

**WHITE OAK MINE**

**VOLUME 5**

UPDATE REPORTS - 1980 ( CONTIUNED )

SOIL / VEGETATION ( WITH 1981 SUPPLEMENT AND SUBMITTAL )

SUBSIDENCE ( WITH 1981 SUPPLEMENT )

WILDLIFE ( 1981 SUPPLEMENT )



# United States Department of the Interior

OFFICE OF SURFACE MINING  
Reclamation and Enforcement  
WASHINGTON, D.C. 20240

MAY 24 1984

## MEMORANDUM

To: Assistant Secretary for Land and Minerals Management

From: ~~407111~~ Director, Office of Surface Mining *Don W. Bell*

Subject: Recommendation for Approval of the Belina Mines Complex Mining Plan, Valley Camp of Utah, Inc., Carbon and Emery Counties, Utah, Federal Leases, U-020305, U-044076 and U-017354

I am prepared to approve a permit for the Belina Mines Complex pursuant to the Surface Mining Control and Reclamation Act (SMCRA) and subject to approval of the mining plan. My decision to approve the Valley Camp of Utah Inc. permit is based on: (1) the applicant's complete permit application, (2) our permit conditions, (3) public participation, (4) review of the application by the Office of Surface Mining (OSM) and by the State as required by the approved Utah State program, and (5) compliance with the National Environmental Policy Act.

The Secretary may approve a mining plan for Federal lands under 30 U.S.C. 207(c) and 1273(c). The proposed operation is in compliance with all applicable laws and regulations.

Under Section 522(e)(2) of SMCRA, surface coal mining operations may be permitted in a National Forest if the Secretary finds that there are no significant recreational, timber, economic or other values which may be incompatible with such surface mining operations and if surface operations are incident to an underground coal mine. Based on the concurrence of the Forest Supervisor, Manti-LaSal National Forest, I recommend the Belina Mines Complex mining plan updated through March 9, 1984, be approved and the compatibility finding be made.

### Approval:

I hereby find that the surface operations and the impacts of the Belina Mines Complex to be located on Federal lands in the Manti-LaSal National Forest are not incompatible with significant recreational, timber, economic or other

minimum, removal and disposal of vegetation cover from fill slopes that would interfere with backfilling and grading operations, slope stability and source, backfilling and grading, topsoil handling, disposal of concrete and asphalt, removal of culverts and re-establishment of natural drainages, sediment control measures, and revegetation of the road surfaces and adjacent slopes.

XXIV - BONDING-UMC 805 and 806

Estimated reclamation costs are included as Appendix A (revised 22 February 1983) in Volume III of the PAP. These estimates were based on the assumption that Valley Camp would purchase topsoil. The applicant's current reclamation plan includes the use of substitute material from the loadout and portal areas as a plant-growth medium; therefore, importation of topsoil will not occur and the bond has been adjusted accordingly. In addition, OSM evaluated and revised the applicant's assumptions regarding backfilling and grading costs. The revised bond for the Belina Mines Complex is estimated by OSM to be at \$1,521,214.00 as documented below:

Reclamation Bond Calculations

A. Portal Reclamation (PAP Volume III, Appendix A)

1. Belina No. 1	\$ 13,500
2. Belina No. 2	11,700
3. Utah No. 2	<u>9,982</u>
Total Item A	\$ 35,182
	=====

B. Structural Removal (PAP Volume III, Appendix A)

1. Concrete Structures	\$ 10,638
2. Steel Structures	71,252
3. Conveyors	30,500
4. Misc. (Waterline, Sewer, Powerlines)	<u>40,600</u>
Total Item B	\$152,900
	=====

C. Grading and Topsoil Application

Cost to move and spread 76,858 yds <sup>3</sup> of topsoil @ \$1.60/yd <sup>3</sup>	
Total Item C	\$122,973
	=====

D. Revegetation (Total Acres=79.1, PAP Volume III, Appendix A)

1. Area Preparation (Rake and Clean) 462.94/ac x 79.1	\$ 36,618
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# **MINING PLAN DECISION DOCUMENT**

## **Belina Mines Complex Valley Camp of Utah, Inc. Carbon & Emery Counties, Utah**



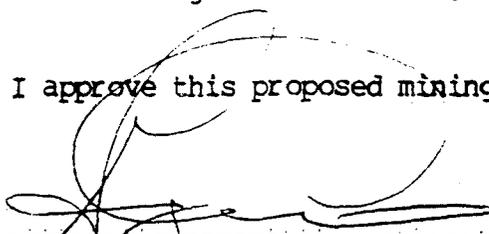
**U.S. Department of the Interior  
Office of Surface Mining Reclamation and Enforcement**

**Federal Coal Leases U-044076,  
U-017354, U-020305**

**March 1984**

values of the National Forest and surface operations and impacts are incident to an underground coal mine.

I approve this proposed mining plan:

  
\_\_\_\_\_  
Assistant Secretary for Land and  
Minerals Management

5/29/84  
Date

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### Valley Camp of Utah, Inc. Belina Mines Complex

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United States Department of the Interior  
OFFICE OF SURFACE MINING  
Reclamation and Enforcement  
BROOKS TOWERS  
1020 15TH STREET  
DENVER, COLORADO 80202

MAY 8 1984

MEMORANDUM

TO: Director, Office of Surface Mining

FROM: *AK* Allen D. Klein, Administrator, Western Technical Center *BDance*

SUBJECT: Recommendation for Approval of Valley Camp of Utah, Inc. Belina Mines Complex Mining Plan and Permit, Carbon and Emery Counties, Utah, Federal Leases: U-020305, U-044076, and U-017354

I. Recommendation

I recommend approval with conditions of the Valley Camp of Utah, Inc. Belina Mines Complex permit for an underground mining operation. The Belina Mines Complex includes the currently active Belina No. 1 and No. 2 mines and the loadout facilities at the Utah No. 2 mine. No mining is being permitted at the Utah No. 2 mine. In addition, the once-proposed conveyor associated with these mines has also been dropped from this permitting action. The mining plan and permit, excluding the Lower O'Conner Seam, were approved under the Federal lands and State interim programs. My recommendation is based on the technical analysis and environmental assessment of the complete application.

The applicant has proposed to continue underground mining on Federal coal leases U-020305, U-044076 and U-017354, during the five-year permit, and later to develop additional portions of Federal coal lease U-020305, U-044076 and U-017354 as well as U-47974, U-47975, and U-067498 and private fee coal and State coal during the remaining 26-year life-of-mine. The permit with conditions included with this memorandum will be in conformance with the applicable Federal regulations, the Utah State Program, the cooperative agreement and the Mineral Leasing Act, as amended. I also recommend that you advise the Assistant Secretary, Land and Minerals Management, under 30 CFR 746.14 that the Valley Camp of Utah, Inc. Belina Mines Complex mining plan is ready for approval. I concur that a performance bond in the amount of \$1,521,000, which includes the cost of haulroad reclamation is adequate.

The Utah Division of Oil, Gas and Mining (UDOGM) and the Office of Surface Mining (OSM) identified elements of the applicant's proposal which require conditions to comply with State and Federal law. The State permit ACT 007 and ACT 001 and conditions are incorporated into the proposed Federal permit UT-0049 and UT-0013. The State regulatory authority will issue this permit concurrently with the Federal permit.

My recommendation for approval is based on the complete mining plan and permit application, updated to March 9, 1984. I have determined that this action will not have a significant impact on the human environment.

## II. Background

The Belina Mines Complex is located in Carbon and Emery Counties, Utah, three miles southwest of Scofield and twenty miles northwest of Price, Utah. The existing permit area contains 2,428 acres of which 969 acres and 1,459 acres, are Federal and private surface, respectively. The estimated life-of-mine operation contains 10,094 surface acres of which 1,618 acres, 7,517 acres, and 959 acres are Federal, private, and State surface, respectively. The existing permit area contains 969 acres, 293 acres, and 571 acres of Federal, Carbon County and private coal, respectively. The proposed mine plan approval area consists of 1,378 acres of Federal coal. The majority of the operations will utilize room-and-pillar mining methods. Two coal seams will be mined to yield a production rate of 1.93 million tons per year. All surface facility operations are scheduled to cease around the year 2010.

In a letter dated March 9, 1984, to OSM, Valley Camp requested an extension of the present five year permit boundary, which would extend mining in Federal lease U-17354 to the southern boundary line of Section 36, and in the southeast corner of Section 35, Federal lease U-044076. (See correspondence section) This extension of existing permit boundary increases the SMCRA permit area from 2,428 surface acres to a total of 2,837 surface acres. Of this 2,837 acres, 1,378 acres and 1,459 acres are Federal and private, respectively. The extension would increase the acreage of coal within the SMCRA permit area from 1,833 acres to 2,242 acres. Of this 2,242 acres, 1,387 acres, 293 acres, and 571 acres are Federal, county and privately owned coal, respectively.

The applicant requested this extension for the purpose of confirming newly acquired geologic seismic data. This tentative geologic information indicated that in this area, additional fault(s) up to 350 feet in displacement and another intrusive dike are present. Valley Camp is concerned about the location of the faulting and the dike and how it may interfere with the present layout of the mine.

Most of the water-quality impacts associated with the Belina haul road and pad have already occurred. Levels of degradation have continued to decrease since the road and pad were constructed. Reconstruction of the road and pad outside of the Whiskey Gulch buffer zone would not be prudent for the following reasons: (1) construction of the road and pad would essentially cause the mine to close since there are no feasible alternative access routes to the portal area; (2) relocation of the pad would require closure and relocation of the Belina No. 2 portal and truck loadout facilities, creating additional disturbance; and (3) relocation of the road and pad would create a new wave of sediment (3-10 years) into Whiskey Gulch. Based on our analysis of the lack of environmental benefits to be gained from removing these structures out of the buffer zone, our recommendation is to authorize their continued existence in their present location (see EA p. 7 and TA p. 16).

On April 20, 1984, OSM was informed that two slides had occurred on April 18, 1984, on the downslope of the Belina haul road. One slide was 40' wide, the other measured 125' wide. According to UDOGM, the failure occurred on a natural slope below the side-cast material used to construct the Belina haul road. The larger slide pushed unconsolidated mud and snow into Eccles Creek; however, the stream was not blocked.

A field inspection of the slide was conducted by UDOGM on April 19, 1984. The Utah Division of Wildlife Resources (DWR) had been contacted and was working with the applicant to design a permanent diversion, approximately 550' in length, around the toe of the slide. Construction had been initiated on April 19. This action was deemed necessary by the state agencies due to the continued failure of the slope during the spring runoff season. According to UDOGM, this portion of Eccles Creek had been previously modified when improvements to the Eccles Creek road were made to access the Coastal State Energy Company's Skyline Mine, located west of the Belina Mines Complex. The proposed diversion, therefore, would relocate the stream to its approximate original location, i.e., away from the toe of the slope.

The UDOGM is treating the diversion and slope stabilization project as an emergency remedial action and sent a letter to the applicant on April 25, 1984 stating the requirements for compliance. These requirements include the submittal of as-built designs demonstrating that the permanent diversion construction meets the requirements of UMC 817.44. A reclamation plan must also be submitted addressing the requirements of UMC 817.111-.116. These plans are to be submitted by the applicant to UDOGM on May 28, 1984.

The Acting Regional Solicitor, in his April 11, 1984 comments on the Belina permit decision document, identified problems with the existing haul road being within the 100' buffer zone of Whiskey Gulch, a tributary to Eccles Creek. The solicitor's main concern was

that the haul road creates impacts to the stream and riparian area, i.e., the road may potentially restrict movement of big game animals. The solicitor has advocated in meetings with the Western Technical Center staff that the road be removed and relocated out of the buffer zone. Relocation of the road would not reduce the potential for slides into Eccles Creek. The slide area is a natural slope and the primary reason for its failure is the unusually high snowfall level saturating the soils and the erosion of the slope's toe. The haul road itself is stable and does not show any signs of failure. The diversion of Eccles Creek will alleviate the problem of continued erosion of the slope's toe, thereby increasing slope stability. The technical analysis (p. 16) has found that relocation of the road would create new impacts in an undisturbed area with very little environmental benefit to be gained.

Because of the limited topsoil salvage that occurred prior to SMCRA, the applicant has proposed that substitute topsoil materials be utilized for reclamation by taking material from the pads in the Belina portal and from the Utah No. 2 loadout and yard areas. The volume of substitute material from the Belina portals source indicates substitute topsoil material is available in an amount sufficient to spread at least six inches over disturbed areas yet to be reclaimed within the Belina portals area. This source of substitute topsoil will also serve as a source of substitute topsoil material for the reclamation of the haul road. The volume for the Utah No. 2 loadout and yard area source indicates substitute topsoil material is available in an amount sufficient to spread approximately six inches over disturbed areas yet to be reclaimed within the Utah No. 2 loadout and yard area.

An evaluation of the physical and chemical data developed for both sources of substitute topsoil indicates both materials are capable of supporting plant growth. This determination was based on the review of physiochemical and productivity data for soils described by the Soil Conservation Service (SCS) which occur in areas adjacent to the Belina Mines Complex. To substantiate this evaluation, OSM is requiring that the applicant design and conduct a greenhouse study or field trials of the substitute topsoil material (see Condition No. 4).

The applicant originally proposed to leave its Belina haul road as an alternative postmining land use. Valley Camp, however, was unable to obtain landowner concurrence to maintain the road (UMC 817.156); hence, OSM determined that the road must be reclaimed in a manner consistent with Utah's performance standards (UMC 817.156). OSM has thus attached a permit Condition No. 10 that requires the applicant to submit plans for the reclamation of the Belina haul road. To ensure that the haul road is reclaimed, OSM and UDOGM have set bond on that portion of the permit area (see TA p. 41) amounting to \$622,000.

In order to effectively plan for the continuation of the Belina mine development, Valley Camp requested to extend development of their South Main Entries through, or to (as the case may be), the faulting and dike. OSM has considered the hydrological and environmental implications of the requested extension. The CHIA considered all anticipated mining, which included the area of the requested extension. Since this area has already been included in the assessment of the cumulative hydrologic impacts, and faulting and intrusives have been considered on the whole, these potential impacts have been addressed. The surface water monitoring program has been revised to require an additional station in Finn Canyon (Condition No.2). The development of main entries into this area will provide additional confirmation on the hydrogeology as required by Conditions No. 3 and No. 4 (see TA pp. 26 and 27).

Several issues raised during the permit review related to the fact that operations at the Belina Mine Complex started prior to the passage of SMCRA. Among the more important of these issues were: (1) the placement of fill in Whiskey Gulch, (2) the absence of salvaged topsoil material around the Belina and Utah #2 portal areas, and (3) postmining reclamation of the Belina haul road.

OSM and UDOGM determined that Whiskey Gulch is an intermittent stream that most probably contains a biological community (see p 16 of the TA) and, therefore, that the buffer zone requirements of UMC 817.57 were applicable. The Belina portals pad sets on a fill over Whiskey Gulch, and most of the Belina haul road is within 100 feet of the stream. The regulatory authority may authorize such activities within the buffer zone if they find that temporary and permanent stream channel diversions will comply with UMC 817.41 through 817.44 and that there will be no degradation of water quantity or quality.

We find that temporary and permanent diversions are already in compliance with UMC 817.41 through 817.44 (see TA, page 18), and analysis of the surface water monitoring data confirmed that there is no reduction in water quantity in Whiskey Gulch. The CHIA report, however, determined that during construction and early use of the road and pad there was degradation of water quality due to increases in total suspended solids (TSS). The CHIA report also found that these increases in TSS concentration were not at the level to cause material damage.

