

US EPA ARCHIVE DOCUMENT

Uranium Contamination Stakeholders Workshop

November 8 – 10, 2011

Skyline Mine



NAVAJO AML RECLAMATION

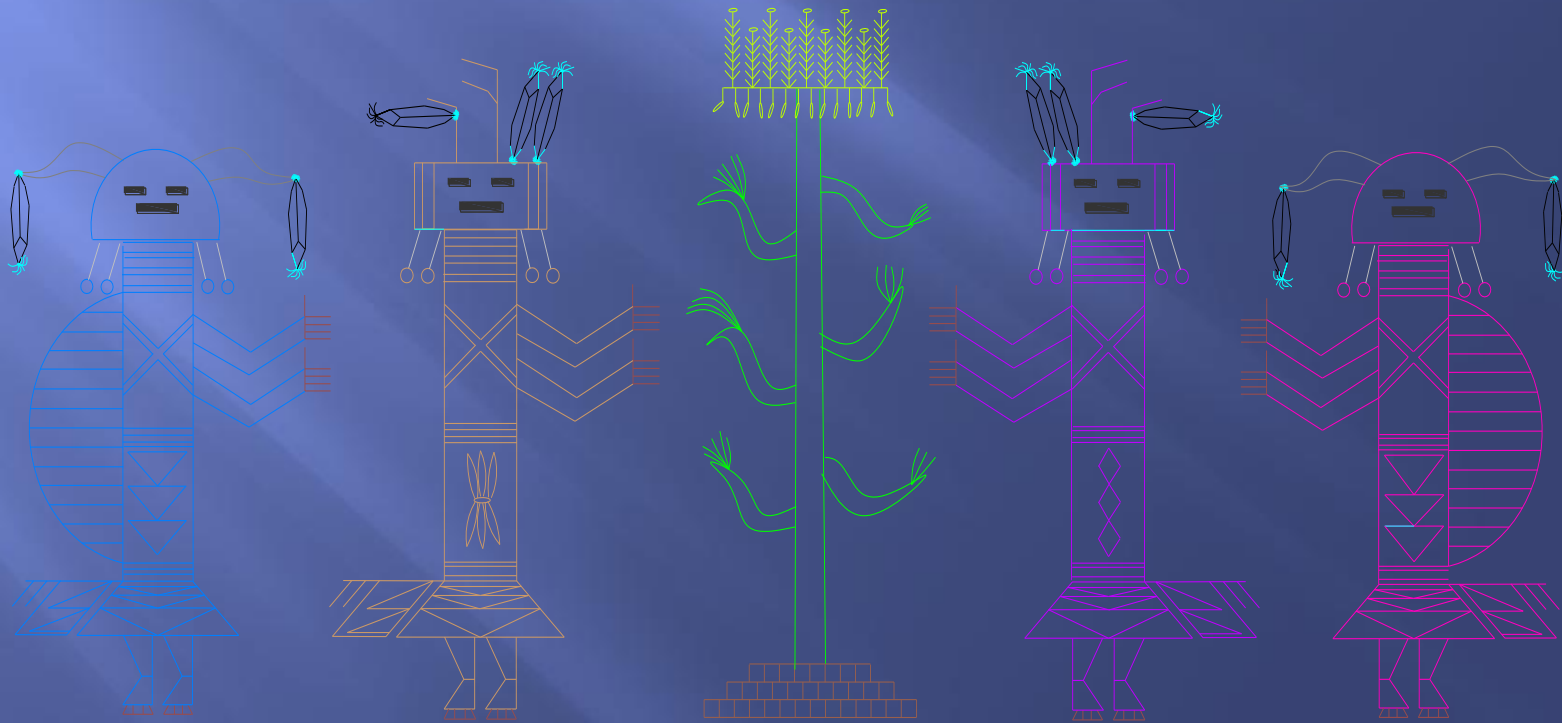


UMTRA DEPARTMENT



*“Restoring Navajo Lands to
Enhance Beauty, Harmony
and Quality of Life”*

Carl Holiday, Health Physicist
Navajo A&E Reclamation Department
Shiprock A&E Reclamation Program

