

# UNITED NUCLEAR CORPORATION



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March 26, 2014

Mr. Andrew Persinko, Deputy Director  
Decommissioning and Uranium Recovery Licensing Directorate  
Division of Waste Management and Environmental Protection  
Office of Federal and State Materials and Environmental Management  
Programs  
U.S. Nuclear Regulatory Commission  
11545 Rockville Pike  
#2 White Flint, Mail Stop T8 F-5  
Rockville, MD 20852-2738

Re: Annual Land Use Report for 2013

Dear Mr. McConnell:

The above report is submitted, pursuant to our NRC Source Materials License No. SUA-1475, Condition 31.

Sincerely,

A handwritten signature in black ink, appearing to read "Max Chischilly, Jr." with a stylized flourish at the end.

Max Chischilly, Jr.  
Radiation Safety Officer

DY:

Enclosure

Cc: Jack E. Whitten, NRC Region IV  
Joe Davis, GE  
Roy Blickwedel, GE  
Yolande Norman, NRC



ANNUAL LAND USE SURVEY REPORT FOR 2012

UNITED NUCLEAR CORPORATION

LICENSE NO. SUA – 1475

CONDITION NO. 31

MARCH 26, 2014



## 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 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 employee 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, eleven 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 4 sites are unoccupied) and former Kerr McGee's remedial Navajo Mine Site is located in this area.
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 tailings seepage 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, PB-2, NW-4 and NW-2. 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-1, NBL-2, PB-2, PB-3, PB-4, RW-A and NW series (1 thru 5), MW-6 and MW-7 to track the northern most migration of the seepage impacted water in Zone 3, Sec. 36.



## 4.0 Well ID, Use, Location and Formation

Well ID: United Nuclear	Use: Domestic (Active)	Location: Sec. 2-Mill Site	Formation: Westwater
Circle Wash	Domestic/ Livestock (Inactive)	Section 14	Alluvium
Unknown ID Abandoned	No Known Use	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