Degradation of the water quality due to increases in TSS have been reduced since the construction of the road and pad because the area has stabilized and the available material has been flushed away. Also, sediment-control measures have been implemented by Valley Camp. Valley Camp continues to provide extra control measures such as recent paving of the haul road and building of a mine-water discharge pond. TSS levels should continue to decrease over time, but they are likely to remain above levels found in undisturbed areas.

The determination of probable hydrologic consequences and the CHIA for the Belina Complex relies heavily on information concerning the occurrence of ground water in other mines in the Mud Creek area. Furthermore, during the data search for the CHIA it was apparent that most of the information available concerning ground-water inflow to mines was only available from personal communications with individuals that have worked extensively in the mines. Ground-water inflow information is considered important to document mining impacts on ground-water inflow to the Belina mines and that information would also document if a significant water-bearing zone had been encountered that may require some mitigating measure. In order for the PAP to be in compliance with UMC 817.52, OSM required that Valley Camp implement an in-mine ground water monitoring program (see Condition No. 4).

While no public hearings have been held specifically for Valley Camp's permanent program application, recent hearings have been held regarding coal development in central Utah of which expansion of the Belina Complex is a part. These hearings were held in order to receive public input for the following documents:

Draft Environmental Impact Statement: Uinta - Southwestern Utah Coal Region, Round II Coal Leases," 1983

Final Environmental Statement: Development of Coal Resources in Central Utah," 1979, USGS

Land Management Plan: Ferron-Price Planning Unit, Manti-La Sal National Forest," 1979, USFS

The Belina Mines Complex permit application was reviewed by OSM and UDOGM using the approved Utah state program and the Federal Lands Program (30 CFR Chapter VII, Subchapter D). The Mineral Leasing Act portion of the plan was also reviewed for compliance with the applicable portion of 30 CFR Part 211 (i.e., requirements and responsibilities of the Minerals Management Service). The technical analysis and environmental assessment for this mine application was prepared by OSM. These documents, other documents prepared by OSM and UDOGM, the company's application, and other correspondence developed during the completeness and technical reviews are part of OSM's mining plan and permit application file. The UDOGM and OSM jointly developed proposed conditions to assure compliance with State and Federal regulations.

A chronology of events related to this mining plan is enclosed. Valley Camp of Utah, Inc., published the newspaper notice in the Price Sun Advocate from September 28, 1983 to October 19, 1983 and no written comments, objections, or requests for an informal conference were received. Concurrence was provided by BLM, Branch of Solid Minerals on August 23, 1983, February 7, 1984, and March 22, 1984. This approval does not include the recovery of the McKinnon Seam present in the southern part of the mining plan area. Mining of the McKinnon Seam will require that another mining plan be developed to demonstrate that all recoverable coal reserves will be mined. In addition, this approval does not cover the area to the southeast of the permit area (i.e. east of the O'Connor Fault) which will also require separate portals and a separate mine plan (see August 23, 1983 letter from BLM, Gordon Whitney).

The BLM provided a letter dated October 21, 1983, stating that none of the lands to be impacted by the Belina No. 1 and No. 2 mines have been designated as unsuitable under section 522 of SMCRA.

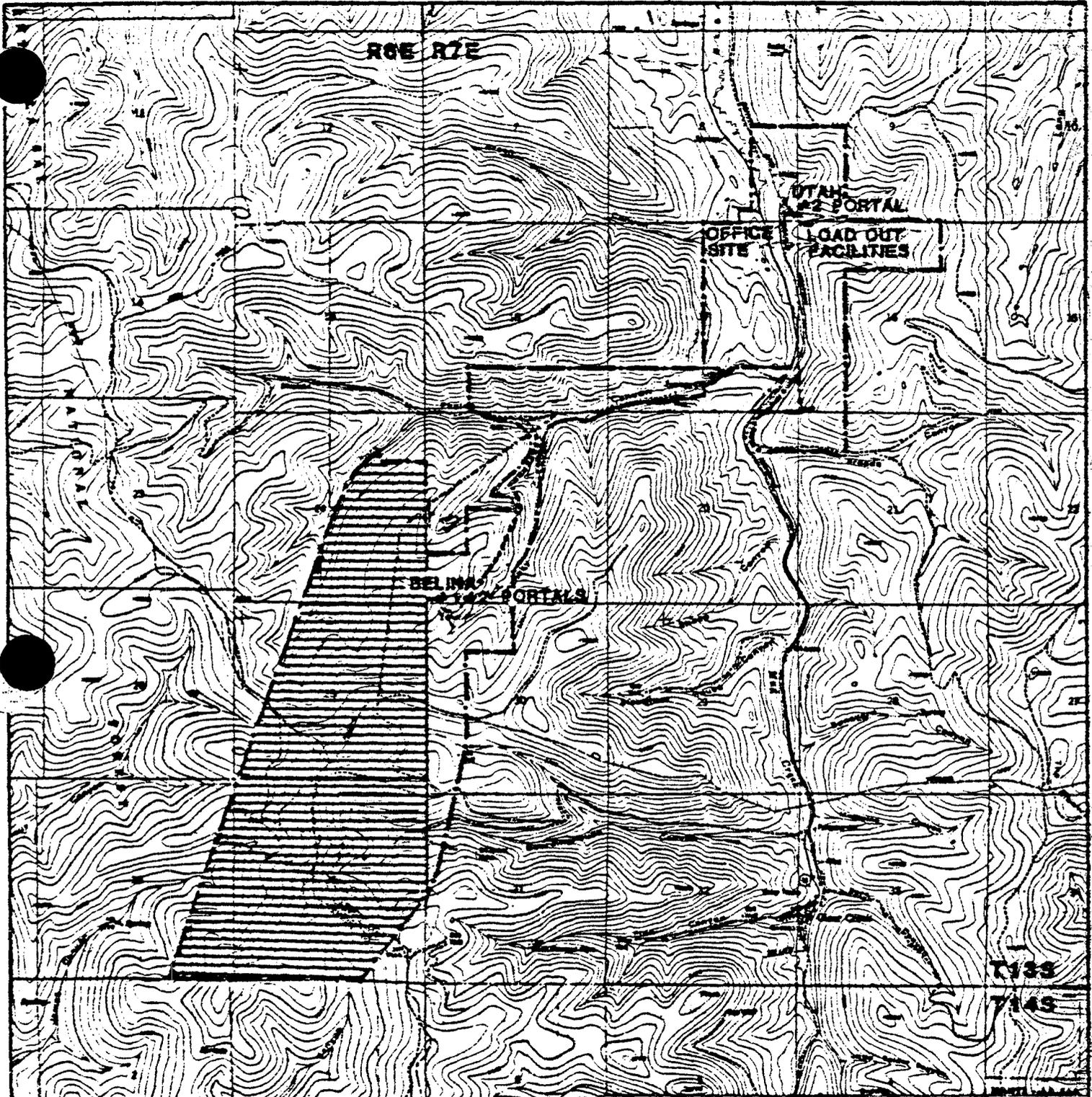
The U. S. Fish and Wildlife Service has provided documentation (see letter from Fred L. Bolwahn, December 20, 1983) that no threatened or endangered species of animals are known to exist in the area of the Belina No. 1 or No. 2 mines. OSM is currently consulting with the USFWS concerning the need for the applicant to participate in the agency's study program, "Recovery of Endangered Fishes of the Upper Colorado River Basin."

The Forest Service provided a letter (see letter from Reed Christiansen, April 20, 1983) documenting several lease stipulations that must be complied with by Valley Camp of Utah, Inc. These stipulations have been reviewed by OSM, and they do not conflict with any of the aspects of this permit package. The Forest Service also raised concerns about protection of riparian areas and the potential impacts of subsidence. A subsequent letter from the Forest Service (see letter from Reed Christensen, December 28, 1983) stated that the previous concerns regarding subsidence and renewable resource lands had been adequately addressed in Volume VI of the updated permit application. The Forest Service concurrence letter was received by OSM on March 12, 1984.

Concurrence from the Utah State Historic Preservation Office (SHPO) was received on February 29, 1984.

Correspondence from the agencies mentioned above did not specifically require permit stipulations (other than the Forest Service lease stipulations), as the concerns raised in the letters have been resolved in the permit application package or in the stipulations that are contained as part of this approval. The information in the permit application and mining plan, as well as other information documented in the recommendation package and made available to the applicant, has been reviewed by UDOGM in coordination with the OSM Project Leader.

Figure 1  
BELINA COMPLEX  
VALLEY CAMP OF UTAH, INC.



**LEGEND**

- SMCRA PERMIT BOUNDARY
- ▬▬▬ AREA OF MINING PLAN APPROVAL (FEDERAL COAL)
- - - PIPELINE
- ==== HAUL ROAD

 NORTH

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SCALE IN MILES

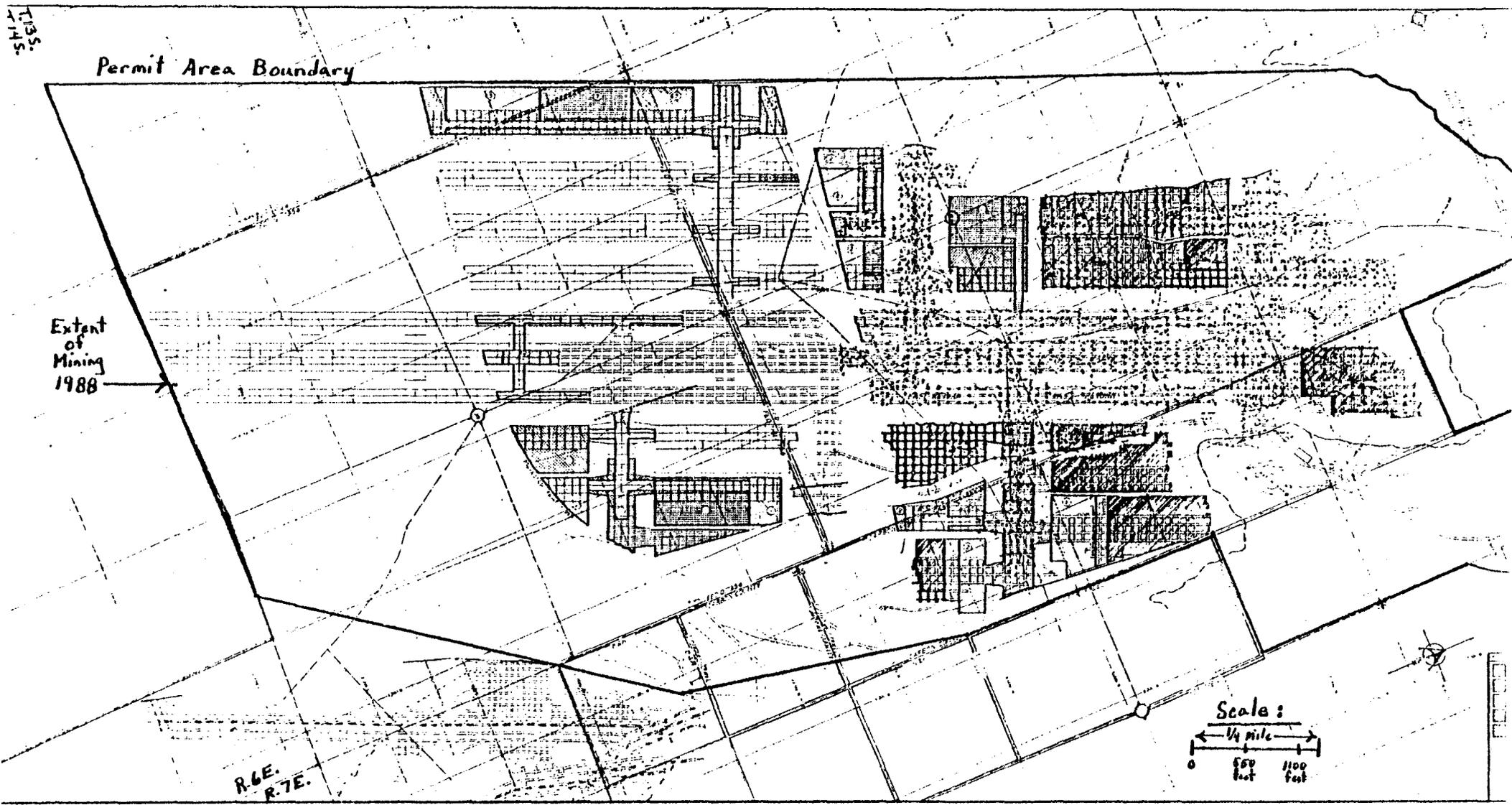
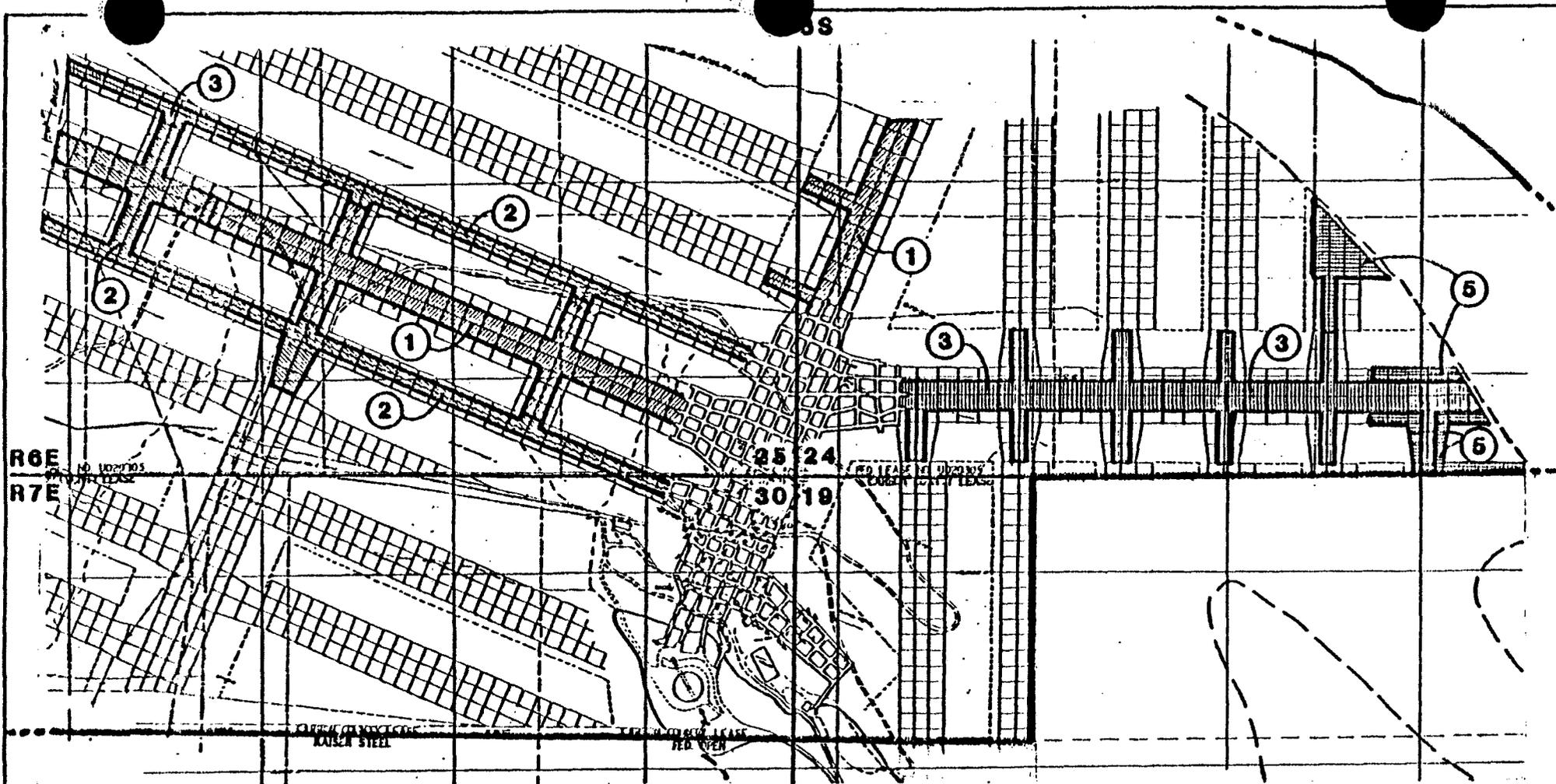


