

UNITED NUCLEAR CORPORATION



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March 25, 2021

ATTN: Document Control Desk, Deputy Director
Division of Decommissioning, Uranium Recovery and Waste Programs
Office of Nuclear Materials Safety and Safeguards
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
#2 White Flint, Mail Stop T8 F-5
Rockville, MD 20852-2738

40-8907

Re: Annual Land Use Report for 2020

Dear Deputy Director:

On behalf of United Nuclear Corporation (UNC), this report is submitted pursuant to NRC Source Materials License No. SUA-1475, Condition 31.

If you have any questions or recommendations, please advise.

Sincerely,

A handwritten signature in cursive script that reads "Max Chischilly, Jr.".

Max Chischilly, Jr.
Radiation Safety Officer

DY:

Enclosure

Cc: Lance Hauer, GE
James Smith, NRC
Bo Pham NRC
Ray L. Kellar, NRC Region IV

NMSS01



ANNUAL LAND USE SURVEY REPORT FOR 2020

UNITED NUCLEAR CORPORATION

LICENSE NO. SUA – 1475

CONDITION NO. 31

MARCH 25, 2021



SURVEY OF LAND OWNERSHIP AND USE WITHIN TWO-MILE RADIUS OF MILL SITE

UNITED NUCLEAR CORPORATION

License No. SUA-1475

Condition No. 31

1.0 Introduction

This report has been prepared pursuant to License Condition 31 of United Nuclear Corporation's License No. SUA - 1475. The information submitted in this report was acquired from the master title plate published by the Bureau of Land Management. United Nuclear Corporation maintains the surface ownership records. The map is a copy of the USGS Quadrangle of Hardground Flats, Oak Springs, and Churchrock, the photo revised in 1979. United Nuclear Corporation's contractor (Wood) assigned site Radiation Safety Officer performed the land use survey.

2.0 Area Ownership and Use

Reference the attached map (figure 1) for location in regards to Mill Site.

Area:	Owner:	Usage:
Section 1	Navajo Tribe	Grazing and well monitoring
Section 2*	United Nuclear	Mill & Tailings site, one unoccupied homesite and well monitoring.
Section 3	Navajo Tribe	Grazing and well monitoring
Section 4	Indian Allotted	Grazing
Section 6	Indian Allotted	Grazing
Section 9	Navajo Tribe	Grazing
Section 10	Indian Allotted	Grazing, twelve homesite, and well monitoring
Section 11	Navajo Tribe	Grazing
Section 12	BLM, A, Etah, Etal	Grazing
Section 13	Navajo Tribe	Grazing
Section 14	Indian Allotted	Grazing
Section 15	Navajo Tribe	Grazing



Area: Section 33	Owner: Navajo Tribe	Usage: Grazing
Section 34	BLM (western portion) United Nuclear (eastern portion)	Grazing
Section 35	Indian Trust for Navajo Tribe	UNC'S Remedial Northeast Churchrock Mine Site is located in this section.
Section 36	United Nuclear	Well monitoring, and pumping/extraction
Map Northern Portion of 2 mile radius	Navajo Reservation	Grazing, 22 home sites (house and hogan but 8 sites are unoccupied), former Kerr McGee's remedial Navajo Mine Site is located in this area, and UNC's biovent monitoring.
Section 31	Indian Allotted	Grazing

***Additional Note for Section 2:**

The Mill has been decommissioned and has been cleaned to meet releasable standards for unrestricted use. Final remediation activity on the tailings area was completed in 1996 with the exception of evaporation pond area, currently used for ground water remediation. Final cover radon flux test result was reported in the "Report On Radon Emanation Testing Of Final Radon Cover Over UNC'S Church Rock Tailings Site, Docket No. 40-80907" submitted on January 3, 1997.

3.0 Current ongoing groundwater mill tailings seepage and other mine remediation activity

- 1) Sample/monitor wells on Sec. 2 and 36 (UNC), Sec. 1 and 3 (Navajo Tribe) and Sec. 10 (Indian Allotted) on a quarterly basis.
- 2) Continual pumping/extraction of wells RW-11, RW-16, RW-17, RW-A and NW-5. These wells are on UNC's Sec. 36 to enhance the remedy for cut off and containment of the migrating Zone 3 seepage impacted water.



- 3) Monthly monitoring (i.e. measure field parameters, in-house bicarbonate and chloride titration test) of wells NBL-2, RW-A, NW series (3 thru 5) and MW-7 to track the northern most migration of the seepage impacted water in Zone 3, Sec. 36. Also included were wells PB-2, PB-3, PB-4, NW-1, NW-2 and MW-6 but currently for water level measurement only, due to wells drying out.
- 4) Monitoring of an active bioventing system installed between May 14 to October 16, 2013 to remediate underlying soil impacted with hydrocarbon predominantly diesel range organics (DRO) and/or total petroleum hydrocarbons (THP) to 1000 mg/kg is ongoing in the northern portion and adjacent to sec. 35 UNC's NECR Mine Site on Navajo Reservation Land.
- 5) Domestic mill well water is being discharged into North and South evaporation pond to maintain a water depth of 0.5 feet in both ponds as an interim radon barrier and to minimize potential wind damage to the liner until final closure.



4.0 Well ID, Use, Location and Formation

Well ID: United Nuclear	Use: Domestic (Active)	Location: Sec. 2-Mill Site	Formation: Westwater
Circle Wash Abandoned	Domestic/ Livestock (Inactive)	Section 14	Alluvium
Unknown ID Abandoned	No Known Use/Covered	Section 11	Alluvium
J.E. Soper#1 Abandoned	No Known Use	Section 1	Two Wells- Members Mancos
BLM - 2	Monitor (Inactive)	Section 12	Alluvium
14T - 586 (Friendship well # 1)	Livestock (Active)	N.I.R. N Part of map	Lower Gallup
NR - 1	Monitor (Inactive)	N.I.R. N Part of map	Alluvium
15K - 303	Livestock (Active)	N.I.R. NE Part of Map	Upper Gallup
SW-1B	Sentinel/ Monitor (Active)	N.I.R. NE Part of map	Upper Gallup
SW-2B	Sentinel/ Monitor (Active)	N.I.R. NE Part of map	Upper Gallup
SW-3B	Sentinel/ Monitor (Active)	N.I.R. NE Part of map	Upper Gallup



5.0 Significant changes or events which took place in 2020 are as follows:

- 1) No change under item 2.0 (Area ownership and Use) and under item 4.0 (Well ID, Use, Location and Formation). Total current home site is thirty-four within the two-mile radius of mill site.
- 2) No quarterly or monthly ground water sampling was performed in April 2nd quarter 2020 in accordance with New Mexico's Governor's Public Health Order of restrictions along with Center for Disease Control (CDC) COVID-19 pandemic guidelines. Also, UNC-CR request for a temporary exemption was granted by NRC on 6-18-20 to defer collecting quarterly ground water samples from monitoring wells in 2nd quarter 2020 ending 6-30-20 and to resume quarterly sampling in July 2020.
- 3) Biovent system was shutdown on 4-9-2020 and no ground water samples have been collected during 2020 from (3) monitoring/sentinel wells (SW-1A, SW-2B and SW-3B) which were installed between December 2019 and January 2020 due to COVID-19 access restrictions.

FIGURE 1

