Navajo Abandoned Uranium Mine

Site Screen Report

This form is for use at the site of abandoned uranium mines (AUM) located on Navajo Nation lands. Applicable sites include all mine and mine features that have or have not undergone reclamation by the Navajo Abandoned Mine Lands Reclamation Program, including features, adits, pits and waste piles. Applicable sites also include all AUM sites listed in the USEPA CERCLIS database, all sites listed in the 2008 AUM GIS Report issued by USACOE and USEPA, all AUM sites on allotment lands associated with the Navajo Nation, and any and all AUM sites not listed in any database located on Navajo lands. Reconnaissance of any sites located on lands adjacent to Navajo lands that may be impacting Navajo lands will need to be coordinated with the authorities appropriate to those lands.

The purpose of the form is to ascertain the status and location of the identified AUM site, and record all immediate site information associated with the mine site. Decisions and recommendations on what additional steps are needed will be provided on a separate document.

Mine Name: **Utah No. 1 Lease**
Mine ID: **706**

Navajo AUM North Central Region

Prepared by:

Weston Solutions, Inc.

Contract: W91238-06-F-0083

20074.063.039.0020

April 2012

Part I Site Identification, Location and Status

Site Names and ID numbers as applicable

Mine ID: **706**

Map ID: NC22

CERCLIS: NNN000909310

Navajo Abandoned Mine Land Reclamation Program: NA-0212

Local name / Aliases: Utah No. 1; Skyline Mine - North

Chapter and local area: Oljato

County: San Juan **State:** UT

Lat/Long: 37.0217045111 N / -110.232929866 W

Nearby road and highway: Indian Route 6410 **Local Post Office:** Oljato, AZ

Surface Land Status: check one or more and provide ownership and contact information below

Tribal Trust Land	☒	**Public lands**	☐
Private	☐	**Tribal Fee Land**	☐
Bureau of Land Mgmt	☐	**Allotment**	☐
State	☐	**Fee land**	☐

Subsurface Mineral Rights:

No information on subsurface mineral rights ownership was found in the EPA/AUM Database.

Claim and operator information:

Historical documents identified the operator of the mine in 1944 as Wayne E. Carroll, Lee Shumway, E.H. Carroll, and Harris Shumway, and from 1944 to 1946 as Wayne E. Carroll, Lee Shumway, E.H. Carroll, and Harris Shumway. No additional historical ownership / lease information was identified in the EPA / AUM database.

Number of residential structures within 200 feet of mine: None

Part II Summary of Radiological Readings

Mine ID: 706

Highest gamma radiation measurement: 392,385 counts per minute (cpm)

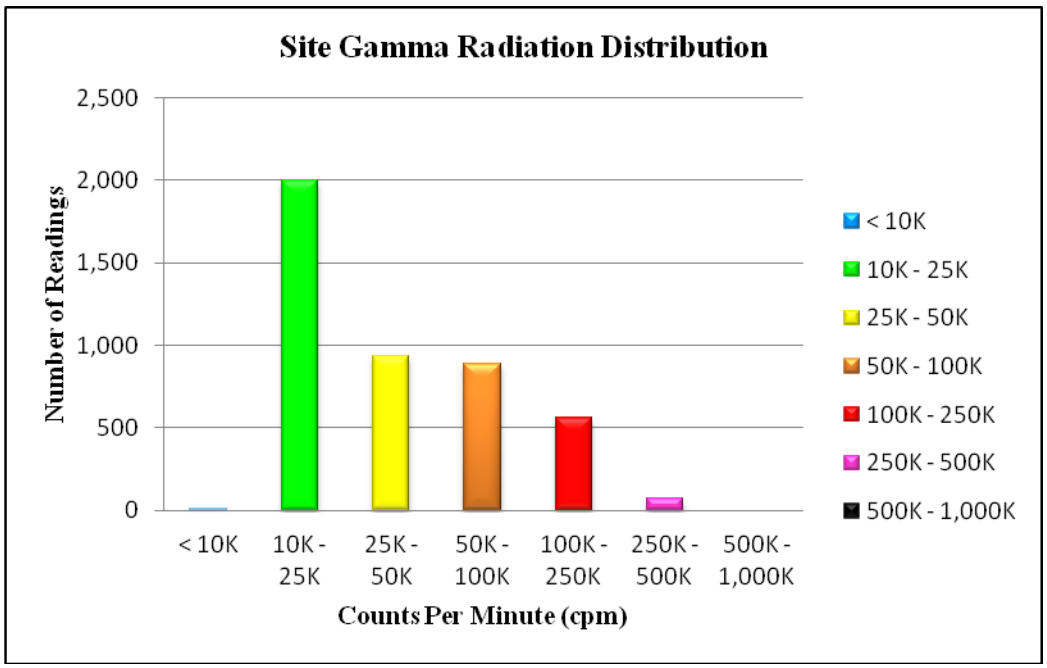
Background Average: 10,327 cpm **Two Times Background:** 20,654 cpm

Describe any other radiological measurements:

A total of 4,459 gamma radiation measurements were collected from the mine site, ranging from 9,763 cpm to 392,385 cpm. Maximum levels of approximately 400,000 cpm were found in the vicinity of the waste rock. The measurements are represented in Figures 1 and 2.