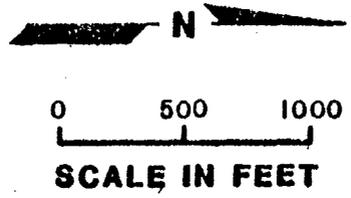
Figure 2



**LEGEND**

————— EXTENT OF MINING ALLOWED BY PERMIT

- ① 1984
- ② 1985
- ③ 1986
- ④ 1987
- ⑤ 1988



**Figure 3**  
**BELINA NO. 2**  
**5-YEAR**  
**MINING PROJECTION**

**Figure 4**  
**BELINA COMPLEX**  
**VALLEY CAMP OF UTAH, INC.**  
**POTENTIAL MINING**

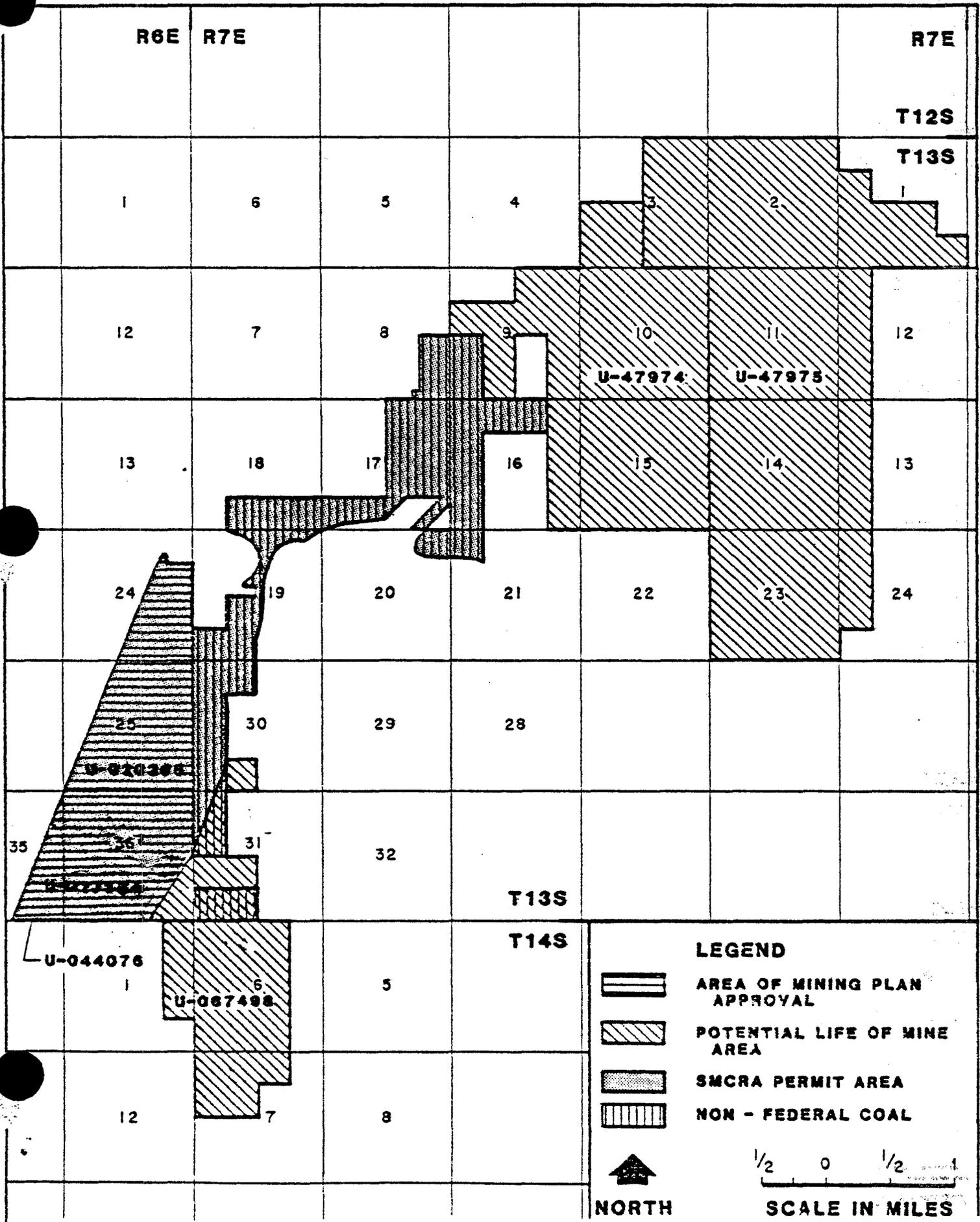
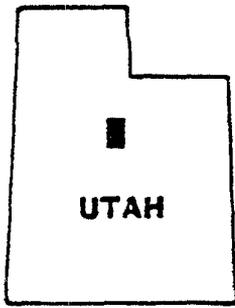
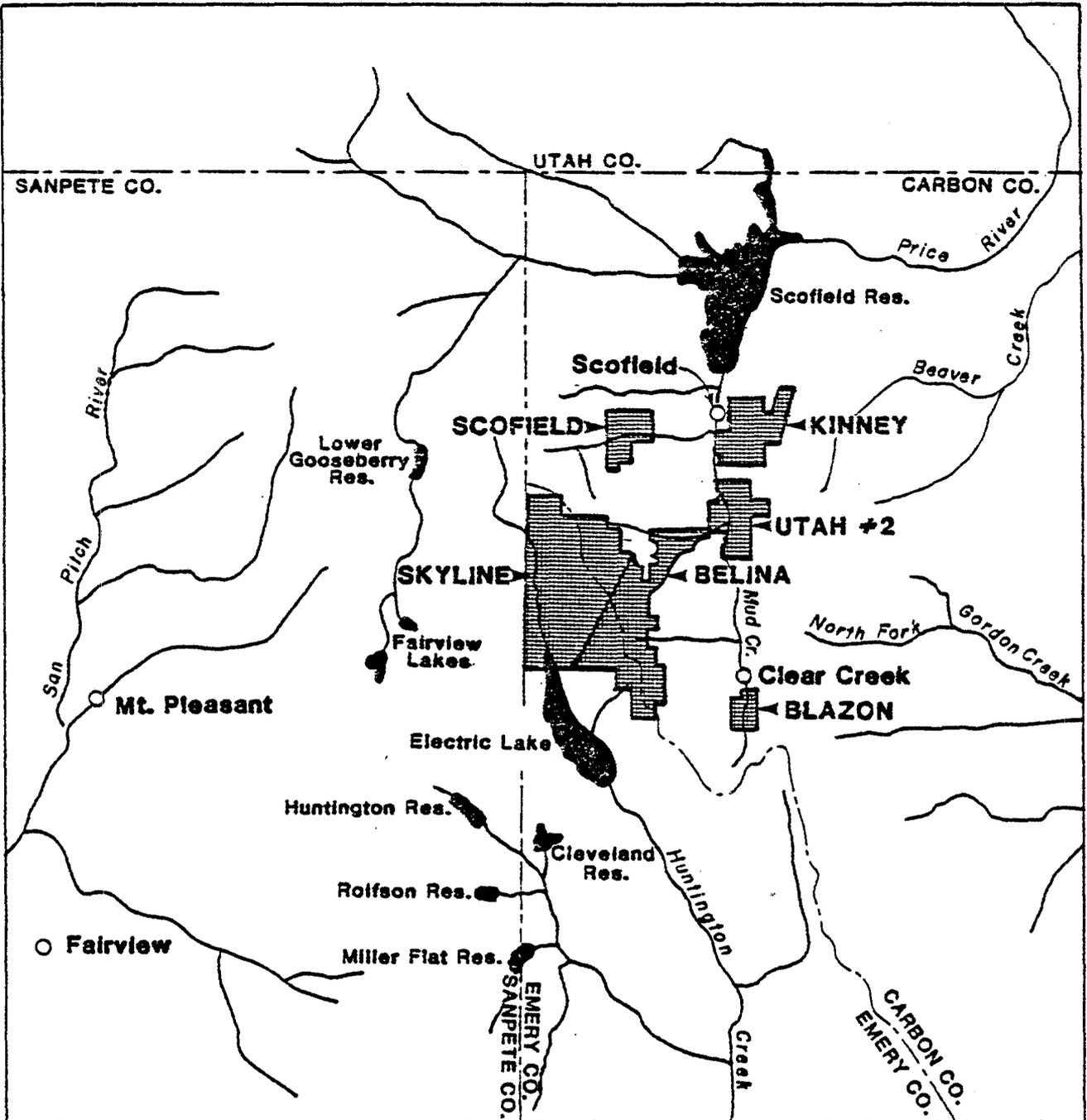


Figure 5

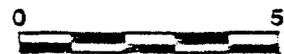


LOCATION MAP

 - Approximate Mine Location



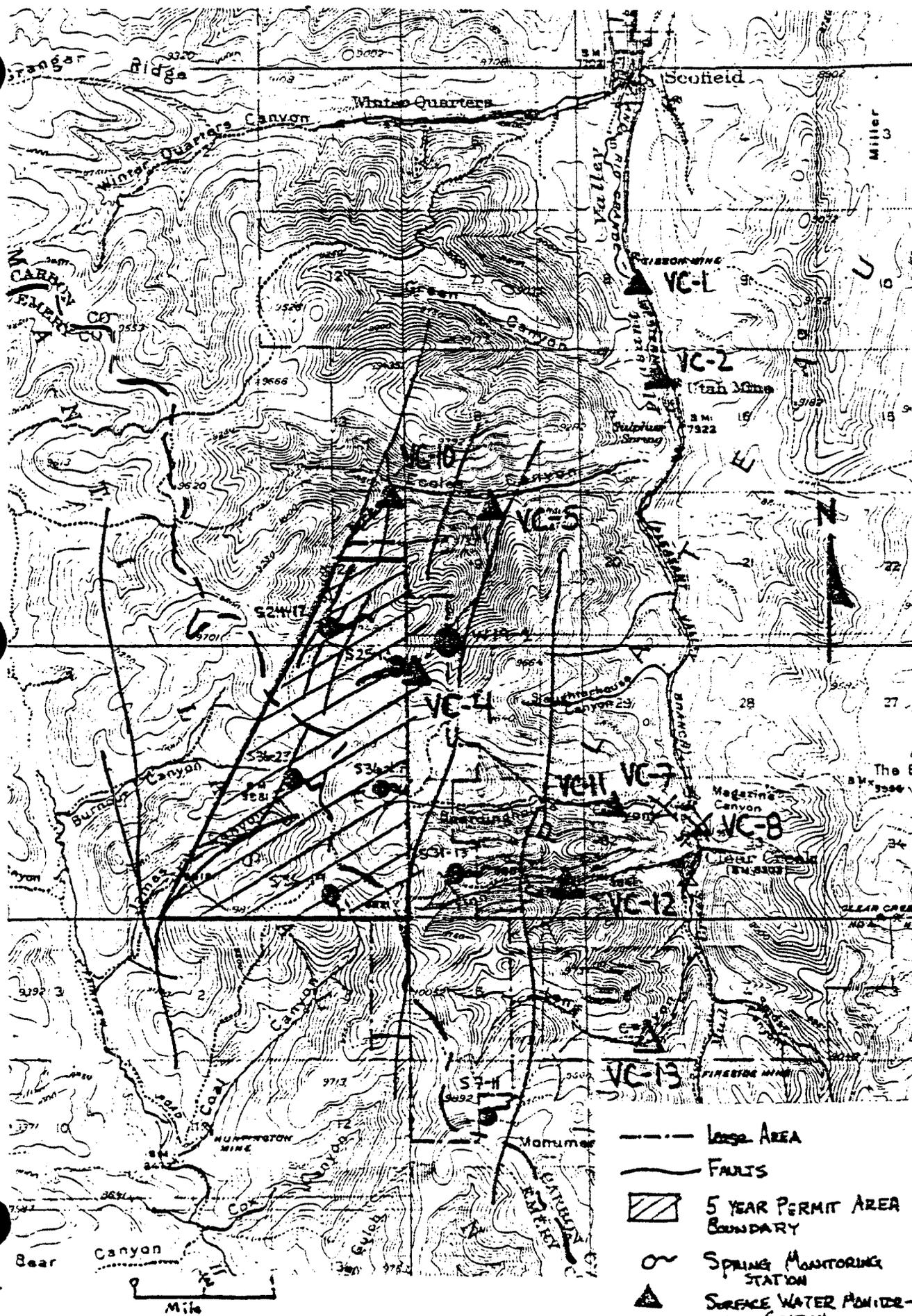
NORTH



SCALE IN MILES

SITE MAP

FIGURE 6



Location of Hydrology Monitoring

CHRONOLOGY OF EVENTS

Valley Camp of Utah, Inc.  
Belina No. 1 and No. 2 Mines

Application for Mining Plan and Permit Approval

DATE	EVENT
December 1976:	Belina #1 produces coal.
February 10, 1977:	USGS issues 211 permit for Belina #1 mine covering the existing Belina #1 (Upper O'Conner Seam).
February 9, 1981:	Valley Camp submits a PAP to OSM and UDOGM for the existing Belina #1 and proposed Belina #2 portal areas.
April 30, 1981:	OSM submits to DOGM final ACR comments on the application.
June 12, 1981:	OSM grants Valley Camp a "minor modification" to construct the Belina #2 portal, fans, conveyor belt and to enter county coal in the Lower O'Conner seam. Approval contained stipulation that the company could not enter Federal coal in Belina #2 without permission from OSM/MMS.
September 1, 1981:	OSM concurs with DOGM consolidated ACR comments.
October 20, 1981:	DOGM forwards a draft ACR document to Valley Camp.
December 2, 1981:	Valley Camp requests permission to enter federal coal in the Lower O'Conner (Belina #2) seam.
December 11, 1981:	DOGM invokes "administrative delay" in the review of the Belina permit application.
December 18, 1981:	MMS approves Valley Camp's request to enter federal coal in the Lower O'Conner seam.
December 24, 1981:	DOGM transmits letter to OSM approving Valley Camp's mining of Federal coal as a "minor modification" to the existing Belina #1 interim mine plan.

