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**STATE OF NEW MEXICO**
**INSPECTOR OF MINES DEPARTMENT**
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SAFETY FIRST

JOE D. LONGACRE, SR.
STATE INSPECTOR OF MINES

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RADIATION & SAFETY

# REPORT OF INSPECTION

I. D. No. 2900542
Section 35 Mine (Kerr-McGee Nuclear Corporation) { Mine
(Name)

Typed July 14, 1977
June 23,24,27,28,29,& 7-7-77
(Date of Inspection)

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

Pursuant to the Mining Laws of the State of New Mexico, Section 63-4-8, an inspection, as designated above, has been made. During this inspection the following was noted:

## GENERAL INFORMATION

Owner & Operator: Kerr-McGee Nuclear Corporation

Location: Approx. 27 miles No. of Grants, New Mexico

Employment:

| | |
|---|---|
| Total | 233 |
| Surface | 30 |
| Underground | 203 |

Work Schedule:

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

Company Officials:
B. Stevens, Manager of Operations
A. Gebeau, Manager of Mines
H. Whitacre, Division Superintendent
R. Bunnell, Mine Superintendent
J. Cleveland, Environmental & Industrial Hygiene Supervisor

Previous Radiation Inspection: April, 1977
Report was posted

Inspection Party: Kerr-McGee Nuclear Corporation
A. E. Borrego, Environmental Control Supervisor
R. Woodcock, Environmental Control Supervisor
J. Fennell, Environmental Technician
R. Swanson, Environmental Technician
D. Liggins, Environmental Technician

Mining Enforcement and Safety Administration (June 24,27,28,29, 1977)
Max Slade, Health Specialist (Washington, D.C.)
James Indenberg, (Washington, D.C.)
Don Rapp, Denver Technical Support
Omer Sauvageau, Metal and Nonmetal Mine Inspector
William Tanner, Jr., Inspector (Rolla, MO)



JOE D. LONGACRE, SR.
State Inspector of Mines

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

State of New Mexico
George C. Henckel, Dust and Mine Gas Inspector

The MESA personnel were conducting a follow up to their survey of January, 1977. Company personnel oftained duplicate radon-daughter samples for comparison purposes.

The mine is opened by a 14' diameter, 4-compartment shaft, 1398 ft. in depth. The shaft is used for the hoisting and lowering of men and materials, hoisting ore and fore ventilation.

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

| Opening | I.D. Size | Air Direction | Air Volume C.F.M. | Make of Fan | H.P. | Depth of Opening |
|---|---|---|---|---|---|---|
| No. 1 BH | 62" | exhaust | 95,000 | Westinghouse | 350 | 1312' |
| No. 2 BH | 62" | exhaust | 90,000 | Hartzell | (2)125 | 1312' |
| No. 3 BH | 62" | exhaust | 90,000 | Westinghouse | 350 | 1312' |
| No. 4 BH | 60" | exhaust | 50,000 | Hartzell | 60 | 1400' |
| No. 5 BH | 60" | intake | 80,000 | Westinghouse | 125 | 1350' |
| Shaft | 14' | intake | 270,000 | - | - | 1398' |
| No. 6 BH | 60" | intake | 50,000 | - | - | 1155' |

Primary fans were surface mounted, electrically powered, centrifugal and axial flow type units. Boreholes were steel lined the length of opening. Auxiliary fans and vent tubing were used to deliver the fresh air to the working places. Underground air flow is controlled by air door, curtains, brattices and bulkheads.

