White Mesa Archeological Sites

A Report

Site 42Sa6386 at White Mesa Uranium Mill Site

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Funded by a grant from the National Sierra Club

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White Mesa Archeological Sites in Danger of Destruction

Although hidden from view, scattered across White Mesa in San Juan County, Utah, are hundreds of prehistoric archeological sites from settlements that date back 700 to 1,500 years ago. At least nine of these sites on White Mesa would be completely obliterated if the U.S. Department of Energy (DOE) chooses International Uranium (USA) Corporation's (IUC's) Uranium Mill in San Juan County, Utah, as the final resting place for the Moab Uranium Mill tailings.[1]

There are more than 24,000 archeological sites in the State of Utah. About 8,000 are in San Juan County. Over 300 of the San Juan County sites are on White Mesa within the IUC Mill's approximately 5,240 acres.

It would be impossible to dispose of the Moab Mill tailings at White Mesa without destroying some of the numerous archeological sites. Nineteen White Mesa archeological sites were excavated in 1979 to 1981 when the uranium mill and four disposal cells were originally constructed. Most of these ancient structures were completely destroyed.

Site 42Sa6388. This pithouse is probably covered by overburden from cell construction.

IUC has proposed transferring the approximately 13 million tons of Moab Mill tailings to White Mesa via a slurry pipeline. Disposal at White Mesa would include the construction of two new disposal cells, to the south and west of the current disposal cells.

Two of the archeological sites that would be impacted by the proposed new cells were excavated in 1981. The larger site, with four pithouses and a shallow trash midden, was not impacted by earlier mill construction. The other, smaller site, may already be covered by tailings Cell 3.

Five sites will need to be excavated if the new impoundments are built. Two sites will need to be tested to determine whether they should be excavated. Six of the un-excavated sites are quite large, from 100 to 325 feet in diameter, and are thought to have been occupied from 900 to 1,100 years ago.

Other archeological structures and cultural materials might be impacted by other mill construction activities. Additional cultural sites might be discovered during construction and archeological mitigation.

Moab Mill Project Environmental Impact Statement to Address Cultural Resources

The White Mesa disposal option will be evaluated by the DOE in the Draft Environmental Impact Statement (DEIS), along with other disposal alternatives. As part of this National Environmental Policy Act (NEPA) process, the DOE will identify and evaluate the impacts of the proposed alternatives on the cultural sites. Any adverse impacts to cultural resources, if White Mesa is chosen, would have to be mitigated pursuant to federal laws and the IUC mill's license conditions. The DEIS is currently due to be released for public comment in the late summer or fall of 2004.

The DOE has published a "Cultural Resources Management Plan" (GJO-MOA 1.24) for the Moab Project. This publication discusses the applicable statutes and regulations. A copy is available from the DOE Grand Junction Office. See contact information on page 8.

White Mesa Cultural Sites

White Mesa is a large, rugged, gently sloping mesa south of the Abajo Mountains in southeastern Utah. It is a dry mesa, with seeps and springs in the canyons providing temporary and permanent sources of water. Westwater and Cottonwood Canyons border the mesa is to the west and Coral Canyon borders it to the east. These canyons lead south to the San Juan River, not far from the town of Bluff, Utah.

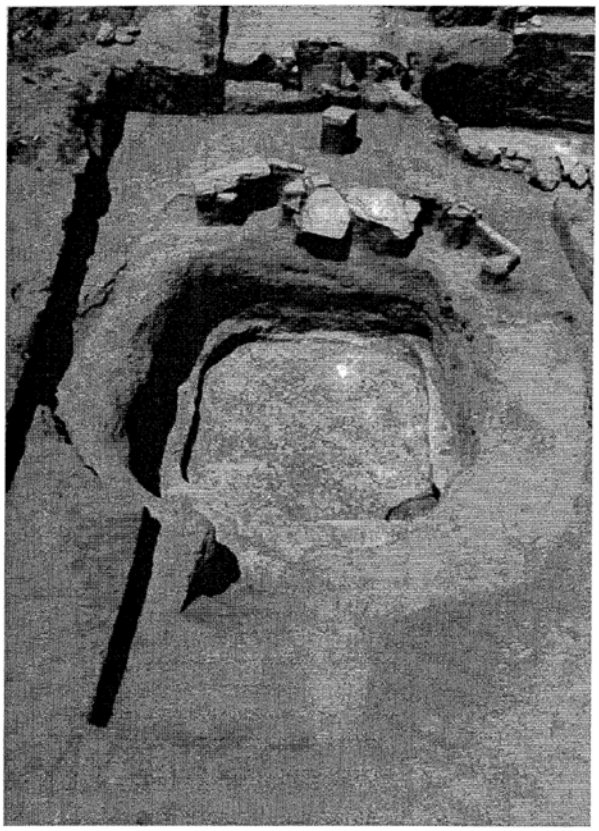
The vegetation is primarily grasses and sage, with desert scrub and scattered pinyon and juniper trees. Current annual rainfall is about 12 inches.

