

# 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 and pits. 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 lands not listed in any database located on Navajo lands. Reconnaissance of any sites located on lands adjacent to Navajo lands but that are or 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, to record all immediate site information associated with the mine site and to document the recommendation and/or decision on what additional steps, if any, are needed at the site.*

## **Mac No. 1 AUM Site**

### **Navajo AUM Eastern Region**

**Prepared by:**

**Weston Solutions, Inc.**

**Contract: W91238-06-F-0083**

**12767.063.496.1111**

**May 2009**

**Part I Site Identification, Location and Status**

**Site Names and ID numbers as applicable**

**Mine ID:** 318

**Map ID:** E31

**CERCLIS:** NNN 000 908 727

**NAMLRP:** NOT ASSIGNED

**New Mexico Mining and Mineral Division ID:** NM0034

**New Mexico Bureau of Geology and Mineral Resources:** NMMK0097

**Local name / Aliases:** Mac #1, Kerr McGee

**Chapter and local area:** Mariano Lake Chapter

**Lat/Long:** 35.5434718114 N / -108.267718918 W

**Nearby road and highway:** NM-371, Interstate 40      **Local Post Office:** Thoreau, NM

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

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

**Ownership and contact information:**

No ownership was identified. The mine site property is classified as Indian Allotment land.

## **Part II Site Observations**

**Observed Structures: list number of and describe human habitation status of structures at the following distances from mine:**

**0 to 200 feet:**

**200 feet to 0.25 mile:**

**Observed Public or commercial structure: list and describe all schools, clinics, Chapter Houses, places of business and any other structure used by members of the community at the following distances:**

**0 to 200 feet:** None

**200 feet to 0.25 mile:** None

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

None

**Observed water sources: list the number and type of wells and surface water sources that are potentially used for human consumption at the following distances from the mine:**

**0 to 0.25 miles:** Water tank at the south corner of the site. Water troughs directly adjacent to tank. Old fenced-in well behind grey buildings on the north side. Downed windmill behind well. **0.25 miles to 4 miles:** None

**Sensitive environments: note and describe 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.**

Vegetation changed approaching the grey buildings (Photo 10).

**Known Site History: include information from interviews with Chapter officials and residents.**

**Note information on mine ownership, period of operation, and type of mining operation.**

The Mac No. 1 mine consists of a surface area of 132,340.87 square meters with approximately 33,583.74 square meters of underground workings. Any historical information pertaining to mining operations and historical ownership of the mine site appeared to be unclear.

### **Part III Type, number and reclamation status of mine features**

**Provide description and reclamation 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 reclamation caps.**

Reclamation status of the mine site is currently unknown. A small hole was observed near the concrete pad on the south side of the grey building (Photo 7). No waste piles or other features were observed during the site visit.

### **Part IV Summary of radiological readings**

#### **Background Locations**

#1 8,847 counts per minute (cpm)

#### **Mine site: Mac No. 1**

- See Figures 1 and 2

**Nearby Structure Perimeter** – None

#### **Describe any other radiological measurements:**

A total of 1,349 gamma radiation measurements were collected from the mine site, ranging from 10,636 cpm to 54,684 cpm. Readings were high surrounding the grey buildings (50,000 to 120,000 cpm). Readings around the water tank were approximately 7,500 cpm. Picture 10 shows a difference in vegetation, with readings ranging from 25,000 to 35,000 cpm. The readings gradually increased east towards the grey buildings. The measurements are represented in Figures 1 and 2.

**Part V        Site sketch of all mine features and readings, including locations of all structures, sources of drinking water and any other important features and radiological readings.**

Presented in Figures 1 and 2

**Part VI      Response Action Summary**

**Site Name(s):** Mac No. 1      **Chapter:** Mariano Lake

**Decision Criteria**

**Is there an unreclaimed waste pile at the site?** No

**At what distance from the waste pile is the nearest residential structure located?** N/A

**At what distances from the waste pile are there potential drinking water sources?** N/A

**Is there a reclamation cap or sealed adit in place at the site?** No

**Is the cap/seal functionally intact?** N/A

**Is the cap/seal sufficiently degraded to create a concern about releases?** N/A

**At what distance from the cap/seal is the nearest domestic structure located?** N/A

**At what distance from the cap/seal is the nearest domestic drinking water source?** N/A

**Summary of emergency response factors**

None

**Summary hazard ranking system factors**

Residences within 0.25 miles of site, with nearby gamma radiation measurements found greater than 2 times background levels. Unable to access the residences.