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

| Sample No. | Sample Location | Ventilation C.F.M. | M&M | Stopes | Working Level |
|---|---|---|---|---|---|
| 1 | 8080 cut out | 2,600 | 0.7 | 2.0 | 0.2 |
| 2 | 1004 slusher | 2,000 | 0.7 | 2.0 | 0.14 |
| 3 | 6103 timber repair | 3,000 | 0.7 | 3.0 | 0.95 |
| 4 | 6507 No. 2 slusher | 500 | 0.7 | 2.0 | 0.86 |
| 5 | 6507 No. 1 slusher | 2,000 | 0.7 | 2.0 | 0.35 |
| 6 | 6502 Timber position | 3,000 | 0.7 | 4.0 | 0.4 |
| 7 | 2-1 lunchroom | 3,000 | 0.8 | - | nil |
| 8 | 3501 slusher | 500 | 0.7 | 2.0 | 2.4 |
| 9 | 3001 rockbolting | 1,000 | 0.7 | 1.0 | 0.97 |
| 10 | 3001 slusher | 500 | 0.7 | 1.0 | 0.3 |
| 11 | 3701 access to 3002 | 1,500 | 0.7 | 4.0 | 0.2 |
| 12 | 3801 slusher | 3,500 | 0.7 | 2.0 | nil |
| 13 | 3901 No. 1 slusher | 1,800 | 0.7 | 1.0 | nil |
| 14 | 3901 work drift | 1,200 | 0.7 | 0.5 | nil |
| 15 | 3901 No. 2 slusher | 900 | 0.7 | 0.5 | 0.1 |
| *16 | 3902 slusher | 1,700 | 0.7 | 2.0 | 1.3 |
| 17 | 3902 slusher resample | - RESAMPLE - | | - | 6.2 |
| *18 | 3902 drill position | 2,000 | 0.7 | 1.0 | 6.6 |

| Sample No. | Sample Location | Ventilation C.F.M. | M&M | Stopes | Working Level |
|---|---|---|---|---|---|
| *19 | 3902 to 3903 access | 500 | Control Sample | | 8.6 |
| 20 | 3501 drill | 900 | 0.7 | 1.0 | 0.1 |
| 21 | 3501 slusher | - | RESAMPLE | - | 4.0 |
| 22 | 1310 slusher | 1,800 | 0.7 | 4.0 | 0.7 |
| 23 | 1300 haulage drift | 10,000 | 0.7 | - | 0.1 |
| 24 | 1307 drill | 1,200 | 0.7 | 2.0 | 0.1 |
| 25 | 1307 slusher | 1,200 | 0.7 | 2.0 | 0.1 |
| 26 | 1307 timber position | 1,000 | 0.7 | 2.0 | 0.5 |
| 27 | 1106 drill | 1,200 | 0.7 | 0.5 | 0.2 |
| 28 | 1106 No. 2 slusher | 800 | 0.7 | 0.5 | 0.5 |
| 29 | 1106 No. 1 slusher | 500 | 0.7 | 1.0 | 0.6 |
| 30 | 1105 No. 1 slusher | 1,000 | 0.7 | 1.0 | nil |
| 31 | 1-5 lunchroom | 2,500 | 0.7 | 0.5 | nil |
| 32 | 1502 drill | 2,000 | 0.7 | 1.0 | 0.4 |
| 33 | 1502 slusher | 1,000 | 0.7 | 1.0 | 0.6 |
| 34 | 1701 slusher | 2,500 | 0.7 | 1.0 | 0.4 |
| 35 | 1701 drill | 2,000 | 0.7 | 1.0 | 0.3 |
| 36 | 1501 No. 1 slusher | 2,500 | 0.7 | 2.0 | 0.5 |
| 37 | 1505 slusher | 700 | 0.7 | 2.0 | 0.1 |
| 38 | 0910 No. 1 slusher | 500 | Control Sample | | 0.1 |
| 39 | 0910 drill | 2,000 | Control Sample | | 1.1 |
| 40 | 0910 No. 2 slusher | 500 | Control Sample | | 0.8 |
| 41 | 0910 access | - | Control Sample | | 1.1 |
| 42 | 0910 No. 2 slusher | - | RESAMPLE | - | 0.3 |
| 43 | 3501 slusher | - | RESAMPLE | - | nil |
| **44 | 3902 slusher | - | RESAMPLE | - | 0.6 |
| 45 | 3902 drill | - | RESAMPLE | - | 1.4 |
| | | | 26 | 53 | |

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

Maintenance & Management - 0.6 x working level
Stope & Developments - 0.6 x working level

CEASE WORK ORDERS ISSUED JUNE 29, 1977

Order No. 1, SIM Rule No. 76-1(2c): For high radiation at the 3501 stope slusher. (57.5-39M) Abated July 7, 1977.

Order No. 2, SIM Rule No. 76-2(c): For high radiation in 3902 stope. (57.5-39M) Abate by July 8, 1977.

Order No. 3, Rules Governing Diesel Equipment in Underground Mines for the State of New Mexico, Rule 4(b): The 8000 haulage drift shall be supplied with at least 75 c.f.m./b.h.p. for operation of diesel locomotives. Abated June 29, 1977.

