

ENVIRONMENTAL ASSESSMENT COVER SHEET

Project Name Union Carbide Intensity of Analysis Medium

Office Grand Resource Area EA Register No. UT-060-GR-1-29

Action Operations Activity Code 4132 2126

Location Lisbon Valley Serial No. G-81-10-P

Required by 43 CFR 23: Yes No

<u>Prepared by</u>	<u>Title</u>	<u>Resource (s) Assigned</u>
<u>C. W. Miller</u>	<u>Geologist</u>	<u>All</u>
Reviewers:		
<u>T. Hare</u>	<u>Compliance Specialist</u>	<u>All</u>

	<u>Signature</u>	<u>Date</u>
Area Manager	<u><i>Mary R. Dennis</i></u> ACT126	<u>6-9-81</u>
District Manager	<u><i>R. Kenneth V. Blue</i></u>	<u>6/12/81</u>



Decision:

I have concluded in writing this Environmental Assessment that all actions planned by the operator are mitigated by the enclosed stipulations. The nature of the industrial process that the operator may use is beyond BLM jurisdiction, however the appropriate Federal agencies are aware of this activity. BLM does not recommend the preparation of an EIS for the project.

Rationale:

The preparation of an environmental assessment is required by regulation (43 CFR 3809.2-1) to (1) identify impacts of proposed or existing operations on the land, (2) determine the adequacy of mitigating measures and reclamation procedures included in the plan to insure the prevention of unnecessary or undue degradation of the land and (3) determine if there is "substantial public interest" in the plan.

Greg R. Dawson
Grand Resource Area Manager ACTING

6-9-81
Date

Kenneth V Rhea
District Manager

6/12/81
Date

Grand

3809
(U-062)

Moab *Appeals for Permit* 1-10-P
P. O.
Moab, U *Shaft Wash p.l. and*
Snowball mine

Mr. Ron DeHollander
Union Carbide Corporation
P. O. Box 1029
Grand Junction, Colorado 81502

Dear Mr. DeHollander:

The plan of operation submitted for Union Carbide's mines and exploration projects in the LaSal area has been carefully reviewed and an Environmental Assessment (EA) prepared. Based on review of the plan and the subsequent EA, the plan is approved as submitted, subject to the enclosed stipulations. These stipulations were derived to prevent unnecessary and undue degradation of public lands, as mandated by the Federal Land Policy and Management Act (FLPMA) and as required by the 43 CFR 3809 regulations.

Because Union Carbide is covered by a bond with the State of Utah, I feel it would be excessive and burdensome to require additional bonding; therefore, no bond is required.

In addition to following the enclosed stipulations, I would appreciate your contacting the Grand Resource Area Manager, P. O. Box M, Moab, Utah 84532, (801) 259-6111 immediately prior to beginning reclamation. This will give us the opportunity to assist you in reclamation techniques and also aid to eliminate any misunderstandings that could arise after completion of reclamation. If you have any questions concerning the enclosed stipulations or any other aspect of the Bureau's involvement with Union Carbide's mining and exploration activity please do not hesitate to contact me or any of my staff.

We look forward to working with you toward the mutual goal of producing minerals while protecting our fragile environment.

Sincerely yours,
/s/ Kenneth V. Williams

District Manager

Enclosure:
Stipulations

JWilliams rt 5/12/81

cc: Grand Resource Area Manager (encl.)

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JUN 15 1981		
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Stipulations for Reclamation of the Deer Creek Group and
Polar Mesa Group of Mining Operations