Distribution Chart and Statistics:

Site Gamma Radiation Statistics	
Number of Readings	4,459
Minimum (cpm)	9,763
Maximum (cpm)	392,385
Mean (cpm)	52,155
Median (cpm)	28,177
Standard Deviation	53,339



Part III Status of Reclamation and Mine Waste

Mine ID: 706

The following information was obtained from the Navajo Abandoned Mine Land Reclamation Program (NAMLRP) Point Features Database:

NAMLRP Status of the mine site: Reclaimed: Yes **Waste Pile onsite:** No

NAMLRP Project Number: NA-0212

NAMLRP Mine features: 1 Portal

The following information was obtained from field observations collected during the 2011 site screening:

Provide description and status of all mine sites and features at site. Include all waste piles, adits, pits and other features, and indicate whether they are open, closed, covered, capped, buried or unreclaimed. Indicate approximate size, shape and extent, including description of any reclamation caps. Note condition of all caps.

Observed reclamation work and status:

Adits:
None Observed

Waste Piles:
Waste pile in the southern part of the site, near the top along the bench (just below resistant, course sand/gravel unit), the pile appears to continue offsite, towards the west

Pits:
None Observed

Shafts:
None Observed

Other Debris and Mine Features:
Exploration holes; derilict mine equipment

Part IV Site Observations and Environs

Observed Residential Structures (number and human habitation status of structures at the following distances from the mine site):

0 to 200 feet: None Observed

200 feet to 0.25 mile: None Observed

Observed Public or Commercial Structures (schools, clinics, Chapter Houses, places of business and any other structures used by members of the community at the following distances from the mine site):

0 to 200 feet: None observed

200 feet to 0.25 mile: None observed

Levels measured around the perimeter(s) of the identified structure(s):

None

Observed Water Sources (number and type of wells and surface water sources that are potentially used for human consumption at the following distances from the mine site):

0 to 0.25 miles: None Observed

0.25 miles to 4 miles: 2 mi SE - Reservoir (Gouldings); 2 mi SE - Well Filling Station (Gouldings); 3 mi W - Water Tank (224)

Sensitive Environments (all sensitive environments located within visible range of the mine site, including: wetlands, endangered species, habitats and approximate locations of sites that may be under protection of the government of the Navajo Nation):

None observed

Known Site History (information from interviews with Chapter officials and residents and database review, includes: mine ownership, type of mining operation, period of operation, known amount of production, and any other information provided):

The Utah No. 1 Lease mine claim consists of an area of 15,505 m^2. The mine was identified as being operational in 1944. While operational, the mine had a total reported production volume of 52 tons. No additional historical ownership / lease information was identified in the EPA / AUM database.

Part V Response Action Summary

Summary of Evaluation Factors:

Accessibility:

Was the mine easily accessible to potential human activity?
Yes

Radiological Measurements:

Were any gamma radiation measurements collected at the mine greater than two times the site-specific background levels?
Yes

Waste Piles:

Were any unreclaimed waste piles observed at the mine with gamma radiation measurements greater than two times the site-specific background levels?
Yes

Structures:

Were any structures observed within 200 feet of the mine?
No

Potential Drinking Water Sources:

Were any potential drinking water sources observed within 4 miles of the mine?
Yes

Reclamation:

Was the mine reported to be previously reclaimed, or did the mine appear to be reclaimed?
Yes