**Summary of reclamation factors**

Reclamation status of the mine site is currently unknown. A small hole was observed near the concrete pad on the south side of the grey building (Photo 7). No waste piles or other features were observed during the site visit.

**Part VII      Photos**







Photo 5. Water tank at south end, towards the south





**Part VIII      Contacts Reports and Information**

Name Stanley Edison

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

Address PO Box 2946, Window Rock, AZ 86515

Information provided General Background and Contact/Access Information

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Name Ms George Padilla

Title or official role (if any) Regional Environmental Scientist, BIA, Navajo Nation

Telephone number (505) 863-8434

Address PO Box 1060, Gallup, NM 87305

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Name \_\_\_\_\_

Title or official role (if any) \_\_\_\_\_

Telephone number \_\_\_\_\_

Information provided \_\_\_\_\_

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Name \_\_\_\_\_

Title or official role (if any) \_\_\_\_\_


Telephone number \_\_\_\_\_

Information provided \_\_\_\_\_


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**Legend**

**Gamma Radiation Measurements**

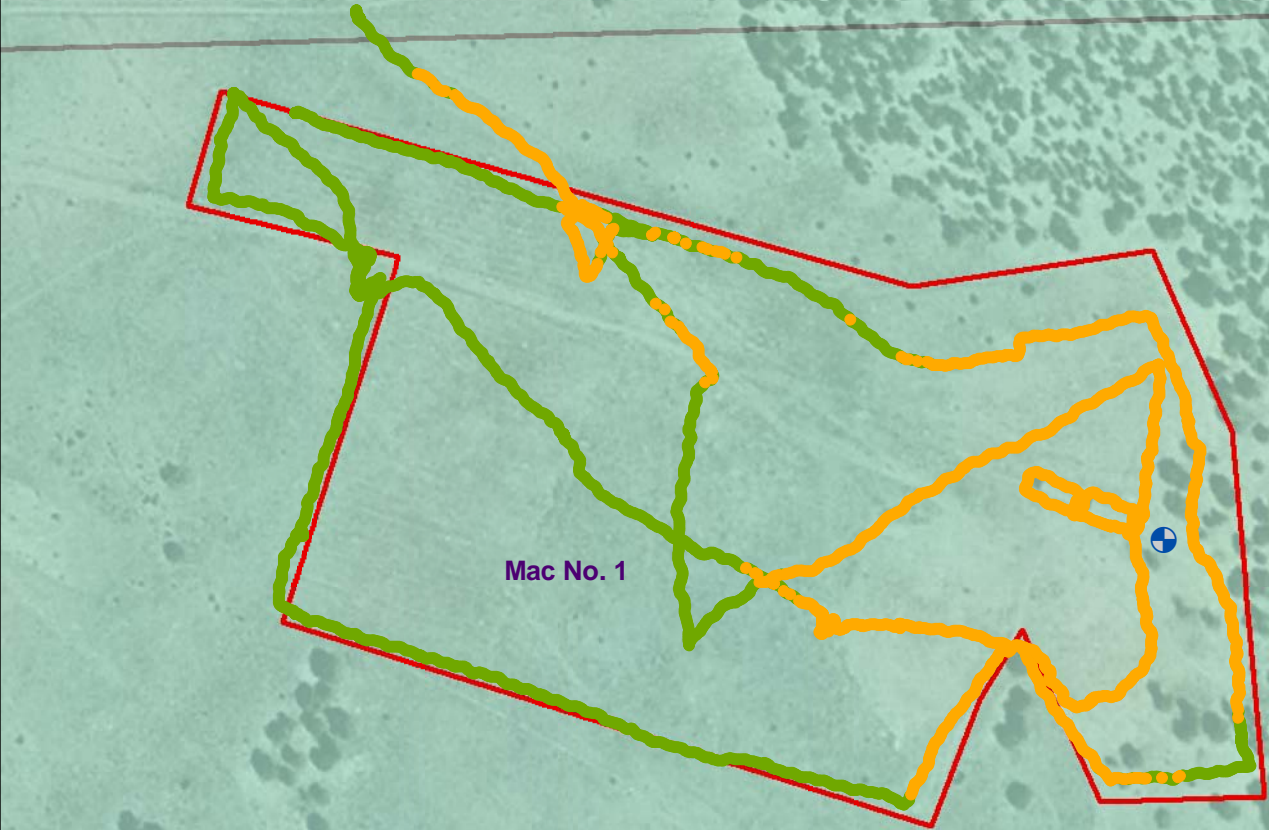
- < 2X Background
- > 2X Background
-  Well