1. Upon termination of mining activities at the Deer Creek group of Mines, the Operator, Union Carbide, shall remove all equipment from within the mine and shall plug mine entrances to preclude future entry.
2. Upon termination of mining activities at the Deer Creek group, the Operator shall remove the ventilation equipment on the surface above the mines. The operator shall fill the boreholes to the surface to prevent accidental or unauthorized entry.
3. Upon termination of mining activities, the operator shall remove all existing facilities such as buildings, oil tanks, ore stock piles, and debris.
4. Upon termination of mining activities, the operator shall recontour the entire area, including the roads both to the mine itself and to the boreholes. One road may be retained to the immediate vicinity of the mine entrance. The same recontouring activities shall be undertaken by the operator at the Polar Mesa group following the exploration activity there, except that roads to prospective portals of shafts may be retained.
5. During the October - December season immediately following the recontouring activity outlined in Stipulation 4, above, the operator shall spread seed of a mix shown on the final sheet. Success of the reseeding activity shall be determined by BLM inspection during the April - June season following the seeding. If BLM determines that the seeding has been unsuccessful, the operator shall spread the seed mix during the subsequent October - December season with another BLM inspection the next April - June. This process shall continue during the requisite number of seasons until BLM has determined that the seeding proved successful.
6. Before conducting exploratory activities at either the Deer Creek group or at the Polar Mesa group the operator shall add a supplement to the plan which will specifically show roads and drilling sites. BLM may add additional stipulations after review of these supplemental plans, after a review of 30 days. Such stipulations shall include requirements for fencing of fluid discharge pits.
7. In the event that the operator may unexpectedly find it necessary to make additional major surface changes beyond those covered in the Plan of Operations required for this Environmental Assessment, the Operator shall submit a supplement to the submitted plan. Additional major surface changes shall include but not be limited to: additional roads, waste dumps, ore storage areas, mine shafts or portals, buildings, and ore car tracks.

468-P81-06

SEED MIXTURE

Species

Grasses

lbs/acre

Hilaria jamesii	Galleta (Curlygrass)	1
Oryzopsis hymenoides	Indian ricegrass	1
Sitanion hystrix	Bottlebrush squirreltail	1

Forbs

Helianthus annuus	Common sunflower	1
	(Kansas sunflower)	
Sphaeralcea coccinea	Scarlet globemallow	1

Shrubs

Eurotia lanata	Winterfat (Whitesage)	1
	Total	6

ENVIRONMENTAL ASSESSMENT
Union Carbide's proposed Mining Activities
Grand and San Juan Co., UT

UT-060-GR-1-29

I. Introduction and Background

Union Carbide Corporation has operated the Deer Creek mining complex near La Sal, Utah for approximately ten years. The Deer Creek Complex consists of one large mine with two entrances, the Beaver shaft and the La Sal Portal, and a smaller mine with one entrance, the Snowball. Total surface disturbance, including stock piles, buildings, equipment storage, etc. is about 20 acres. The complex has operated for approximately 10 years, tapping uranium bearing ore in the Salt Wash member of the Morrison Formation. Total employment is currently 90-100 individuals. The operations occupies the following described lands:

T. 28 S., R. 24 E. } SECTION 36; SECTION 35: W¹/₂NW¹/₄,
Sec. 35 and 36 } SW¹/₄ SW¹/₄ - NON-FEDERAL.

T. 29 S., R. 24 E. } SECTION 2 NON-FEDERAL.
Sec. 1 and 2 }

~~T. 28 S., R. 25 E. } SECTION 31; ENTIRE SECTION - NOT~~
~~Sec. 31 } UNDER BLM SURFACE MANAGEMENT.~~

T. 29 S., R. 25 E.
Sec. 6, in San Juan County, Utah.

II. Proposed Action and Alternatives

- A. Union Carbide Corporation, the operator, first proposes to continue production from the existing Deer Creek complex near the town of La Sal, Utah. The operator proposes one addition to the existing production complex, a waste dump near the Beaver Shaft to be known as the Beaver dump, to be in the SE¹/₄ of Sec. 35 T. 28 S., R. 24 E. The operator also proposes to conduct extensive exploratory work to determine continuation of the ore bodies that are currently being worked in the Deer Creek Complex. The operator also proposes exploratory drilling in the Polar Mesa area, Grand Co., Ut. T. 24 S., R. 24 E. Union Carbide has requested that the names of the specific claims that will be explored, both here and in the Deer Creek Complex be confidential information. At this time the operator has not selected specific drill sites within the claims. Consequently, BLM has no objections to honoring the request. Like the Deer Creek group, the Polar Mesa area has been prospected and mined previously, though there is no activity now at Polar Mesa. Total disturbance from "new" drilling will be about 14 acres, about 2 acres will be disturbed on a new waste dump. Finally the operator proposes a reclamation program for both areas. During construction of roads, waste dumps, ventilation sites, etc., topsoil will be salvaged for reuse on such sites. When use of the sites is terminated, the surface facilities will be removed and the areas regraded to conform to the natural contour as nearly as possible. Soils will be replaced. The lands will be seeded with an appropriate seed mix. Further details of reclamation are in the Operator's Plan, Appendix I.