The White Mesa archeological sites are the temporal and spiritual remains of the early people who lived there over many hundreds of years. Archeologists have divided the early settlements into chronological cultural classifications. These classifications apply to numerous ancient settlements throughout the Four Corners region: Arizona, Colorado, New Mexico, and Utah. The White Mesa prehistoric period of occupation are estimated to range from Basketmaker III (A.D. 450-750), Pueblo I (A.D. 750-900), Pueblo II (A.D. 850-1100), and Pueblo III (A.D. 1100-1300). Cultural sites as early as A.D. 115 have been identified.

Little is visible on the surface now. The scattered pieces of pottery, building stones, middens, burned stone and materials, and depressions in the ground provide an indication that there may once have been a structure underneath the fill material. Most structures were only revealed by digging. Underneath the surface archeologists have discovered large pit houses and kivas, storage structures, burial sites, fire pits, middens, and numerous artifacts of daily life. Many of the sites are extensive and contain more than one type of structure. Sites can range from 15 to 300 feet in diameter.

The prehistoric habitations on White Mesa exhibit a great deal of architectural variety.

Kivas and pits (habitation, fire, storage) were built into the massive caliche deposits underneath the surface. Mud and stone was used as building material and roofs were created with vegetation, usually over an internal log support system.



Site 42Sa6437. Pithouse with ceremonial kiva in upper right corner. Site was destroyed by construction of tailings Cell 2.

Basketmaker III inhabitants built small, semi-permanent deep pithouses to live in and small specialized structures for the processing and storage of food.[2] Pueblo I habitations were not as numerous and situated on canyon rims near springs.

Pueblo II peoples reinhabited Basketmaker III habitations and built new ones. It is believed that the numerous shallow pit structures were primarily temporary, seasonal habitations used to harvest, accumulate, and store food resources.

Food was then transported to the permanent settlements in the area. Nearby canyon rock shelters and canyon bottom-land habitations were also used. The many man-made artifacts include manos, metates, stone hammers, flaked implements, pottery, woven pieces, pipes, and agricultural implements. The architecture, animal and wild and domestic plant remains, and other evidence of community life provide a unique picture of the people who came to live on White Mesa and the nearby canyons.

The sites provided much information on the relationship between the settlements on White Mesa and larger, permanent settlements in San Juan County and in distant areas, such as Mesa Verde, Colorado.

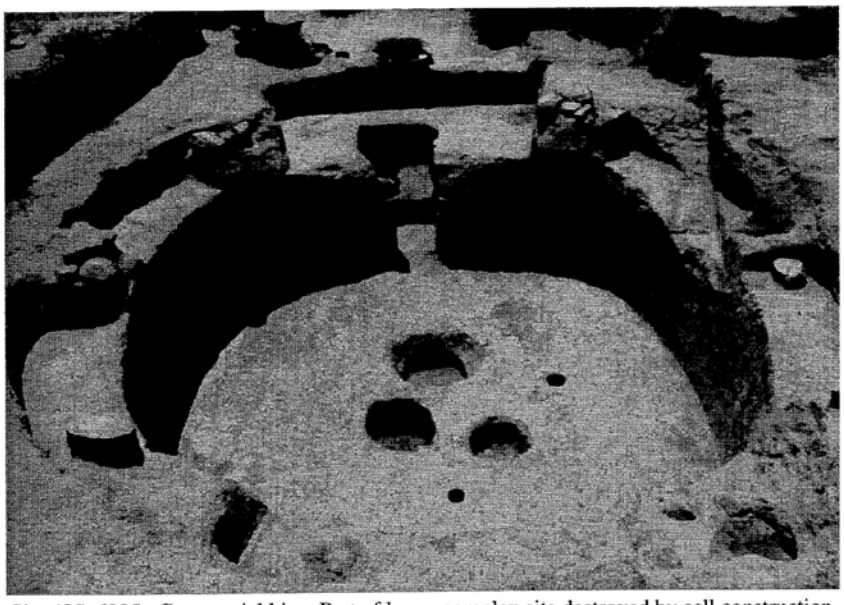
Eighteen excavated White Mesa cultural sites are now gone and cannot be viewed, studied, and appreciated by the public. We no longer have access to this part of White Mesa's rich cultural history and heritage.