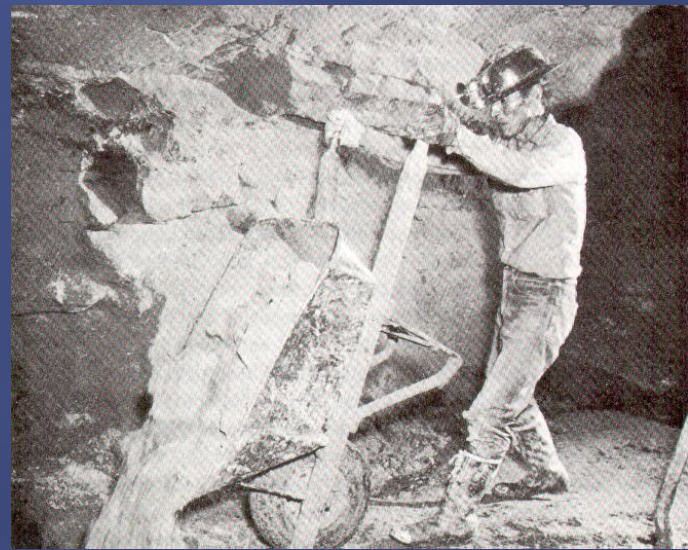


Uranium Ore

Causes serious health problems such as cancer and other respiratory problems.



Mining was very dangerous, labor intensive, and with little to no Personnel Protective Equipment



Left: Ore extraction using animals was common
Right: Mining camps were located within close proximity to mining activities



INTRODUCTION

The Navajo Nation geographical covers over 26,000 square miles, occupying parts northeastern Arizona, southeastern Utah, and northwestern New Mexico.

The environmental conditions vary from dry lowlands of Cameron, Arizona to the mountainous, rough, and wet lands of the Chuska Mountain range.

Mining legacy dates back to the late 1800's for coal and the early 1900's for minerals like uranium, vanadium, copper, and sand & gravel.

Public Law 95-87

Surface Mining Control and Reclamation Act (SMCRA) of 1977

- ❑ In August 3rd, 1977 Congress passed the Surface Mining Control and Reclamation Act (SMCRA), Public Law 95-87.
- ❑ Lands and waters eligible for reclamation under this authority are those which were mined or affected by mining and abandoned or left in an inadequate reclamation status and for which there is no continuing reclamation responsibilities under Federal, State and Tribal laws
- ❑ In 1988, the NN Council approved the Navajo Reclamation Plan and Code.
- ❑ From 1988 to 1992 Navajo AML conducted an on-the-ground survey of abandon mine lands and inventoried uranium, copper and sand/gravel sites.
- ❑ Navajo AML Completed Reclamation on all known coal sites in 1994 and received coal certification.

What is an AML Problem?

These are abandoned mines (coal and non-coal) and lands that present an immediate danger to the public health, safety, and general welfare.

The abandon mines include surface mines such as open pit, rimstrips, trenches and underground mines with features like portals/adits, incline and vertical shafts.

The unknown lures the public into the mine areas where unknown dangers and hazards exist unstable mine openings, pits, cliffs, radiological conditions, wildlife – snakes, bears, insects, etc. (visible/invisible) Other problems include: landslides, open portals and shafts, subsidence, and waste bank or underground mine fires.

Abandoned mines have negatively impacted the health, safety and welfare of the Navajo people.

SMCRA focus was and are:

- Abandoned Coal Mines
- Addressing the Physical Hazards

Prioritization Scheme, Priority 1, 2, and 3.

- Priority 1 – extreme danger to the Public, Livestock and Wildlife. (Physical hazards)
- Priority 2 – danger to Public, Livestock and Wildlife.
- Priority 3 – environmental dangers. (Environmental dangers)

Accomplishments - Coal Reclamation Projects

44 Projects initiated, 260 sites reclaimed - Coal certification in 1994, but still addresses any reported problems. Coal problems addressed were reservation wide.

