21 x working level
Stopes and Developments	=0.26 x working level
Haulages	=0.02 x working level
Total Mine Exposure Index	=0.21 x working level

Approved:.....

JOE D. LONGACRE, SR.
State Inspector of Mines

ACKNOWLEDGEMENT

The courtesy and cooperation extended by the staff and personnel of the CR1E Mine was gratefully appreciated.

Inspected and Reported by:
George C. Henckel
Dust & Mine Gas Inspector
Deputy Inspector of Mines

jlj

Approved: Joe D. Longacre Jr.
JOE D. LONGACRE, SR.
State Inspector of Mines

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ENERGY AND MINERALS DEPARTMENT
BUREAU OF MINE INSPECTION
2340 MENAUL, N.E., SUITE 106
ALBUQUERQUE, NEW MEXICO 87107

SAFETY FIRST

JOE D. LONGACRE, SR.
STATE INSPECTOR OF MINES

OFFICE TELEPHONE 842-3066
RESIDENCE PHONE 344-1129

REPORT OF INSPECTION

I.D. No. 2900782-Churchrock No. 1 Mine
Kerr-McGee Corporation (Name) { Mine } typed May 20, 1981
May 11,12, 1981 (Date of Inspection)

Underground Uranium (Classification of Mine) | McKinley (County in which located) | H. Zimmerman, Environmental Engr. (Company representative present at inspection)

Pursuant to the Mining Laws of the State of New Mexico, Section 69-5-10, an inspection, as designated above, has been made. During this inspection the following was noted:

GENERAL INFORMATION

Owner: U.S. Department of Interior, U.S. Bureau of Indian Affairs

Operator: Kerr-McGee Corporation

Employment: 205

Work Schedule:
8 hr. shift
2 shift/day
5 days/week

Company Officials:
B. Young, Manager of Operations
A. Phieiger, Mine Supt.
B. Kuenzler, Gen. Mine Foreman
P. Dominquiz, Safety Director

Previous radiation inspection:
Nov. 1980

Inspection Party: Kerr-McGee Corporation
H. Zimmerman, Environmental Engr.
R. Kelly, Environmental tech.

NM Bureau of Mine Inspection
George Henckel, Dust & Mine Gas Inspector

Duplicate samples were taken for comparison purposes.

The mine was ventilated by air delivered and exhausted through the following openings:

Opening	ID	Air Direction	Ventilation c.f.m	HP	Fan
No. 1 BH	60"	exhaust	63,000	400	Westinghouse Centri-fugal
No. 2 BH	60"	exhaust	99,000	400	Westinghouse Centri-fugal

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State Inspector of Mines

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Opening	ID	Air Direction	Ventilation c.f.m.	HP	Fan
No. 3 BH	60"	exhaust	73,000	400	Westinghouse Centrifugal
No. 6 BH	60"	intake	30,000	---	---
CR 1 Shaft	14'	intake	200,000	---	---

The following is a list of locations sampled, radon-daughter concentrations, ventilation volumes, and average weighted exposures:

Sample No.	Location	c.f.m.	Working Level State	KMC	M&M	Stopes	Haulages
1	1605 Bolting	n.f.	0.38	0.32	1	2	
2	1605 #2 Slusher	conv.	0.36	0.33	1	1	
3	1605 #1 Slusher	1500	0.21	0.19	1	1	
4	2180 Haul. Develop.	7000	Nil	0.01	1	4	
5	2100-1600-1400 Haulages	10000	Nil	0.03	1		3
6	1403 Timber	2000	Nil	0.04	1	1	
7	1403 Drill	1000	Nil	0.05	1	1	
8	1403 #2 Slusher	1200	Nil	0.05	1	1	
9	1403 #1 Slusher	2000	Nil	0.03	1	1	
10	1400-1200 Haulage	50000	Nil	0.01	1		2
11	1-4 Lunchroom	n.f.	Nil	0.01	1	1	
12	2801 Drill	1000	0.16	0.15	1	1	
13	2801 Slusher	2000	Nil	0.05	1	1	
14	2800-6100 Haulages	12000	Nil	0.04	1		2
15	1-4 Station area	ADQ	Nil	0.01	1		2
16	1008 Drift repair	n.f.	0.82	0.68	1	2	
17	1008 Slusher	n.f.	0.98	1.1	1	2	
18	1007 Timber	n.f.	5.6	4.6	1	1	
19	1007 Slusher	2500	0.22	0.18	1	1	
20	6000 Haul. repair	n.f.	0.07	0.08	1		4
21	5300 Haul. repair	300	0.10	0.15	1		2
22	5301 Drill	n.f.	0.50	0.51	1	1	
23	5301 #2 Slusher	1000	0.57	0.26	1	1	
24	5301 #1 Slusher	1200	0.09	0.13	1	2	
25	4000 Lunchroom	n.f.	Nil	---	1	1	
26	5100 C.P. Drill	8000	Nil	0.02	1		1
27	5010 Drill	n.f.	0.80	0.92	1	1	
28	5010 Slusher	1500	0.21	0.09	1	1	
29	5701 Drill	1000	0.53	0.42	1	1	
30	5701 Slusher	1000	0.27	0.40	1	1	
31	5702 Slusher	1200	0.23	0.18	1	2	
32	5600-5700 haulage	10000	Nil	0.05	1		2
33	4201 Slusher	1000	0.14	0.04	1	1	
34	4201 Drill	1000	0.16	0.17	1	1	
35	4603 #2 Slusher	n.f.	0.42	0.52	1	1	
36	4603 Drill	n.f.	0.65	0.95	1	1	
37	4603 #1 Slusher	2500	0.06	0.05	1	2	

Sample No.	Location	c.f.m.	Working Level State	KMC	M&M	Stopes	Haulages
38	4503 Slusher	2500	0.06	0.05	1	2	
39	7000 Lunchroom	n.f.	Nil	0.10	1	1	
40	7101 Drill	500	0.37	0.39	1	1	
41	7101 Slusher	1000	0.29	0.34	1	1	
42	7211 Bolting	n.f.	0.31	0.33	1	0.5	
43	7211 Slusher	1500	0.13	0.18	1	0.5	
44	7602 Drill	500	0.53	0.58	1	0.5	
45	7602 Slusher	1200	0.27	0.54	1	0.5	
46	7601 Slusher	500	0.19	0.33	1	1	
47	7601 Drill	3500	0.30	0.34	1	1	
					47	47	18

The average weighted exposures for the various classes of mine personnel were as follows:

Maintenance & Management	=0.33 x working level
Stopes and Developments	=0.37 x working level
Haulages	=0.03 x working level
Total Mine Exposure Index	=0.30 x working level

The inspection was not completed as MSHA inspectors arrived to conduct their inspection.

ACKNOWLEDGEMENT

The courtesy and cooperation extended by the staff and personnel of the CR1 mine was greatly appreciated.

Inspected and Reported by:
George C. Henckel
Dust & Mine Gas Inspector
Deputy Inspector of Mines

jlj

Approved: Joe D. Longacre Jr.
JOE D. LONGACRE, SR.
State Inspector of Mines

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STATE INSPECTOR OF MINES

OFFICE TELEPHONE 842-3066
RESIDENCE PHONE 344-1129

RADIATION

REPORT OF INSPECTION

I.D. No. 2901726-Old Churchrock Mine
United Nuclear Corporation (Name) { Mine } typed May 11, 1981
April 29, 1981 (Date of Inspection)

Underground Uranium (Classification of Mine) McKinley (County in which located) James Fletcher, Mgr. of Eng. Service Shaft E. Ebright, Mine Foreman (Company representative present at inspection)

Pursuant to the Mining Laws of the State of New Mexico, Section 69-5-10, an inspection, as designated above, has been made. During this inspection the following was noted:

INTRODUCTION

The primary purpose of this inspection was to check radon-daughter concentrations in each working area of the mine, to measure quantity of air supplied to each man working underground, and to calculate a time-weighted exposure for each of the various classes of mine personnel.

A gamma survey was not conducted due to the fact that company provides gamma radiation dosimeters for all the employees working underground, the individual cumulative records are kept by the company for inspection.

For collecting the alpha particles, the M.S.A. Monitaire air sampler, U.S. Bureau of Mine approval No. 2F-2004 was used. For counting the alpha disintegration, the PS-1 Eberline portable scaler, pulse rate meter, in combination with the SPA-1 Eberline millipore filter radon probe was used.

GENERAL INFORMATION

Owner of Property: United Nuclear Corp.

Location: Approximately 16 miles NE of Gallup, NM, off NM Highway 566

Employment: 52

Work Schedule:
Hours per shift 8
Shifts per day 2
Hours per week 40

Company Officials:
Tom Bailey, President of Mining and Milling
Vance Tonc, General Mgr. of Western Mines
James Popovich, Dir. of Shaft Const. Open
James Fletcher, Mgr. Eng. Services of Shaft Const.
Steve White, Mine Foreman
Jack Farley, Safety Manager
Roger Siegmann, Safety Officer

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State Inspector of Mines

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Mining methods: Trackless development for modified room and pillar

Principal product: Uranium ore

Type of operation: Underground

Mine Emergency (Fire Drill) Trained: Feb. 15, 1980

Self-Rescuer Weighed: Jan. 28, 1981

Lost-time injury in 1981: Two

Last lost-time accident: April 13, 1981

First-aid trained to date: 60%

Mine Rescue Trained: Feb. 23, 1981

Previous radiation inspection: January 22,23, 1981

The inspector was accompanied by Mr. James Fletcher during the entire period of this inspection.

This mine is opened by one 10½' I.D. concrete lined shaft 850 feet deep and the shaft has three compartments. This shaft is utilized for ventilation, for hauling materials, for hauling development ore, and for hoisting men. This mine has connection to the No. 1 vent hole, which is 42" I.D. and steel cased for 480 feet from the surface and then timbered for 170 feet to the bottom with a 5' x 5' cribb-rise. Vent hole No. 2 is 7' I.D. steel-cased and concreted, is set-up for regular hoisting equipment, is utilized as second escapeway, and for hoisting materials in and out of the mine.

RADIATION AND VENTILATION

This mine is ventilated by some 85,000 cubic feet per minute of fresh air, delivered and exhausted through the following openings:

Opening	Size	Air Direction	Air Volume C.F.M.	Make of Fan	Fan H.P.	Depth of Opening
3 compt. shaft	10½' I.D.	Intake	85,000	Joy Series 1000	2-60	850'
No. 1 B.H.	42" I.D.	Exhaust	35,400	Joy Series 1000	1-150	650'
No. 2 B.H.	7' I.D.	Exhaust	49,600	Joy Series 1000	1-120	812'

Main fans were electrically powered units and axial-flow type units. These fans were mounted at the surface collar of the boreholes. The booster fan at the shaft was mounted some 50 feet to the south of the shaft and was allowed to blow fresh air all the way to the 1-5 level and bottom of shaft through the m/w compartment of the shaft. The air underground was distributed to the working places by directing the primary air flow towards the working places with the aid of auxiliary fans and vent tubing. Air flow underground was controlled by the use of bulkheads.

The following is a list of radon-daughter concentrations, the ventilation volumes and time-weighted exposures for each of the various classes of mine personnel:

Sample No.	Sample Location	Ventilation C.F.M.	Time-Weighted Exposure M&M	Stopes	Haulages	Working Level
1	2-6 Track heading	3,000	0.5	4.0		0.14
2	2-6 Track haulage	3,500	0.5		2.0	0.37
3	C-7-W heading	2,600	0.5	4.0		0.38
4	C-148 heading	2,000	0.5	4.0		0.56
5	C-148,C-17 & C-144 haulage	8,000	0.5		2.0	0.44
6	C-29 haulage	10,000	0.5		2.0	0.66
7	C-25N heading	3,500	0.5	4.0		0.37
8	152 lunchroom	2,000	0.5	1.0	1.0	0.06
9	153 shop	6,000	4.5			0.03
10	2-1 track south longholing	2,000	0.5	1.0		0.01
11	Trench and station	48,000	1.0	1.0	3.0	Nil
			10.0	19.0	10.0	

The average time-weighted exposure for the various classes of mine personnel and the total mine exposure index is as follows:

Maintenance and Management	=0.17 x working level
Stopes and Developments	=0.31 x working level
Haulageways	=0.30 x working level
Total Mine Exposure Index	=0.27 x working level

ACKNOWLEDGEMENT

The courtesy and cooperation of staff and personnel of the Old Churchrock Mine during this inspection are hereby gratefully acknowledged.

Inspected and Reported by:
L.A. Quinones
Dust & Mine Gas Engineer
Deputy Inspector of Mines

jlj

Approved: Joe D. Longacre Jr.
JOE D. LONGACRE, SR.
State Inspector of Mines

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ALBUQUERQUE, NEW MEXICO 87107

JOE D. LONGACRE, SR.
STATE INSPECTOR OF MINES

OFFICE TELEPHONE 842-3056
RESIDENCE PHONE 344-1129

SAFETY FIRST

VENTILATION & RADIATION

REPORT OF INSPECTION

I.D. No. -Margery Mine
Trans-World Metals (Name) { Mine } typed May 13, 1981 / April 29, 1981 (Date of Inspection)

Metal (Classification of Mine) Sierra (County in which located) Embree H. Hale, General Manager (Company representative present at inspection)

Pursuant to the Mining Laws of the State of New Mexico, Section 69-5-10, an inspection, as designated above, has been made. During this inspection the following was noted:

GENERAL INFORMATION

Date of previous inspection: initial

The operation is located: go up Percha Road, between Hillsboro, NM, and Kingston, NM-1 mile N. from 1st cabin. The operation is owned and operated by Trans-World Metals.

Employment:
Underground	6
Total	6

Work Schedule:
Hours per day	8
Shifts per day	1
Days per week	5

Company Official:
Embree Hale, General Manager

Mining method: Drifting

Principal product: Silver

Type of operation: Underground

Lost-time injuries to date: none

First-aid training to date: none

INTRODUCTION

The primary purpose of this inspection was to check radon daughter concentrations in each work place of the mine and to measure quantity of ventilation supplied to each man working underground.

This operation is opened by an adit tunnel, 400' deep. Ventilation is distributed to the working faces by a mechanical blower at the rate of 1900 c.f.m. of top level and 3,600 c.f.m. at the bottom level. Work is being performed at the adit level and also at the 100' level.