Impacts to Archeological Sites

Over the years, ever since the first humans lived on the mesa, natural and man-made forces brought changes to the early habitations. As one group of people left and others came, some structures were reused and rebuilt. When the structures were inhabited, fire sometimes burned down the wood and brush that made up the roofs and walls. Stone walls and wooden beams collapsed, animals moved in and made burrows, wind and water brought in soil, and plants sprouted.

It is estimated that the last of the ancient people left their homes in the area in about A.D. 1260, most likely due to continued drought throughout the southwest. Later, Ute, Navajo, and Paiute communities moved into the area, establishing temporary and permanent homes.

Much of the evidence of historic and pre-historic native habitations and life has been erased by natural forces and human activities. When farming and ranching communities moved into that area, new human and human related activities began to seriously impact the remnants of the early cultures. The European settlers who immigrated to San Juan County starting in the 19th century had little cultural connection with the ancient and recent native inhabitants. Mechanized range improvements (chaining, disking, plowing, and railing), cattle grazing, vandalizing, and pot hunting were carried out with impunity.



Site 42Sa6385. Ceremonial kiva. Part of large, complex site destroyed by cell construction.

These activities took their toll on the remains of the area's cultural sites. Structures and artifacts were knocked down, removed, eroded, displaced, and destroyed. Similar destructive activities continue to impact White Mesa archeological sites today.

Uranium Mill on White Mesa

In the late 1970s, a new industry moved into the area. This was the uranium mining and milling industry. It was to have an extremely adverse and long-lasting impact on the cultural

resources on White Mesa. In 1977 Energy Fuels Nuclear, Inc. (Energy Fuels) proposed to build a uranium mill on White Mesa. The mill would be licensed by the Nuclear Regulatory Commission (NRC) as a uranium recovery facility under the Atomic Energy Act of 1954, as amended.

Since the facility was to be licensed by the federal government, the National Historic Preservation Act and related federal regulations were applicable to the development of the proposed uranium project. The NRC was required to consult with the Advisory Council on Historic Preservation and the Utah State Historic Preservation Officer. The NRC did not consult with local tribal members and tribal governments regarding the impacts of the proposed mill on White Mesa archeological and cultural resources.

Energy Fuels contracted with the Antiquities Section of the Utah Division of State History to conduct historical and archeological surveys. One survey identified over 100 cultural sites within the original mill site boundaries. Another preliminary survey identified over 200 prehistoric archeological sites on the BLM and School and Institutional Trust Lands Administration (SITLA) land that would be transferred to Energy Fuels.

Determinations of the significance of some of the sites on the original mill site property were made by digging to discover whether there were subsurface structures or deposits. Eventually, it was determined that a number of sites would need to be excavated and studied to supposedly mitigate the adverse effects of the construction of the Energy Fuels' uranium mill.

The Antiquities Section carried out full-scale excavations in 1978 (one site) and 1979 (eleven sites). Two reports, which included the descriptive data and preliminary interpretations, were published by the Antiquities Section. Photographs from some of the beautiful sites excavated in 1979 are presented here.[3] The artifacts recovered by the Antiquities Section were given to the University of Utah in Salt Lake City.

Plano Archaeological Consultants (Plano) excavated two sites in 1980, and Plano and Abajo Archeology excavated six sites in 1981. Reports with descriptive data and interpretations were published.[4] The artifacts from these excavations are stored, but not displayed, at the Edge of the Cedars Museum in Blanding, Utah.

Naming the Archeological Sites

One of the troubling aspects of the 1979 excavations was the naming of each excavated archeological site by the researchers for the Antiquities Section of the Division of State History. It is not known whether the archeologists conducting the research (who were paid by Energy Fuels) did this on their own or at the request of Energy Fuels.