Accomplishments - Non-Coal Projects

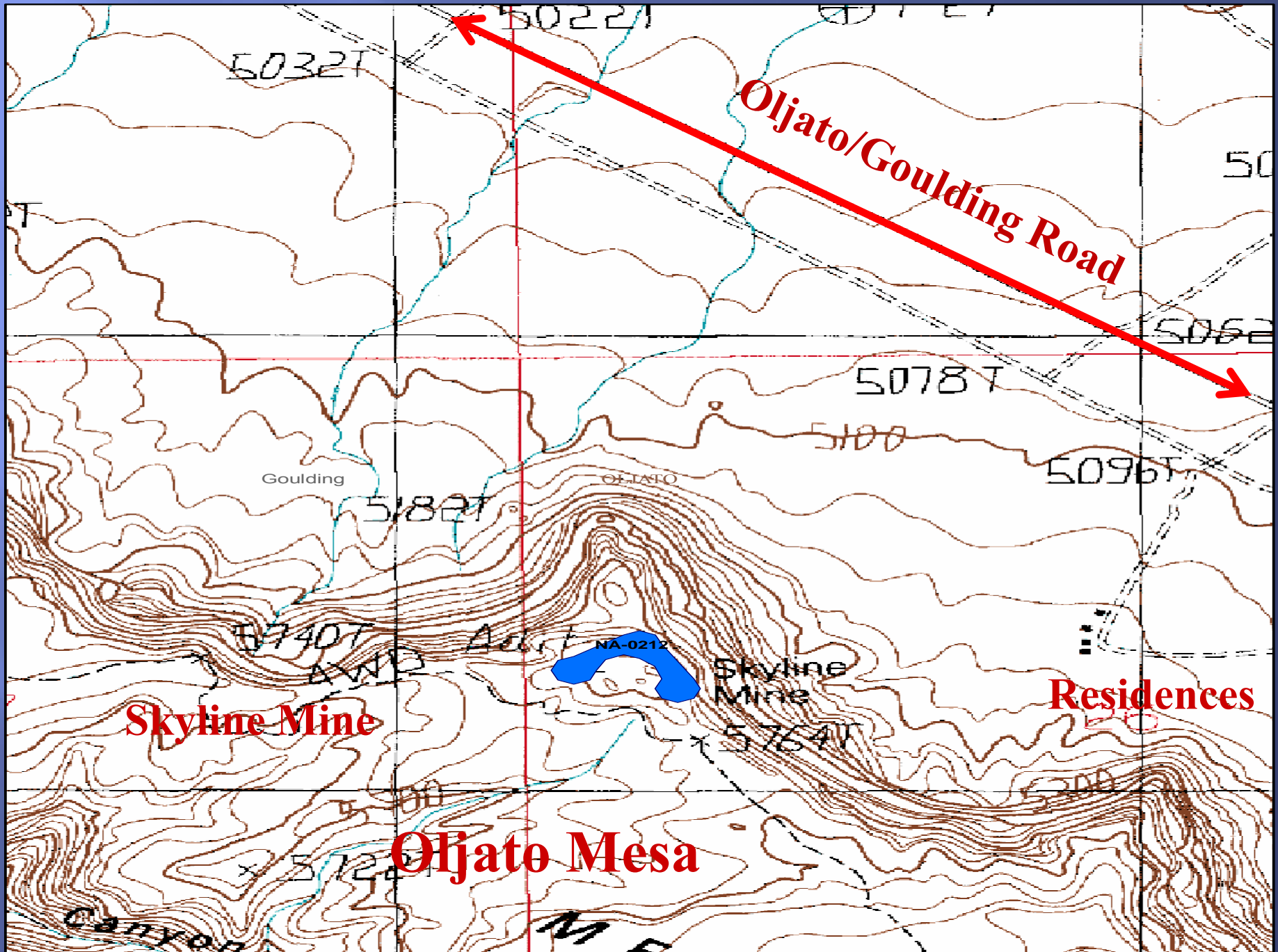
Approximately 1,085 non-coal AML sites inventoried, 273 non-coal reclamation projects initiated. Completed approximately 90% of the total inventoried AML sites.

Monument Valley, UT/AZ

- Monument Valley area consisted of 5 Projects(Moonlight, Monument Valley 2, Monument Valley 2, Phase 2, Monument Valley 3, Monument Valley 4.
- Skyline Mine (NA-0212) was part of Monument Valley 3 Project.
- Skyline Mine was addressed as a Priority 1 site which addressed only the physical hazards and the accessible mine waste piles at the top of the mesa.
- Mine waste at the base of the mesa considered priority 3.
- Total AML cost for the Skyline Mine = \$105,000

