SEMS-RM DOCID # 1231643

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: **A & B No. 5**
Mine ID: **171**

Navajo AUM Western Region

Prepared by:

Weston Solutions, Inc.

Contract: W91238-06-F-0083

20074.063.017.0020

August 2011

Part I Site Identification, Location and Status

Site Names and ID numbers as applicable

Mine ID: **171**

Map ID: W10

CERCLIS: NNN000909225

Navajo Abandoned Mine Land Reclamation Program: NA-0112

Local name / Aliases: A & B #5

Chapter and local area: Bodaway / Gap

County: Coconino **State:** Arizona

Lat/Long: 36.0937913377 N / -111.425189496 W

Nearby road and highway: Indian Route 6134 **Local Post Office:** Tuba City, 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:

The mine surface land status is classified as Tribal Trust Land. Historical documents identified the operator of the mine as A & B Mining Corporation in 1954. 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: 171

Highest gamma radiation measurement: 458,658 counts per minute (cpm)

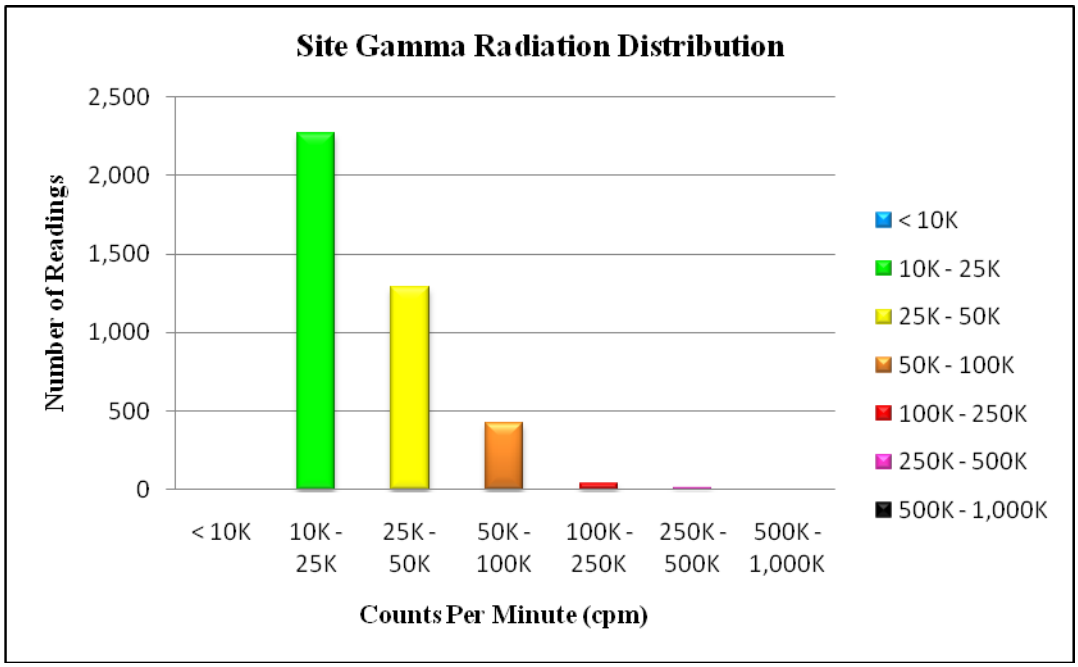
Background Average: 15,031 cpm **Two Times Background:** 30,062 cpm

Describe any other radiological measurements:

A total of 4,027 gamma radiation measurements were collected from the mine site, ranging from 12,889 cpm to 458,658 cpm. Measurements collected in the vicinity of the pit area were found at a maximum level of approximately 450,000 cpm, and the reclamation areas of approximately 50,000 cpm. The measurements are represented in Figures 1 and 2.

Distribution Chart and Statistics:

Site Gamma Radiation Statistics	
Number of Readings	4,027
Minimum (cpm)	12,889
Maximum (cpm)	458,658
Mean (cpm)	31,582
Median (cpm)	23,526
Standard Deviation	24,856



Part III Status of Reclamation and Mine Waste

Mine ID: 171

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-0112

NAMLRP Mine features: 1 Rim Strip / Pit

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:
None observed

Pits:
Open pit area, 200' x 80', tan-yellow gravel

Shafts:
None observed

Other Debris and Mine Features:
4 reclamation caps surrounding open pit area: Cap 1 - 90' dia; Cap 2 - 150'x100'x6'; Cap 3 - 60'x40' x4'; Cap 4 - 300'x150', northwest corner of site, small ridges running east to west

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: None observed

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):

The site in located within a wash area which may contain seasonal tributaries to the Little Colorado River