DATE	EVENT
January 20, to January 28, 1982:	OSM initiates a series of discussions with MMS requesting that they define a "limit" to mining in the Lower O'Conner Seam.
February 2, 1982:	MMS approves Valley Camp's request to enter Federal coal until July 1, 1983 and delineates mining area on a map.
February 23, 1982:	Valley Camp submits letter to DOGM stating its intent to respond to the ACR by May 31, 1982.
March 25, 1982:	OSM approves Valley Camp's request to enter Federal coal in the Lower O'Conner seam until December 31, 1982, or upon a decision on the mine plan application, whichever comes first. OSM establishes a May 31, 1982 deadline for submittal of a response to the October 1981 ACR.
June 23, 1982:	Valley Camp submits response to October 1981 ACR.
July 6, 1982:	OSM awards contract for reveiw of the application to Envirosphere for \$8,828.
July 16, 1982:	Envirosphere submits to OSM an ACR of the application, including Valley Camp's June 23, 1981 submittal.
August 25, 1982:	A revised second-round ACR is formally transmitted to Valley Camp.
November 9, 1982:	Valley Camp responds to the August 25, 1982 second-round ACR.
December 6, 1982:	Valley Camp requests second "minor modification" to continue mining Federal coal in Lower O'Conner Seam beyond the December 31, 1982 deadline.
December 10, 1982:	Envirosphere completes review of latest submittal.
December 22, 1982:	OSM approves applicant's request to continue mining federal coal beyond December 31, 1982 deadline. Authority to mine federal coal is to expire September 16, 1983. All of the remaining responses to deficiencies are to be submitted by March 18, 1983.

DATE	EVENT
February 7, 1983:	DOGM forwards the third-round deficiency letter to Valley Camp.
March 10, 1983:	Valley Camp submits a response to the third-round deficiency letter.
April 4, 1983:	OSM terminates Envirosphere's contract.
May 23, 1983:	DOGM issues preliminary "Determination of Completeness" on PAP. Fourth deficiency letter is forwarded to company.
June 17, 1983:	Valley Camp responds to remaining completeness items.
June 10, 1983:	Contract awarded to Engineering Science for review of mine plan: \$82,198.
August 9, 1983:	"Draft Determination of Technical Adequacy (DOA)" submitted to UDOGM identifying outstanding technical deficiencies.
August 22, 1983:	DOGM issues "Determination of Completeness" on Belina Mines Complex PAP.
August 24, 1983:	DOA forwarded to Valley Camp.
September 16, 1983:	Valley Camp submits partial response to DOA.
October 7, 1983:	OSM terminates authority for Valley Camp's continued mining of Federal coal in the Lower O'Conner Seam until the permanent program permit is issued.
October 18, 1983:	Valley Camp presents the remaining materials in response to the August 24, 1983 DOA at a meeting in Denver.
October 14, 1983:	Second DOA sent to Valley Camp regarding the partial response to the August 24, 1983 DOA.
November 16, 1983:	Valley Camp submits their response to the October 14, 1983 DOA.
November 29, 1983:	Third DOA sent to Valley Camp concerning its response to the October 14, 1983 DOA.
December 20, 1983:	Fourth DOA sent to Valley Camp raising all remaining issues that had been revealed by the draft technical analysis.

DATE	EVENT
January 10, 1984:	Valley Camp submits their response to the remaining issues raised in previous DOAs.
February 3, 1984:	Draft Findings, Technical Analysis, Environmental Analysis, and other Secretarial decision document material for the Belina Mine Complex are completed.
March 7, 1984:	Forest Service provides final concurrence on permit application package.
March 9, 1984:	Valley Camp submits a letter to OSM requesting permission to extend the South Main Entries to the southern boundary of Section 36 and in the southeast corner of Section 35, U-017354 and U-044076, respectively.
March 13, 1984:	BLM, Branch of Solid Minerals, concurs with Valley Camp's request to extend mining into Section 35 and 36.
March 22, 1984:	Final concurrence received from BLM on mining plan.
March 23, 1984:	Final findings, technical analysis, environmental analysis and other Secretarial decision document material for the Belina Mine Complex are completed.
March 26, 1984:	Forest Service concurs with Valley Camp's request to extend mining into Section 35 and 36.
	Environmental assessment and finding of no significant impact on proposed mining plan decision made available to public.
	OSM submitted final Secretarial decision document to Assistant Secretary for Land & Minerals Management recommending approval of mining plan with conditions.
	Utah Division of Oil Gas & Mining issued permanent program SMCRA permit with conditions.
	Assistant Secretary for Land and Minerals Management approved mining plan with conditions.

## FINDINGS

Valley Camp of Utah, Inc.  
Belina Mines Complex

### Application for Mining Plan

- I. The State of Utah and the Office of Surface Mining (OSM) have determined that the permit application plan submitted on February 9, 1981, and updated through March 9, 1984, and the permit with conditions are accurate and complete and comply with the requirements of the approved Utah State Program, the Surface Mining Control and Reclamation Act (SMCRA), and the Federal Lands Program [UMC 786.19(a)].
- II. OSM has reviewed the permit application and mining plan, and prepared the technical analysis (TA). OSM also prepared the environmental assessment (EA) and based on this has made the following findings:
  1. The applicant proposes acceptable practices for the reclamation of disturbed lands. In addition, due to the absence of stockpiled topsoil, the applicant has identified suitable sources (based on chemical and physical analysis) of substitute topsoil in both the Belina portals disturbed area, and the Utah No. 2 loadout and yard disturbed area. The proposed substitute topsoil materials have characteristics of sufficient quality in terms of suitability for use as topsoil comparable to existing soils in the region. The proposed substitute topsoil materials are present in quantities sufficient for spreading at least six inches over disturbed areas at the Belina portals and the reclaimed haulroad and approximately six inches over disturbed areas at the Utah No. 2 loadout and yard area. The quality and quantity of available substitute topsoil indicate reclamation in terms of revegetation is feasible. The OSM staff has determined that reclamation, as required by the Act, can be feasibly accomplished under the mining plan when supplemented by a condition (No. 6 and 7). OSM has determined that reclamation at Belina Mines Complex is technologically and economically feasible under SMCRA Section 522(a)(2)(b).

2. OSM has conducted a cumulative hydrologic impact assessment (CHIA) of all existing and anticipated mining by surface coal mines in the general area. The CHIA included the impacts of all anticipated mining in the cumulative impact area (CIA). It should be noted that the Miller tract lease connected to the Utah No. 2 mine was evaluated in the CHIA; however, this permitting action does not include any mining associated with the Utah No. 2 mine. This is because Valley Camp of Utah, Inc. did not supply the necessary information to permit the Miller tract lease or any coal recovery at the Utah No. 2 mine. The CHIA was written prior to completion of the technical analysis and the final commitments made by the applicant; therefore, issues raised in the CHIA were used by OSM to recommend mitigating measures that evolved during the permit review process. It is concluded from the CHIA and the TA that increases in total dissolved solids, total suspended solids, calcium, magnesium, and phosphate will occur; however, these increases will not cause material damage to the surrounding hydrologic balance. In addition, springs with water rights (other than Valley Camp's) may dry up, increased stream flow from mine discharges will occur in Eccles Creek and Mud Creek, and an unknown number of springs currently used by wildlife will possibly dry up. The applicant provided mitigating measures to prevent damage to the hydrologic balance where potential impacts were considered important to local users or wildlife; therefore, it is concluded that the application has been designed to prevent damage to the hydrologic balance outside the proposed mine plan area, and the PAP is considered in compliance with UMC 786.19(c).
  
3. After reviewing the description of the proposed permit area, Utah Division of Oil, Gas and Mining and OSM have determined that this area is:
  - a. Not included within an area designated unsuitable for surface coal mining operations. [UMC 786.19(d)(1)]
  
  - b. Not within an area under study for designating lands unsuitable for surface coal-mining operations. [UMC 786.19(d)(2)]
  
  - c. Not on any lands subject to the prohibitions or limitations of UMC 761.11(a) (national parks, etc.), 761.11(f) (public buildings, etc.), and 761.11(g) (cemeteries). [UMC 786.19(d)(3)]
  
  - d. Within 100 feet of the outside right-of-way of a public road. [UMC 786.19(d)(4)] The permit boundary includes State Highway 96 and portions of Eccles Canyon Road (a Forest Service Development road). Pursuant to UMC 761.12 Valley Camp has previously carried on mining-related activities on the public roads within its permit area prior to August 3, 1977 and has leases with private surface owners to conduct these activities; [PAP, Volume III, Section 782.15]. In accordance with UMC 761.12(d) and UMC 786.11, a public comment period was held from September 28, 1983 to October 19, 1983 and no comments were received. The Carbon County Commissioner's Office provided concurrence on the PAP on September 15, 1983.] Valley Camp has a previous right to these activities and can continue them under this permit.

e. Not within 300 feet of any occupied dwelling. [UMC 786.19(d)(5)]

4. OSM's issuance of a permit and the Secretarial decision on the Mineral Leasing Act plan is in compliance with the National Historic Preservation Act and implementing regulations (36 CFR 800). The State Historic Preservation Officer has concurred with OSM's finding that the mining operations will have no effect upon cultural resources listed or eligible for listing on the National Register of Historic Places, provided that an inventory of the surface over the underground workings is conducted as proposed by the applicant. (See Appendix B of the technical analysis). [UMC 786.19(e); OSM TA; State Historic Preservation Officer concurrence letter, February 29, 1984]
5. The applicant has not submitted surface owner consent letters for areas where the surface and mineral estates have been severed, because UMC 782.15(b) only requires such consent in cases where the surface operations include the surface mining of coal, which will not be part of the Belina operations. The application is, therefore, in compliance with UMC 786.19(f).
6. The applicant does not currently have any outstanding violations of any law, rule or regulations of the United States, or of any State law, rule or regulation, as specified by UMC 786.17(c) (Dave Loff, UDOGM, May 8, 1984). [UMC 786.19(g)]
7. OSM's records confirm that all fees for the Abandoned Mine Reclamation Fund have been paid. [UMC 786.19(h); oral communication with John Sender, OSM Fee Compliance Officer, in Albuquerque Field Office on April 17, 1983]
8. OSM records show that the applicant does not control and has not controlled mining operations with a demonstrated pattern of willful violations of the Act and the Utah State Program of such nature, duration, and with such resulting irreparable damage to the environment as to indicate an intent not to comply with the provisions of the Act. [UMC 786.19(i) 773.15(b)(1); oral communication with Jodie Merriman, OSM Reclamation Specialist, in OSM Albuquerque Field Office on January 17, 1984]
9. Underground coal mining and reclamation operations to be performed under the permit will not be inconsistent with other mining in the immediate vicinity of the Belina Mines Complex. [UMC 786.19(i)]
10. The applicant has provided evidence and the Utah Division of Oil, Gas and Mining has found there are no prime farmlands in the permit area and area for life of mine. [UMC 784.19(1)]
11. The alluvial valley floor that was identified in the vicinity of the Belina mines (i.e., in Pleasant Valley below the Utah No. 2 loadout) is not within the proposed permit area and no farming will be interrupted, discontinued, or precluded. In addition no material damage to the water supplied to the alluvial valley floor will occur as a result of mining. [UMC 786.19(1)]

12. The proposed postmining land use of the permit area has been approved by the Utah Division of Oil, Gas and Mining and OSM.
13. Utah Division of Oil, Gas and Mining and OSM have made all specific approvals required by the Act, the approved Utah State Program, and the Federal Lands Program.
14. The Federal action complies with the Endangered Species Act of 1973, the Bald Eagle Protection Act, and the Migratory Bird Act. The Federal action also complies with the laws and regulations protecting fish and wildlife resources. The U. S. Fish and Wildlife Service raised wildlife concerns in correspondence dated September 13, 1982, and April 8, 1983. Sufficient supplemental information has been provided by the applicant to resolve the concerns (see TA Sections 784.21 and 817.97). The wetland monitoring plan proposed by the applicant has been evaluated and supplemented with Condition No. 8; therefore, the Federal action will comply with Executive Order 11990, Protection of Wetlands.
15. Procedures for public participation have complied with requirements of the Act, the approved Utah State Program, the Federal Lands Program, and Council on Environmental Quality regulations (40 CFR Part 1500 et seq.). (30 CFR 740.13(c)(3); Chronology of Events).
16. The applicant has complied with all other requirements of applicable Federal laws; and either has or has applied for permits from the Environmental Protection Agency and Utah State Air and Water Quality agency. [30 CFR 746.13(g); Letters of Concurrence and Clearance and mining plan and permit application package]
17. Approximately 1,378 acres of the permit area are located within the Manti-LaSal National Forest. During leasing, the Forest Service supplied stipulations and during mine plan review, determined that there were no significant recreational, timber, economic, or other values which may be incompatible with such surface mining operations. [Section 522(e)(2)(A), SMCRA; see concurrence letters from U.S. Forest Service, March 7, 1984; March 26, 1984; and Findings of Compatibility]

  
\_\_\_\_\_  
Administrator  
Western Technical Center

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Headquarters Reviewing Officer

FINDING OF NO SIGNIFICANT IMPACT

Valley Camp of Utah, Inc.  
Belina Mines Complex

The technical analysis and environmental assessment were prepared by the Office of Surface Mining (OSM). These documents identify certain environmental impacts that would result from the Federal approval of the mining plan for the Valley Camp of Utah, Inc. Belina Mines Complex. The five-year permit application, submitted to the State under its approved permanent program, proposes a total permit area of 2,837 acres. The permit area encompasses portions of three Federal leases.

OSM has determined that impacts would result from mining at the Belina Mines Complex; however, OSM finds that impacts would not be significant. A potentially significant issue was identified concerning possible reduction in flow to Boardinghouse Spring located in lower Boardinghouse Canyon as a result of the proposed Belina mining operations. Boardinghouse Spring is the main water source for the town of Clear Creek (approximate population, 45), but the water right to this spring is owned by Valley Camp. OSM's technical analysis (TA) and cumulative hydrologic impact assessment (CHIA) report conclude that the average annual flow from the spring is 250 gpm; the town utilizes 24 percent (61 gpm) of this flow. A worst-case analysis concludes that the Belina Mines Complex could intercept 26 gpm of ground-water flow, or result in a 10.4 percent reduction of flow. If mining reduced the spring's flow by 26 gpm, the available flow to the town of Clear Creek would still be 224 gpm. OSM's socioeconomic assessment (EA page 8) concludes that this water supply will be adequate for existing and any future population of the town of Clear Creek; therefore, there will be no significant adverse impact from the potential reduction of flow at this spring.

Other impacts identified by OSM and the State would be mitigated by those appropriate environmental protection measures detailed in the mining plan and proposed conditions attached to the permit.

Based upon the evaluation of impacts given in the TA and EA, I find that no significant impacts to the human environment would result from the proposed mine; therefore, an environmental impact statement is not required.

*ats* Richard E. Dawes  
Administrator  
Western Technical Center  
3/23/84  
Date

## ENVIRONMENTAL ASSESSMENT

### VALLEY CAMP OF UTAH, INC. BELINA MINES COMPLEX

#### INTRODUCTION

The Belina Mines Complex is located about 3 miles southwest of Scofield, Utah, and 20 miles northwest of Price, Utah (See Figure 4). The SMCRA permit area includes T. 13 S., R 6 E., SLM, portions of section 24, portions of section 25, portions of section 35 and portions of section 36. In T. 13 S., R. 7 E., SLM, portions of section 8, portions of section 9, portions of section 16, portions of section 17, portions of section 18, portions of section 19, portions of section 20, portions of section 21, portions of section 30 and portions of section 31. The mining plan approval area includes T. 13 S., R. 6 E., SLM, portions of sections 24 and 25, and portions of section 35 and 36.