Part VI Photos

Photo 1	Mine Site #706 - Berm

Photo 2	Mine Site #706

Photo 3	Mine Site #706

Photo 4	Mine Site #706

Photo 5	Mine Site #706

Photo 6	Mine Site #706

Photo 7	Mine Site #706 – Mining debris

Photo 8	Mine Site #706 – Waste rock

Part VII Contact Reports and Information

Name: Eugene Esplain

Title or official role (if any): Navajo EPA Superfund Program

Telephone number: (928) 871-7331

Address: PO Box 2946, Window Rock, AZ 86515

Information provided: Lead Regulatory Agency

Name: _____

Title or official role (if any): _____

Telephone number: _____

Address: _____

Information provided: _____

Name: _____

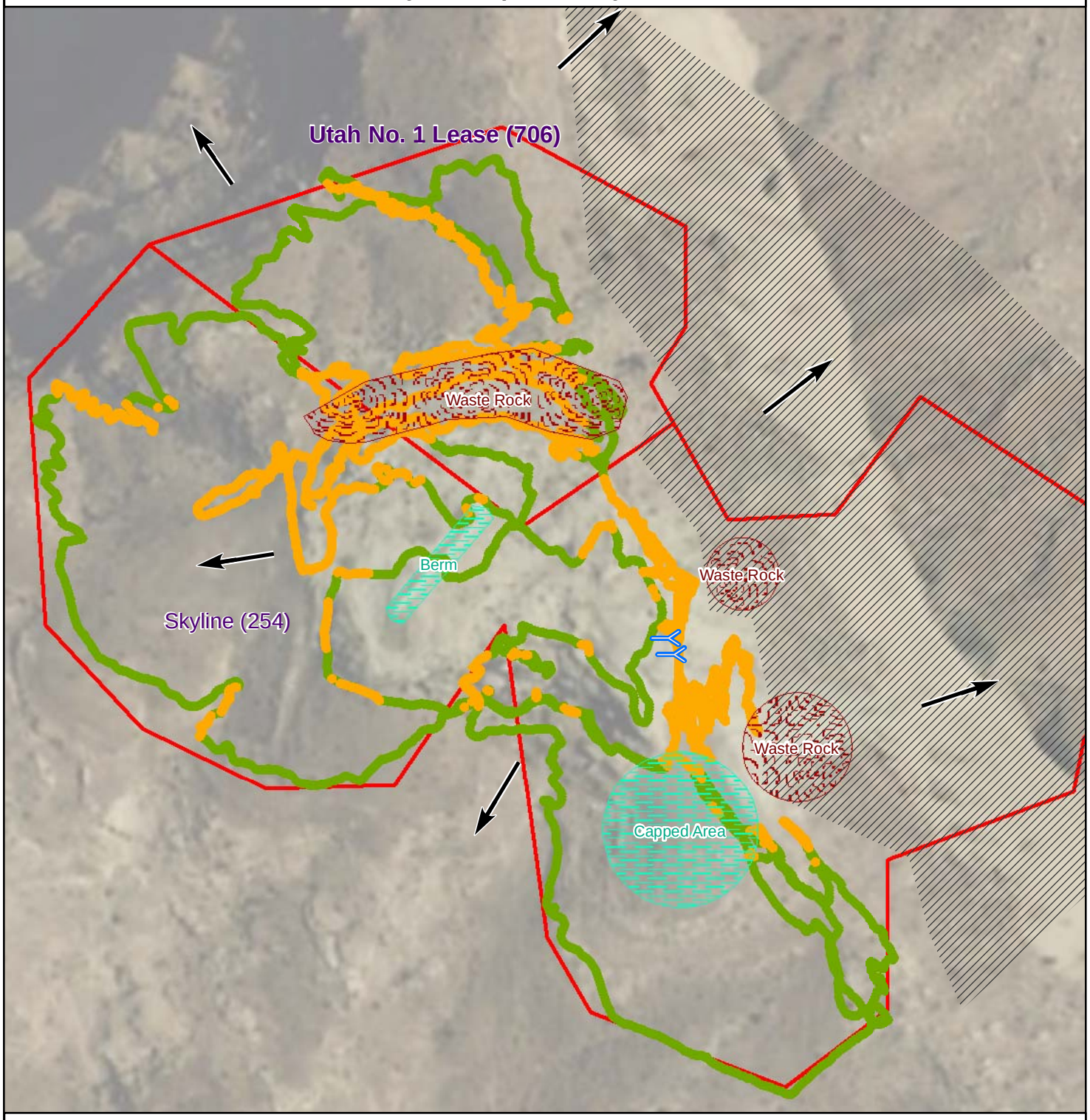
Title or official role (if any): _____

Telephone number: _____

Address: _____

Information provided: _____

Figure 1 - Gamma Radiation Measurements, Above Two Times Background
Utah No. 1 Lease (706)
Oljato Chapter, Navajo Nation



Gamma Radiation Measurements

- < 2X Backgound
- > 2X Background

Measured as counts per minute (cpm)