The names given the sites did not reflect the prehistoric native culture, the historic native culture, or even the local and regional geographic characteristics. The Antiquities Section chose, instead, to legitimize the new nuclear industry culture by giving each site a name that is associated with atomic weapons and atomic energy. The names given to the eleven excavated sites were: Reactor Ridge, Half-Life House, Isotope Slope, Proton Point, J/PSI Point, Three Meter Isle, Radon Ridge, Plasma Point, Alpha House, Barium Bottoms, and Tailings Terrace.

It is hard to comprehend how the archeologists working with the Antiquities Section justified this total indifference to the historical culture associated with the sites they were studying. They knew the sites would soon be eliminated to facilitate the growth of this new destructive nuclear industry—destructive to the environment and to community health and safety. Perhaps they thought that, by giving the sites names associated with the new atomic industrial culture that was moving onto White Mesa, the obliteration of the archeological sites was justified and acceptable.

White Mesa Archeological District and the National Register of Historic Places

When the Uranium Mill on White Mesa was originally constructed during the early 1980s, the mill property was specifically designated as the White Mesa Archeological District. Two parcels (about 2,000 acres) owned by the original licensee made up the archeological district. The uranium mill and the tailings impoundments were constructed in this area.[5]

In 1979, at the request of the NRC, the White Mesa Archeological District was found eligible for inclusion in the National Register of Historic Places by the Secretary of Interior. The National Register is the national list of lands recognized

for their significance in American history, architecture, engineering, archeology, and culture. However, the White Mesa district has not been "listed" in the National Register. Few people are aware that the White Mesa Archeological District even exists and has been found eligible for the National Register.

The NRC also requested that several White Mesa historical sites be found eligible for the National Register. These sites were "Earth Dam," "Range War Site, "Proposed Townsite," "Posey War Site," "Kunen Jones Homesite," and the "White Mesa Community." For some inexplicable reason, no eligibility determination for the White Mesa historical sites was ever made. The eligibility of the White Mesa historical sites for the National Register remains an unresolved question.

BLM Addition to the White Mesa Archeological District

In the late 1970s, Energy Fuels and the BLM began a lengthy negotiation to arrange for a land exchange. The purpose of the exchange was to provide a "buffer zone" around the mill. The exchange would give Energy Fuels ownership of about 2,600 acres of BLM land on White Mesa, adjacent to the mill.[6] It was not until 1985 that the land exchange was finalized.

As part of the land exchange, in August 1980, the BLM requested that White Mesa BLM parcel be found eligible for the National Register as an addition to the White Mesa Archeological District. The Secretary of Interior found the BLM parcel eligible for the National Register, and it was added to the White Mesa Archeological District

Also, Energy Fuels purchased a section (640 acres) of Utah State Institutional Trust Lands Administration (SITLA) land adjacent to the BLM land.[7] It does not appear that that section of land is part of the White Mesa Archeological District, although it contains numerous archeological sites.

Legal Requirements Related to the Archeological Sites

The current NRC requirements for the archeological sites within the original mill site property are found in License Condition 9.7 of IUC's license (SUA-1358). IUC would be required to conduct a cultural resource inventory for the construction of any new cells, such as the ones proposed to accommodate the Moab Mill Tailings.

In July 1988 the new licensee (Umetco Minerals Corporation) submitted a list of White Mesa archeological sites identified within the original site boundaries.[8] The list identifies the status of each site.[9]

The sites within the land transferred from the BLM to Energy Fuels in 1985 are the subject of the August 26, 1985, "Cultural Resource Easement: Energy Fuels — BLM Land Exchange." The BLM retained exclusive use and control of all cultural sites on the BLM land transferred to Energy Fuels along with the right to visit the cultural sites. Part of Cell 1 and excavated soil overburden are in a quarter section of former BLM land.[10] Currently, IUC does not have plans to construct new tailings impoundments on the former BLM land.

The 1985 Easement also required the BLM to conduct periodic inspections of the archeological sites to assure compliance with the Easement's provisions "at intervals not greater than three (3) years." As of 2004, the BLM should have conducted at least six archeological site inspections. But, **NO** archeological site inspections have been conducted by the BLM on White Mesa, as the easement requires.

The Monticello BLM office is now aware of their responsibility to conduct archeological site inspections and is in the process of hiring a new archeologist and moving to fulfill its responsibilities under the Cultural Resources Easement.

Ute Mountain Ute Tribe Opposes Moving Moab Tailings to White Mesa

A few miles to the south of the mill is the home of the White Mesa Band of the Ute Mountain Ute Tribe. Their land is adjacent to the IUC Mill property. Navajo Nation tribal members reside in the area and in the Westwater community to the west.