Coal that will be removed by Valley Camp of Utah, Inc. (Valley Camp) over the life of the mine will include 8,438 acres of Federally owned coal; 640 acres of privately-owned coal; and 305 acres of Carbon County-owned coal. Federal coal leases include U-020305, U-017354, U-044076, U-067498, U-47974, and U-47975. The proposed area of mining plan approval is about 1,378 acres and is the same as the proposed resource recovery and protection plan area (see Figure 1). The area being evaluated for permit approval includes the surface and underground disturbance associated with the Belina No. 1 and No. 2 Mines, the loadout facility located at the inactive Utah No. 2 Mine and the haul road from the Belina portals to Eccles Canyon. The mining plan approval excludes county and fee coal, which is being permitted under the SMCRA permit approval.

Valley Camp began construction operations in 1976. Production of 1.2 million tons per year began under a 30 CFR 211 coal mining permit from the U.S. Geological Survey (USGS) issued 10 February 1977; the Utah Division of Oil, Gas, and Mining (UDOGM) permit was issued on 8 October 1976. The proposed action is to continue mining coal underground at 0.97 million tons per year and increase to a maximum of 1.93 million tons per year from the Upper and Lower O'Connor Seams in 1988 through 2010.

Approval of the Surface Mining Control and Reclamation Act (SMCRA) permit and the mining plan by OSM would provide for mining at the Belina Mines Complex site through the year 1988 at a maximum rate of 0.97 million tons per year (59 million tons total for the life of the mine). Coal is and would continue to be transported to the buyers by unit train. Valley Camp employs approximately 214 people at its Belina Mines Complex. This employment level would increase to 425 when future production reaches 1.93 million tons per year.

Pursuant to 30 CFR 746.14(b), the Secretary of the Interior must approve, disapprove, or conditionally approve the proposed mining plan. Valley Camp of Utah, Inc. submitted an application for a permit supported by a mining and reclamation plan (MRP) to expand coal mining in the Upper and Lower O'Connor Coal Seams in conformance with the requirements of the SMCRA, the Utah State Program, the Federal Lands Program, and the Mineral Leasing Act. This environmental assessment is being written to help the public officials make decisions that are based on an understanding of the environmental consequences.

## ALTERNATIVES

### Alternative No. 1: No Action

The Federal mineral leasing laws and existing lease requirements make it necessary for the Secretary of the Interior to respond to applications and approve, disapprove, or conditionally approve mining operations on Federal leases. OSM finds the permit to be complete (8/22/83). Therefore, this alternative is not viable and will not be discussed further.

### Alternative No. 2: Proposed Action with Stipulations (Preferred Alternative)

Action proposed by Valley Camp of Utah, Inc. consists of extending existing coal mining in the Upper and Lower O'Connor Coal Seams by the use of room and pillar and continuous miner techniques. Both portals will be mined with continuous miner and shuttle cars, utilizing conveyor belts for haulage.

Approximately 76 acres on the surface were disturbed to locate existing support facilities and sedimentation ponds. No significant additional surface disturbance would be needed to support expanded underground mining operations. The applicant anticipates mining the McKinnon Seam in the future. This seam has not been included in the present mining and reclamation plan. The existing mining will operate in the Upper and Lower O'Connor Seams through the 5-year permit term. The Upper O'Connor seam ranges in thickness from 4 to 20 feet and the Lower O'Connor Seam ranges in thickness from 3.5 to 25 feet. Both seams are extremely faulted along the western portion of the permit boundary.

It is anticipated that approximately 0.97 to 1.93 million tons of coal will be produced each year. The coal will be, as it is now, transported from the portals into a crusher and then directly to the coal stockpiles at the loadout.

When mining of the O'Connor Seams and under future permits, the McKinnon Seam, is complete, the site will be reclaimed. Reclamation will consist of the sealing of 5 portals at Belina No. 1 Mine and 3 portals at Belina No. 2 Mine. All surface

facilities will be removed and the mine bench and portal face-up areas will be regraded to achieve a stable grade. The regraded area will be ripped, topsoiled, and revegetated. The haul road from the Belina portals to Eccles Canyon will also be regraded, ripped, topsoiled, revegetated, with adequate drainage provided for stream crossings.

The preferred alternative of the Office of Surface Mining (OSM) includes approval of the proposed PAP with both Federal and State conditions (stipulations), contained in the "Permit with Stipulations" section of this decision document. These conditions would be attached to the proposed Federal mining plan approval and to OSM's proposed SMCRA permit.

### Alternative No. 3: Disapproval of Mine Plan

The disapproval alternative would result in a permanent closure of the existing mining operations. One of the most noticeable impacts of such a closure would be a permanent loss of about 214 jobs in the Scofield-Price area. Disapproval of the mining plan would require initiation of reclamation activities. Impacts to water and land resources from mining would cease. The recovery of .97 million tons of coal resources per year would not occur as a result of implementation of this alternative.

### DESCRIPTION OF THE AFFECTED ENVIRONMENT

Valley Camp's mining operations are located approximately 20 miles northwest of Price, Utah, in Carbon and Emery Counties, Utah. The mine site is on the southwestern portion of the Pleasant Valley drainage basin approximately 3 miles south of Scofield, Utah. Approximately 8,438 acres of the potential life of mine area are covered by Federal leases U-020305, U-017354, U-044076, U-067498, U-47974, and U-47975. The remaining 945 acres are covered by the county and fee coal leases (See Figure 1). Coal mining operations of the existing Belina Mines Complex, as proposed in the MRP, would consist of underground coal mining from the Upper and Lower O'Connor Seams. The Upper O'Connor Seam outcrops at an elevation of about 9,050 feet at the Belina No. 1 portal and the Lower O'Connor Seam outcrops at an elevation of about 8,960 feet at the Belina No. 2 portal.

Except for approximately 76 acres which have been disturbed to locate support facilities and sedimentation ponds, the entire mining plan area is rugged and mountainous, varying in elevation from 7,840 feet near the loadout facility at Utah No. 2 to over 9,200 feet at the Belina portals.

The mining plan area consists of a series of the north-south trending ridges which are separated by gulches and canyons containing intermittent streams which drain into Mud Creek. The surface area has been primarily used for livestock grazing and wildlife habitat.

The surface facilities are located in a narrow valley of steep, well-drained slopes and consist of the Belina No. 1 and Belina No. 2 portals with associated buildings, coal loadout, and sedimentation ponds. Existing surface disturbances at the mine site are within 100 feet of Utah Highway 96 and were disturbed prior to the enactment of SMCRA in 1977.

The major vegetation communities within the mining plan area consist of spruce-fir, aspen, sagebrush, and fringe sage. Riparian communities occur along some of the larger drainages. Common understory species are wheatgrasses, mountain brome, sedges, needlegrass, wildrose, snowberry, elderberry, ninebark, and numerous forbs.

Numerous wildlife species inhabit the general area. The most prominent species include mule deer and elk which utilize the spruce-fir, aspen, and mountain shrub habitats in and adjacent to the mining plan area during the summer and fall. The northern bald eagle occurs as a fall visitor to the Scofield Reservoir. Golden eagles and other larger raptors frequent the area. Active Cooper's and goshawk nests are present in the mining plan area. Drainages within the mining plan area provide habitat for beaver.

The permit area is located in a mule deer summer range on Utah deer herd unit 32. Parts of the permit area are known to be used by deer and elk for fawning. Winter ranges for deer and elk are somewhat remote from the mine complex area. These ranges are located 7 to 8 miles to the northeast and southeast from the permit area. Therefore, movement of these animals from summer to winter range parallel the permit area. Movement generally takes place in the lower valleys, i.e., the Pleasant Valley corridor. This being the case, the mine currently does not restrict or impede movement to summer and winter range for mule deer and elk (Utah Division of Wildlife Resources, September 8, 1983, letter to Valley Camp). Regionally, moose are known to use riparian bottoms as wildlife habitat. Moose were introduced into the Pleasant Valley area several years ago, however, poaching has reduced their number. Whiskey Gulch and Eccles Creek are not considered as important habitat for moose due to the steep topography limiting the width of the riparian bottoms (DWR, March 14, 1984).

Aquatic systems on the mining plan area include Whiskey Gulch Creek, Eccles Canyon Creek, and Mud Creek. Eccles Canyon Creek supports a trout fishery in the lower reaches. Both fish and wildlife resources may have already been affected by sedimentation from the existing Belina Mines Complex and the adjacent Skyline Mine.

Climatic conditions in central Utah are variable because of the extreme topographic changes in the region. The mine site receives from 25 to 30 inches of precipitation, including 8 inches of rainfall from May to September. The ridges above the

Belina Mines Complex accumulate greater snowpack than does the valley because the easterly storm track that occurs in the area.

The Upper and Lower O'Connor Coal Seams that are mined at the Belina Mines Complex are in the Blackhawk Formation which is part of the Cretaceous-age Mesa Verde Group. The Lower O'Connor Seam is present as a single seam up to 25 feet thick over most of the Belina Mines Complex, although in the southern part of the Belina Mines Complex the Lower O'Connor Seam splits into the "A" and "B" Seams. These seams are also present at the Skyline Mine to the west. The Upper O'Connor Coal Seam is also present over the Belina Mines Complex as a single seam, although in parts of the mining plan area the seam splits into 2 or 3 seams. At the northern end of the mining plan area the lowest split of the Upper O'Connor Seam was not mined. The uppermost McKinnon Seam will not be mined during the term of this 5-year permit.

The strata in the mine area dips from 2 to 5 degrees to the west. The coal in the Upper O'Connor Seam ranges in thickness from 4 to 20 feet, contains 0.61 percent sulfur, 6.99 percent moisture, 5.85 percent ash, and provides 12,212 BTUs. Coal in the Lower O'Connor Seam ranges in thickness from 3.5 to 25 feet and contains 0.54 percent sulfur, 6.50 percent moisture, 5.10 percent ash, and 12,496 BTUs. The total recoverable coal reserves in the permit area are estimated at 161.8 million tons.

## IMPACTS OF ALTERNATIVE NO. 2

### Soils

The Belina Mines Complex is an existing active underground mine. Soils over most of the 76 acres of disturbance had been disturbed before the enactment of the SMCRA. The soils that had been disturbed in the three surface areas adjacent to the Belina portals are classified as Argic Pachic Cryoborolls. This soil is considered a fair topsoil material. The office/warehouse and the loadout facilities at Utah No. 2 are classified as Typic Cryoborol. This soil is considered poor topsoil material where slopes exceed 30 percent and fair on lesser slopes. Alternative topsoil locations have been identified and sampled by the applicant. A determination of the suitability of such alternate material for reclamation and a calculation of volumes has been completed.

To meet the demand for a suitable topsoil material, the applicant has identified material onsite sufficient to cover 38 acres. A field test or greenhouse study will be used to demonstrate that this material will be suitable as a plant growth medium with supplemental fertilization and incorporation of organic matter (see Chapter XIV of the accompanying technical analysis). Since the reclamation of the site may not take place for another 30 years, it would be necessary to re-evaluate the availability and quality of the topsoil material prior to actual reclamation operations.

Some impact to soils may potentially occur due to future subsidence, however, it should be emphasized that because the required surface area has already been disturbed and no new surface area is proposed to be disturbed to support expanded mining operations, the approval of this mining plan is not likely to result in additional adverse impacts on soils.

### Vegetation

For a description of the plant communities found within the mining plan area see Chapters II and XV of the accompanying technical analysis. Past mining activities have altered and/or removed approximately 76 acres of native vegetation. This area includes about 30 acres for the mine portal area, 21 acres for the loadout facilities, and 25 acres for the haul road. Additional vegetation impacts are not anticipated with mining plan approval. Approval of the mining plan will not cause significant long-term adverse vegetation impacts. Reasons for this conclusion include: (1) the surface area affected is small and dispersed; (2) adequate revegetation with native plant species is practical as proposed; (3) essentially all disturbed areas will be revegetated; and (4) no future mining disturbances from additional facilities are anticipated within the area of the mining plan approval, and (5) impacts to vegetation from subsidence will be minimal due to the applicant's implementation of the subsidence control program.

### Surface Water Hydrology

The Belina Mines Complex is located along an intermittent channel in Whiskey Canyon. The portal facilities are constructed on a valley fill in the canyon. Sediment and drainage control facilities at the Belina mines include two sedimentation ponds, one for mine water discharge and one for surface runoff. Both ponds and all of the ditches and culverts comply with the performance standards.

Total suspended sediment concentrations have been increased below the mine because of past failures of the mine discharge ponds and inadequate sediment control measures during construction of the valley fill and the haul road. The mine discharge pond has been reconstructed (November, 1983) and is functioning to reduce sediment contribution into Pond No. 4. Since the reconstruction, no violations have been issued regarding TSS levels in Pond No. 4 (See TA pages 14 and 17). Also, the haul road has been paved which should reduce the sediment contribution from the road.

The Utah No. 2 facilities are located along Mud Creek, a perennial stream. Three sedimentation ponds are already constructed at the facilities. Ponds No. 1 and 3 are in compliance with the performance standards. Pond No. 2 is too small to achieve a detention time of 24 hours (UMC 817.46(c)).

The pond is currently .4 acre/foot too small for total containment of the 10-year 24-hour event. However, Valley Camp has committed to enlarging the pond during the next construction season, spring of 1984 (July 25, 1983 letter to UDOGM). Valley Camp has further committed to submitting plans to the regulatory authority for review and acceptance prior to construction. Much of the Utah No. 2 facilities are within 100 feet of Mud Creek. NPDES records and site visits have confirmed that none of the ponds have discharged water. The water monitoring records show no adverse impacts from the Utah No. 2 facilities on Mud Creek.

There will be an increase in total dissolved solids, calcium, and total suspended solids concentrations and loads because of mining operations. However, no material damage is anticipated from either the proposed mining operation or all of the anticipated mining in the area because the increase in TDS does not violate surface water quality standards. Also, calcium tends to precipitate (drop out) in Scofield Reservoir.

No alluvial valley floors (AVF) have been identified in or immediately adjacent to the mining plan area. The closest alluvial valley floor is downstream of the Utah No. 2 facilities along Mud Creek in Pleasant Valley. Activities at the Belina mines and the Utah No. 2 facilities will not disturb the hydrologic balance of this alluvial valley floor because ground water flows will be maintained along the O'Connor fault during and after mining, which provides flow to Eccles Creek and; hence to the AVF.

Most of the water quality impacts associated with the road and pad have already occurred. Levels of degradation have continued to decrease since the road and pad were constructed. The haul road, truck loadout facilities and Belina pad are located within the 100 foot buffer zone of Whiskey Gulch, an intermittent stream, therefore, UMC 817.57 Hydrologic Balance: Stream Buffer Zones is applicable (see TA page 16). OSM has considered two alternatives to resolve this problem: 1) require the applicant to remove and relocate the haul road, loadout facility and pad to bring the operation into compliance with UMC 817.57, or 2) authorize the continued existence of these structures as provided for by UMC 817.57.