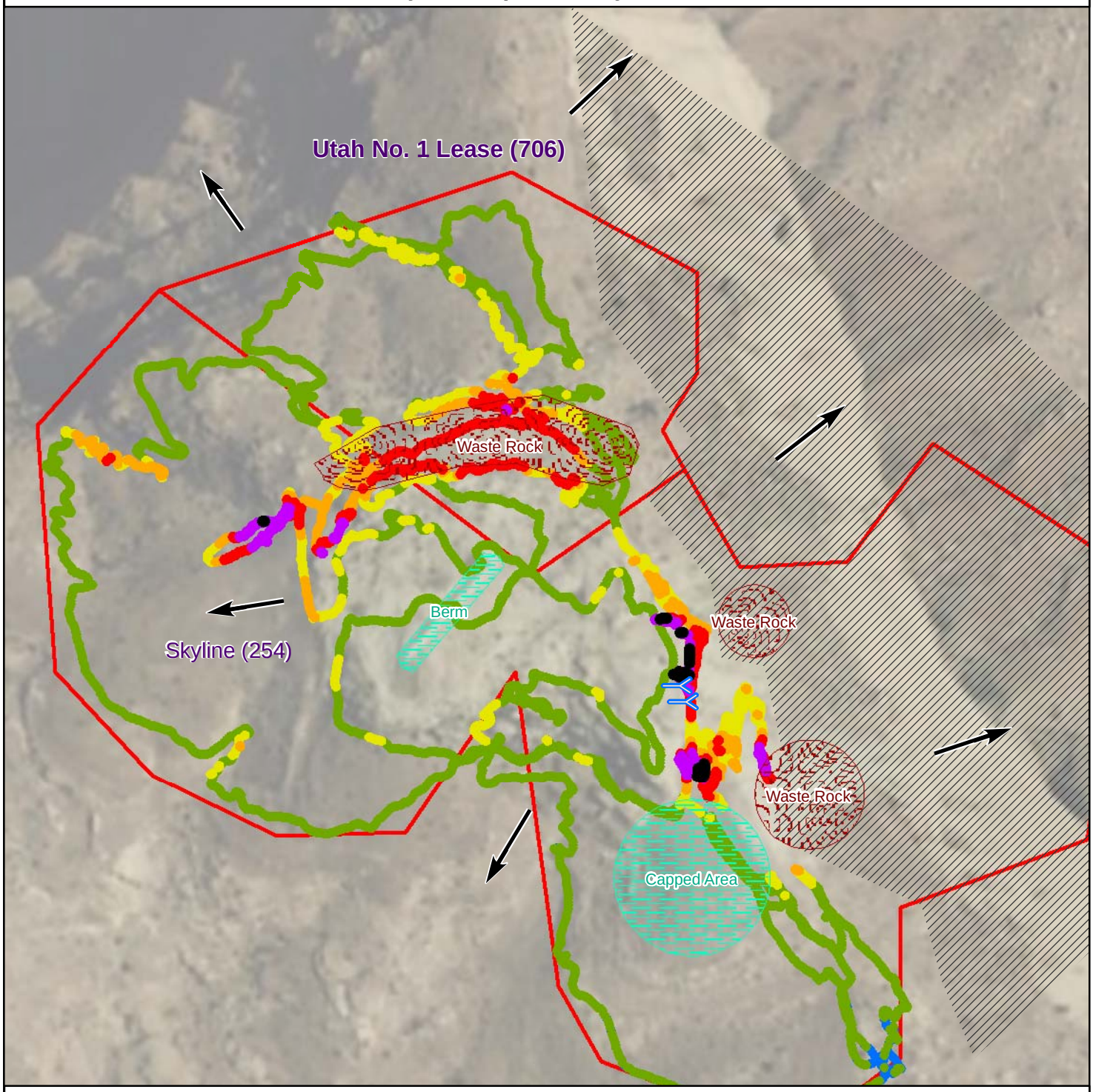
Average background 10,327 cpm

Mine Site Boundary
General Slope Direction
Observed Reclamation Feature
Observed Waste Rock
Observed Structure
Observed Adit

N

Feet
0 **200**

Figure 2 - Gamma Radiation Measurements
Utah No. 1 Lease (706)
Oljato Chapter, Navajo Nation



Gamma Radiation Measurements

- 0 - 10,000 cpm
- 10,000 - 25,000 cpm
- 25,000 - 50,000 cpm
- 50,000 - 100,000 cpm
- 100,000 - 250,000 cpm
- 250,000 - 500,000 cpm
- 500,000 - 1,000,000 cpm

Average background 10,327 cpm

Mine Site Boundary
General Slope Direction
Observed Reclamation Feature
Observed Waste Rock
Observed Structure
Observed Adit

Measured as counts per minute (cpm)

N

Feet
0 **200**