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 A & B No. 5 mine claim consists of an area of 20,495.01 m^2. The mine was identified as being operational in 1954. While operational, the mine had a total reported production volume of 305 tons. The mine surface land status is classified as Tribal Trust Land. Historical documents identified the operator of the mine as A & B Mining Corporation in 1954. 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?
No

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?
No

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 #171; Reclamation areas

Photo 2: Mine Site #171; Former pit area

Photo 3: Mine Site #171; Waste pile

Photo 4: Mine Site #171; Reclamation area

Part VII Contacts 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: _____

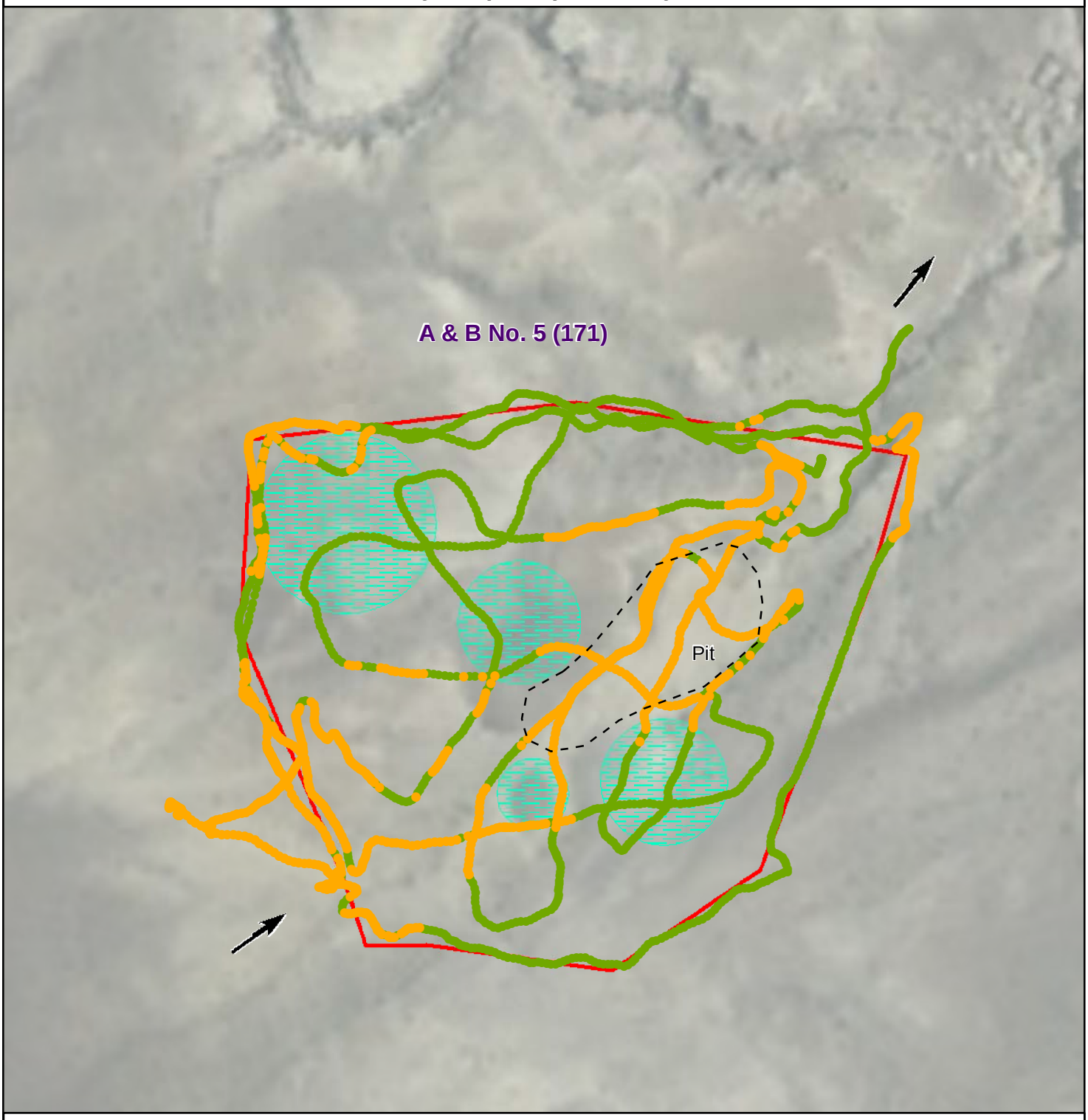
Title or official role (if any): _____

Telephone number: _____

Address: _____

Information provided: _____

Figure 1 - Gamma Radiation Measurements, Above Two Times Background
A & B No. 5 (171)
Bodaway / Gap Chapter, Navajo Nation