ABATEMENT OF NOTICES ISSUED APRIL 21, 1977

Notice No. 20, SIM Rule No. 71-1(2c); (57.5-2M) Abated June 29, 1977.

ABATEMENT OF NOTICES ISSUED APRIL 14, 1977

Notice No. 2, SIM Rule No. 75-3(2a); (57.5-50(a)M) Abated June 29, 1977

EXTENSION OF NOISE NOTICES ISSUED APRIL 14, 1977

Notice No. 1, SIM Rule No. 75-3(2a): Men drilling with pneumatic drill machine more than mone and one-half (1/2) hours during their eight hour work shift shall be provided with adequate earmuffs and the hazardous noise be reduced to safe levels.

NOTICES ISSUED JUNE 29, 1977

Notice No. 1, Section 63-28-6, NMSA: The ribs at 1308 drill position shall be scaled down. (57.3-22M) Abated June 29, 1977.

Notice No. 2, Section 63-25-1, NMSA: The powder at the bottom of 1501 service compartment shall be cleaned up and properly stored. (57.6-1M) Abated June 29, 1977.

Notice No. 3, Rules and Regulations Effective in the Uranium Mining Areas, Rule No. 1: The roof jack in 1502 shall be used properly to support the ground during rockbolting and wire meshing operations. Abated June 29, 1977.

Notice No. 4, SIM Rule No. 75-1(2c); The air hose to the drill shall be provided with a safety chain. (57.13-21M) Abated June 29, 1977.

Notice No. 5, SIM Rule No. 75-3(2a): The men working 1502 shall wear ear protecting devices when drilling and bolting. (57.5-50M) Abated June 29, 1977.

Notice No. 6, SIM Rule No. 75-1(2c): The air hose for the safety chain. (57.13-21M) Abated June 29, 1977.

Notice No. 7, Section 63-28-6, NMSA: The timber set in 3002 shall be repaired. (57.3-22M) Abated June 29, 1977.

Notice No. 8, Section 63-28-6, NMSA: The 3002 stope shall be sealed where necessary. (57.3-22M) Abated June 29, 1977 .

Notice No. 9, Section 63-28-6, NMSA: The 3901 drill position shall be scaled down. (57.3-22M) Abated June 29, 1977.

Notice No. 10, Section 63-28-6, NMSA: The timber set in 3801 shall be repaired. (57.3-22M) Abated June 29, 1977.

Notice No. 11, SIM Rule No. 71-2(2c): The man in 3801 shall wear a safety line when standing on open grizzly. (57.15-5M) Abated June 29, 1977.

Notice No. 12, SIM Rule No. 71-3(c): The explosives on the 2-1 level shall be transported in non-conductive containers. (57.6-56M) Abated June 29, 1977.

Notice No. 13, SIM Rule No. 71-1(2c): The blasting line in 1700 haulage drift shall be properly insulated and supported. (57.6-122M) Abate by July 8, 1977.

Notice No. 14, SIM Rule No. 71-1(2c): The blasting line in 0300 haulage shall be properly supported and insulated. (57.6-122M) Abate by July 8, 1977.

Notice No. 15, Section 63-28-9, NMSA: Dust shall be controlled at the 0910 No. 1 slusher. Abate by July 8, 1977.

Notice No. 16, Section 63-28-5, NMSA: The grizzly in 1505 stope shall be covered when not in use. (57.11-12M) Abate by July 8, 1977.

Notice No. 17, Section 63-28-6, NMSA: The work drift in 1701 stope shall have the wire mesh in the back repaired. (57.3-22M) Abate by July 8, 1977.

Inspection and MESA's radiation checkup were discussed with Art Gebeau, Hal Whitacre, Charles Gardner, Ralph Bunnell, Jerry Prunier, Al Borrego, Dave Kump, Dave Liggins, Richard Swanson, Ron Woodcock, Colleen Aherns, Jean Fennell, Louis Maese, Don Rapp, Max Slade, James Indenberg and Omer Sauvageau.

ACKNOWLEDGMENT

The courtesy and cooperation of Mr. Ralph Bunnell, staff and personnel of the Section 35 Mine is hereby gratefully acknowledged.

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

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