The primary environmental benefit of bringing the operation into compliance (i.e., remove/relocate the structures) would be the reclamation and reestablishment of the riparian area in Whiskey Gulch. Although regionally moose are known to use riparian bottoms as habitat, Whiskey Gulch is not considered to be suitable habitat due to the steep topography which limits the width and hence the use of the riparian bottom. Reconstruction of the road, loadout facility and pad outside of the Whiskey Gulch buffer zone would not be prudent for the following reasons: 1) reconstruction of the road and pad would essentially cause the mine to close: there are no feasible alternative access routes to the portal area, 2) relocation of the pad would require

closure and relocation of the Belina No. 2 portal and truck loadout facilities: this would create additional disturbance, and 3) relocation of the road and pad would create a new wave of sediment (3-10 years) into Whiskey Gulch. The DWR and UDOGM have worked with the applicant to implement measures reducing the impacts of the operation on Whiskey Gulch (slope stabilization, revegetation, sediment control measures, etc.); therefore, these agencies support the continued existence of the facilities within the buffer zone in lieu of creating new disturbances to the area (see OSM phone confirmation with DWR, March 14, 1984). After considering these alternatives, the regulatory authority authorizes the use of the pre-existing haul road, loadout facility and portal yard within the Whiskey Gulch buffer zone. The applicant has committed to protect surface water resources through the implementation of a subsidence control program. (See Condition No. 5 of the TA and p. 9 of the EA.)

### Ground Water Hydrology

Five ground water impacts have been identified: (1) ground water encountered in the mines will be pumped from the mines to receiving streams; (2) three springs with water rights (i.e., 91-1643, 91-3499, and 91-3500) may be affected by the Belina Mines Complex; (3) the recharge to the springs in lower Boardinghouse Creek (i.e., water right 91-3586, owned by Valley Camp) that supply water for the Town of Clear Creek may be interrupted by the Belina Mines Complex; (4) two wells located in fault zones that occur in the Belina Mines Complex (i.e., Connelville Fault-Coastal States Energy Well 91-1560 and O'Connor Fault-Valley Camp Well 91-1691) may experience some decline in flow resulting from dewatering in the Belina mines; (5) two water rights belonging to Valley Camp (i.e., 91-3596 and 91-3595) associated with abandoned mine discharges will likely diminish as a result of dewatering in the Belina mines. These two water rights are not in current use.

These impacts to the ground water system have been evaluated in Chapter 9 and 12 of the technical analysis. The impacts are not significant to the hydrologic balance in the area adjacent to the Belina Mines Complex. OSM's hydrologic assessment and socioeconomic analysis (EA, p.9) concludes that the reduction of flow in the Boardinghouse Spring from mining will not constitute a significant impact of the Town of Clear Creek. For expanded discussions of hydrologic impacts, see the CHIA report available from OSM (summarized in the TA, Appendix A).

### Fish and Wildlife Resources

Approval of the permit application package (PAP) with Condition No. 8 (see Chapter XVI of the accompanying technical analysis) will not cause long-term adverse fish and wildlife impacts. Reasons for this conclusion include: (1) actual area of prior mining disturbance is small (approximately 76 acres); (2) major wildlife displacements and impacts have already been caused by the existing facilities; (3) restoration of premining fish and

wildlife habitats is technically and practically feasible; and (4) essentially all disturbed habitats would be revegetated with useful plant species. Mining activities will not affect the continued existence of endangered or threatened species or result in impacts to critical supporting habitats (see 20 December 1983 letter from the Fish and Wildlife Service). Large raptors will be protected from electrocutions and nesting disturbances. Key or important habitats will be adequately mitigated with development of equivalent habitats.

#### Backfilling and Grading

According to the PAP for the proposed underground mining operations, the areas of the portals at Belina Nos. 1 and 2 Mines and Utah No. 2 will be backfilled and regraded to bring the contours to a stable grade. The surface lands will be restored to their premining land uses. Revegetation of the disturbed areas prior to abandonment by the applicant should result in the mining operation producing no significant lasting impact on the environment.

#### Coal and Non-Coal Processing Wastes

Crushing is the only onsite coal preparation process that is proposed and, hence, no coal processing wastes will be generated at the Belina Mines Complex. Non-coal wastes are stored in metal trash carriers prior to being transported to the Carbon County Sanitary Landfill for disposal. The proposed methods of disposal of non-coal processing wastes will not have a significant adverse impact on the environment.

#### Subsidence

The underground mining operations at the Belina Mines Complex are expected to produce surface subsidence (i.e., cracks and potholes) in areas where the overburden is less than 400 feet thick. It is estimated that approximately 1,043 acres within the permit area may be affected by subsidence. (OSM CHIA, Figure 2) Valley Camp has provided subsurface support to protect surface structures, including a gas pipeline, a gas well, and perennial streams. OSM has reclassified all streams within the permit area as intermittent, therefore, the applicant must revise the subsidence monitoring program to reflect this change (see TA p. 28 and 44). Impacts on fish and wildlife from subsidence effects include loss of water sources and riparian and wetland habitat areas; Condition No. 8 contains measures to replace these resources. (See TA p. 36) Undiscovered cultural resources may also be affected by subsidence, and Valley Camp has committed to undertake a survey to identify whether any such resources exist over the underground workings. (See Appendix 3 of the TA)

#### Socioeconomics

Expansion of the Belina Mines Complex would result in a continuation and eventual increase in current levels of employment and associated indirect and induced socioeconomic

impacts. Although the current employment at the mine is at 214 employees, direct project employment has exceeded 315 employees in the past several years. Based on current employment levels at the mine, the total employment impact in the region is 365 jobs. The associated population impact is approximately 950 persons living in 300 households, mostly in Carbon and Sanpete Counties. The direct and induced effects associated with the Belina Mines Complex would remain constant at these levels throughout the short-term, i.e., through 1988.

Expansion of Valley Camp's Belina Mines Complex in 1989 would generate limited direct and indirect socioeconomic impacts over the life-of-mine. These impacts would be of both a beneficial and adverse nature. Employment would increase to 425 in order for production to reach 1.93 million tons per year.

Beneficial impacts include increased employment, higher sales revenues for coal business and increased total wage and salary labor earnings. Public sector revenues would also increase.

Population in the region would increase by approximately 930 persons as a result of the Valley Camp expansion. Approximately 70 percent of the population impact would occur in Carbon and Sanpete Counties (i.e. Price and Fairfield), where the baseline total population is anticipated to increase by 63 percent (from 36,800 in 1980 to 60,050 in 2000). The remaining population impact would occur in other surrounding areas within a reasonable commuting distance from the mine, principally Utah and Emery counties. Additional housing needs would parallel the population growth. Capital and operating expenditures of local counties, school districts, municipalities and utilities would increase as a result of the need to meet higher levels of demand. A potentially significant issue was identified concerning the possible reduction of the Town of Clear Creek's water supply due to mining at the Belina Mines Complex. Clear Creek is a small community of approximately 45 residents (Carbon County Planning Department). The town (land and buildings) is owned by Valley Camp. Clear Creek currently gets its water supply from the Boardinghouse Spring located in lower Boardinghouse Canyon. The spring's water right belongs to Valley Camp. OSM's technical analysis (TA) and cumulative hydrologic impact assessment (CHIA) report concludes that the average annual flow from the spring is 250 gpm; the town utilizes 24 percent (61gpm) of this flow. A worst case analysis concludes that the Belina Mines Complex could intercept 26 gpm of ground water flow, or result in a 10.4 percent reduction in flow. If mining reduced the flow by 26 gpm, the available flow to the town would still be 224 gpm.

Recent projections (i.e., Bureau of Land Management Final Environmental Impact Statement, "Unita-Southwestern Coal Region" January, 1984) and Carbon County growth management policies show a limited amount of population growth in Pleasant Valley, including the Town of Clear Creek, due to the lack of developable land and readily available tax base to support public services

and facilities. Therefore, based on OSM's hydrologic assessment and the fact that the spring will support the current and future population of Clear Creek, the impact of potentially reducing the springs flow will be minimal.

Additional vehicular traffic on local highways, especially on U.S. 6, Utah 96, Utah 31 and the newly built Eccles Canyon road from the Pleasant Valley to Sanpete County is of concern to local government officials. Valley Camp has implemented an employee transportation bus system which services mine employees living in the Carbon-Emery-Sanpete County region. The continuation of this service will help to alleviate transportation impacts as the mine and employment levels expand.

### Cultural Resources

A cultural resources inventory of proposed surface disturbance areas (mine portals, transportation corridors, and service areas) has been prepared for the Belina Mines Complex. The Archaeological - Environmental Research Corporation inventory (Hauck, 1980) identified five historic sites within the permit area, two of which (270U/1 and 270U/2) will be directly affected by mining activities. These sites were determined ineligible for nomination to the National Register of Historic Places (NRHP) in conjunction with the approval of the Skyline Mine, and disturbance of these sites will constitute No Effect (see Appendix B to the technical analysis).

OSM requested State Historic Preservation Officer (SHPO) concurrence with the recommendations that the remaining three sites (42Cr388, 389, and 390) be determined ineligible for nomination to the NRHP with a finding of No Effect/No Adverse Effect for the project (see Appendix B to the TA, Attachment 2). SHPO concurrence was received on February 29, 1984.

The effects of subsidence on cultural resources cannot be estimated at present since no inventory has been conducted in the area over the underground workings. The applicant has committed to inventory certain portions of the area over the underground workings for cultural resources and to report the findings prior to 31 December 1984. Completion of the investigation by the specified date will allow sufficient time to require additional inventory and/or to implement an approved mitigation program if subsidence would result in adverse effects to any site listed or eligible for listing on the NRHP. The applicant has also committed to conduct additional inventory if necessary and to consult with the regulatory authority concerning a mitigation plan should sensitive sites be threatened with adverse effects as a result of subsidence.

Implementation of the measures proposed in the application and the stipulation concerning emergency discoveries of cultural sites during mining (Stipulation No. 1, Chapter VI of the

accompanying technical analysis), in addition to the stipulations on the Federal coal leases, will allow a finding of No Effect/No Adverse Effect according to the provisions of the Programmatic Memorandum of Agreement among USGS, BLM, and OSM concerning the Federal Coal Management Program, 1978.

#### LONG-TERM IMPACTS

Long-term impacts that would occur if the permit is approved are: maximum economic recovery of coal for local use and for power plant markets; continued employment of approximately 214 persons in the near future, eventually increasing to approximately 425 employees; possible subsidence on some parts of 2,442 acres; generation of fugitive dust; and minor adverse effect to wildlife due to the presence of men and machinery in the area, and loss of some springs in the area.

#### IMPACTS OF ALTERNATIVE NO. 3

Alternative No. 3 would completely close down mining operations at the Belina Mines Complex and would result in permanent loss of about 214 jobs in the short term, and about 425 jobs in the long term. In terms of loss of payroll and purchase of goods and services, a total loss of about \$35,000,000 annually would occur to the local economy. Further, this alternative would result in a loss of approximately .97 million tons of coal every year for a period of 26 years. Non-availability of .97 million tons of coal every year would have to be substituted for by alternate sources of energy such as crude oil, bottled propane and butane, nuclear energy, natural gas, and renewable solar energy or by other coal market sources. However, this alternative would preclude possible additional subsidence in unmined areas and continued impacts to water, air and land resources.



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

Office of the Mining Supervisor  
2040 Administration Building  
1745 West 1700 South  
Salt Lake City, Utah 84104

April 5, 1983

Memorandum

To: Office of Surface Mining, Denver  
Senior Project Manager—Utah

From: Mining Supervisor

Subject: Valley Camp of Utah, Inc., Belina No. 1  
and No. 2 Mines, Carbon and Emery Counties,  
Utah, Mining and Reclamation Plan

Supplemental material for the subject plan was transmitted with your formal letter dated March 17, 1983. The material consisted of a Geology and Coal Reserve Study by Gates Engineering Company dated October 1982. This material has been reviewed, as requested, for completeness and technical adequacy. We were also asked to analyze the proposed coal recovery procedures and identify any conflicts with future recovery of the coal resources.

The submitted material is compatible with 30 CFR 211 rules, effective August 30, 1982, and will assist with the safe recovery of the maximum amount of the recoverable resource (coal).

We have determined that the total plan submission is now adequate for our administration of the associated Federal coal leases and is in compliance with 30 CFR rules and maximum economic recovery will be achieved within the limits of the equipment and technology presently being used. We recommend approval of the mining plan part of the mining and reclamation plan permit application package.

Jackson W. Moffitt

cc: BLN/Chrono  
Valley Camp of Utah  
McKean (2) ✓

8-D

UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE  
Manti-LaSal National Forest  
599 West Price River Drive  
Price, Utah 84501

2820

April 20, 1983

Sarah Branson  
Office of Surface Mining (USDI)  
Reclamation and Enforcement  
Brooks Towers - 1020 15th St.  
Denver, Colorado 80202



Dear Ms. Branson:

After reviewing the Geology and Coal Reserves Study, October 1982, for the Valley Camp of Utah, Inc., Belina Mines, the Forest Service has no concerns regarding the "completeness" or technical adequacy of the report.

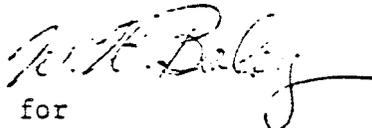
After reviewing the Apparent Completeness Review submittal (03/10/83) for the Belina Mines, the Forest Service has concern about the completeness of section UMC 817.97. The Division of Oil, Gas and Mining has specified that riparian areas should be identified and that Valley Camp's response deals with the disturbed riparian areas in Whiskey and Eccles Canyons and states, in part, that other riparian areas will not be disturbed. It is possible that riparian areas along the smaller drainages and adjacent to springs or seeps could be affected by subsidence. This possibility should be identified and those areas should be included in the hydrologic-subsidence monitoring program and plan.

The Forest Service has sent a letter to your office, November 5, 1982, which responds to the Apparent Completeness Review comments, UMC 784.20. No update concerning this letter has been incorporated in the Apparent Completeness Review submittal of 3/10/83. In another letter to your office, August 20, 1982, the Forest Service has expressed concerns about Appendix H of the Apparent Completeness Review. The appropriate changes have not been incorporated in the Apparent Completeness Review submittal of 3/10/83.

All stipulations on Federal Coal Leases U-020305, U-017354, U-049076, and U-067498 must be included in the mine operating plan. The appropriate stipulations are enclosed.

If you have any questions concerning these comments, please contact the Supervisor's Office, Manti-LaSal National Forest, 599 West Price River Drive, Price, Utah 84501.

Sincerely,



for  
REED C. CHRISTENSEN  
Forest Supervisor

Enclosures

:

U-067498

STIPULATION 1

The coal contained within the lease area and authorized for mining under this lease shall be extracted only by underground mining methods.

STIPULATION 2

All support facilities, structures, equipment, and similar developments will be removed from the lease area within two years after the final termination of use of such facilities. All disturbed areas and those areas occupied by such facilities will be rehabilitated in accordance with an approved reclamation plan, 30 CFR 211 and the "Surface Mining Control and Reclamation Act of 1977" or approved Utah program as applicable.

STIPULATION 3

(a) Before undertaking any activities that may disturb the surface of the leased lands, the Lessee may be required to conduct a cultural resource intensive field inventory in a manner specified by the Regional Director and the Authorized Officer of the surface managing agency on portions of the mine plan area and adjacent areas, or exploration plan area, that may be adversely affected by lease-related activities and which were not previously inventoried at such a level of intensity. The inventory shall be conducted by a qualified professional cultural resource specialist (i.e., archaeologist, historian, or historical architect, as appropriate), approved by the Authorized Officer of the surface managing agency and a report of the inventory and recommendations for protecting any cultural resources identified shall be submitted to the Regional Director (or the District Mining Supervisor if activities are associated with coal exploration outside an approved mining permit area) and the Authorized Officer of the surface managing agency. The Lessee shall undertake measures, in accordance with instructions from the Regional Director (or the District Mining Supervisor if activities are associated with coal exploration outside an approved mining permit area), to protect cultural resources on the leased land. The Lessee shall not commence the surface disturbing activities until permission to proceed is given by the Regional Director or the District Mining Supervisor as appropriate.