Skyline Mine Portal Closures





Oljato/Goulding Road

Skyline Mine

Oljato Mesa

Residences

NA-0212

Skyline Mine

Goulding

OLJATO

5740T
AND

Acct

5764T

5078T

5100

5096T

5032T

5022T

50

5062

5182T

5T

CANYON

M E

**Holiday
Mesa**



**Oljato Chapter
House**



**Skyline
Mine**



**Gouldings
Store**



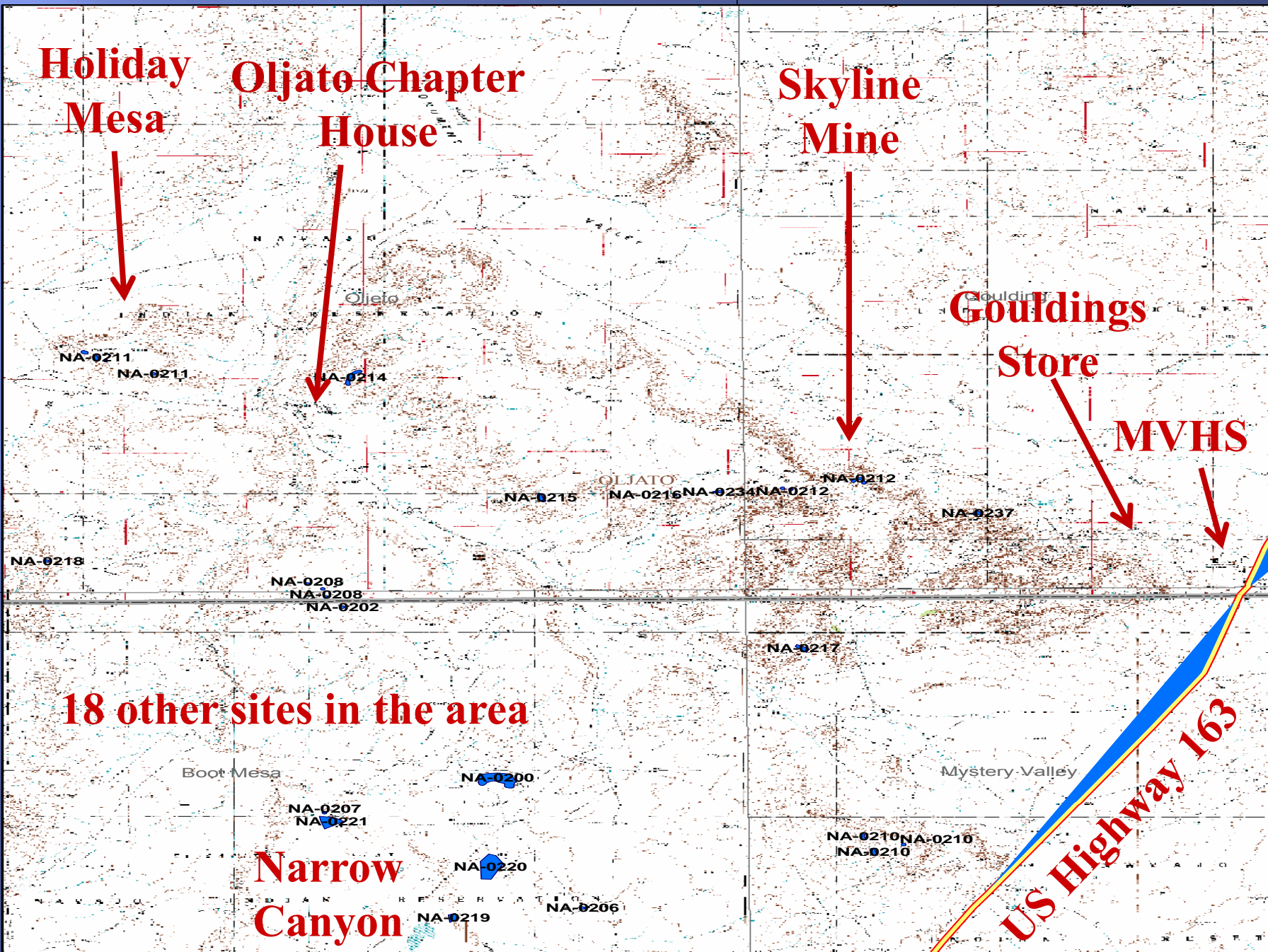
MVHS



18 other sites in the area

**Narrow
Canyon**

US Highway 163



Skyline Mine

Navajo AML/US EPA Partnership

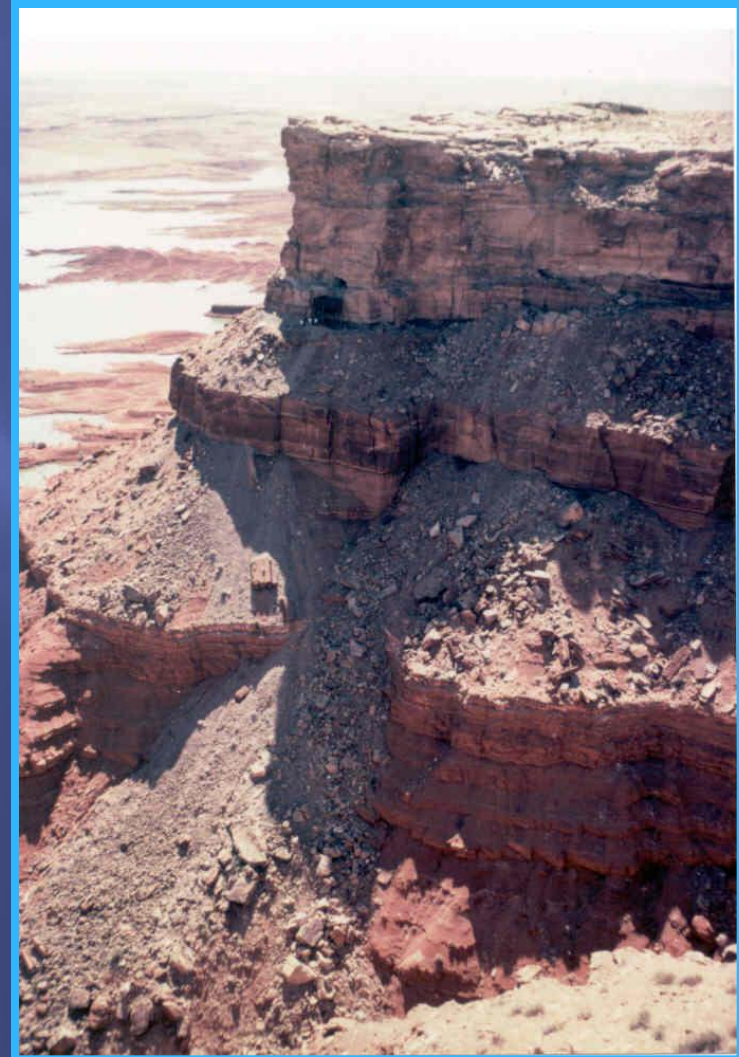
- Navajo AML Assisted with the initial site assessment, identification of previous work done by Navajo AML.
- Cleanup guidelines, burial technique and location was critical
- Navajo AML performed 8 site visits, 3 with Southwest AML Partnership groups. (Utah, New Mexico, Colorado AML Programs.)
- Navajo AML Interest included: HP instrument and equipment, radiological monitoring methods, cleanup criteria, Mine waste burial design and concept, burial cell design and liner specifications.
- Mainly to use the information for new technology and concepts in future Navajo AML Projects.
- Thank you to Skyline group for helping and assisting with learning experience.

Other sites in the area



Holiday Mesa – Oljato, UT

Whirlwind Mine – Northwest of Oljato, Utah. Upper end of Lake Powel in the background



Other Navajo AML Activities

- Partnerships - AUM, Navajo Nation Departments and Programs, US EPA, Other States, Tribes and Agencies