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State Inspector of Mines

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RADON DAUGHTER CONCENTRATIONS

The following is a list of radon daughter concentrations found in each working place of the mine:

Sample No.	Sample Location	cfms Ventilation	Working Level
1	Entrance of adit	700	Nil
2	Hoisting area	1200	Nil
3	Adit tunnel, working face	1900	Nil
4	Ladderway to 100 level	2100	Nil
5	100 level	3000	Nil
6	100 level, working face	3600	Nil

As it can be seen in the figures above, the concentration of radon daughters in this mine, in terms of working level, is nil. The company does not have radiation problems. Positive mechanical ventilation is necessary in mining to help dilute gases, control dust, and to create a better working environment. Wet down haulage ways and muck piles to help ventilation do a more effective job.

ACKNOWLEDGEMENT

The courtesy and cooperation rendered during this inspection are hereby gratefully acknowledged.

Inspected and Reported by:
Gilbert E. Miera
Dust & Mine Gas Inspector
Deputy Inspector of Mines

jlj

Approved: Joe D. Longacre Sr.
JOE D. LONGACRE, SR.
State Inspector of Mines

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RESIDENCE PHONE 344-1129

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STATE INSPECTOR OF MINES

RADIATION & VENTILATION

REPORT OF INSPECTION

I. D. No. -Volcano Mine
Dolan Campbell, Inc. (Name) { Underground Mine } typed March 19, 1981 March 12, 1981 (Date of Inspection)

Silver & Gold (Classification of Mine) Hidalgo (County in which located) Jack Hale, Man in Charge (Company representative present at inspection)

Pursuant to the Mining Laws of the State of New Mexico, Section 69-5-10, an inspection, as designated above, has been made. During this inspection the following was noted:

INTRODUCTION

The object of this inspection was to check radon-daughter concentrations in each working place of the mine and measure quantity of air supplied to each man working underground and to calculate a time-weighted exposure for each of the various classes of mine personnel.

For collecting the alpha particles, the MSA Monitaire air sampler, U.S. Bureau of Mines approval No. 2F-2004 was used. For counting the alpha disintegration, the PS-1 Eberline PRM-4 pulse rate meter in combination with the pulse integrator P1-1 was used.

GENERAL INFORMATION

Owner and Operator: Dolan Campbell, Inc.

Location: approximately six (6) miles north of Steins Pass-west of Lordsburg, NM-18 miles on I. 10

Employment: 6

Work Schedule:
Hours per shift 8
Shifts per day 1
Days per week 40

Company Officials:
Dolan Campbell, General Manager
Jack Hale, Man in Charge

Mining method: Vein mining & stope development

Principal product: gold & silver

First Radiation & Ventilation for 1981

The inspector was accompanied by Mr. J. Hale during the entire period of this inspection.

The operation is opened by one vertical shaft, approximately 300 feet deep, 12 feet wide and 5 feet high. Work is being performed at 100 level and also

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State Inspector of Mines

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at the 200' level.

VENTILATION

The mine is presently being ventilated by natural flow ventilation. Company officials were told that when bottom level is activated, a blower will have to be installed to ventilate working faces.

RADON DAUGHTER CONCENTRATIONS

The following is a list of radon-daughter concentrations found in each place sampled for radiation and ventilation. A time-weighted exposure calculation was not made due to the low concentrations of radon-daughters (0.02) working levels found during this inspection. Therefore, the total mine exposure index will be too low, in result, it will be negligible.

Sample No.	Sample Location	Ventilation C.F.M.	Working Level
1	Stope 101	1560	Nil
2	Upcast-main shaft	2000	Nil
3	Downcast utility shaft (walkway)	1500	Nil
4	Drift from 4 shaft to hoist shaft	3500	Nil

As it can be seen in the figures on this page, the concentrations of radon-daughters in the mine in terms of working levels are below the standards. Therefore, the company will not have radiation problems with over exposure to the working personnel. Company shall not neglect the importance of ventilation even though radiation is not present.

NOTICE ISSUED MARCH 12, 1980

Notice No. 1, Section 63-28-9, NMSA: Timber sets on the 100 level shall be properly blocked. (spreaders) Abated March 12, 1981.

The above notice was discussed with Mr. J. Hale

ACKNOWLEDGEMENT

The courtesy and cooperation rendered during this inspection is hereby gratefully acknowledged.

Inspected and Reported by:
Gilbert E. Miera
Dust & Mine Gas Inspector
Deputy Inspector of Mines

jlj

Approved: Joe D. Longacre Sr.
JOE D. LONGACRE, SR.
State Inspector of Mines

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2340 MENAUL, N.E., SUITE 106
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RESIDENCE PHONE 344-1129

JOE D. LONGACRE, SR.
STATE INSPECTOR OF MINES

RADIATION & VENTILATION

REPORT OF INSPECTION

I. D. No. -Jim Crow
Queenstake & Oakcreek Mining ..... { Mine } typed March 19, 1981
(Name) March 9, 1981.....
(Date of Inspection)

Silver & Gold.... ...Grant..... L. Billingsley, Manager.....
(Classification of Mine) (County in which located) (Company representative present at inspection)

Pursuant to the Mining Laws of the State of New Mexico, Section 69-5-10, an inspection, as designated above, has been made. During this inspection the following was noted:

GENERAL INFORMATION

The primary purpose of this inspection was to check radon-daughter concentrations in each working place of the mine, to measure quantity of air supplied to each man working underground and to calculate the time-weighted exposure for each of the various classes of mine personnel.

For collecting the alpha particles, the MSA Monitaire air sampler, U. S. Bureau of Mines approval No. 2F-2004 was used. For counting the alpha disintegration, the PS-1 Eberline PRM-4 pulse rate in combination with the pulse integrator P1-1 was used.

Owner & Operation: Queenstake & Oakcreek Mining Co.

Location: Approximately 12 miles Northeast of Duncan, Arizona

Employment: 6

Work Schedule:
Hours per day 8
Shifts per day 2
Hours per week 40

Company Officials:
Les Billingsley, Mine Manager

Mining method: Repairing shaft & Driving drift

Principal product: Silver & Gold

Last radiation inspection: Initial

Lost-time accidents to date: One

The inspector was accompanied by Mr. L. Billingsley during the entire period of this inspection.

The operation is opened by one vertical shaft which is approximately 200 feet deep, 6' x 8' wide. Work is being done on the 100' level and at the 200' level. Shaft is also being repaired.

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State Inspector of Mines

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VENTILATION

The mine is presently being ventilated by air entering shaft and is distributed to working face with a pneumatic blower at the rate of 2500 c.f.m. 7½ H.P. Buffalo type blower is used to ventilated shaft workings-

RADON DAUGHTER CONCENTRATIONS

The following is a list of radon-daughter concentrations found in each working place of the mine as well as ventilation volume found during this inspection.

A time-weighted exposure calculation for the different types of mine personnel was not made due to the low concentration of radon-daughters (.01 working level) found during this inspection. Therefore, the total mine exposure index will be too low, in result, it will be negligible.

Sample No.	Sample Location	Ventilation C.F.M.	Working Level
1	100 Level	1500	Nil
2	100 Level SW Drift	900	0.01
3	Bottom of Shaft	2500	Nil
4	200' Level	2500	Nil

As it can be seen in the above figures, the concentration of radon-daughters in this mine in terms of working levels are below the standards. Therefore, the company will not have problems with over-exposure from ionizing radiation to the working personnel, when always keeping the same system of ventilation control.

No notices were issued after this inspection. Shaft work needed and Lost-time accidents were discussed with Mr. L. Billingsley. He was also made aware of mine gases that can be encountered while cleaning out old shaft-Hydrogen sulfide, Nitrogen dioxide, and carbon monoxide. were discussed in detail.

ACKNOWLEDGEMENT

The courtesy and cooperation of all personnel of the Jim Crow are hereby gratefully acknowledged.

Inspected and Reported by:
Gilbert E. Miera
Dust & Mine Gas Inspector
Deputy Inspector of Mines

jlj

Approved: Joe D. Longacre Sr.
JOE D. LONGACRE, SR.
State Inspector of Mines

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ALBUQUERQUE, NEW MEXICO 87107

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OFFICE TELEPHONE 842-3056
RESIDENCE PHONE 344-1129

RADIATION

REPORT OF INSPECTION

I. D. No. 2900752-Center Mine
Summit Minerals, Inc. (Name) { Mine } typed March 19, 1981
March 10, 1981 (Date of Inspection)

Gold & Silver (Classification of Mine) Grant (County in which located) D. E. Hanson, General Supt. (Company representative present at inspection)

Pursuant to the Mining Laws of the State of New Mexico, Section 69-5-10, an inspection, as designated above, has been made. During this inspection the following was noted:

GENERAL INFORMATION

The primary purpose of this inspection was to check radon-daughter concentrations in each working place of the mine, the measure quantity of air supplied to each man working underground and to calculate a time-weighted exposure for each of the various classes of mine personnel.

For collecting the alpha particles, the MSA Monitaire air sampler, U.S. Bureau of Mine approval No. 2F-2004 was used. For counting the alpha disintegration, the PS-1 Eberline PRM-4 pulse rate in combination with the pulse integrator P1-1 was used.

Date of previous radiation inspection: First radiation inspection in 1981

The operation is located northeast of Duncan, Arizona, north of Carlisle Creek in the Summit Mountains. The operation is owned and operated by Summit Minerals, Inc.

Employment: 13

Work Schedule:
- Hours per day 8
- Shifts per day 1
- Hours per week 40

Principal product: Silver and gold

Company Officials:
D. E. Hanson, General Supt.
F. Dollarhide, Man in Charge

Mining method: vein mining and stope development & driving decline from Carlisle Mine

The inspector was accompanied by Mr. D. E. Hanson during periods of this inspection. Mr. F. Dollarhide accompanied the inspector on portions of the inspection.

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State Inspector of Mines

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The operation is opened by one adit tunnel, which is approximately 400 feet long-driven from the Carlisle Mine. Work is also being performed at the Center Mine Shaft. Cleanup and stope development is being performed at the 350 level. Diesel L.H.D. is used in the adit tunnel.

VENTILATION

The mine is presently being ventilated by air entering adit on the Carlisle side and is distributed to working face with pneumatic blower. At the center mine shaft, 350 level, men are depending on natural ventilation. Air enters the mine through shaft and is exhausted out of mine through old workings.

RADON DAUGHTER CONCENTRATIONS

The following is a list of radon-daughter concentrations found in each working place of the mine as well as ventilation volume found during this inspection.

A time-weighted exposure calculation for the different types of mine personnel was not made due to the low concentration of radon-daughters (.01) working level) found during this inspection. Therefore, the total mine exposure index will be too low, in result, it will be negligible.

Sample No.	Sample Location	Ventilation C.F.M.	Working Level
1	1-1 Drift	5,500	Nil
2	Carlisle Shaft	3,500	0.01
3	Old raise	1,500	0.01
4	Entrance of tunnel	2,000	0.01
5	250 level	1,000	Nil
6	350 level	1,800	Nil
7	350 level-East Drift	900	Nil

As it can be seen in the above figures, the concentration of radon-daughters in this mine in terms of working levels are below the standards. Therefore, the company will not have problems with over exposure from ionizing radiation to the working personnel, keeping the same system of ventilation control operating at all times.

NOTICE ISSUED MARCH 10, 1981

Notice No. 1, Section 69-35-9, NMSA: Adit tunnel shall be wetdown to control dust created by diesel L.H.D. Abated March 10, 1981.

ACKNOWLEDGEMENT

The courtesy and cooperation of all personnel of the Center mine are hereby gratefully acknowledged.

Approved: Joe D. Longacre Sr.
JOE D. LONGACRE, SR.
State Inspector of Mines

Inspected and Reported by:
Gilbert E. Miera
Dust & Mine Gas Inspector

jlj

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
BUREAU OF MINE INSPECTION
2340 MENAUL, N.E., SUITE 106
ALBUQUERQUE, NEW MEXICO 87107

SAFETY FIRST

JOE D. LONGACRE, SR.
STATE INSPECTOR OF MINES

OFFICE TELEPHONE 842-3055
RESIDENCE PHONE 344-1129

RADIATION

REPORT OF INSPECTION

RAD. No. 2900590-Section 23 Mine
United Nuclear-Homestake Partners (Name) { Mine } typed March 31, 1981 / March 9,10,11,12,1981 (Date of inspection)

Underground Uranium (Classification of Mine) | McKinley (County in which located) | Tom Yanske-Ventilation & Planning Engr. (Company representative present at inspection)

Pursuant to the Mining Laws of the State of New Mexico, Section 69-5-10, an inspection, as designated above, has been made. During this inspection the following was noted:

INTRODUCTION

The primary purpose of this inspection was to check radon-daughter concentrations in each working area of the mine, to measure quantity of air supplied to each man working underground and to calculate a time-weighted exposure for each of the various classes of mine personnel.

For collecting the alpha particles, the MSA Model "S" air sampler, U.S. Bureau of Mines approval No. 2G-2239-2 was used. For counting the alpha disintegration, the PS-1 Eberline pulse rate meter, in combination with the SPA-1 Eberline millipore filter radon probe, was used.

GENERAL INFORMATION

Owner and Operator: United Nuclear-Homestake Partners

Location: approximately 26 mi. N. of Grants, NM, on St. Hwy. No. 509-A

Work Schedule:

Hours per shift	8
Shifts per day	2
Hours per week	40

Employment: 140

Previous Radiation Inspection: Sept. 23,24,25, 1980.

Company Officials:
John Parker, General Manager
Frank Murray, Manager of Mines
Jack Johnson, General Supt.
Ron Guill, Supt. of Mines
Joe Erdman, Mine Foreman
Fred Craft, Sr., Engr. of Ventilation and Planning
Roy Souther, Safety Director
Tom Yanske, Ventilation & Planning Engr.

Mining method: modified room & pillar

Principal product: uranium ore

JOE D. LONGACRE, SR.
State Inspector of Mines

ONE COPY OF THIS REPORT SHALL BE POSTED IN A CONSPICUOUS PLACE AT THE MINE

This mine is currently being inspected at one (1) month intervals because of a mine fatality.

The inspector was accompanied by Mr. Tom Yanske, Ventilation and Planning Engineer, during the entire period of this inspection. Mr. Tom Yanske obtained duplicate radon-daughter samples, with the instant working level meter, for comparison purposes. Mr. George Henckel, Dust & Mine Gas Inspector, also participated in the inspection on March 9 and March 12, 1981.