(b) The Lessee shall protect all cultural resource properties within the lease area from lease-related activities until the cultural resource mitigation measures can be implemented as part of an approved mining and reclamation plan or exploration plan.

(c) The cost of conducting the inventory, preparing reports, and carrying out mitigation measures shall be borne by the Lessee.

(d) If cultural resources are discovered during operations under this lease, the Lessee shall immediately bring them to the attention of the Regional Director (or the District Mining Supervisor as appropriate), and the Authorized Officer, Surface Management Agency. The Lessee shall not disturb such resources except as may be subsequently authorized by the Regional Director (or the District Mining Supervisor).

Within two (2) working days of notification, the Regional Director (or the District Mining Supervisor, as appropriate) will evaluate or have evaluated any cultural resources discovered and will determine if any action may be required to protect or preserve such discoveries.

(e) All cultural resources shall remain under the jurisdiction of the United States until ownership is determined under applicable law.

#### STIPULATION 4

Before undertaking any activities that may disturb the surface or the leased lands, the Lessee shall contact the Regional Director and Authorized Officer of the Surface Management Agency to determine whether the Lessee will be required to conduct a paleontological appraisal of the mine plan and adjacent areas, or exploration plan areas, that may be adversely affected by lease-related activities. If the Regional Director and Authorized Officer, Surface Management Agency, determines that one is necessary, the paleontological appraisal shall be conducted by a qualified paleontologist approved by the Authorized Officer of the surface management agency, using the published literature and, where appropriate, field appraisals for determining the possible existence of fossils of scientific significance. A report of the appraisal and recommendations for protecting any fossils of significant scientific interest on the leased lands so identified shall be submitted to and approved by the Regional Director and the Authorized Officer, Surface Management Agency. When necessary to protect and/or collect the fossils of significant scientific interest on the leased lands, the Lessee shall undertake the measures provided in the approval of the mining and reclamation plan or exploration plan.

(a) The Lessee shall not knowingly disturb, alter, destroy, or take any fossils of significant scientific interest, and shall protect all such fossils in conformance with the measures included in the approval of the mining and reclamation plan or exploration plan.

(b) The Lessee shall immediately bring any such fossils that might be altered or destroyed by his operation to the attention of the Regional Director or the District Mining Supervisor, as appropriate. Operations may continue as long as the fossil specimen or specimens would not be seriously damaged or destroyed by the activity. The Regional Director or the District Mining Supervisor, as appropriate, shall evaluate or have evaluated such discoveries brought to his attention and, within five (5) working days, shall notify the Lessee what action shall be taken with respect to such discoveries.

(c) All such fossils of significant scientific interest shall remain under the jurisdiction of the United States until ownership is determined under applicable law. Copies of all paleontological resource data generated as a result of the lease term requirements will be provided to the Regional Director or the District Mining Supervisor, as appropriate.

(d) These conditions apply to all such fossils of significant scientific interest discovered within the lease area whether discovered in the overburden, interburden, or coal seam or seams. Fossils of significant scientific interest do not include those fossils commonly encountered during underground mining operations such as ferns and dinosaur tracks. Skeletal remains shall be considered significant.

#### STIPULATION 5

The Lessee shall, prior to entry upon the lease, conduct an intensive field inventory for threatened and endangered plant and/or animal species, bald or golden eagles, or migratory species of high Federal interest on those areas to be disturbed and/or impacted including the access routes to the lease area. The inventory shall be conducted by a qualified specialist(s) approved by the Authorized Officer, Surface Management Agency, and a report of the inventory and recommendation for the protection of these species submitted to and approved by the Authorized Officer, Surface Management Agency, and Regional Director or District Mining Supervisor as appropriate. An acceptable report of any findings shall include the specific location, distribution, and habitat requirements of the species. The Lessee shall protect these species within the lease area from any activities associated with operations conducted under the terms of the lease and shall undertake such protective measures as may be required by the Authorized Officer, Surface Management Agency, and Regional Director or District Mining Supervisor as appropriate.

#### STIPULATION 6

Powerlines used in conjunction with the mining of coal from this lease shall be constructed so as to conform with the publication "Suggested Practices for Raptor Protection on Powerlines" (Edison Electric Institute, 1975). When feasible, powerlines will be located at least 100 yards from public roads.

#### STIPULATION 7

The Lessee shall provide for the suppression and control of fugitive dust on all haul roads, and at coal hauling, transportation, and storage facilities. The migration of road surfacing materials shall be controlled by watering, chemical treatment or hard surfacing. Loss of gravel courses shall be periodically replaced.

#### STIPULATION 8

In order to avoid surface disturbance on steep canyon slopes and the need for surface access, all surface breakouts for ventilation tunnels shall be constructed from inside the mine, except at specific locations approved by the Regional Director with the concurrence of the Authorized Officer, Surface Management Agency and the District Mining Supervisor.

#### STIPULATION 9

Prior to mining, the Lessee shall perform a study to secure adequate baseline data to quantify the existing surface resources on and adjacent to the lease area. The study will be established in consultation with and approved by the Authorized Officer, Surface Management Agency, the Regional Director, and the District Mining Supervisor and shall be adequate to locate, quantify, and demonstrate the inter-relationship of the geology, topography, surface hydrology, vegetation, and wildlife. Baseline data will be established so that future programs of observation can be incorporated at regular intervals for comparison.

#### STIPULATION 10

The Lessee shall establish a monitoring system to locate, measure, and quantify the progressive and final effects of underground mining activities on the topographic surface, underground and surface hydrology, and vegetation. The monitoring system shall utilize techniques which will provide a continuing record of change over time and an analytical method for location and measurement of a sufficient number of points over the lease area. The monitoring shall be an extension of the baseline data and shall be conducted by a method approved by the Regional Director in consultation with and concurrence by the Authorized Officer, Surface Management Agency and District Mining Supervisor.

#### STIPULATION 11

Underground mining operations shall be conducted in such a manner so as to prevent surface subsidence that would: (1) cause the creation of hazardous conditions such as potential escarpment failure and landslides, (2) cause damage to surface structures, and improvements, and (3) damage or alter the flow of perennial streams. The Lessee in his mining plan shall provide specific measures for the protection of escarpments. The Regional Director in consultation with and concurrence of the District Mining Supervisor and Authorized Officer, Surface Management Agency, shall approve such measures and may prescribe any additional measures to be employed such as mining methods, specify the amount of coal recovered, and determine any corrective measures considered necessary to assure that escarpment failure does not occur except at specifically approved locations, or that hazardous conditions are not created.

#### STIPULATION 12

Existing surface improvements required for the surface uses of the lease area will need to be protected or maintained to provide for the post-mining continuance of the current land uses. Existing surface improvements whose utility may be lost or damaged as a result of mining activities are to be replaced or restored.

#### STIPULATION 13

The Lessee shall reclaim all areas disturbed as a result of mining and exploration operations to a land use capable of supporting the prevailing levels of livestock grazing, big game winter range, and other wildlife habitat.

STIPULATION 14

At the conclusion of the mining operation, or at the request of the Authorized Officer of the Surface Managing Agency, all damaged, disturbed, or displaced land monuments, accessories and appendages shall be replaced or restored in their original location (or at other locations that meet the needs of the land nec. and as approved by the Authorized Officer of the Surface Managing Agency) and shall be done at the expense of the Lessee.

IX. Management Requirements and Constraints

The effects and the impacts of subsidence over removed coal beds are dependent upon many factors, and in most areas not fully understood. The mining method, thickness and number of coal seams, depth and lithology of the overburden materials are possibly the most significant factors which influence the magnitude of subsidence. Past experience has shown that subsidence does occur with impacts upon surface resources varying from insignificant to high.

In order that the magnitude of the subsidence at the ground surface can be evaluated, a monitor-inventory program is required. This program should be developed in conjunction with the U.S.G.S. and should be continued until the necessary information is obtained. Areas of investigation should include changes of topography, underground and surface hydrology, and effects on vegetation. This information must be furnished the Surface Management Agency in order that they may alter management plans.

Guidelines to effect these studies are contained in May 17, 1976, "Coal Mining Operating Regulations," Federal Register, Vol. 41, No. 96.

Where surface resources become affected, all disturbed areas, mine areas, roads, drill sites, etc., shall be rehabilitated to the extent possible as directed by the lease terms, and the stipulations contained in the permits and Environmental Analysis Reports prepared for site specific activities.

### B. Alternative Two - Proposed Action

The proposed action is to readjust the terms of Federal coal lease U-020305 to comply with current Federal regulations and Forest Service land management requirements. This action will require an assessment of the environmental effects of development of the coal reserves within the lease. As a result of this assessment, surface management stipulations will be developed for inclusion in the lease terms. When this lease is readjusted, it becomes subject to the coal leasing and mining requirements of the Federal Coal Leasing Amendments Act (FCLAA), the Surface Mining Control and Reclamation Act (SMCRA) and other pertinent Federal regulations.

#### 1. Mitigating Measures for Alternative Two

The following mitigating measures are recommended by the Forest Service for inclusion in the lease terms.

- a. Standard stipulation for lands, under the jurisdiction of the Department of Agriculture (Form 3109-3).
- b. The Lessee will be responsible to comply with all applicable Federal, State, and local laws and regulations.
- c. In accordance with Sec. 523(b) of the "Surface Mining Control and Reclamation Act of 1977," surface mining and reclamation operations conducted on this lease are to conform with the requirements of this Act and are subject to compliance with Office of Surface Mining Regulations, or as applicable, a Utah program equivalent approved under cooperative agreement in accordance with Sec. 523(c) and final determination of suitability for mining. The United States Government does not warrant that the entire tract will be susceptible to mining.
- d. The coal contained within the lease area and authorized for mining under this lease shall be extracted only by underground mining methods.
- e. All support facilities, structure, equipment, and similar developments will be removed from the lease area within two years after the final termination of use of such facilities. All disturbed areas and those areas occupied by such facilities will be rehabilitated in accordance with an approved reclamation plan, 30 CFR 211 and the "Surface Mining Control and Reclamation Act of 1977" or approved Utah program as applicable.

- f. (1) Before undertaking any activities that may disturb the surface of the leased lands, the Lessee may be required to conduct a cultural resource intensive field inventory in a manner specified by the Regional Director and the Authorized Officer of the surface managing agency on portions of the mine plan area and adjacent areas, or exploration plan area, that may be adversely affected by lease-related activities and which were not previously inventoried at such a level of intensity. The inventory shall be conducted by a qualified professional cultural resource specialist (i.e., archaeologist, historian, or historical architect, as appropriate), approved by the Authorized Officer of the surface managing agency and a report of the inventory and recommendations for protecting any cultural resources identified shall be submitted to the Regional Director (or the District Mining Supervisor if activities are associated with coal exploration outside an approved mining permit area) and the Authorized Officer of the surface managing agency. The Lessee shall undertake measures, in accordance with instructions from the Regional Director (or the District Mining Supervisor if activities are associated with coal exploration outside an approved mining permit area), to protect cultural resources on the leased land. The Lessee shall not commence the surface disturbing activities until permission to proceed is given by the Regional Director or the District Mining Supervisor as appropriate.
- (2) The Lessee shall protect all cultural resource properties within the lease area from lease-related activities until the cultural resource mitigation measures can be implemented as part of an approved mining and reclamation plan or exploration plan.
- (3) The cost of conducting the inventory, preparing reports, and carrying out mitigation measures shall be borne by the Lessee.
- (4) If cultural resources are discovered during operations under this lease, the Lessee shall immediately bring them to the attention of the Regional Director (or the District Mining Supervisor as appropriate), and the Authorized Officer, Surface Management Agency. The Lessee shall not disturb such resources except as may be subsequently authorized by the Regional Director (or the District Mining Supervisor).

Within two (2) working days of notification, the Regional Director (or the District Mining Supervisor, as appropriate) will evaluate or have evaluated any cultural resources discovered and will determine if any action may be required to protect or preserve such discoveries. The cost of data recovery for cultural resources discovered during lease operations shall be borne by the surface managing agency unless otherwise specified by the Authorized Officer, Surface Management Agency.

(5) All cultural resources shall remain under the jurisdiction of the United States until ownership is determined under applicable law.

- g. Before undertaking any activities that may disturb the surface or the leased lands, the Lessee shall contact the Regional Director and Authorized Officer of the Surface Management Agency to determine whether the Lessee will be required to conduct a paleontological appraisal of the mine plan and adjacent areas, or exploration plan areas, that may be adversely affected by lease-related activities. If the Regional Director and Authorized Officer, Surface Management Agency, determines that one is necessary, the paleontological appraisal shall be conducted by a qualified paleontologist approved by the Authorized Officer of the surface management agency, using the published literature and, where appropriate, field appraisals for determining the possible existence of larger and more conspicuous fossils of scientific significance. A report of the appraisal and recommendations for protecting any larger and more conspicuous fossils of significant scientific interest on the leased lands so identified shall be submitted to and approved by the Regional Director and the Authorized Officer, Surface Management Agency. When necessary to protect and collect the larger and more conspicuous fossils of significant scientific interest on the leased lands, the Lessee shall undertake the measures provided in the approval of the mining and reclamation plan or exploration plan.

(1) The Lessee shall not knowingly disturb, alter, destroy, or take any larger and more conspicuous fossils of significant scientific interest, and shall protect all such fossils in conformance with the measures included in the approval of the mining and reclamation plan or exploration plan.

(2) The Lessee shall immediately bring any such fossils that might be altered or destroyed by his operation to the attention of the Regional Director or the District Mining Supervisor, as appropriate. Operations may continue as long as the fossil specimen or specimens would not be seriously damaged or destroyed by the activity. The Regional Director or the District Mining Supervisor, as appropriate, shall evaluate or have evaluated such discoveries brought to his attention and, within five (5) working days, shall notify the Lessee what action shall be taken with respect to such discoveries.

(3) All such fossils of significant scientific interest shall remain under the jurisdiction of the United States until ownership is determined under applicable law. Copies of all paleontological resource data generated as a result of the lease term requirements will be provided to the Regional Director or the District Mining Supervisor, as appropriate.

(4) The cost of any required salvage of such fossils shall be borne by the United States.

(5) These conditions apply to all such fossils of significant scientific interest discovered within the lease area whether discovered in the overburden, interburden, or coal seam or seams. Fossils of significant scientific interest do not include those fossils commonly encountered during underground mining operations such as ferns and dinosaur tracks. Skeletal remains shall be considered significant.

- h. The Lessee shall, prior to entry upon the lease, conduct an intensive field inventory for threatened and endangered plant and/or animal species, bald or golden eagles, or migratory species of high Federal interest on those areas to be disturbed and/or impacted including the access routes to the lease area. The inventory shall be conducted by a qualified specialist(s) approved by the Authorized Officer, Surface Management Agency, and a report of the inventory and recommendation for the protection of these species submitted to and approved by the Authorized Officer, Surface Management Agency, and Regional Director or District Mining Supervisor as appropriate. An acceptable report of any findings shall include the specific location, distribution, and habitat requirements of the species. The Lessee shall protect these species within the lease area from any activities associated with operations conducted under the terms of the lease and shall undertake such protective measures as may be required by the Authorized Officer, Surface Management Agency, and Regional Director or District Mining Supervisor as appropriate.
- i. Powerlines used in conjunction with the mining of coal from this lease shall be constructed so as to conform with the publication "Suggested Practices for Raptor Protection on Powerlines" (Edison Electric Institute, 1975). When feasible, powerlines will be located at least 100 yards from public roads.
- j. The Lessee shall provide for the suppression and control of fugitive dust on all haul roads, and at coal handling, transportation, and storage facilities in accordance with the regulatory requirements as contained in 30 CFR 817.95 (or CFR 816.95 as applicable), dated December 31, 1979. The migration road surfacing and subsurface materials into streams and water courses shall be prevented.
- k. In order to avoid surface disturbance on steep canyon slopes and the need for surface access, all surface breakouts for ventilation tunnels shall be constructed from inside the mine, except at specific locations approved by the Regional Director with the concurrence of the Authorized Officer, Surface Management Agency and the District Mining Supervisor.