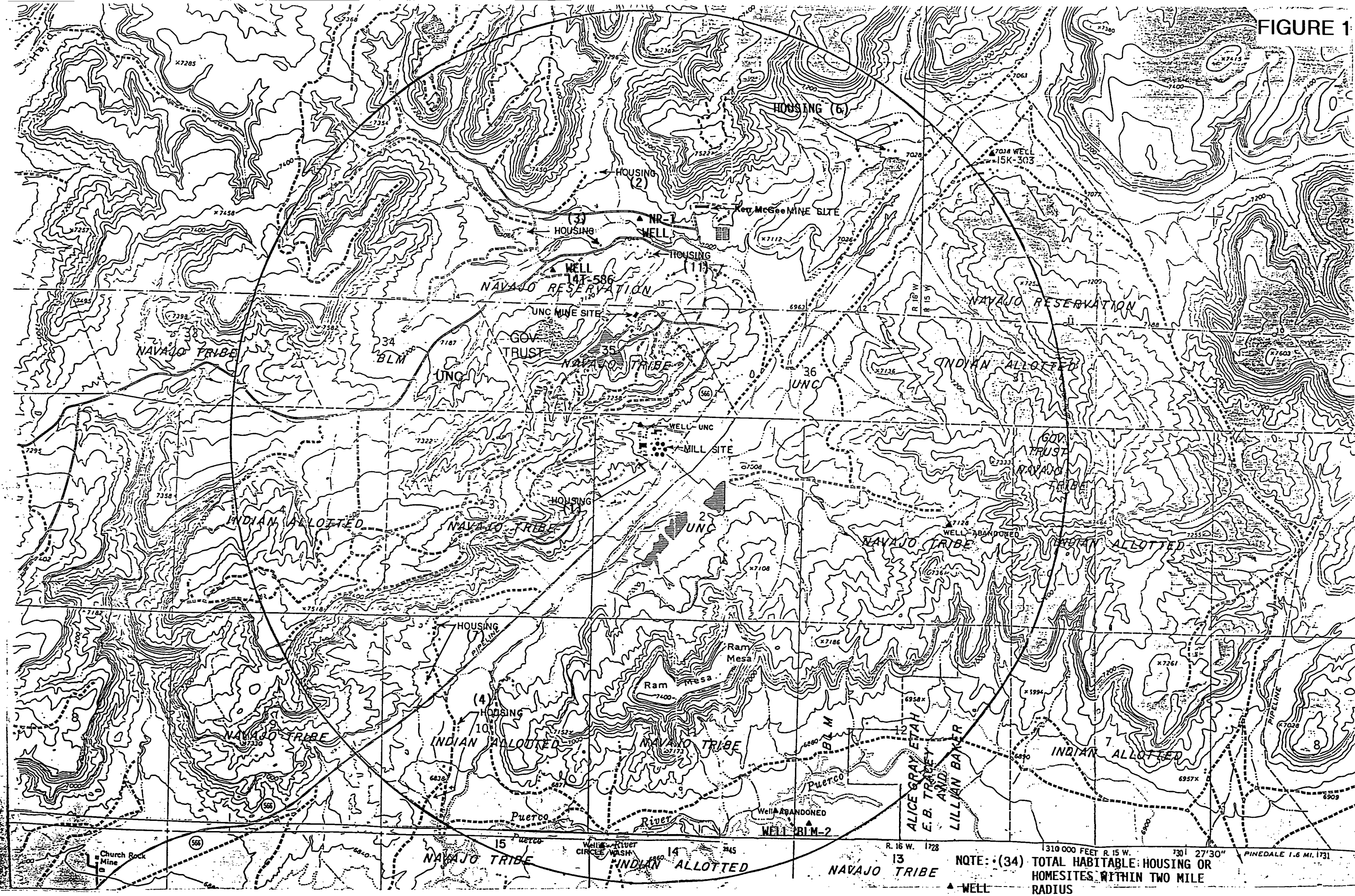
## 5.0 Significant changes or events which took place in 2013 are as follows:

- 1) No change under item 2.0 (Area ownership and Use) and 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) After the August 2009 remedial construction activity (i.e. Interim Removal Action) on UNC'S NECR Mine Site in Sec 35 (Indian Trust Land) and adjacent Navajo Reservation Land; the following pertinent events or changes have since taken place in 2013.
- Further remedial construction activity which involved the complete removal/excavation of soil containing RA-226 exceeding 2.24 pci/gm inside a steel culvert (6'6" x 5'4" x 66') was completed in March and April 2013. This N. culvert is in place on Red Water Pond Road and is part of NECR Mine IRA project. Other task included: 1) transport/consolidate excavated soil to mine stockpile site, 2) culvert interior and surrounding impacted areas were backfilled with clean soil to grade, 3) implement erosion control methods, and 4) preliminary and post radiological verification survey.
  - On October 29, 2013 field activities started on the Northeast Church Rock Mine Site Removal Action (RA) Pre-Design Studies (PDS) Sampling and Analysis Plan. This project involved direct push cone penetration testing, auger drilling with core sampling and onsite geotechnical testing on mine uranium ore impacted soil and mill tailings impoundment. The pre-design phase work plan is to further investigate and pre-determine feasibility to RA alternative selected by USEPA in the Action Memo which includes: 1) removal of up to approximately 1,000,000 cubic yards of mine spoils and debris from Mine Site but volume will be dependent on PDS results, 2) restoration of Mine Site, and 3) consolidation of mine spoils and debris from Mine Site into a repository at Church Rock Mill Site. Field activity ended on December 13, 2013 but Mill laboratory work is still ongoing. UNC-RWP and MWH-HASP was implemented to address radiation protection.

FIGURE 1



NOTE: (34) TOTAL HABITABLE HOUSING OR HOMESITES WITHIN TWO MILE RADIUS