VENTILATION AND RADIATION

The mine was ventilated by some 568,300 c.f.m. of air delivered and exhausted through the following openings:

Opening	ID Size	Air Direction	Air Volume c.f.m.	Fan	HP
45E-12S BH	72"	Intake	157,300	-	-
118 E vent raise	4' x 6'	Intake	180,000	-	-
Shaft	18' x 18'	Intake	231,200	-	-
33E BH	60"	Exhaust	75,700	Joy Series 1000	125
69E BH	60"	Exhaust	40,200	Joy Series 1000	125
82E BH	40"	Exhaust	35,500	Joy Series 1000	100
93E BH	60"	Exhaust	52,700	Joy Series 1000	125
108E BH	60"	Exhaust	64,400	Bonanza	125
131E BH	40"	Exhaust	37,000	Joy Series 1000	60
134E BH	40"	Exhaust	29,700	Joy Series 1000	100
153E BH	30"	Exhaust	15,100	Joy Series 1000	100
204E BH	40"	Exhaust	49,200	Joy Series 1000	125
208 BH	60"	Exhaust	46,100	Joy Series 1000	125
176E BH	60"	Exhaust	62,800	Joy Series 1000	125
7 BH (Kerr-McGee Sec.22)		Exhaust	18,800	Joy Series 1000	60
20E-2200S	60"	Exhaust	41,300	Joy Series 1000	125

Main fans are electrically powered, surface mounted, axial-flow type units. All the bore holes are steel-lined throughout the length of the opening.

Listed below are the location of the samples, ventilation volumes, radon-daughter concentration, and average time-weighted exposure calculations for the various classes of mine personnel.

Sample No.	Sample Location	Ventilation c.f.m.	Man-Shift Exposures M&M	Stopes	Haulages	Working Level
1	14E 2600S-slusher 1	500	0.4	1.0		0.1
2	14E 2600S-drill position	2000	0.4	1.0		0.2
3	20E 2200S-CP drill	1000	0.4	1.0		0.1
4	26E 2400S-slusher 1	500	0.4	1.0		0.4
5	26E 2400S-drill position	800	0.4	1.0		Nil
6	42E 2650S-slusher 1	convection	0.4	1.0		0.4
7	42E 2650S-slusher 2	convection	0.4	1.0		0.1
8	56E 2480S-slusher 1	convection	0.4	0.6		0.1
9	56E 2480S-slusher 2	2400	0.4	0.7		0.2
10	56E 2480S-slusher 3	convection	0.4	0.7		0.6
11	63E 2575S-slusher 1	convection	0.4	0.6		0.1
12	63E 2575S-slusher 2	convection	0.4	0.7		0.2
13	63E 2575S-slusher 3	1200	0.4	0.7		0.2
14	73E 2480S-slusher 1	700	0.4	0.4		0.1
15	73E 2480S-slusher 2	500	0.4	0.4		0.1
16	73E 2480S-slusher 3	500	0.4	0.4		0.4
17	73E 2480S-slusher 4	500	0.4	0.4		0.4
18	73E 2480S-drill position	500	0.4	0.4		0.5
19	40E track-haulage	8400	0.8		0.9	Nil
20	14E track-haulage	7000	0.8		0.9	0.1
21	20E track-haulage	9200	0.4		0.9	0.1
22	106E track-haulage	16000	0.4		1.1	0.1
23	82E 2330S-slusher 1	700	0.4	0.3		0.1
24	82E 2330S-slusher 2	convection	0.4	0.4		0.1
25	82E 2330S-slusher	convection	0.4	0.4		0.3
26	82E 2330S-longhole position	1000	0.8	0.3		0.2
27	82E 2330S-drill position	convection	0.4	0.3		0.8
28	82E 2330S-drill position		Control Sample			0.8
29	82E 2330S-slusher 3 (left)	convection	0.4	0.3		0.3
30	94E 2150S-slusher 2	500	0.4	1.0		Nil
31	94E 2150S-slusher 1	800	0.4	1.0		Nil
32	106E 1280S-slusher 1	800	0.4	0.7		Nil
33	106E 1280S-slusher 2	1000	0.4	0.6		0.5
34	106E 1280S-slusher 3	convection	0.4	0.7		Nil
35	106E track	80300	0.9		0.9	Nil
36	90E 1600S-slusher 1	convection	0.4	0.7		Nil

Sample No.	Sample Location	Ventilation c.f.m.	Man-shift Exposures M&M	Stoper	Haulages	Working Level
37	90E 1600S-drill position	convection	0.4	0.7		Nil
38	90E 1600S-slusher 2	convection	0.4	0.6		0.4
39	1600 S. track	8500	0.4		1.1	Nil
40	Old diesel shop-726 level	convection	0.6			Nil
41	New diesel shop-726 level	convection	0.6			0.1
42	18E 600N-drill & muck position	3000	0.4	2.0		0.1
43	18E track	6000	0.4		0.9	0.1
44	726 W. track	40000	0.5		0.9	Nil
45	45E track	129000	0.4		0.9	Nil
46	64 E track	52000	0.4		0.9	Nil
47	64E track-longhole position	82000	0.4	1.0		Nil
48	64E 2000S-slusher 1	1000	0.4	0.6		0.9
49	64E 2000S-slusher 2	convection	0.4	0.6		0.3
50	64E 2000S-drill position	1000	0.4	0.6		0.2
51	64E 2000S-drill position	1000	0.4	1.1		0.1
52	64E 2000S-longhole position	500	0.4	1.1		0.2
53	64E 2000S-slusher 1 (resample)		Control Sample			0.2
54	64E pump station	convection	0.4			Nil
55	84E track	21000	0.4		0.9	Nil
56	84E 2100S-slusher 1	convection	0.4	2.0		Nil
57	1700S track	convection	0.4		0.9	Nil
58	48E 1700S-slusher 1	convection	0.4	0.7		Nil
59	48E 1700S-slusher 2	convection	0.4	0.7		0.1
60	48E 1700S-drill position	convection	0.4	0.6		Nil
61	178E 1500S-slusher 3	convection	0.4	0.3		0.9
62	178E 1500S-slusher 2	convection	0.4	0.2		0.5
63	178E 1500S-slusher 1	convection	0.4	0.2		0.5
64	178E 1500S-drill position	convection	0.4	0.3		0.9
65	1135S track	19000	0.4		0.9	0.3
66	139E 1200S-slusher 1	1000	0.4	1.0		0.2
67	139E 1200S-slusher 2	1000	0.4	1.0		0.4
68	139 E 1200S-drill position		Control sample			1.00
69	139E track-heading (drill & muck)	6000	0.4	2.		Nil
70	139E track-haulage	6000	0.4		0.9	0.1
71	184E 40N-slusher 1	convection	0.4	1.0		0.1
72	184E 40N-work drift	convection	0.4	1.0		0.2
73	194E-development	3000	0.4	1.0		0.1
74	194 E haulage	3000	0.6		1.1	0.1

Sample No.	Sample Location	Ventilation c.f.m.	Man-Shift Exposures M&M	Stopes	Haulages	Working Level
75	184E 1200N-slusher 1	convection	0.4	2.0		0.2
76	155 E development	1500	0.4	1.0		Nil
77	155E set up	2500	0.4	1.0		Nil
78	174E development	3000	0.4	1.0		0.1
79	135E development	convection	0.4	1.0		Nil
80	2000 N. Wagner-haulage	convection	0.4		0.9	0.2
81	114E 2050N-slusher 1	convection	0.4	1.0		0.1
82	64E-slusher 1	convection	0.4	2.0		Nil
			34	49	15	

The time-weighted exposures for the various classes of mine personnel and the total mine exposure index are as follows:

Maintenance and Management	= 0.2 x working level
Stopes	= 0.2 x working level
Haulageways	= 0.1 x working level
Total Mine Exposure	= 0.1 x working level

NOTICES ISSUED MARCH 11, 1981

Notice No. 1, SIM Rule No. 74-1(2c): The un-used primers at bottom of raise 14E-2600S manway shall be stored in proper magazine. (57.6-1M) Abated March 11, 1981

Notice No. 2, SIM Rule No. 71-2(2c): Un-used primers behind slusher located at 178E 1500S stope shall be stored in proper magazine. (57.6-1M) Abated March 11, 1981

Notice No. 3, Rules Governing Diesel Equipment in Underground Mines for the State of New Mexico. Rule 4(b): 194E haulage shall be provided with at least 75 cubic feet per minute per brake horse power to run diesel equipment. Abated March 11, 1981

Notice No. 4, Section 69-35-6, NMSA: Loose or dangerous slabs in 18E-600 N heading shall be immediately barred down. Abated March 11, 1981

Notice No. 5, Section 69-35-6, NMSA: The 650E haulage, just before 130E Wagner haulage, shall be barred down and rebolted. Abated March 11, 1981

Notice No. 6, Section 69-29-2, NMSA: Raise manway 84E 2100S shall have platforms and positive closing doors of not less than twenty-four inches, at intervals of not more than thirty (30) feet vertically. Abated March 11, 1981

The above notices were discussed with Messrs. Jack Johnson, Fred Craft, and Tom Yanske. Mr. George Henckel, Dust & Mine Gas Inspector, also participated in this close-out meeting.

Approved .....

JOE D. LONGACRE, SR.
State Inspector of Mines

ACKNOWLEDGEMENT

The courtesy and cooperation extended by company officials and employees are hereby gratefully acknowledged.

Inspected and Reported by:
Thomas A. Parkhill
Dust & Mine Gas Inspector
Deputy Inspector of Mines

jlj

Approved: Joe D. Longacre Sr.
JOE D. LONGACRE, SR.
State Inspector of Mines

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
BUREAU OF MINE INSPECTION
2340 MENAUL, N.E., SUITE 106
ALBUQUERQUE, NEW MEXICO

JOE D. LONGACRE, SR.
STATE INSPECTOR OF MINES

OFFICE TELEPHONE 842-3066
RESIDENCE PHONE 344-1129

SAFETY FIRST

RADIATION

REPORT OF INSPECTION

I.D. No. 2900589-Section 15 Mine
United Nuclear-Homestake Partners (Name) { Mine } typed March 11, 1981
March 4, 1981 (Date of Inspection)

Underground Uranium (Classification of Mine) McKinley (County in which located) Jerry Jaramillo, Mine Foreman (Company representative present at inspection)

Pursuant to the Mining Laws of the State of New Mexico, Section 69-5-10, an inspection, as designated above, has been made. During this inspection the following was noted:

GENERAL INFORMATION

Owner and operator: United Nuclear-Homestake Partners

Location: approximately 28 miles NW of Grants, NM, Ambrosia Lake mining district

Company Officials:
J. Parker, General Manager
F. Murray, Manager of Mines
J. Johnson, General Superintendent
C. Jaramillo, Mine Foreman

Previous radiation inspection: January 1980

Employment: 10

Work Schedule:
Hours per shift 8
Shifts per day 1
Days per week 5

Inspection Party: United Nuclear, Homestake Partners
C. Jaramillo, Mine Foreman
S. Atkins, Ventilation Sampler
N. Torres, Ventilation & planning Engineer

NM Bureau of Mine Inspection
Tom Parkhill, Dust & Mine Gas Inspector
George C. Henckel, Dust & Mine Gas Inspector

Duplicate samples were taken for comparative purposes.

JOE D. LONGACRE, SR.
State Inspector of Mines

ONE COPY OF THIS REPORT SHALL BE POSTED IN A CONSPICUOUS PLACE AT THE MINE

The mine is presently being ventilated by air delivered and exhausted through the following:

Opening	Size	Air Direction	cfm	HP	Fan	Depth of Opening
22 Raise BH	60"	Exhaust	100,000	125	Joy	600'
Decline	-	Intake	100,000	-	-	-

The main fan is an electrically powered, surface mounted axial flow type unit.

Listed below are the radon-daughter concentrations, ventilation volumes, and average exposures.

Sample No.	Location	cfm	Working Level		Manshift Exposures		
			State	UN-HP	M&M	Stopes	Haulages
1	68 Stope	12,000	0.25	0.20	0.3	1	
2	412 Haulage	68,000	0.24	0.16	0.3		0.5
3	Old Diesel Shop Lunchroom	Conv.	0.32	0.20	0.3	0.5	
4	Shifter Shack	Conv.	0.27	0.15	0.3	0.5	
5	340 Stope No. 1 Slusher	Nat.flow	0.04	0.04	0.3	0.5	
6	340 Stope No. 2 Slusher	2,500	0.56	0.30	0.3	0.5	
7	340 Stope No. 3 Slusher	Nat.flow	0.54	0.47	0.3	1	
8	337 Stope Slusher	Nat.flow	0.04	0.01	0.3	1	
9	Decline	100,000	0.01	0.02	0.6		0.5
					3.0	5	1

The average weighted exposure for the various classes of mine personnel were as follows:

Maintenance and Management	=0.27 x working level
Stopes & Developments	=0.26 x working level
Haulage	=0.10 x working level
Total Mine Exposure Index	=0.25 x working level

NOTICE ISSUED 3-4-81

Notice No. 1, Section 69-35-17(a), NMSA: Proper head protection shall be worn underground. No metal hardhats. Abated 3-4-81

The inspection was discussed with Messrs. Jerry Jaramillo, Nick Torres, Scott Atkins, and George Henckel.

ACKNOWLEDGEMENT

The courtesy and cooperation rendered during this inspection is hereby gratefully acknowledged.

Inspected and Reported by:
George C. Henckel
Dust & Mine Gas Inspector
Deputy Inspector of Mines

Thomas A. Parkhill
Dust & Mine Gas Inspector
Deputy Inspector of Mines

jlj

Approved: Joe D. Longacre Sr.
JOE D. LONGACRE, SR.
State Inspector of Mines

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
BUREAU OF MINE INSPECTION
2340 MENAUL, N.E., SUITE 106
ALBUQUERQUE, NEW MEXICO 87107

JOE D. LONGACRE, SR.
STATE INSPECTOR OF MINES

OFFICE TELEPHONE 842-3066
RESIDENCE PHONE 344-1129

SAFETY FIRST

RADIATION

REPORT OF INSPECTION

I.D. No. 2900573-NE Churchrock Mine
United Nuclear Corp. Mining and Milling (Name) { Underground Mine } typed March 10, 1981
February 24,25, 1981 (Date of Inspection)

Uranium (Classification of Mine) McKinley (County in which located) Roger Siegmann, Safety Officer (Company representative present at inspection) Joe Gurule, Ventilation Tech.
M. Peterson, Safety Tech. (2-24-81 only)

Pursuant to the Mining Laws of the State of New Mexico, Section 69-5-10, an inspection, as designated above, has been made. During this inspection the following was noted:

INTRODUCTION

The primary purpose of this inspection was to check radon-daughter concentrations in each working area of the mine, to measure the quantity of air supplied to each underground working area, and to calculate the time-weighted exposures for each of the various classes of mine personnel.

For collecting the alpha particle samples, the M.S.A. Portable Pump, Model S, U.S. Bureau of Mines Approval No. 2G-2239-2. For counting the alpha disintegrations, an Eberline Portable Scaler, Model PS-1, in combination with a millipore filter radon probe was used.