In March 2003, the Ute Mountain Ute Tribal Council passed a resolution opposing IUC's proposal to construct a slurry pipeline and move the Moab Mill tailing to White Mesa.

At a September 2003 meeting in Moab, representatives of the Ute Mountain Ute Tribe, the Southern Ute Tribe, and the Northern Ute Tribe informed the DOE that disposing of the Moab Mill

Site 42Sa7754. Kiva. Probably covered by overburden from tailings cell construction.

Tailings at White Mesa was totally unacceptable.

The meeting between tribal representatives was part of the regulatory review and consultation process, pursuant to Section 106 of the National Historic Preservation Act and 43 C.F.R. Part 800. The consultation with the tribes and the DOE relates to the effects of the proposed disposal options on tribal cultural resources. These resources include gravesites, artifacts, traditional cultural practices (such as modern-day ceremonial practices and the harvesting of food and material for traditional crafts), and spiritual values. Clean water and air are also part of the important cultural resources to be preserved.

Members of the White Mesa Band and Navajo Nation living in the vicinity of White Mesa have publicly stated their numerous concerns regarding the operation of the IUC Uranium Mill and the adverse impacts to cultural resources should the Moab Mill tailings be disposed of on White Mesa.

There are tribal members who support the operation of the mill and the slurring of the tailings to White Mesa because of the jobs that are expected. The nuclear industry has a long history of dividing tribal communities over questions of expected jobs and financial gains versus adverse environmental, health, safety, social, and cultural resource impacts.

Public Participation

There is a great deal of additional information related to the archeological sites on White Mesa. Many documents are available from the NRC. Information related to the DOE's evaluation of the impacts on White Mesa Cultural Resources, including the archeological sites, will be placed in the Blanding and Moab public libraries. There will be opportunities to submit written and oral comments on the DEIS, and public hearings will be held in San Juan County and Grand County.

Footnotes

[1] Archeological Sites (Map), Department of Energy, Grand Junction Office, Filename: X0039500-02, May 6, 2002.
[2] "1981 Excavations on White Mesa, San Juan County, Utah," William E. Davis, Plano Archeological Consultants and Abajo Archeology, February 1983.
[3] "Archeological Excavations on White Mesa, San Juan Couty, Utah, 1979," Laurel Casjens, et al., Antiquities Section, Division of State History, June 1980, Volumes I-IV.
[4] "1980 Excavations on White Mesa, San Juan County, Utah," Larry D. Agenbroad, et al., Plano Archeological Consultants, 1981, and "1981 Excavations on White Mesa, San Juan County, Utah," William E. Davis.
[5] Township 37 South, Range 22 East.
[6] Most of the BLM land was in Township 38 South, Range 22 East, just south of the Energy Fuels' property.
[7] Section 16, Township 38 South, Range 22 East.
[8] Archeological Sites Related to the White Mesa Project, Attachment 2 to letter from J.S. Hamrick, Umetco Minerals Corporation, to Harry J. Pettingill, Uranium Recovery Field Office, NRC, July 28, 1988.
[9] Sites identified as "Excavated" (30 sites), "Contributing Sites to be Excavated" (38 sites), and "Undetermined sites" (49 sites), "Non-Contributing sites" (7 sites). Eleven of the sites identified as "Excavated" have not been excavated.
[10] SE 1/4 of Section 29, Township 37 South, Range 22 East.

CONTACTS AND INFORMATION

To request a copy of the DEIS, contact:
Wendee Ryan: Wendee.Ryan@gjo.doe.gov
or the DOE Grand Junction Office.

U.S. Department of Energy
Moab Mill Project
Toll-free hotline: 1-800-637-4575
Website: http://www.gjo.doe.gov/moab
E-mail: moabcomments@gjo.doe.gov
Mail: Mr. Don Metzler
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2597 B 3/4 Road
Grand Junction, CO 81503

U.S. Nuclear Regulatory Commission
Web page: http://www.nrc.gov
Dr. Myron Fleigel
NRC Moab Mill Project Manager
Toll-free number: 1-800-368-5642, ext. 6629
E-mail: mhf1@nrc.gov

Utah Division of Radiation Control
Website: http://www.radiationcontrol.utah.gov

National Register of Historic Places
Website: http://www.cr.nps.gov/nr.