- Public Relations - NAMLRP is cost effective from past AML experience, Technical Information Exchange on reclamation techniques, Presentations to groups, schools, etc., Continuing to incorporate the Navajo Culture in with modern day technology, One of the leading National Programs in AML work, 5 AML awards, providing recommendations to others, etc
- New ideas and technology – Geomorphic, Environmental Monitoring
- Others - Navajo AML Reclamation continues to perform limited work on coal related issues that are reported by the public.

SOIL CLASSIFICATION

- ▣ Class A = Background
- ▣ Class B = Background to 25 pCi/gm
- ▣ Class C = Greater than 25 pCi/gm

NAMLRP Clean up guidelines

- ▣ Ra-226 concentration in the top 6-inches of soil equal to or less than 25 pCi/area, (including background).
- ▣ Dose Rate equal to or less than 50 uR/hr at one meter, (including background).

In house guidelines developed because of our work under SMCRA – Coal driven. Also dealing with naturally-occurring uranium, which has no cleanup standards.

Navajo AML Funding Issue

Obama Administration, OMB and DOI all want to cut funding to certified states and tribes under SMCRA, which Navajo AML is part of:

- March 12, 2010 – Navajo Nation President Joe Shirley issued statement concerning Navajo AML Funding
- May 21, 2010 – Three Tribe (Navajo, Hopi and Crow) letter to President Obama concerning AML Funding
- June 02, 2011 – Navajo Nation President Ben Shelly's letter to U.S. Department of the Interior.

SUMMARY

- ▣ Continue with Funding Issues.
- ▣ Partnerships
- ▣ AML Reclamation/PFP Activities.
- ▣ Public Relations.
- ▣ Enhance GIS database - include Coal and PFP project locations and information.
- ▣ Others

KEEP OUT



Old mines can be
DANGEROUS

QUESTIONS