GENERAL INFORMATION

Owner of Property: Owned and operated by United Nuclear Corporation

Location: Approximately 20 miles NE of Gallup, NM, at the end of NM Hgy No. 566

Previous Radiation Inspection:
September 10, 980

Employment: 319

Work Schedule:
Hours per shift 8
Shifts per day 3
Hours per week 40

Type of operation: Underground

Company Officials:
Thomas F. Bailey, President
Jerry Thornton, General Supt.
Jack Farley, Manager of Safety
Ed Marble, Senior Safety Officer
Doug Mangam, Training Officer
Ancil Salice, Ventilation Engineer

First-aid training to date: 100%

Mine Rescue Training: May 22-28, 1980

Lost-time Injuries to date: 7 as of 2-25-81

Last Fire Drill Practiced: Jan. 15, 1981

Principal product: Uranium ore

JOE D. LONGACRE, SR.
State Inspector of Mines

ONE COPY OF THIS REPORT SHALL BE POSTED IN A CONSPICUOUS PLACE AT THE MINE

The inspector was accompanied by Messrs. Roger Siegmann, Safety Officer, Joe Gurule, Ventilation Technician, and Mrs. M. Peterson, Safety Technician, who participated on February 24, 1981, only. Mr. L.A. Quinones, Dust & Mine Gas Engineer, and Mr. Gilbert Miera, Dust & Mine Gas Inspector, of this Bureau, also participated in this inspection, making noise and dust inspections respectively.

The No. 1 and No. 2 shafts are interconnected at the 1500 and 1700 levels. The No. 1 shaft is used for hoisting men, ore, and materials. The No. 2 shaft is used primarily for ventilation and as a second escape route in times of extreme emergencies.

VENTILATION AND RADIATION

This underground operation is ventilated by some 680,000 cubic feet per minute (cfm) of air delivered and exhausted through the following openings. (underground air flow is controlled by bulkheads, air doors, air seals, brattices, and curtains)

Opening	Size	Air Direction	Air Volume cfm	Make of Fan	Fan HP	Depth of Opening
Shaft No.1	168" I.D.	Intake	429,000	None	None	1700'
Shaft No.2	144" I.D.	Intake	235,000	None	None	1700'
Vent Hole No. 1	60" I.D.	Exhaust	55,000	Joy Series 1000 Hartzell	1-150 1-200	1500'
Vent.Hole No. 2	Lost	-	-	-	-	-
Vent Hole No.3	144" I.D.	Exhaust	200,000	Joy Series 1000	2-400	1700'
Vent Hole No. 4	Lost	-	-	-	-	-
Vent. Hole No. 5	30" I.D.	Intake	19,000	None	None	1500'
Vent Hole No. 6	60" I.D.	Exhaust	22,000	Hartzell	1-200	1500'
Vent Hole No. 7	60" I.D.	Exhaust	217,000	Hartzell	2-200	1500'
Vent Hole No. 8	60" I.D.	Exhaust	96,000	Joy Series 1000	1-200	1600'
Vent Hole No. 9	60" I.D.	Exhaust	93,000	Hartzell Joy Series 1000	1-200 1-200	1500'

The main fans are electrically powered, axial-flow type units. All primary fans are surface units. All boreholes are steel-lined throughout the length of the opening. Air is distributed to the working placed by directing the primary airflow, by use of auxillary fans with vent tubing.

The following is a list of the radon-daughter concentrations found in several working areas, as well as ventilation volumes found during this inspection. All of this information was derived from data obtained during this inspection.

Sample No.	Location of Sample	Ventilation cfm	M&M	Stopes	Haulages	W.L.
1	C-71 area C97.5 drill position	7750	1.0	6.0	3.0	0.1
2	C-71 area C97.5 haulage to air doors	120,000	1.0		3.0	0.3
3	MD shop @ A2-97 haulage	1,000	4.0		1.0	0.3
4	A2-97 Shifter shack	1,000	1.0		2.0	0.2
5	A2-108.5 @ A-5-51 drill position	6,820	1.0	6.0		0.8
6	A-51 area haulage to No. 11 raise	33,000	1.0		3.0	0.2
7	A-297 N. haulage to 266.5 area	43,000	1.0		4.0	0.3
8	A2-74 run around A2-66.5 area (drill position)	7,130	1.0	6.0		Nil
9	A2-74 run around A2-66.5 haulage to No. 10 raise	52,000	1.0		2.0	0.5
10	A2-62.5 area @ 2-113.5 rehab. area drill position	28,000	1.0	6.0		0.2
11	A2-58.5 area access to No. 19 haulage	29,000	1.0		4.0	0.3
12	A2-58.5 @ 82-107 slusher slot	49,000	1.0	6.0	3.0	1.1*
13	82-107 Slusher slot to No. 19 raise haulage	22,000	1.0		4.0	0.8
14	A2-58.5 @A2-111 drill position	1,000	1.0	6.0		0.1
15	A2-105 access drill position	27,000	1.0	6.0		0.5
16	1500 Loco shop	30,000	4.0		2.0	Nil
17	A2-58.5 @ A2-113 rehab area drill position	22,000	1.0	6.0		0.9
18	A2-64.5 truck shop	84,000	4.0		3.0	Nil
19	A-3-40 track to raise 21 haulage	10,540	1.0		1.0	Nil
20	A-3-40 track raise 21 to raise 8 haulage	3,000	1.0		3.0	0.3
21	A-3-track to A-1 track haulage	99,000	1.0		5.0	Nil
22	A-4 track heading, drill position	30,000	1.0	6.0	1.0	Nil
23	A-1 track to materials storage area haulage	125,000	1.0		5.0	Nil
24.	Pump station-1700 level	22,000	1.0			Nil
25	1700 Loco shop	125,000	4.0			Nil
			37	54	49	

* Cease Work Order

The time-weighted exposures for the various classes of mine personnel and the total mine exposure index are as follows:

Maintenance & Management	=	0.2 x working level
Stopes	=	0.4 x working level
Haulageways	=	0.3 x working level
Total Mine Exposure Index	=	0.3 x working level

CEASE WORK ORDER ISSUED FEBRUARY 24, 1981

Order No. 1, SIM Rule No. 76-1(2c): Radiation above 1.0 working level men in A2-58.5 stope slusher position. (57.5-39M) Abated February 25, 1981. Area was closed down by company officials due to cave-in to the entrance of this stope.

NOTICES ISSUED FEBRUARY 25, 1981

Notice No. 1, Section 69-5-7(c), NMSA: Dust conditions in C-72.5 haulage shall be controlled to allay the dust. Abated February 25, 1981.

Notice No. 2, Section 69-5-7(c), NMSA: Dust conditions in A-5-53 access haulage shall be controlled to allay the dust. Abated February 25, 1981.

Notice No. 3, Section 69-5-7(c), NMSA: Dust conditions in 8-266 access haulage shall be controlled to allay the dust. Abated February 25, 1981.

Notice No. 4, Section 69-35-6, NMSA: The C-11 access haulage, hear the beginning of timber sets shall be barred down and rebolted. Abated February 25, 1981.

Notice No. 5, SIM Rule 76-1(2c): Evidence of cigarette smoking was found near the C-1 access haulage (57.5-41M) Abated February 25, 1981.

Notice No. 6, SIM Rule No. 75-1(2c): High pressure air hose connections on drill machines shall be provided with safety chains in C-71 area, C 97.5 (57.13-21M) Abated February 25, 1981.

Notice No. 7, SIM Rule No. 71-1(2c): Escape route signs throughout the mine shall all be made of substantial material (no paper signs) marked with conspicuous and easily read direction signs that clearly indicate the way to escape. (57.11-51(b)M) Abated February 25, 1981.

Notice No. 8, Section 69-5-7(c), NMSA: The discharge end of the vent tubing in A2-59.5 @ A2-113 shall be kept at thirty (30) feet or less from the working face. Abated February 25, 1981.

Notice No. 9, Section 69-5-7(c), NMSA: The discharge end of the vent tubing in A-4 track drift shall be kept at thirty (30) feet or less from the working face. Abated February 25, 1981.

Notice No. 10, SIM Rule No. 76-1(2c): Track A-4 shelter holes shall be marked conspicuously with lights, reflective tape, or proper reflective signs. (57.9-111M) Abated February 25, 1981

Notice No. 11, SIM Rule No. 76-1(2c): Track A-2 shelter holes shall be marked conspicuously with lights, reflective tapes or proper reflective signs. (57.9-111M) Abated February 25, 1981.

At the conclusion of this inspection, the above notices were discussed with Messrs. David Yob, Joe Gurule, Roger Siegmann, Doug Mangum, and Mrs. M. Peterson. Messrs. L.A. Quinones, Dust & Mine Gas Engineer, and Gilbert Miera, Dust & Mine Gas Inspector, also participated in this discussion.

ACKNOWLEDGEMENT

The courtesy and cooperation of staff and personnel of the NE Churchrock Mine during this inspection are hereby gratefully acknowledged.

Inspected and Reported by:
Thomas A. Parkhill
Dust & Mine Gas Inspector
Deputy Inspector of Mines

L.A. Quinones
Dust & Mine Gas Engineer
Deputy Inspector of Mines

Gilbert Miera
Dust & Mine Gas Inspector
Deputy Inspector of Mines

jlj

Approved:
JOE D. LONGACRE, SR.
State Inspector of Mines

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
BUREAU OF MINE INSPECTION
2340 MENAUL, N.E., SUITE 106
ALBUQUERQUE, NEW MEXICO 87107

JOE D. LONGACRE, SR.
STATE INSPECTOR OF MINES

SAFETY FIRST

OFFICE TELEPHONE 842-3065
RESIDENCE PHONE 344-1129

REPORT OF INSPECTION

I.D. No. -Little Granite typed March 6, 1981

Brammel Construction Co. (Name) { Mine } February 17, 1981 (Date of Inspection)

Gold & Silver (Classification of Mine) | Sierra (County in which located) | G. Aguilar, Man in Charge (Company representative present at inspection)

Pursuant to the Mining Laws of the State of New Mexico, Section 69-5-10, an inspection, as designated above, has been made. During this inspection the following was noted:

GENERAL INFORMATION

The primary purpose of this inspection was to check radon-daughter concentrations in each working place of the mine, to measure quantity of air supplied to each man working underground and to calculate a time-weighted exposure for each of the various classes of mine personnel.

For collecting the alpha particles, the MSA Monitaire air sampler, U. S. Bureau of Mines approval No. 2F-2004 was used. For counting the alpha disintegration, the PS-1 Eberline PRM-4 pulse rate in combination with the pulse integrator P1-1 was used.

Owner and Operator: Brammel Construction Co.

Location: Located in the Carpenter 3 mining district; 1 mile north on St. Rd. to Turkey Creek-8 miles up Creek

Employment: 7

Work Schedule:
Hours per day 8
Shifts per day 1
Hours per week 40

Company Officials:
William Brammel, General Manager
George Aguilar, Man in Charge

Mining method: Vein mining

Principal product: Gold and Silver

Last radiation report: Initial

First-aid training to date: None

Mine Rescue training to date: None

The inspector was accompanied by Mr. G. Aguilar during the entire period of this inspection. Mr. A. Duran, Deputy Inspector of Mines, conducted a safety inspection.

This operation is opened by one 2-compartment 4' x 8 ' shaft. 70" deep. Air enters the mine through the shaft and also through the adit tunnel, intersecting shaft at the 50' level.

JOE D. LONGACRE, SR.
State Inspector of Mines

ONE COPY OF THIS REPORT SHALL BE POSTED IN A CONSPICUOUS PLACE AT THE MINE

VENTILATION

The mine is presently being ventilated by natural ventilation. The company has been instructed that no more work shall be performed on the bottom level until faces are ventilated.

RADON DAUGHTER CONCENTRATIONS

The following is a list of radon-daughter concentrations found in each working place of the mine as well as ventilation volume found during this inspection.

A time-weighted exposure calculation for the different types of mine personnel was not made due to the low concentration of radon-daughters (.01 working level) found during this inspection. Therefore, the total mine exposure index will be too low, in result, it will be negligible.

Sample No.	Sample Location	Ventilation C.F.M.	Working Level
1	West Heading	650	Nil
2	East Heading	700	Nil
3	Adit tunnel	1800	Nil
4	Shaft	1950	Nil

As it can be seen in the figures on the above, the concentration of radon-daughters in this mine in terms of working levels are below the standards. Therefore, the company will not have problems with over-exposure to the working personnel, when always keeping the same system of ventilation control--blower must be installed.

NOTICE ISSUED 2-17-81

Notice No. 1, Section 63-28-9, NMSA: Working areas on the bottom level shall be properly ventilated. Abated Feb. 17, 1981

Notice No. 2, SIM Rule No. 75-3: Surface hoisting tugger shall be provided with noise control. (57.5-50M) Abated Feb. 17, 1981

Notices issued above were discussed with Mr. G. Aguilar in detail.

ACKNOWLEDGEMENT

The courtesy and cooperation of management and personnel of Brammel Construction Co., Little Granite Mine, rendered during this inspection, are hereby gratefully acknowledged.

Inspected and Reported by:
Gilbert E. Miera
Dust & Mine Gas Inspector
Deputy Inspector of Mines

jlj

Approved: Joe D. Longacre Sr.
JOE D. LONGACRE, SR.
State Inspector of Mines

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ALBUQUERQUE, NEW MEXICO 87107

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JOE D. LONGACRE, SR.
STATE INSPECTOR OF MINES

OFFICE TELEPHONE 842-3056
RESIDENCE PHONE 344-1129

RADIATION

REPORT OF INSPECTION

I.D. No. -Silver Queen
Donald A. McGhee and Company (Name) { Mine } typed March 6, 1981 February 19, 1981 (Date of Inspection)

Silver (Classification of Mine) Hidalgo (County in which located) Charles L. McGhee, Man in Charge (Company representative present at inspection)

Pursuant to the Mining Laws of the State of New Mexico, Section 69-5-10, an inspection, as designated above, has been made. During this inspection the following was noted:

GENERAL INFORMATION

The primary purpose of this inspection was to check radon-daughter concentrations in each working place of the mine, to measure quantity of air supplied to each man working underground and to calculate a time-weighted exposure for each of the various classes of mine personnel.

For collecting the alpha particles, the MSA Monitaire air sampler, U.S. Bureau of Mines approval No. 2F-2004 was used. For counting the alpha disintegration, the PS-1 Eberline PRM-4 pulse rate in combination with the pulse integrator P1-1 was used.