Advisory Council on Historic Preservation
Website: http://www.achp.gov

International Uranium (USA) Corporation
Website: http://www.intluranium.com

Federal Statues:
National Historic Preservation Act, Archeological Resources Protection Act, American Indian Religious Freedom Act Native American Graves Protection and Repatriation Act,
Website: http://www.gpoaccess.gov/index.html

Federal Regulations:
Title 36 C.F.R. Parts 60, 63, 68, and 78
Title 36 C.F.R. Part 800
Title 43 C.F.R. Part 7
Title 43 C.F.R. Part10
Website: http://www.gpoaccess.gov/index.html

Document #707 Fields, Sarah M. Individual

-----Original Message-----
From: Sarah M. Fields [mailto:sarahmfields@earthlink.net]
Sent: Wednesday, February 16, 2005 10:12 PM
To: Donald Metzler
Cc: Loren Morton; Mike Fleigel
Subject: IUSA's Proposal for the Moab Mill Project

Dear Mr. Metzler,

Upon review of International Uranium Corporation's (IUSA's) submittal, "Moab Tailings Project White Mesa Slurry Pipeline Option: Preliminary Cost Estimate and Technical Report" (May 9, 2003), I have some questions regarding the applicability of the various sections of the Uranium Mill Tailings Radiation Control Act of 19789 (UMTRCA) to the proposed project and question about rights of way.

I. IUSA Operations

The activities at the Moab Mill are currently under the supervision and direction of the Department of Energy (DOE) pursuant to Title I of UMTRCA.

IUSA's proposal contains three major operations: 1) a slurry preparation plant at the Moab Mill, 2) slurry and recycle pipelines between the preparation plant and the IUSA Mill at White Mesa, and 3) the disposal site at White Mesa. Currently the IUSA mill is operated under a 10 C.F.R. Part 40 source material license pursuant to Title II of UMTRCA.

IUSA proposal states that the slurry preparation plant will be under IUSA's supervision and direction. The pipelines will also be under their control and direction. It appears that IUSA would own both operations.

QUESTIONS:

1. Since IUSA believes that they would control and operate the slurry preparation plant and the materials that enter that plant at the Moab Mill will, at that point, become the property of IUSA, under what regulatory regime would IUSA operate that slurry preparation plant?

2. Would that slurry plant become part of IUSA's Title II licensed activities? If so, is the DOE authorized to have a Title II operation at a Title I facility?

3. Would IUSA operate the slurry preparation plant as a contractor to the DOE?

If so, would the DOE have oversight responsibility for that Moab Mill operation?

4. Would the pipelines become part of IUSA's licensed activities? If not, which State or Federal agency or agencies would have oversight over the construction and operation of the pipeline. Which statutes and regulations apply?

5. If IUSA takes ownership of the tailings at the Moab site and their slurry operation and/or pipelines are part of their uranium mill facility operation, where in statute and NRC or State of Utah regulations is this authorized? What
Part 40 regulations, guidances, manuals, etc., apply to this type of operation?

6. I may have missed some questions. Basically, I would like to know what statutes and regulations would apply and how they would be applied to the slurry
preparation and pipeline facilities and operations if the IUSA proposal is approved.

II. Rights of Way

The fact that it is doubtful that IUSA would be able to get a right of way over the Matheson Wetlands Perserve would seem to be something that would preclude the implementation of IUSA's proposed project. Yet, many FTE's and funds have been spent on considering a proposal that would be moot because the required rights of way are likely not available to this private entity.

I do not understand why this basic issue has not been brought up and settled. IUSA seems to think that a non-publicly available memo from a law office suffices as a reasonable assurance that there is no problem with rights of way.

QUESTION:

1. Why has the DOE gone ahead with consideration of the the IUSA proposal when it it quite possible that IUSA will not be able to abtain the required rights of way?

2. Why has the DOE not even bothered to inquire of the various owners or responsible parties for the land that IUSA would have to cross with a pipeline in order to determine whether any right-of-way difficulties might arise that would block IUSA's proposed project?

3. If the IUSA Mill alternative is chosen as the preferred alternative, is the DOE authorized or prepared in any way to exert federal authority in order
to obtain the required rights of way on behalf of IUSA?

The DEIS sheds no light on these legal and regulatory authority questions.

Thank you for your attention to these matters. If you are unable to answer these questions with authority, please refer them to the appropriate persons.

Sincerely,

Sarah M. Fields
P.O. Box 143
Moab, Utah 84532