 Indian Allotment

 Mine Claim Boundaries

 Feet  
0 500

Gamma survey conducted in October 2008  
measured as counts per minute (cpm)  
Average background = 8,847 cpm



**Gamma Radiation Measurements  
Above Two Times Background  
Mac No. 1  
Mariano Lake Chapter  
Navajo Nation, New Mexico** Figure 1

# Legend

## Gamma Radiation Measurements

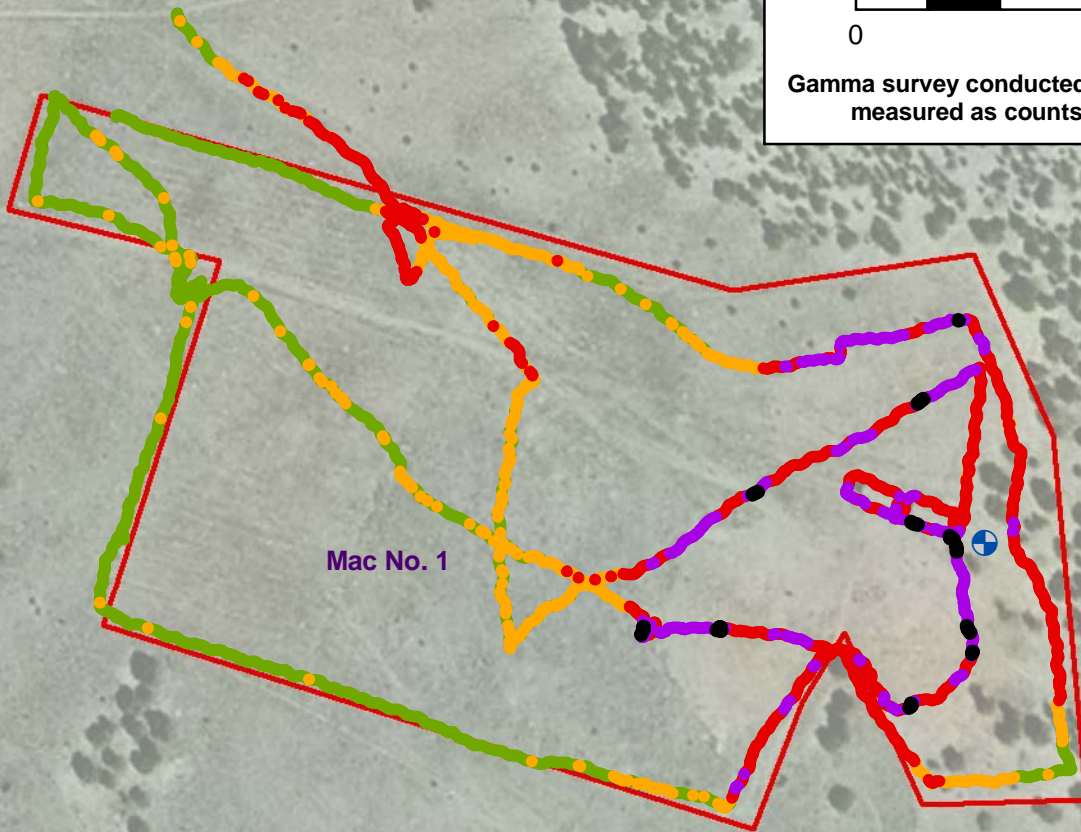
- 0 - 10,000
- 10,000 - 15,000
- 15,000 - 20,000
- 20,000 - 50,000
- 50,000 - 100,000
- > 100,000

⊕ Well

▭ Mine Claim Boundaries



Gamma survey conducted in October 2008  
measured as counts per minute



Mac No. 1



Gamma Radiation Measurements  
Mac No. 1  
Mariano Lake Chapter  
Navajo Nation, New Mexico