B. Alternatives

Since this Environmental Assessment is written under the 3809 regulations, the plan cannot be disapproved per se, however, stipulations can be added to prevent undue degradation.

III. Affected Environment

A. Nonliving Components

1. Climate

The climate in the Deer creek area is described in the Indian Creek Dry Valley U.R.A.; the Polar Mesa area climate is discussed in the Castle Valley U.R.A. The existing operation at Deer Creek produces some air pollution.

2. Land and Geology

The surface geology in both areas is primarily Burro Canyon and Dakota sandstones, however in some places the Morrison Formation itself is exposed. Faulting has created some faulting scarps that create sites for adit mining, however other locations of commercial quality ore may be reachable only by shafts. The geology and topography of both areas is similar, despite their physical separation. The uplift of the laccolithic La Sal Mountains pushed a sequence of sedimentary rocks, including the Morrison Formation and the overlying sandstones, into an angular position at both ends of the range. The Polar Mesa site is a little north of the dramatically pushed up sequence, and is not dipping, however the formations are the same. The topographic feature of Polar Mesa exists because the more resistant sandstones above the Morrison Formation have kept the ore bearing unit from eroding away.

3. Soils and Water

Soils in the Deer Creek group are discussed in the Indian Creek Dry Valley U.R.A., those in the Polar Mesa Area are described in the Castle Valley U.R.A. There is very little ground water in the existing mines in the Deer Creek Complex, because of the tight Morrison Formation and the lack of substantial aquifers above the mining galleries. The situation at Polar Mesa is probably similar to the Deer Creek area, though that cannot be definitely ascertained without drilling. Surface waters in the Polar Mesa area are present in two major intermittent streams that have formed Thompson Canyon and Burro Canyon, with the mesa in between. In the Deer Creek area several streams, at least two perennial, flow off the La Sal Mts., through the Union Carbide bloc of mining claims.

B. Living Components

1. Vegetation

Vegetation in the Deer Creek group is described in the Indian Creek-Dry Valley U.R.A. The mining operations have surface facilities at elevations between 6,800' and 7,200' elevation, so Pinyon-Juniper trees and associated understory vegetation are present. At the Polar Mesa site the elevation ranges from 6,200' to 7,900' so Pinyon-Juniper and scattered Ponderosa Pine, Quaking Aspen, and Blue Spruce are present.

2. Wildlife

The species of wildlife in the Polar Mesa area are listed in the Castle Valley U.R.A., the species in the Deer Creek group are noted in the Indian Creek-Dry Valley U.R.A. No threatened or endangered species are known to be resident in either area.

C. Human Values

1. Land Uses

Two human uses of both Polar Mesa and the Deer Creek group, in addition to mining, should be noted. First, both areas are subject to permitted livestock grazing allotments; Polar Mesa's allotments being managed by the U.S. Forest Service because of the area's proximity to a segment of the Manti-La Sal National Forest. In addition, both areas are subject to wood gathering, also under permit.

2. Wilderness and Visual Resources

Neither area can be considered wilderness because of previous mining activities. Visual resources are good in the Polar Mesa area and good in portions of the Deer Creek Area but are not outstanding or unique.

3. Cultural

No cultural or archaeological resources are known on either site, both of which have been previously disturbed. The BLM archaeologist's report is in Appendix II.

4. Socioeconomic

The primary sources of Union Carbide's employment, the existing mines at the Deer Creek have been operating for some years. The 90-100 employed individuals are generally well integrated into the local social and economic structures.

IV. Analysis of the Proposed Action and Alternatives

A. Proposed Action

1. Anticipated Impacts

a. Nonliving Components

(1) Climate

No impacts are anticipated beyond the existing conditions except minor air pollution during drilling at Polar Mesa.