Owner and operator: Donald A. McGhee and Company

Location: Located approximately 20 miles west of Lordsburg, NM, 5 miles northwest of Stien Pass.

Employment: 2

Work Schedule:
Hours per day 8
Shifts per day 1
Hours per week 40

Company Officials:
Donald A. McGhee, General Superintendent
Charles L. McGhee, Man in Charge

Mining method: Drifting

Principal product: Silver

Last radiation inspection: initial

The inspector was accompanied by Mr. C. McGhee during the entire period of this inspection. Mr. A. Duran, Deputy Inspector of Mines, conducted a safety inspection.

This operation is opened by one adit tunnel 7' x 8', 60 feet deep.

JOE D. LONGACRE, SR.
State Inspector of Mines

ONE COPY OF THIS REPORT SHALL BE POSTED IN A CONSPICUOUS PLACE AT THE MINE

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SAFETY FIRST

JOE D. LONGACRE, SR.
STATE INSPECTOR OF MINES

OFFICE TELEPHONE 842-3065
RESIDENCE PHONE 344-1129

RADIATION

REPORT OF INSPECTION

I.D. No. -Silver Queen
Donald A. McGhee and Company (Name) { Mine } typed March 6, 1981 / February 19, 1981 (Date of Inspection)

Silver (Classification of Mine) Hidalgo (County in which located) Charles L. McGhee, Man in Charge (Company representative present at inspection)

Pursuant to the Mining Laws of the State of New Mexico, Section 69-5-10, an inspection, as designated above, has been made. During this inspection the following was noted:

GENERAL INFORMATION

The primary purpose of this inspection was to check radon-daughter concentrations in each working place of the mine, to measure quantity of air supplied to each man working underground and to calculate a time-weighted exposure for each of the various classes of mine personnel.

For collecting the alpha particles, the MSA Monitaire air sampler, U.S. Bureau of Mines approval No. 2F-2004 was used. For counting the alpha disintegration, the PS-1 Eberline PRM-4 pulse rate in combination with the pulse integrator P1-1 was used.

Owner and operator: Donald A. McGhee and Company

Location: Located approximately 20 miles west of Lordsburg, NM, 5 miles northwest of Stien Pass.

Employment: 2

Work Schedule:
Hours per day 8
Shifts per day 1
Hours per week 40

Company Officials:
Donald A. McGhee, General Superintendent
Charles L. McGhee, Man in Charge

Mining method: Drifting

Principal product: Silver

Last radiation inspection: initial

The inspector was accompanied by Mr. C. McGhee during the entire period of this inspection. Mr. A. Duran, Deputy Inspector of Mines, conducted a safety inspection.

This operation is opened by one adit tunnel 7' x 8', 60 feet deep.

JOE D. LONGACRE, SR.
State Inspector of Mines

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SAFETY FIRST

JOE D. LONGACRE, SR.
STATE INSPECTOR OF MINES

OFFICE TELEPHONE 842-3056
RESIDENCE PHONE 344-1129

RADIATION

REPORT OF INSPECTION

I.D. No. -Silver Queen
Donald A. McGhee and Company (Name) { Mine } typed March 6, 1981 February 19, 1981 (Date of Inspection)

Silver (Classification of Mine) Hidalgo (County in which located) Charles L. McGhee, Man in Charge (Company representative present at inspection)

Pursuant to the Mining Laws of the State of New Mexico, Section 69-5-10, an inspection, as designated above, has been made. During this inspection the following was noted:

GENERAL INFORMATION

The primary purpose of this inspection was to check radon-daughter concentrations in each working place of the mine, to measure quantity of air supplied to each man working underground and to calculate a time-weighted exposure for each of the various classes of mine personnel.

For collecting the alpha particles, the MSA Monitaire air sampler, U.S. Bureau of Mines approval No. 2F-2004 was used. For counting the alpha disintegration, the PS-1 Eberline PRM-4 pulse rate in combination with the pulse integrator P1-1 was used.

Owner and operator: Donald A. McGhee and Company

Location: Located approximately 20 miles west of Lordsburg, NM, 5 miles northwest of Stien Pass.

Employment: 2

Work Schedule:
Hours per day 8
Shifts per day 1
Hours per week 40

Company Officials:
Donald A. McGhee, General Superintendent
Charles L. McGhee, Man in Charge

Mining method: Drifting

Principal product: Silver

Last radiation inspection: initial

The inspector was accompanied by Mr. C. McGhee during the entire period of this inspection. Mr. A. Duran, Deputy Inspector of Mines, conducted a safety inspection.

This operation is opened by one adit tunnel 7' x 8', 60 feet deep.

JOE D. LONGACRE, SR.
State Inspector of Mines

ONE COPY OF THIS REPORT SHALL BE POSTED IN A CONSPICUOUS PLACE AT THE MINE

VENTILATION

The mine is presently being ventilated by natural ventilation. The company has been instructed that no more work shall be performed in the mine until it is properly ventilated.

RADON DAUGHTER CONCENTRATIONS

The following is a list of radon-daughter concentrations found in each working place of the mine as well as ventilation volume found during this inspection.

A time-weighted exposure calculation for the different types of mine personnel was not made due to the low concentration of radon-daughters (.01 working level) found during this inspection. Therefore, the total mine exposure index will be too low, in result, it will be negligible.

Sample No.	Sample Location	Ventilation c.f.m.	Working Level
1	Working face		Nil
2	Entrance, adit tunnel	375	Nil

As it can be seen in the figures on the above, the concentrations of radon-daughters in this mine in terms of working levels are below the standards. Therefore, the company will not have the problems with over-exposure to the working personnel when always keeping the same system of ventilation control, after blower is installed.

NOTICE ISSUED FEB. 19, 1981

Notice No. 1, Section 63-28-9, NMSA: Adit tunnel shall be well ventilated before any mining is performed in these areas. Abated Feb. 19, 1981

Notice issued above was discussed with Mr. C. McGhee in detail.

ACKNOWLEDGEMENT

The courtesy and cooperation of management and personnel of the Silver Queen mine, rendered during this inspection are hereby gratefully acknowledged.

Inspected and Reported by:
Gilbert E. Miera
Dust & Mine Gas Inspector
Deputy Inspector of Mines

jlj

Approved: Joe D. Longacre Sr.
JOE D. LONGACRE, SR.
State Inspector of Mines

Wolff

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ALBUQUERQUE, NEW MEXICO 87107

SAFETY FIRST

JOE D. LONGACRE, SR.
STATE INSPECTOR OF MINES

OFFICE TELEPHONE 842-3065
RESIDENCE PHONE 344-1129

RADIATION

REPORT OF INSPECTION

I.D. No. 2901744
Section 14 Mine (Cobb Resources Corporation) { Mine } Typed March 6, 1981
(Name) { } February 19, 1981
(Date of Inspection)

Underground Uranium
(Classification of Mine)

McKinley
(County in which located)

Charles D. Lunger, Safety Director
(Company representative present at inspection)

Pursuant to the Mining Laws of the State of New Mexico, Section 69-5-10, an inspection, as designated above, has been made. During this inspection the following was noted:

INTRODUCTION

The primary purpose of this inspection was to check alpha and gamma radiation in each working place of the mine, to measure quantity of air supplied to each man working underground and to calculate a time-weighted exposure for each of the various classes of mine personnel that are exposed to alpha radiation.

For collecting the alpha particles, the MSA Monitaire air sampler, U. S. Bureau of Mines approval no. 2F-2004 was used. For counting the alpha disintegration, the PS-1 Eberline portable scaler, in combination with the SPA-1 Eberline millipore filter radon probe was used.

For measuring the gamma radiation, the Eberline portable ion chamber, Model RO-3 cutie pie type was used. The American National Standard Institute (ANSI) standard was used to evaluate the results and during the measuring of the gamma radiation the criteria of the standard was followed.

GENERAL INFORMATION

Owner and Operator: Cobb Resources Corporation, formerly Cobb Nuclear Corporation

Location: Approximately 29 miles N of Grants, NM, off State Hyw. 509-A.

Principal product: uranium ore

Lost-time accidents to date: none

Mine Resuce training: none

Company Officials:
George O. Lotspeich, President
Richard Stevenson, Superintendent of Mines
Charles D. Lunger, Safety Director

Mining method: redevelopment for modified room and pillar extraction

Previous radiation inspection: March 11, 1980

First-aid training to date: none

Self-rescue weighed: February, 1981

JOE D. LONGACRE, SR.
State Inspector of Mines

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Employment: 17 Mine Emergency training: none

Work Schedule:
Hours per shift 9
Shifts per day 2
Hours per week 45

The inspector wassaccompanied by Mr. Charles D. Lunger, Safety Director, during the entire period of this inspection. Mr. L. A. Quinones, Dust and Mine Gas Engineer, and Mr. Thomas A. Parkhill, Dust and Mine Gas Inspector, representing the Bureau of Mine Inspection, conducted the inspection of this mine.

The mine is opened by a square timbered, two compartment vertical shaft, 360 feet deep. This shaft is used for hoisting personnel and for hoisting materials and production ore and for ventilation as primary air intake.

VENTILATION, ALPHA AND GAMMA RADIATION

This mine was ventilated by some 88,000 cubic feet per minute of fresh air delivered and exhausted through the following openings:

Opening	Size	Air Direction	Air Volume c.f.m.	Make of Fan	Fan HP	Depth of Opening
North BH 1	20"ID	exhaust	30,000	Hartzell	2-25	320'
North BH 2	20"ID	exhaust	20,000	Hartzell	1-30	350'
North BH 3	20"ID	exhaust	20,000	Hartzell	1-30	350'
South BH	20"ID	exhaust	18,000	Hartzell	1-25	350'
2 Compt. Shaft	4'6"x9'	intake	88,000	-	-	360'

Main fans were electrically powered units and axial flow type. These fans were mounted at the surface collar of the boreholes (BH).

Air underground was distributed to the working places by directing the primary airflow, by the use of auxiliary fans and vent tubing.

Air underground was controlled by the use of bulkheads and curtains.

The following is a list of radon-daughter concentrations, ventilation volumes and time-weighted exposure for each of the various classes of mine personnel.

Sample No.	Sample Location	Ventilation c.f.m.	M&M	Stopes	Haulages	Working Level	mR/h Gamma Radiation
1	NW stope area, near front-end loader	6,000	0.8	2	-	0.4	0.70
2	NW stope area, near vent bag	5,000	0.8	2	-	0.4	0.90
3	Main haulage drift to explosives storage area (walking sample)	8,000	0.6	-	1.3	0.5	0.60
4	Main haulage drift from explosives storage to shaft (walking sample)	18,000	0.6	-	1.3	0.3	0.60
5	Shop area and lunchroom (walking sample)	10,000	0.6	-	-	0.2	0.70
6	Skip pocket near main shaft station	30,000	0.6	-	1.4	0.1	0.20
	TOTALS		4.0	4.0	4.0		

The average time-weighted exposure for the various classes of mine personnel and the mine exposure index are as follows:

Maintenance and Management	- 0.3 x working level
Stopes and Development	- 0.4 x working level
Haulageways	- 0.3 x working level
Total Mine Index	- 0.3 x working level

The average gamma radiation measurement found in each working place of this mine during this inspection was below the 2.0 mR/h required.

NOTICES ISSUED FEBRUARY 19, 1981

Notice No. 1, SIM Rule No. 78-1(2b): Timber set at main station shall be blocked and wedged. (57.3-2M) Abated February 19, 1981.

Notice No. 2, Section 69-35-6, NMSA: The NW working area and haulage shall be barred down before production work continued. Abated February 19, 1981.

Notice No. 3, Section 69-5-7(c): Dust conditions throughout the working areas and haulages shall be wetted down to allay the dust. Abated February 19, 1981.

Notice No. 4, Rules and Regulations Effective in the Uranium Mining Areas, Rule No. 5: No one shall be allowed to work in the NW stope area without adequate roof support. Abated February 19, 1981.

Notice No. 5, SIM Rule No. 76-1(2c): The shop and lunchroom area shall be kept free of combustible and rubbish materials. (57.4-50M) Abated February 19, 1981.

Notice No. 6, SIM Rule No. 76-1(2c): The skip area near the main shaft shall bekkept free of combustibles and rubbish materials. (57.4-50M) Abated February 19, 1981.

At the conclusion of this inspection, all notices issued were discussed with Mr. Richard Stevenson and Mr. Charles D. Lunger. Mr. L. A. Quinones, Dust and Mine Gas Engineer also participated in this discussion.

ACKNOWLEDGEMENT

The courtesy and cooperation of the staff and personnel of the Section 14 Mine during this inspection are hereby gratefully acknowledged.

Inspected and Reported by:
Thomas A. Parkhill
Dust and Mine Gas Inspector
Deputy Inspector of Mines

Inspected and Reported by:
L. A. Quinones
Dust and Mine Gas Engineer
Deputy Inspector of Mines

jmz

Approved: Joe D. Longacre Sr.
JOE D. LONGACRE, SR.
State Inspector of Mines

Wolff

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SAFETY FIRST

JOE D. LONGACRE, SR.
STATE INSPECTOR OF MINES

OFFICE TELEPHONE 842-3066
RESIDENCE PHONE 344-1129

RADIATION

REPORT OF INSPECTION

I.D. No. 2900781
Section 19 Mine (Kerr-McGee Nuclear Corporation) (Name) Mine — Typed March 6, 1981; February 9,10,11,12,16,18, 19, 1981 (Date of Inspection)

Underground Uranium (Classification of Mine) — McKinley (County in which located) — Al Borrego, Environmental Technician (Company representative present at inspection)

Pursuant to the Mining Laws of the State of New Mexico, Section 69-5-10, an inspection, as designated above, has been made. During this inspection the following was noted:

GENERAL INFORMATION

Owner and Operator: Kerr-McGee Nuclear Corporation

Location: Approximately 25 miles NW of Grants, NM, Ambrosia Lake mining district.

Company Officials:
A. Gebeau, Manager of Operations
H. Whitacre, Manager of Mines
N. Erickson, Division Superintendent
W. Wenger, Mine Superintendent
D. Ogden, General Mine Foreman

Employment: 165

Previous radiation inspection: October, 1980

Work Schedule:

Hours per shift	8
Shifts per day	3
Days per week	5

The inspector was accompanied by Al Borrego, Tivi C De Baca and Hilda Saavedra during protions of the inspection. Duplicate samples were taken for comparison purposes.