Legend

Gamma Radiation Measurements

- < 2X Backgound
- > 2X Background

Measured as counts per minute (cpm)

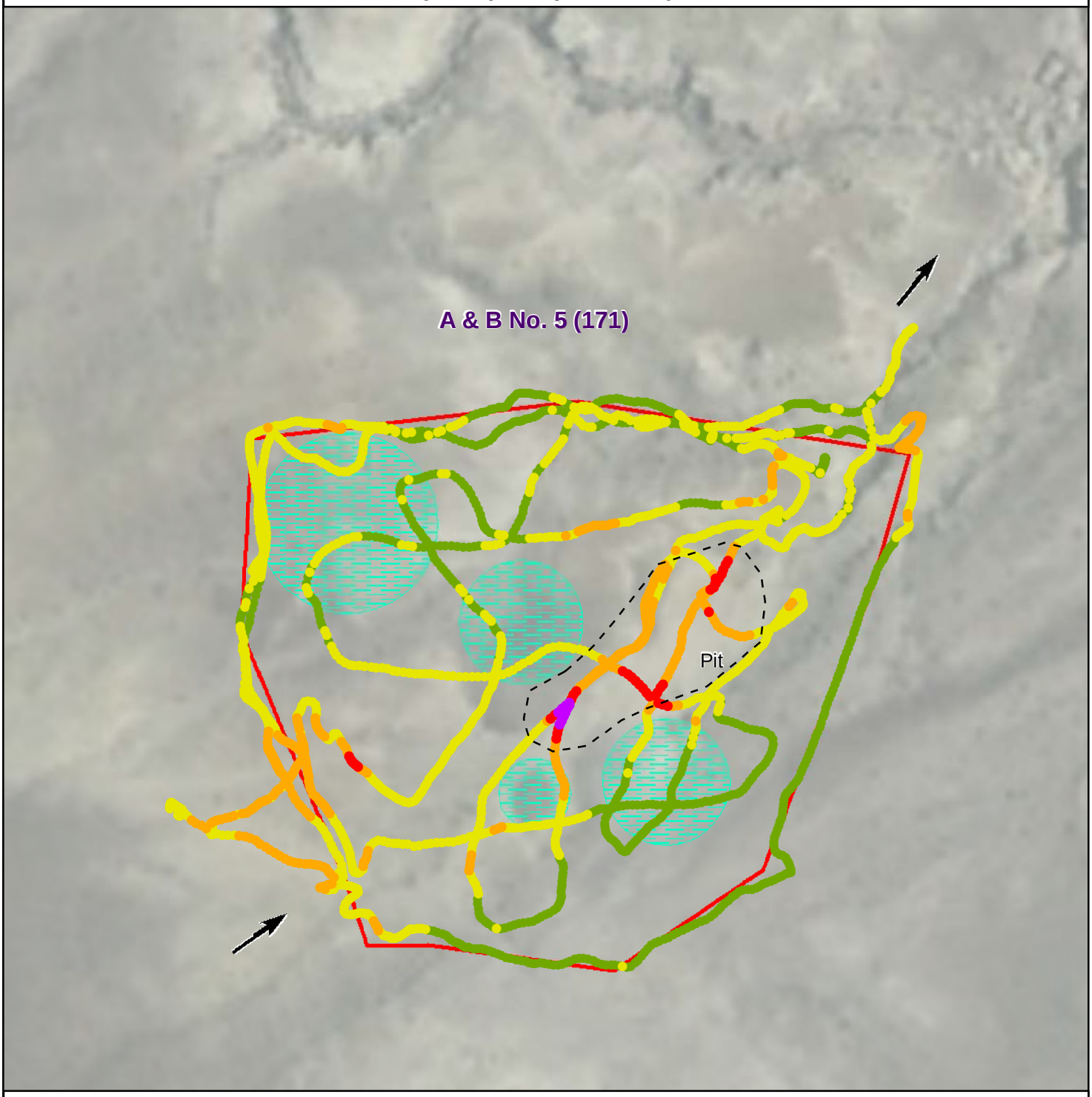
Average background 15,031 cpm

Mine Site Boundary
General Slope Direction
Observed Reclamation Feature
Observed Waste Pile
Observed Structure
Steep Grade

N

0 150 Feet

Figure 2 - Gamma Radiation Measurements
A & B No. 5 (171)
Bodaway / Gap 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

Measured as counts per minute (cpm)

Mine Site Boundary
General Slope Direction
Observed Reclamation Feature
Observed Waste Pile
Observed Structure
Steep Grade

Average background 15,031 cpm

N

Feet
0 **150**