(2) Land and Geology

The existing mining activity will continue to remove uranium ore from the Morrison Formation. The construction of the Beaver Waste Dump will remove no more than 2 acres of land that had other characteristics. The exploratory drilling activities should affect some 14 acres total on both sites. This disturbance will be from some roads as well as the drill pads themselves.

(3) Soils and Water

Water should not be affected by the proposed actions. Soils should be affected only as they are removed from sites of activity, to be stockpiled for later replacement.

b. Living Components

(1) Vegetation

Disturbance to vegetation on the 14 acres to be used for new drilling, according to the Operator's Plan should occur. Reseeding will be a subsequent impact to vegetation.

(2) Wildlife

The temporary removal of the scattered sites noted in (1) above should have only minimal impacts on wildlife.

c. Human Values

(1) Land Uses

The removal of vegetation will have minor impacts on both grazing and wood use in both areas, however the total area involved is small. Reseeding will have a positive impact on these uses.

(2) Wilderness and Visual Resources

The much disturbed Deer Creek group should not be impacted by the proposal. The visual quality of the Polar Mesa area should be affected only temporarily and to a minor extent, by the presence of the drilling project.

(3) Cultural

No impacts to cultural resources are anticipated.

(4) Socioeconomic

Construction of the Beaver Waste Dump will not require any additional personnel since those already employed at the mines will conduct the project. Drilling may bring a few people into the area, however they should remain only temporarily. Some of these may already be present in the area and would commute to the location if Union Carbide selects a drilling contractor from Southeastern Utah. When the entire project closes, at an indeterminate future time, the loss of positions will have pronounced socioeconomic impact. However a few temporary positions of employment will be generated by the reclamation program.

2. Recommended Mitigating Measures

Since specific drilling locations and roadsites are not yet designated by Union Carbide, a supplemental Plan of Operations should be submitted when these sites are determined. When roads, drill sites, and waste dump sites are determined, soils should be removed from the sites and stockpiled.

During the exploratory drilling operations, the operator should not construct a pit for retention of waste fluids unless such fluids would directly enter a natural drainage. In the event the pits described in (3) are necessary, such pits will be fenced on all sides except that occupied by the drilling rig during the drilling phase. When the rig is removed, the fourth side should be fenced. The pit should be refilled as soon as possible. Upon termination of mining the operator will remove all buildings and other structures and equipment and will regrade the disturbed areas. To conform as nearly as practical to the natural contour. Following the recontouring the operator will reseed the area with an appropriate seed mix.

3. Residual Impacts

Following an adequate rehabilitation program, the only residual impacts anticipated will be the removal of ore from the underground strata.

4. Short-term Use and Long-term Productivity

The relatively short-term mining activity current in the area will not affect future long-term productivity that could occur from grazing, wood removal, or other unanticipated activities.

5. Irreversible and Irretrievable Commitment of Resources

As noted in Section 3 above, the only irreversible and irretrievable commitment of resources from this operation is the removal of uranium ore from the underground mine.

B. Alternatives

Because this Environmental Assessment is written under the 3809 regulations the alternative of "no action" is unfeasible.

- However, the alternative of placing stipulations on the activity, to insure adequate reclamation, is the primary purpose of the 3809 regulations.

V. Recordation of Individuals, Groups, Agencies Consulted, and Intensity of Public Interest

Since this mine is in operation and since the additional prospecting is in disturbed areas, intensity of public interest is low. Aside from the operator, Union Carbide Corp., BLM consulted Mr. F. A. Barnes, noted in local environmentalist activities, who made no objections to the plan.

Appendix I

Operator's Plan

(Certain Sections that the Operator requested be kept
confidential have been edited.)

1) Name and Mailing Address

Ron DeHollander
Union Carbide Corporation
P.O. Box 1029
Grand Junction, CO 81502

2) Maps

See Exhibit A through B

3) Mining Claims and Serial Numbers

Attached to individual project areas.

4) Operation Description

This plan is submitted on a project area basis instead of submitting numerous "notices" and "plans of operations" for Union Carbide's mines and exploration projects in the La Sal area. Exploration drilling for uranium and the mining of uranium are ongoing at this time and occur on a year-around basis. The drilling is conducted in order to locate new ore deposits and to define and expand known deposits in conjunction with underground mining operations.