The mine was ventilated by air delivered and exhausted through the following:

Opening	I.D.	Air Direction	Ventilation c.f.m.	Fan	HP
No. 1 BH	60"	intake	12,500	-	60
No. 2 BH	48"	exhaust	14,300	Joy	125
No. 3 BH	60"	exhaust	42,900	Joy	125
No. 4 BH	60"	exhaust	36,700	Joy	125
No. 5 BH	48"	exhaust	37,250	Centrifugal	125
No. 6 BH	48"	exhaust	24,600	Westinghouse	125
No. 7 BH	48"	exhaust	18,900	Joy	60

JOE D. LONGACRE, SR.
State Inspector of Mines

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Opening	I.D.	Air Direction	Ventilation c.f.m.	Fan	HP
No. 8 BH	8"	exhaust	1,000	Hartzell	7.5
Shaft	-	intake		-	-
No. 8 BH-Section 17	-	exhaust	25,000	Joy	125

Main fans are surface mounted, electrically powered axial and centrifugal type units. Boreholes are steel lined the length of the opening.

Underground airflow is controlled by bulkheads, curtains and regulators. Air is distributed by use of auxiliary fans and vent tubing.

The following is the list of radon-daughter concentrations, ventilation volumes and average weighted exposures obtained during the inspection:

Sample No.	Sample Location	Ventilation c.f.m.	Working Levels State	Working Levels K.M.	M&M	Stopes	Haulages
1	6000 haulage drift	10,000	0.20	0.13			1
2	6080 haulage development	7,000	0.09	0.06		2	
3	6012 slusher	1,800	0.14	0.09		1	
4	6012 drill	2,500	0.10	0.06		1	
5	6014 No. 1 slusher	convection	0.11	0.09		2	
6	6014 No. 2 slusher	natf flow	0.13	0.13		2	
7	6099 lunchroom	2,000	Nil	0.02		1	
8	0901 slusher	2,000	Nil	0.02		4	
9	1499 lunchroom	nat. flow	0	-		1	
10	2014 slusher	1,800	0.17	0.19		2	
11	2014 access	nat. flow	0.11	0.05		2	
12	2204 set up	7,000	Nil	0.11		2	
13	2104 slusher	2,500	0.10	0.15		2	
14	2104 work drift	2,500	0.65	0.54		2	
15	2000 haulage	19,000	Nil	-			1
16	1-4 station area	adequate	0	-			5
17	1980 haulage development	7,000	Nil	0.02		2	
18	1702 slusher	1,500	0.54	0.52		2	
19	1702 work drift	2,000	0.35	0.32		2	
20	1703 slusher	600	0.70	0.81		2	
21	1706 slusher	1,200	0.31	0.46		2	
22	1706 drill	2,000	0.35	0.38		2	
23	1703 drill	2,000	0.55	0.67		2	
24	1705 slusher	eddy flow	0.69	0.71		2	
25	1709 raise development	2,000	0.48	0.69		2	
26	1700 haulage	12,000	0.54	0.70			3
27	1099 lunchroom	2,000	Nil	-		1	
28	1401 drill	8,000	Nil	0.03		1	
29	1401 slusher	1,500	Nil	0.02		1	
30	5400 CP drill	3,000	0.09	0.08		1	
31	5302 slusher	2,000	0.12	0.09		1	
32	5302 work drift	3,000	0.18	0.16		1	
33	5311 slusher	eddy flow	0.27	0.21		2	
34	5311 access	nat. flow	0.20	0.19		2	
35	5300 haulage	25,000	Nil	0.01			1

Sample No.	Sample Location	Ventilation c.f.m.	Working Levels State	Working Levels K.M.	M&M	Stopes	Haulages
36	5101 slusher	1,200	0.65	0.23		2	
37	5101 drill	500	0.82	1.07		2	
38	5101 drill	nat. flow	0.70	0.92	Resample		
39	5099 lunchroom	1,000	Nil	0.07		1	
40	4000 haulage	40,000	Nil	0.03			1
41	4280 haulage development	8,000	0.55	0.52		4	
42	4111 No. 1 slusher	1,200	0.13	0.11		2	
43	4111 No. 2 slusher	1,000	0.11	0.07		2	
44	1801 slusher	convection	Nil	0.04		1	
45	3216 slusher	nat. flow	0.19	0.22		4	
46	3215 slusher	1,200	0.11	0.12		4	
47	3200 haulage	10,000	Nil	0.01			1
48	1800 haulage	5,000	Nil	0			1
49	1200 haulage	20,000	Nil	-			1
50	1305 slusher	1,500	0.10	0.11		1	
51	1308 slusher	nat. flow	Nil	0.09		2	
52	1309 slusher	nat. flow	Nil			1	
53	1300 haulage	10,000	Nil	0.07			1
54	1504 slusher	500	0.17	0.36		1	
55	1504 drill	500	0.18	0.20		1	
56	1704 drill	nat. flow	2.3	2.03			
57	1704 slusher	1,500	0.75	0.70			
58	1704 drill	1,800	0.94	1.17			
59	1502 LH drill	1,800	1.00	-			
60	1704 drill		1.20	1.04	Resample		
61	1704 slusher		0.86	0.90	Resample		
62	1704 slusher		0.58	0.58	Resample		
63	1704 drill		0.52	0.66	Pesample		
64	1704 drill		0.60	0.58	Resample		

The average weighted exposures for the various classes of mine personnel were as follows:

Maintenance and Management - 0.26 x working level
Stopes and Developments - 0.28 x working level
Haulage - 0.11 x working level
Total Mine Exposure Index - 0.26 x working level

ORDERS ISSUED 2-19-81

Order No. 1, SIM Rule No. 76-1(2c): For high radiation at 1704 drill position. (57.5-39M) Abated 2-19-81.

Order No. 2, SIM Rule No. 76-1(2c): For high radiation at 1502 longhole drill position. (57.5-39M) Abated 2-19-81.

NOTICES ISSUED 2-19-81

Notice No. 1, Section 69-32-12, NMSA: Explosives shall be transported in insulated containers. Abated 2-19-81.

Notice No. 2, Section 69-32-1, NMSA: Explosives shall be properly stored at 3216 stope. Abated 2-19-81.

Notice No. 3, Section 69-32-12, NMSA: Explosives shall be stored and handled properly at the service compartment used by 1704 stope. Abated 2-19-81.

The inspection was discussed with Mr. Bill Wenger, Mine Superintendent.

ACKNOWLEDGEMENT

The courtesy and cooperation extended by the staff and personnel of the Section 19 mine was greatly appreciated.

Inspected and Reported by:
George C. Henckel, III
Dust and Mine Gas Inspector
Deputy Inspector of Mines

jmz

Approved: Joe D. Longacre Jr.
JOE D. LONGACRE, SR.
State Inspector of Mines

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
BUREAU OF MINE INSPECTION
2340 MENAUL, N.E., SUITE 106
ALBUQUERQUE, NEW MEXICO 87107

SAFETY FIRST

JOE D. LONGACRE, SR.
STATE INSPECTOR OF MINES

OFFICE TELEPHONE 842-3066
RESIDENCE PHONE 344-1129

REPORT OF INSPECTION

I.D. No. 2901699-Eberle Mine & Mill
Challenge Mining Company (Name) { Mine & Mill } typed Feb. 20, 1981 / Feb. 12, 1981 (Date of Inspection)

Gold & Silver (Classification of Mine) Catron (County in which located) T. O'Donnell, Man in Charge (Company representative present at inspection)

Pursuant to the Mining Laws of the State of New Mexico, Section 69-5-10, an inspection, as designated above, has been made. During this inspection the following was noted:

GENERAL INFORMATION

The primary purpose of this inspection was to check radon-daughter concentrations in each working place of the mine, to measure quantity of air supplied to each man working underground and to calculate a time-weighted exposure for each of the various classes of mine personnel.

For collecting the alpha particles, the MSA Monitaire air sampler, U.S. Bureau of Mines approval No. 2F-2004 was used. For counting the alpha disintegration, the PS-1 Eberline PRM-4 pulse rate in combination with the pulse integrator P1-1 was used.

Owner and Operator: Challenge Mining Company

Location: In the Cooney mining district, ½ mile south of Mogollon, New Mexico

Employment: 8

Work Schedule:
Hours per day 8
Shifts per day 1
Hours per week 40

Company Officials:
R. Manning, General Manager
T. O'Donnell, Man in Charge

Mining method: enlarging drifts and ore salvage

Principal product: silver and gold

Last radiation report: May 3, 1978

First- aid training to date: 100%

Lost-time accidents to date: None

The inspector was accompanied by Mr. T. O'Donnell, during the entire period of this inspection. Mr. Alfredo D. Duran, Deputy Inspector of Mines, conducted a safety inspection. Mr. Felix Carrasco, Deputy Inspector of Mines, Electrical, conducted an electrical inspection.

JOE D. LONGACRE, SR.
State Inspector of Mines

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This operation consists of an adit tunnel connected to 2 raises, operation is in the process of mucking out old adit tunnel which will give the mine a second entrance for seconary escapeway purposes.

VENTILATION

Fresh air enters the mine through two raises approximately 90 feet in length and 9 feet by 5 feet in width. It is exhausted through an adit tunnel approximately 400 feet in length and 7 feet by 5 feet wide. Fresh air enters the mine at a rate of 15,000 c.f.m. natural ventilation. Ventilation changes direction when surface temperature changes.

RADON DAUGHTER CONCENTRATIONS

The following is a list of radon daughter concentrations found in each working place of the mine as well as ventilation volume found during this inspection.

A time-weighted exposure calculation for the different types of mine personnel was not made due to the low concentration of radon daughters (.01 working level) found during this inspection. Therefore, the total mine exposure index will be too low, in result, it will be negligible.

Sample No.	Sample Location	Ventilation c.f.m.	Working Level
1	adit drift	4,800	Nil
2	north drift	9,540	Nil
3	south drift	3,200	Nil

As it can be seen in the figures on the above, the concentration of radon-daughters in this mine in terms of working levels are below the standards. Therefore, the company will not have problems with over exposure to the working personnel, when always keeping the same system of ventilation control.

The operator shall become aware of dangers involved when entering old workings appropriate tests shall be made on the quality of air (hydrogen sulfide, oxygen deficiency). The condition of ground and ground control shall not be neglected. Well experienced miners shall work in the repair and reactivating process of this mine.

ACKNOWLEDGEMENT

The courtesy and cooperation of employees are hereby gratefully acknowledged.

Inspected and Reported by:
Gilbert E. Miera
Dust & Mine Gas Inspector
Deputy Inspector of Mines
jlj

Approved: Joe D. Longacre Sr.
JOE D. LONGACRE, SR.
State Inspector of Mines

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
BUREAU OF MINE INSPECTION
2340 MENAUL, N.E., SUITE 106
ALBUQUERQUE, NEW MEXICO 87107

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JOE D. LONGACRE, SR.
STATE INSPECTOR OF MINES

OFFICE TELEPHONE 842-3056
RESIDENCE PHONE 344-1129

RADIATION

REPORT OF INSPECTION

I.D. No. 2900539-Section 30 West
Kerr-McGee Nuclear Corporation (Name) { Mine } typed Feb. 18, 1981
Feb. 2,3,4,5,1981 (Date of Inspection)

Underground Uranium (Classification of Mine) McKinley (County in which located) Fred Bailey, Environmental Sampler (Company representative present at inspection)

Pursuant to the Mining Laws of the State of New Mexico, Section 69-5-10, an inspection, as designated above, has been made. During this inspection the following was noted:

GENERAL INFORMATION

Owner and Operator: Kerr-McGee Nuclear Corporation

Location: approximately 24 miles NW of Grants, NM, Ambrosia Lake mining district

Company Officials:
A. Gebeau, Manager of Operations
H. Whitacre, Manager of Mines
J. Meisner, Division Superintendent
N. Holton, Mine Superintendent
G. Oberhuber, General Mine Foreman

Employment: 190

Previous radiation inspection: Feb. 1980

Work Schedule:
Hours per shift 8
Shifts per day 3
Days per week 5

The inspector was accompanied by Fred Bailey and George Vigil during the inspection. Duplicate radon-daughter samples were taken for comparison purposes.

The mine was ventilated by air delivered and exhausted through the following:

Opening	I.D.	Air Direction	HP	Fan	Ventilation c.f.m.
No. 1 BH	48"	exhaust	200	Westinghouse	58,500
No. 2 BH	48"	intake	(2)125	Joy	63,000
No. 3 BH	45"	exhaust	400	Westinghouse	80,000
No. 4 BH	42"	intake	(2)125	Joy	40,000
No. 5 BH	60"	exhaust	350	Westinghouse	70,000
No. 6 BH	60"	exhaust	200	Westinghouse	62,000

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State Inspector of Mines

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Opening	I.D.	Air Direction	HP	Fan	Ventilation c.f.m.
Shaft	152"	intake	-	-	195,000
No. 3 (Sec.30)	36"	exhaust	30	Hartzell	10,000
No. 4 (Sec.30)	36"	exhaust	125	Joy	15,000
No. 7	48"	exhaust	60	Joy	22,000

Sample No.	Location	Ventilation c.f.m.	Working Level State	Working Level K.M.	Exposures M&M	Exposures Stopes	Exposures Haulages
1	1604 Slusher	1000	0.90	0.41	0.8	2	
2	1604 Drill	1000	0.25	0.11	0.8	1	
3	1600-1200 Haulages	10000	Nil	0.05	0.8		1
4	2009 Slusher	Nat.flow	Nil	0.07	0.8	1	
5	2009 Drill	2000	Nil	0.01	0.8	1	
6	2000 Haulage	12000	0	0.05	0.8		1
7	2207 Slusher	1200	0.10	0.07	0.8	2	
8	2207 Work drift	1500	0.84	1.95	Control sample		
9	2200 Haulage	10000	0	0.01	0.8		1
10	2407 Slusher	1500	Nil	0.04	0.8	1	
11	2407 Drill	Nat.flow	Nil	0.06	0.8	1	
12	2400 Haulage	10000	Nil	0.06	0.8		1
13	2000 Lunchroom	Conv	Nil	0.01	0.8	1	
14	2602 Slusher	1200	0.52	0.37	0.8	1	
15	2602 Drill	1500	0.24	0.13	0.8	1	
16	2603 Raise Develop.	2000	0.07	0.06	0.8	2	
17	2600 Haulage	12000	Nil	-	0.8		1
18	1000 Haulage	90000	Nil	-	0.8		1
19	3700 Haulage	15000	Nil	-	0.8		1
20	3906 Slusher	1500	0.76	0.51	0.8	1.5	
21	3906 Drill	800	0.56	0.53	0.8	0.5	
22	3907 Slusher	800	0.43	0.19	0.8	2	
23	3909 Set up	Nat.flow	0.24	0.11	0.8	2	
24	4101 Slusher	2000	0.50	0.41	0.8	1	
25	4101 Drill	2000	0.42	0.39	0.8	1	
26	4301 Slusher	1200	0.46	0.42	0.8	1	
27	4301 Drill	900	0.50	0.41	0.8	1	
28	3712 Slusher	1500	0.38	0.23	0.8	1	
29	3712 Drill	500	4.2	3.66	0.8	1	
30	3517 Slusher	1200	Nil	-	0.8	2	
31	3119 Slusher	500	Nil	0.07	0.8	1	
32	3119 Drill	500	0.08	0.06	0.8	1	
33	1100 Haulage	60000	0	0.04	0.8		1
34	1100 Lunchroom	Conv.	0	-	0.8	1	
35	1114 Drill	Nat.flow	Nil	0.04	0.8	2	
36	1114 Slusher	1000	0.19	0.18	0.8	2	
37	1709 Slusher	1200	0.05	0.03	0.8	1	
38	1709 Drill	1500	0.13	0.15	0.8	1	
39	1908 Slusher	1000	0.27	0.26	0.8	2	
40	2303 Slusher	1000	0.24	0.33	0.8	2	
41	7007 Slusher	2000	Nil	0.01	0.8	2	