It is difficult, if not possible, to project in advance the exact location of necessary access roads and drill sites for these projects until actual field work begins.

Union Carbide expects to drill approximately 130 holes throughout the area during 1981. Total surface disturbance is expected to be approximately 14 acres during 1981.

Equipment in use in the area consists of wagon drills, rotary drills, core drills, pickup trucks, passenger cars, LHD's, crawler tractors, probe trucks, and farm tractors for reclamation work.

5) Reclamation Plan

All immediate and future surface disturbances including roads, mine ventilation sites, mine waste dumps and drill pads will be constructed in a manner so as to minimize surface degradation, erosion, and the amount of area disturbed. Where practicable, topsoil will be salvaged by stockpiling or windrowing to the extent that it is available and used for reclamation of disturbed areas when it is determined they are no longer needed.

Revegetation will be by the broadcast method and planted in late fall or early spring to utilize natural precipitation. After seeding the surfaces will be dragged or raked to provide seed coverage with soil. All seeding rates are based on pure live seed and broadcast seeding methods. The mixture is as follows:

Crested Wheatgrass	6#/acre
Sand Dropseed	0.2#/acre
Indian Ricegrass	1.5#/acre
Western Wheatgrass	2.6#/acre
Four Wing Saltbush	5.3#/acre

Access routes will be constructed for only the minimum width needed for operation and shall follow natural contours where practicable to minimize cut and fill. Areas of surface disturbance will be constructed to control erosion, landslides and water runoff.

All mine waste dumps and deleterious material or substances and other wastes produced by the operations shall be disposed of so as to prevent unnecessary or undue degradation and in accordance with applicable Federal and State laws.

6) Nonoperation

Union Carbide does not anticipate any extended periods of nonoperation for this overall project area. If nonoperation occurs in the future, a plan addressing any adverse impacts associated with an extended shutdown will be submitted to the Bureau of Land Management.

7) Miscellaneous

Vehicle travel will be confined to defined roadways as much as possible.

All operations will be conducted in accordance with applicable Federal and State laws and regulations and maintained in a safe and clean manner.

It is Union Carbide's intent to cooperate with the BLM representatives and to insure the impact on the environment is held to a minimum.

8) Confidential Information

All maps and claim information in the exploration portion of this plan is confidential information and should be treated as such unless written permission is obtained from Union Carbide.

Appendix II
Archaeologist's Report



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Moab District
P. O. Box 970
Moab, Utah 84532

Evaluation of Compliance with FEO 11593 and Sec. 106 of the Historic Preservation Act of 1966

Project Name Snowball Mine

Developer Union Carbide

Antiquities Permit # N/A

Name of Permitted Institution BLM Moab D.O.

Description of Activity Uranium Mine + H.Q. Office

Location of Activity _____

Description of Examination Procedures:

- Search of Site Survey Files and Available Literature
- Physical Examination

Evaluation of Findings

- Adequate for compliance with FEO 11593
- Adequate to substantiate a determination of no effect.
- Adequate to provide the basis for a determination of no adverse effect. BLM will have to present its case to the Historic Preservation Office and to the National Advisory Council on Historic Preservation.
- Will require consultation with the contractor to resolve certain questions. See attached analysis.
- Is inadequate for compliance purposes because:

Field exam + mine plan indicate sufficient area already affected to serve future needs without new disturbance in excess of 5 acres.

Bruce D. Lenthorn

Appendix III
Stipulations

Stipulations for Reclamation of the Deer Creek Group and
Polar Mesa Group of Mining Operations

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SEED MIXTURE

Species

Grasses

lbs/acre

Hilaria jamesii	Galleta (Curlygrass)	1
Oryzopsis hymenoides	Indian ricegrass	1
Sitanion hystrix	Bottlebrush squirreltail	1

Forbs

Helianthus annuus	Common sunflower (Kansas sunflower)	1
Sphaeralcea coccinea	Scarlet globemallow	1

Shrubs

Eurotia lanata	Winterfat (Whitesage)	1
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Total 6