Sample No.	Location	Ventilation c.f.m.	Working Level State	Working Level K.M.	Exposures M&M	Exposures Stopes	Exposures Haulages
42	7010 Slusher	1800	Nil	0.02	0.8	2	
43	7000 Haulage	15000	0.08	0.10	0.8		1
44	7800 Haulage	15000	0	0.02	0.8		1
45	8308 Set up	10000	0.24	0.16	0.8	2	
46	7205 Slusher	1200	0.16	0.12	0.8	2	
47	7207 Slusher	1500	0.40	0.31	0.8	2	
48	7200 Haulage	-	Nil	0.03	0.8		1
49	1-5 Station area	ADQ	Nil	0.01	0.8	4	
50	2300 C.P. Drill	8000	Nil	0.03	0.8	1	
51	5180 Haulage Devel	7000	Nil	0.04	0.8	4	
52	5080 Haulage Devel	7000	Nil	0	0.8	4	
53	5100-5000-1700 Haulage	30000	Nil	0	0.8		1
54	1300 Haulage	60000	Nil	0.01	0.8		1
55	1-4 Station area	ADQ	Nil	0.02	0.8		1
56	0100 Set up	12000	Nil	0	0.8	4	
57	3712 Drill			0.64	C.W.O. 44	ABATED 67	14

The average exposure for the various classes of mine personnel were as follows:

Maintenance and Management - 0.22 x working level
Stopes & Developments - 0.22 x working level
Haulages - 0.01 x working level
Total Mine Exposure Index - 0.20 x working level

CEASE WORK ORDER ISSUED 2-5-81

Order No. 1, SIM Rule No. 76-1(2c): For high radiation at 3712 drill position. (57.5-39M) Abated 2-5-81

The inspection was discussed with Mr. Norman Holton and Dave Maddy.

ACKNOWLEDGEMENT

The cooperation extended by the staff and personnel of the Section 30-W Mine was greatly appreciated.

Inspected and Reported by:
George Henckel
Dust & Mine Gas Inspector
Deputy Inspector of Mines

jlj

Approved: Joe D. Longacre Sr.
JOE D. LONGACRE, SR.
State Inspector of Mines

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
BUREAU OF MINE INSPECTION
2340 MENAUL, N.E., SUITE 106
ALBUQUERQUE, NEW MEXICO 87107

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JOE D. LONGACRE, SR.
STATE INSPECTOR OF MINES

OFFICE TELEPHONE 842-3066
RESIDENCE PHONE 344-1129

RADIATION

REPORT OF INSPECTION

I.D. No. 2900538-Section 30
Kerr-McGee Nuclear Corporation (Name) { Mine } typed Feb. 17, 1981 / Jan. 19,20,21,22,1981 (Date of Inspection)

Underground Uranium (Classification of Mine) McKinley (County in which located) Nancy Woodcock, Environmental Tech. (Company representative present at inspection)

Pursuant to the Mining Laws of the State of New Mexico, Section 69-5-10, an inspection, as designated above, has been made. During this inspection the following was noted:

GENERAL INFORMATION

Date of previous radiation inspection: April, 1980

The operation is located approximately twenty-three (23) miles north of Grants, NM, on State Highway 509 and it is owned and operated by Kerr-McGee Nuclear Corporation.

Employment: 144

Work Schedule:
Hours per shift 8
Shifts per day 3
Days per week 5

Company Officials:
A. Gebeau, Manager of Operations
H. Whitacre, Manager of Mines
J. Meisner, Division Supt.
D. Winsor, Mine Supt.
B. Rion, Gen. Mine Foreman

The inspector was accompanied by Dennis Lorenzo, Susan Sumner, and George Vigil during portions of this inspection. Duplicate samples were taken for comparison purposes.

Opening	I.D.	Air Direction	Ventilation c.f.m.	HP	Fan
No. 1 BH	36"	exhaust	71,900	25	Joy
No. 2 BH	36"	exhaust	19,600	60	Hartzell
No. 3 BH(30N)	42"	exhaust	10,900	25	Hartzell
No. 4 BH(30N)	42"	exhaust	17,400	125	Joy
No. 5 BH	42"	exhaust	16,700	30	Hartzell
No. 6 BH	42"	exhaust	29,200	60(1)	Joy
No. 7 BH	42"	exhaust	16,600	125	Joy
No. 8 BH	42"	intake	73,700	(2)125	Joy
No. 9 BH	48"	intake	51,600	125	Hartzell
No. 10 BH	48"	exhaust	37,800	60	Joy
No. 11 BH	60"	intake	56,400	125	Joy
No. 12 BH	48"	exhaust	36,100	125	Joy

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State Inspector of Mines

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Opening	I.D.	Air Direction	Ventilation c.f.m.	HP	Fan
No. 13 BH	48"	exhaust	60,200	(2)125	Buffalo
No. 14 BH	30"	exhaust	13,400	125	Joy
No. 15 BH	48"	exhaust	36,700	125	Joy
No. 16 BH	60"	intake	69,800	200	Hartzell
Shaft	-	intake	110,000	-	-
No. 1(Sec.33)	36"	intake	9,300	25	Hartzell
No. 2(Sec.33)	36"	intake	9,700	25	Joy
No. 4(Sec.33)	30"	exhaust	7,800	25	Joy
No. 5(Sec.33)	30"	exhaust	5,000	25	Joy
No. 6(Sec.33)	48"	intake	62,500	25	Joy
No. 8(sec.33)	48"	exhaust	28,600	125	Joy
No. 7(Sec.33)	48"	exhaust	12,000		

Main fans were surface mounted, electrically powered axial flow type units. All foreholes were steel lined the length of the opening. Air was distributed to the working places by use of auxiliary fans and vent tubing. Underground airflow was controlled by air doors, bulkheads, curtains, and brattices.

The following is a list of radon-daughter concentrations, ventilation volumes and average weighted exposures:

Sample No.	Location	Ventilation c.f.m.	Working Level State	Working Level K.M.	M&M	Exposures Stopes	Exposures Haulages
1	5101 Drill	1000	0.22	0.20	1	2	
2	4901 Slusher	1800	0.80	1.08	1	4	
3	5101 Slusher	2000	0.42	0.20	1	2	
4	5501 Slusher	Nat.flow	0.29	0.22	1	1	
5	5502 Slusher	nat. flow	0.23	0.25	1	1	
6	5502 Drill	1000	0.06	0.08	1	1	
7	1417 Slusher	Nat.flow	0.15	0.17	1	1	
8	1417 Drill	Nat.flow	0.09	0.12	1	1	
9	5499 Lunchroom	2000	0.11	0.11	1	1	
10	3404 Repair	2000	0.25	0.39	1	2	
11	5700 Haulage Develop.	1500	0.56	0.74	1	2	
12	1400 Haulage Develop.	5000	0.18	0.22	1	2	
13	3400 C.P. Drill	6000	0.13	0.14	1	1	
14	8408 Slusher	1200	0.35	0.37	1	1	
15	8408 Drill	2000	0.50	0.71	1	1	
16	7801 #1 Slusher	700	0.06	0.03	1	2	
17	7801 #2 Slusher	500	Nil	0.02	1	2	
18	6812 Slusher	1200	0.30	0.27	1	4	
19	1015 Slusher	1200	0.48	0.28	1	2	
20	7202 Bolting	4000	0.05	0.02	1	1	
21	7202 #2 Slusher	2000	0.05	0.11	1	1	
22	7202 #1 Slusher	Conv.	0.11	0.09	1	1	
23	1000 Haulage	75000	Nil	0	1		4
24	6801 Lower Slusher	Nat.flow	0.05	0.01	1	1	
25	6801 lower Drill	2000	Nil	0.01	1	1	
26	8600 Lunchroom	Conv.	Nil	-	1	1	
27	2002 Raise Develop.	1000	Nil	0.10	1	2	

Sample No.	Location	Ventilation c.f.m.	Working Level State	Working Level K.M.	Exposures M&M	Exposures Stopes	Exposures Haulages
28	2300 C.P. Drill	5000	0.06	0.08	1	1	
29	2505 Slusher	1500	0.12	0.13	1	1	
30	2505 Drill	2000	0.08	0.07	1	1	
31	2503 Drill	1800	0.80	0.99	1	1	
32	2503 Drill	-	0.29	0.63	Resample, No exposure		
33	2503 #1 Slusher	2000	0.09	0.07	1	1	
34	2503 #2 Slusher	5000	0.09	0.07	1	1	
35	2508 L.H. Drill	3000	Nil	0.06	1	1	
36	2508 Slusher	Nat.flow	Nil	0.05	1	1	
37	3199 Lunchroom	2000	Nil	0.03	1	1	
38	3110 #1 Slusher	1500	0.18	0.17	1	2	
39	3110 #2 Slusher	2000	0.07	0.04	1	2	
40	3110 #3 Slusher	1000	Nil	0	1	2	
41	3100 Haulage	40000	Nil	0.03	1		2
42	5980 Haulage Develop.	8000	0	0.03	1	2	
43	7001 Slusher	Nat.flow	Nil	0.01	1	1	
44	7001 Drill	1000	Nil	0.04	1	1	
45	5928 Raise	Nat.flow	Nil	0.01	1	2	
46	5900 Lunchroom	Conv.	Nil	0.02	1	1	
47	3001 Drill	1000	0.78	0.65	1	2	
48	3001 Slusher	500	0.12	0.11	1	2	
49	1100-1700 Haulages	70000	Nil	-	1		4
50	Station area	ADQ	Nil	-	1		2
					49	72	12

The average weighted exposures for the various classes of mine personnel were as follows:

Maintenance and Management	- 0.16 x working level
Stopes and Developments	- 0.20 x working level
Haulages	- 0.0 x working level
Total Mine Exposure Index	- 0.17 x working level

NOTICE ISSUED JAN.22, 1981

Notice No. 1, SIM Rule No. 74-3(c): The miner in 4901 shall wear his self-rescue device. (57.15-31 a.b.) Abated Jan. 22, 1981

The inspection was discussed with Mine Superintendent, Dennis Winsor.

ACKNOWLEDGEMENT

The cooperation extended by the staff and personnel of the Section 30 Mine was greatly appreciated.

Inspected and Reported by:
George Henckel
Dust & Mine Gas Inspector
Deputy Inspector of Mines

jlj

Approved: Joe D. Longacre Sr.
JOE D. LONGACRE, SR.
State Inspector of Mines

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ENERGY AND MINERALS DEPARTMENT
BUREAU OF MINE INSPECTION
2340 MENAUL, N.E., SUITE 106
ALBUQUERQUE, NEW MEXICO 87107

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JOE D. LONGACRE, SR.
STATE INSPECTOR OF MINES

OFFICE TELEPHONE 842-3066
RESIDENCE PHONE 344-1129

RADIATION

REPORT OF INSPECTION

I.D. No. 2900543
Section 36 Mine (Kerr-McGee Nuclear Corporation) { Mine } Typed January 27, 1981
(Name) January 12,13,14, 1981
(Date of inspection)

Underground Uranium | McKinley | Ellen Turner, Environmental Technician
(Classification of Mine) (County in which located) (Company representative present at inspection)

Pursuant to the Mining Laws of the State of New Mexico, Section 69-5-10, an inspection, as designated above, has been made. During this inspection the following was noted:

GENERAL INFORMATION

Owner and Operator: Kerr-McGee Nuclear Corporation

Location: thirty-one miles N of Grants, NM, Ambrosia Lake Mining District.

Company Officials:
A. Gebeau, Manager of Operations
H. Whitacre, Manager of Mines
N. Erickson, Division Superintendent
J. Kunitz, Mine Superintendent
J. Denton, General Mine Foreman

Employment: 150

Work Schedule:
Hours per shift 8
Shifts per day 3
Days per week 5

Previous Radiation Inspection: February, 1980

The inspector was accompanied by Ellen Turner during the inspection. Duplicate radon daughter samples were taken for comparison purposes.

The mine was ventilated by air delivered and exhausted through the following openings:

Opening	I.D.	Air Direction	Ventilation c.f.m.	HP	Fan
No. 1 BH	36"	exhaust	21,600	20	Joy
No. 2 BH	48"	exhaust	62,300	350	Westinghouse Centrifugal
No. 3 BH	60"	exhaust	41,000	60	Joy
No. 4 BH	60"	exhaust	84,000	350	Westinghouse Centrifugal
No. 5 BH	60"	intake	80,000	-	-
Shaft	14'	intake	144,000	-	-

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State Inspector of Mines

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Main fans were surface mounted, electrically powered, centrifugal and axial-flow type units. Boreholes were steel lined throughout the length of the opening. Auxiliary fans and vent tubing were used to direct the primary airflow to working places. Underground airflow was controlled by use of air doors, bulkheads, curtains and brattices.

The following is a list of radon-daughter concentrations and ventilation volumes.

Sample No.	Sample Location	Ventilation c.f.m.	Working Levels		Man-Shift Exposure		
			State	K.M.	M&M	Stopes	Haulages
1	7101 slusher	1,500	0.18	0.19	1	4	
2	7102 slusher	1,500	0.28	0.30	1	2	
3	4903 raise development	nat. flow	0.25	0.38	1	2	
4	7001 cut out	6,500	0.30	0.29	1	2	
5	4900 haulage	8,000	0.25	0.13	1		2
6	4900 lunchroom	nat. flow	0.00	0.16	1	1	
7	5401 slusher	2,000	0.35	0.58	1	1	
8	5401 drill	2,000	0.37	0.30	1	1	
9	5801 No. 1 slusher	3,000	0.16	0.12	1	1	
10	5801 No. 2 slusher	1,200	0.13	0.04	1	0.5	
11	5801 drill	1,000	0.61	0.51	1	0.5	
12	5501 slusher	2,000	0.07	0.10	1	2	
13	4799 lunchroom	nat. flow	0.23	0.18	1	1	
14	1400 haulage	25,000	0.19	0.19	1		2
15	1600 haulage development	8,000	0.58	0.56	1	2	
16	1506 raise	5,000	0.62	0.57	1	2	
17	1504 drill	2,500	0.48	0.42	1	1	
18	1504 slusher	1,500	0.47	0.39	1	1	
19	1503 drill	2,500	0.47	0.54	1	1	
20	1503 slusher	convection	0.42	0.59	1	1	
21	1500 haulage	30,000	0.27	0.18	1		2
22	Sec. 1 lunchroom	nat. flow	0.20	0.20	1	1	
23	1302 drill	2,000	0.52	0.59	1	1	
24	1302 slusher	1,200	0.37	0.66	1	1	
25	1303 drill	2,000	0.38	0.33	1	2	
26	1303 No. 2 slusher	1,200	0.25	0.18	1	1	
27	1303 No. 1 slusher	convection	0.33	0.38	1	1	
28	1702 slusher	3,000	0.28	0.20	1	2	
29	1701 drill	2,500	0.62	0.44	1	2	
30	1701 slusher	nat. flow	0.35	0.35	1	2	
31	1200-1100-800 haulages	73,000	0.20	0.14	1		2
32	8300 haulage development	6,000	0.17	0.05	1	2	
33	0900 haulage development	6,000	0.11	0.13	1	2	
34	0700 haulage	15,000	0.37	0.54	1		2
35	timber barn	15,000	0.55	0.62	1	1	2
36	2900 CP drill	4,000	Nil	0.02	1	1	
37	0900 haulage development	5,000	Nil	0.03	1	2	
38	0907 stope	900	Nil	0.04	1	2	
39	0906 bulkhead crew	nat. flow	0.15	0.21	1	2	
40	0903 slusher	1,800	0.19	0.24	1	4	
					40	55	12

The average weighted exposures for the various classes of mine personnel were as follows:

Maintenance and Management	- 0.30 x working level
Stopes and Developments	- 0.28 x working level
Haulages	- 0.31 x working level
Total Mine Exposure Index	- 0.29 x working level

NOTICES ISSUED 1-14-81

Notice No. 1, SIM Rule No. 74-3(c): The man in 1702 stope shall wear a self-rescue device. (57.15-31(a,b) Abated 1-14-81

The inspection was discussed with Messrs. Jim Kunitz, Jim Denton, Harry Gonzales and Chris Baldwin.

ACKNOWLEDGEMENT

The courtesy and cooperation extended by the staff and personnel of the Section 36 Mine was greatly appreciated.

Inspected and Reported by:
George C. Henckel
Dust and Mine Gas Inspector
Deputy Inspector of Mines

jmz

Approved: Joe D. Longacre Jr.
JOE D. LONGACRE, SR.
State Inspector of Mines

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT
BUREAU OF MINE INSPECTION
2340 MENAUL, N.E., SUITE 106
ALBUQUERQUE, NEW MEXICO 87107

→ File

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SAFETY FIRST

JOE D. LONGACRE, SR.
STATE INSPECTOR OF MINES

RECEIVED
FEB 02 1981
RADIATION PROTECTION SECTION

OFFICE TELEPHONE 842-3065
RESIDENCE PHONE 344-1129

RADIATION

REPORT OF INSPECTION

I.D. No. 2900542
Section 35 (Kerr-McGee Nuclear Corporation) { Mine } Typed January 27, 1981; January 5,6,7,8,9,15, 1981
(Name) (Date of Inspection)

Underground Uranium (Classification of Mine) | McKinley (County in which located) | George Trujillo, Environmental Technician (Company representative present at inspection)

Pursuant to the Mining Laws of the State of New Mexico, Section 69-5-10, an inspection, as designated above, has been made. During this inspection the following was noted:

GENERAL INFORMATION

The operation is located approximately twenty-seven miles north of Grants, New Mexico, Ambrosia Lake mining district. The operation is owned and operated by Kerr-McGee Nuclear Corporation.

Employment: 240

Work Schedule:
- Hours per shift 8
- Shifts per day 3
- Days per week 5

Company Officials:
A. Gebeau, Manager of Operations
H. Whitacre, Manager of Mines
N. Erickson, Division Superintendent
R. Bunnell, Mine Superintendent
F. Gonzales, General Mine Foreman

Previous Radiation Inspection: July, 1980

Inspection Party: Kerr-McGee Nuclear Corporation
George Trujillo, Environmental Technician
Brian Shaw, Environmental Sampler
Betsy Neuhause, Environmental Sampler

NM Bureau of Mine Inspection
George C. Henckel, Dust and Mine Gas Inspector

The mine is ventilated by air delivered and exhausted through the following openings:

Opening	ID	Air Direction	Ventilation c.f.m.	Fan	HP
No. 1 BH	60	exhaust	85,000	Westinghouse Cent.	350
No. 2 BH	60	exhaust	86,000	Westinghouse Cent.	350
No. 3 BH	60	exhaust	74,500	Westinghouse Cent.	350
No. 4 BH	60	exhaust	35,800	Joy	125

JOE D. LONGACRE, SR.
State Inspector of Mines

ONE COPY OF THIS REPORT SHALL BE POSTED IN A CONSPICUOUS PLACE AT THE MINE

Opening	ID	Air Direction	Ventilation c.f.m.	Fan	HP
No. 5 BH	60	exhaust	54,600	Western	(2)100
No. 6 BH	60	exhaust	44,700	Joy	(2)125
No. 7 BH	60	intake	156,600	Hartzell	200
No. 8 BH	60	exhaust	90,400	Westinghouse Cent.	350
Shaft	60	intake	314,400	-	-

Main fans are surface mounted, electrically powered centrifugal and axial flow type units. Boreholes are cased the length of the opening. Air is directed underground by use of auxiliary fans and vent tubing, curtains, brattices, bulkheads and air doors.

The following is a list of radon-daughter concentrations, ventilation volumes and average weighted exposures:

Sample No.	Sample Location	Ventilation c.f.m.	Working Levels State	Working Levels K.M.	Man-Shift Exposure M&M	Man-Shift Exposure Stopes	Man-Shift Exposure Haulages
1	3612 slusher	nat. flow	0.30	0.53	0.7	3	
2	3612 drill	nat. flow	0.90	1.31	0.7	2	
3	3603 access	-	0.76	0.70-Control Sample; No Exposure			
4	3603 LH drill	nat. flow	0.68	0.56	0.7	1	
5	3605 development	6,500	0.21	0.29	0.7	2	
6	3697 shop	6,000	0.20	0.20	2		
7	3600 lunchroom	2,000	0.19	0.19	0.7	1	
8	3604 development	6,000	0.15	0.08	0.7	1	
9	3603 LH drill	-	0.30	0.30 - Resample			
10	3612 drill	-	0.56	0.58 - Resample			
11	3612 haulage	nat. flow	0.12	0.09	0.7		2
12	5504 drill	1,000	0.05	0.13	0.7	1	
13	5504 slusher	1,000	0.05	0.13	0.7	1	
14	5700 haulage development	3,000	0.15	0.08	0.7	2	
15	5100 haulage development	4,000	0.13	0.15	0.7	2	
16	5100 haulage	8,000	0.09	-	0.7		3
17	7100 CP drill	5,000	0.05	0.11	0.7	1	
18	2-2 station area	adequate	Nil	0.00	0.7	3	
19	4380 haulage development	6,000	Nil	0.05	0.7	2	
20	4302 drill	700	0.13	0.12	0.7	1	
21	4302 No. 2 slusher	nat. flow	0.23	0.19	0.7	1	
22	4301 slusher	nat. flow	0.25	0.30	0.7	1	
23	4301 drill	2,000	0.11	0.11	0.7	1	
24	4002 slusher	convection	0.23	0.29	0.7	1	
25	4002 drill	500	0.19	0.15	0.7	1	
26	4001 No. 2 slusher	700	0.13	0.12	0.7	1	
27	4001 No. 1 slusher	500	0.12	0.12	0.7	1	
28	6106 No. 1 slusher	nat. flow	Nil	0.03	0.7	2	
29	6106 No. 2 slusher	convection	0.08	0.10	0.7	2	
30	6106 timber	1,000	0.42	0.50	0.7	1	
31	2-1 mechanic shop	4,000	Nil	0.00	3		
32	2-1 station area	adequate	Nil	0.00	0.7	3	3
33	2-1 lunchroom	2,000	Nil	0.01	0.7	1	
34	4106 slusher	1,500	Nil	0.12	0.7	1	
35	4106 drill	2,000	0.64	0.52	0.7	1	
36	4101 drill	nat.flow	5.2	2.08	0.7	2	
37	4102 slusher	1,500	0.12	0.11	0.7	2	

Sample No.	Sample Location	Ventilation c.f.m.	Working Levels State	Working Levels K.M.	Man-Shift Exposure M&M	Man-Shift Exposure Stopes	Man-Shift Exposure Haulages
38	4101 slusher	convection	0.19	0.26	0.7	2	
39	4000,3000 haulages	100,000	Nil		0.7		3
40	8800 CP drill	5,000	0.20	0.15	0.7	1	
41	8604 raise development	2,000	0.17	0.27	0.7	2	
42	8603 raise development	2,500	0.14	0.16	0.7	2	
43	8602 slusher	1,000	0.13	0.18	0.7	2	
44	8403 cut out	convection	0.08	0.08	0.7	2	
45	8200 winze	2,000	0.18	0.15	0.7	2	
46	8000,1000 haulages	60,000	Nil	-	0.7		3
47	8500 CP drill	3,000	0.24	0.24	0.7	1	
48	9500 raise borer	7,000	0.72	0.72	0.7	2	
49	9103 drill	2,000	0.66	0.75	0.7	1	
50	9103 slusher	2,000	0.88	0.69	0.7	1	
51	9102 access	7,000	0.51	0.57	0.7	2	
52	9102 LH drill	7,000	0.48	0.56	0.7	1	
53	9102 slusher	1,500	0.45	0.50	0.7	2	
54	9301 slusher	nat. flow	0.31	0.27	0.7	1	
55	9301 cut out	1,800	0.70	0.94	0.7	1	
56	9301 drill	3,000	0.27	0.15	0.7	1	
57	9300 lunchroom	1,500	0.23	0.22	0.7	1	
58	9600 haulage development	7,000	0.15	0.19	0.7	4	
59	9000,9600 haulages	40,000	0.10	0.12	0.7		3
60	9803 cut out	3,500	Nil	0.11	0.7	1	
61	9801 raise development	1,000	0.05	0.03	0.7	2	
62	9801 development	5,000	0.10	0.09	0.7	2	
63	9802 No. 2 slusher	nat. flow	0.26	0.27	0.7	2	
64	9802 No. 1 slusher	nat. flow	0.08	0.10	0.7	2	
65	1711 development	4,000	0.32	0.25	0.7	2	
66	1711 drill	1,200	3.7	3.29	0.7	1	
67	1711 slusher	convection	4.7	5.20 - Control Sample			
68	9805 development	6,000	0.15	0.20	0.7	1	
69	9805 development	6,000	0.30	0.44	0.7	1	
70	9097 shop	nat. flow	Nil	0.00	6.7		
71	9804 development	5,500	0.30	0.31	0.7	2	
72	9806 development	7,500	1.15	1.34	0.7	1	
73	9806 development	7,500	0.48	0.53	0.7	1	
74	9804 development	3,000	0.42	0.41	0.7	2	
75	0908 slusher	1,200	0.07	0.09	0.7	1	
76	0908 timber	2,000	0.14	0.12	0.7	1	
77	1307 No. 2 slusher	convection	0.72	0.39	0.7	0.5	
78	1307 work drift	10,000	0.21	0.24	0.7	0.5	
79	1307 No. 1 slusher	2,000	0.22	0.25	0.7	1	
80	1308 bolting	1,200	0.36	0.28	0.7	1	
81	1308 slusher	eddy flow	0.21	0.20	0.7	1	
82	1505 No. 1 slusher	500	0.31	0.62	0.7	2	
83	1505 No. 2 slusher	1,100	0.09	0.06	0.7	1	
84	1505 drill	1,000	0.42	0.55	0.7	1	
85	0300 haulage	100,000	Nil	0.00	0.7		3
86	0400 lunchroom	2,500	0.16	0.14	0.7	1	
87	1711 development	5,000	0.11	0.11 - Resample			
88	1711 slusher	900	0.20	0.26 - Resample			
89	1711 drill	1,000	0.19	0.18 - Resample CWO Abated			
90	1711 access	-	0.60	0.60 - Control Sample; No Exposure			
91	4101 drill	-	-	0.33 - CWO Abated			
92	9806 development	-	0.58	0.56 - Resample CWO Abated			
				67	107	20	

The average weighted exposures for the various classes of mine personnel were as follows:

Maintenance and Management	- 0.30 x working level
Stopes and Developments	- 0.36 x working level
Haulages	- 0.04 x working level
Total Mine Exposure Index	- 0.31 x working level

CEASE WORK ORDERS ISSUED 1-15-81

Order No. 1, SIM Rule No. 78-1(c): High radiation at 4101 drill position. (57.5-39M) Abated 1-15-81

Order No. 2, SIM Rule No. 78-1(c): High radiation at 1711 drill position. (57.5-39M) Abated 1-15-81.

Order No. 3, SIM Rule No. 78-1(c): High radiation at 9806 development near breakthrough to Sandstone Mine. (57.5-39M) Abated 1-15-81.

NOTICES ISSUED 1-15-81

Notice No. 1, SIM Rule No. 71-2(c): Smoking shall be prohibited in the 2-2 lunchroom. (57.5-41M) Abated 1-15-81

Notice No. 2, SIM Rule No. 71-2(c): Smoking shall be prohibited in the 8600 haulage drift. (57.5-41M) Abated 1-15-81.

The inspection was discussed with Messrs. Ralph Bunnell, Russ Jones and George Trujillo.

ACKNOWLEDGEMENT

The courtesy and cooperation extended by the staff and personnel of the Section 35 Mine was greatfully appreciated.

Inspected and Reported by:
George C. Henckel
Dust and Mine Gas Inspector
Deputy Inspector of Mines

jmz

Approved: Joe D. Longacre Sr.
JOE D. LONGACRE, SR.
State Inspector of Mines