1. Prior to mining, the lessee shall perform a study to secure adequate baseline data to quantify the existing surface resources on and adjacent to the lease area. The study will be established in consultation with and be subject to concurrence by the surface managing agency. The study shall be adequate to locate, quantify and demonstrate the interrelationship of the geology, topography, all surface hydrology, vegetation and wildlife. The baseline data will be established so that future programs of observation can be incorporated at regular intervals for comparison.
- m. The Lessee shall establish a monitoring system to locate, measure and quantify the progressive and final effects of underground mining activities on the topographic surface, underground and surface hydrology, and vegetation. The monitoring system shall utilize techniques which will provide a continuing record of change over time and an analytical method for location and measurement of a sufficient number of points over the lease area. The monitoring shall be an extension of the baseline data and shall be conducted by a method approved by the Regional Director in consultation with and concurrence by the Authorized Officer, Surface Management Agency and District Mining Supervisor.
- n. If removal of timber is required for clearing of construction sites, etc., such timber shall be removed in accordance with Forest Service regulations.
- o. The Lessee will be required to maintain a mine development and operation of a size that is compatible with the physical environment. The limited area available for mine facilities at the coal outcrop, steep topography, adverse winter weather, and physical limitations on the size and design of the access road, are factors which will determine the ultimate mine size. Because physical site limitations may cause severe conflicts with other Forest uses and access to Forest lands, the Authorized Officer, Surface Management Agency, through the Regional Director and in consultation with the District Mining Supervisor concerning regulatory requirements for diligent development, may place limits on the size of mine development or traffic loads on Forest roads.
- p. Underground mining operations shall be conducted in such a manner so as to prevent surface subsidence that would: (1) cause the creation of hazardous conditions such as potential escarpment failure and landslides, (2) cause damage to surface structures, and (3) damage or alter the flow of perennial streams. The Lessee in his mining plan shall provide specific measures for the protection of escarpments. The Regional Director in consultation with and concurrence of the District Mining Supervisor and Authorized Officer, Surface Management Agency shall approve such measures and may prescribe any additional measures to be employed such as mining methods, specify the

amount of coal recovered, and determine any corrective measures considered necessary to assure that escarpment failure does not occur except at specifically approved locations, or that hazardous conditions are not created.

- q. Existing surface improvements required for the surface uses of the lease area will need to be protected or maintained to provide for the post-mining continuance of the current land uses. Existing surface improvements whose utility may be lost or damaged as a result of mining activities are to be replaced, restored, or compensated for at the discretion of the Authorized Officer, Surface Management Agency.
- r. The Lessee shall reclaim all areas disturbed as a result of mining and exploration operations to a land use capable of supporting the pre-mining levels of livestock grazing, big game winter range, and other wildlife habitat.

### III. AFFECTED ENVIRONMENT (DESCRIPTION OF EXISTING ENVIRONMENT)

The descriptive information presented in the following sections of this report has been assembled from the Skyline and Belina Mine Plans and numerous general and site-specific environmental documents that pertain to the area of coal lease U-020305. The following documents, in particular, have been reviewed to obtain this information:

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U-017354  
(U-921)

# United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
Utah State Office  
2040 Administration Building  
1745 West 1700 South  
Salt Lake City, Utah 84104

August 23, 1983

IN REPLY  
REFER TO:

Memorandum

To: Utah State Coordinator, OSM, Denver  
Attn: Mrs. Sarah Bransom

From: Chief, Branch of Solid Minerals

Subject: Valley Camp of Utah, Inc., Belina No. 1  
and No. 2 Mines, Mining and Reclamation Plan (MRP)



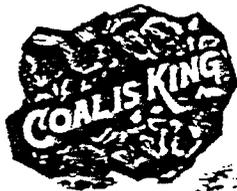
August 17, 1983, Sarah Bransom met with Boyd McKean in the Salt Lake Mining Office to discuss some remaining problems with the technical review of the subject plan. Mrs. Bransom was particularly concerned about resource recovery of the McKinnon seam and other areas in the associated Federal leases that were not included or projected to be mined as part of the submitted plan.

This office reviewed the original MRP plan and asked for a mine layout projected to cover the entire property in our comment letter dated April 6, 1981. In subsequent meetings and discussions with mine management, it was agreed that the subject MRP plan would only cover that part of the property as projected and sequenced on mine maps "E1-005 Belina No. 1, Five Year Projections" and "E2-0006, Belina No. 2, Five Year Projections". These maps were submitted with the company's final response to the apparent completeness review (ACR). As indicated in our comment letter dated July 8, 1982, the plans as shown on the above prints were accepted.

Property to the south and east of the area covered by the above plans is not included as part of this mine plan principally because of a major fault zone (O'Connor) separating the areas. A new mine plan submittal and/or a major mine plan modification will be required before conducting any Federal coal development or mining operations in or on that part of the property. This will require obtaining a complete permit application package approved by the Secretary.

There is some minable McKinnon seam coal in the southwestern part of the subject MRP plan. We have discussed this with the company and have agreed that recovery of this resource will require a separate mine operation. The McKinnon seam is 300 to 400 feet above the Upper O'Connor seam. Before any development or mining operations can be started in the McKinnon seam, the company will be required to have a complete permit application package approved by the Secretary.

*J. Gordon Whiteley*  
Acting



# CARBON COUNTY

## PRICE, UTAH 84501

September 15, 1983

Trevor Whiteside  
Valley Camp Coal Company  
Scofield Route  
Helper, Utah 84526

Dear Trevor,

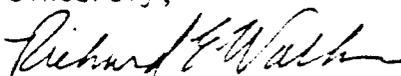
We have reviewed your mine restoration plans as contained in your mining permit application for the Belina and Utah #2 mines. You are proposing to reestablish wildlife related shrub and brush vegetation in the area of the Belina mines. The area around the current workings is zoned Critical Environmental Zone One which has both wildlife and watershed protection components. When you maximize wildlife habitat you normally restore watershed preservation vegetation as well so this does satisfy the county zoning ordinance.

For the Utah #2 mine you are proposing to restore the area to rangeland presumably to allow livestock use compatible with the adjacent range land. This use is a permitted one in the Critical Environmental Zone Two which is established in the area. We hope you will at the same time reestablish willows and other erosion protection vegetation to stabilize the stream banks as much as possible.

The mine headquarters area is zoned Critical Environmental Zone Two also and as such allows limited construction activities such as mountain recreation cabin sites and institutional campgrounds. Therefore the future use as defined in the mine plan as mixed urban does fit the area as we have defined it with some stipulations. The Alpine School District buildings located on the site as well further lends the area to a zone which allows some development.

The mining plan as submitted does appear to comply with the future development plans established by the county for the Scofield area. If you have any questions please let me know.

Sincerely,

  
Richard E. Walker

# Memorandum

DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

Moab District

IN REPLY REFER TO

3400

(U-066)

OCT 01 1983

To : Center Administrator, OSM, Denver, Colorado      Date:  
Attention: Sarah Bransom  
FROM : District Manager, Bureau of Land Management, Moab  
SUBJECT: Valley Camp of Utah Belina Complex

In accordance with your request dated September 29, 1983, we have reviewed Volume VI of the Technical Deficiency Review for subject complex. As noted by our correspondence of May 4, 1981, the original submittal was complete insofar as surface lands managed by the BLM are concerned. None of the lands impacted by the complex outside the Forest Service boundary are public lands and, thus, we have not identified any of the lands impacted as unsuitable under Section 522 of SMCRA. Review of mine plans in regards to coal recovery are currently processed through our State Office (U-920).

*Kenneth Allen*

1983 OCT 24 11:28  
0511-1150



IN REPLY REFER TO

# United States Department of the Interior

FISH AND WILDLIFE SERVICE

ENDANGERED SPECIES OFFICE

1106 FEDERAL BUILDING

125 SOUTH STATE STREET

SALT LAKE CITY, UTAH 84138-1197

December 20, 1983

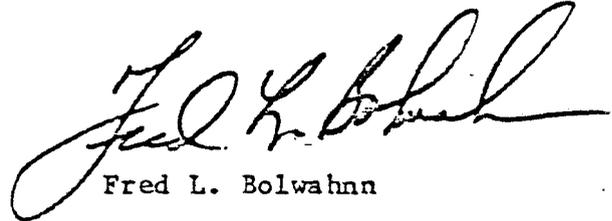
## MEMORANDUM

TO: Chief, Technical Support Branch  
Office of Surface Mining, Denver, Colorado

FROM: Field Supervisor, Endangered Species Office,  
U. S. Fish and Wildlife Service, Salt Lake City, Utah

SUBJECT: Belina Mines Complex

We have received your memorandum of November 21, 1983 requesting a list of threatened and endangered species in the vicinity of the Belina mines complex. No species currently listed or proposed as either threatened or endangered by the U. S. Fish and Wildlife Service are known to occur in the area of the Belina mines complex in Carbon County, Utah.



Fred L. Bolwahn



United States  
Department of  
Agriculture

Forest  
Service

Manti-LaSal  
National Forest

599 West Price River Drive  
Price, Utah 84501

Reply to 2820

Date December 28, 1983

Sarah Bransom  
OSM - Reclamation and Enforcement  
Brooks Towers - 1020 15th Street  
Denver, Colorado 80202

Dear Ms. Bransom:

Manti-LaSal National Forest personnel have reviewed Volume VI on technical deficiency for the Belina Mines complex owned by Valley Camp of Utah. Concerns expressed in our letters to OSM dated August 20, 1982, which dealt with the meaning of non-renewable resource land and subsidence monitoring and November 5, 1982, on subsidence have been adequately discussed to our satisfaction. For various reasons, several items were not included in Volume VI. The Forest Service would like a copy of the following information:

- a. Appendix 1 geotechnical report
- b. Haul road as-built drawings
- c. Annual subsidence reports
- d. Any information gathered from archeological surveys

If we can be of further assistance, please contact us.

Sincerely,

for  
REED C. CHRISTENSEN  
Forest Supervisor





January 25, 1984

Mr. Walt Swain, Utah Coordinator  
Western Technical Center  
Office of Surface Mining  
Brooks Towers  
1020 Fifteenth Street  
Denver, Colorado 80202

RE: Stream Classification  
Valley Camp of Utah, Inc.  
Belina Complex  
ACT/007/001, Folder No. 13  
Carbon County, Utah

Dear Walt:

As per your request the Division has studied information pertaining to Whiskey Gulch so that its classification (intermittent or ephemeral) can be established for mining purposes. Stream classification is dependent on the duration of stream flow in response to precipitation. The Division determination of stream classification rests on the interpretation of the definitions established in the regulations.

The regulations defining ephemeral and intermittent streams are as follows:

Ephemeral stream means a stream which flows only in direct response to precipitation in the immediate watershed or in response to the melting of a cover of snow and ice, and which has a channel bottom that is always above the local water table.

Intermittent stream means a stream or reach of a stream that is below the local water table for at least some part of the year, and that contributes to the stream and obtains its flow from both surface runoff and ground water discharge.

The hydrograph submitted by Valley Camp illustrates that flows in Whiskey Gulch occur through several months during the year. The Surface Geology map prepared for Valley Camp by Vaughn Hansen Associates show a fault (the O'Conner Fault) bisecting Whiskey Gulch. This information as well as a report by the USGS (Waddel, K. M., et al., 1983 Hydrology of the Price River Basin, Utah, with Emphasis on Coal Mining Areas, USGS Open File Report 83-208) is interpreted to mean that the stream in Whiskey Gulch is a gaining stream which acquires its source from ground water emanating from secondary porosity along the fault and from the Star Point Sandstone. Since this interpretation delineates a stream that lies below a water table, the Division has no alternative but to declare the stream in Whiskey Gulch an intermittent stream.

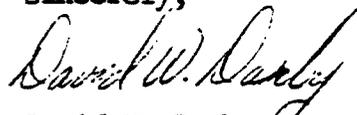
Mr. Walt Swain  
January 25, 1984  
Page 2

To comply with the performance standards established under UMC 817.57, Valley Camp should submit a request for a variance along a stream buffer zone.

The Division anticipates that <sup>disruption</sup> ~~dissipation~~ along Whiskey Gulch prior to implementation of the Surface Mining and Reclamation Act can be waived if no adverse impacts exist.

If you have any further questions, please feel free to contact me anytime.

Sincerely,



David W. Darby  
Reclamation Hydrologist

DWD/jvb

cc: John Nadolski, Engineering Science



# United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
UTAH STATE OFFICE  
136 E. SOUTH TEMPLE  
SALT LAKE CITY, UTAH 84111

IN REPLY REFER TO

3400  
U-017354  
(U-921)

February 3, 1984

## Memorandum

To: Utah Senior Project Manager, OSM, Denver

Attention: Ms. Sarah Branson

From: Chief, Branch of Mining Law and Solid Minerals

Subject: Valley Camp of Utah, Inc., Belina Complex,  
Mining and Reclamation Plan (MRP)

Volume VI, the Technical Deficiency Review of the subject MRP transmitted with your letter of September 29, 1983, has been reviewed for completeness and technical adequacy. We have determined that this information is compatible with the underground mining part of the MRP and 43 CFR 3482.1(c) rules and regulations.

Proposed coal recovery procedures have not changed. We do have concerns with future recovery of the coal resources. Numerous small headwater streams across the mine property have been classified as perennial. There is a natural gas line running north and south over the property and four connecting gas lines running in an east-west direction. The MRP indicates that coal pillars will not be mined under the gas lines or the perennial streams in an area computed by using a 35 degree angle of draw. This coupled with the potential angle of draw problem along the boundaries represents substantial areas across the mine property that can only be first mined.

The BLM is the administrator of the Federal leases included in the subject MRP and is responsible to see that the maximum amount of the minable coal is safely and economically mined using current technology and available equipment.

It is not good practice or practical to state at this time how much coal must be left in the undeveloped areas of the mine. As mine development progresses, each problem including the above angle of draw problems should be individually reviewed by management and BLM and possibly other interested parties to determine the best approach for mining safely the maximum amount of coal and give adequate protection to the involved parts of the gas lines and perennial streams. Perennial streams will not be significantly affected by full retreat mining under proper conditions.

Angle of draw data available and being developed for this coal field indicates that the angle of draw selected for the MRP (35°) could be significantly different from the actual angle of draw which results from mining. We expect the actual angle to be considerably less than 35° resulting in substantial reserves remaining unmined in the ground.

Approval of an underground mining plan should allow flexibility in the plan to properly adjust to the problems that will be encountered as the mine develops. Rules and regulations 43 CFR 3481.1 and 43 CFR 3484.1 outline the general obligations of the operator/lessee and the performance standards required for underground mining.

*Jackson H. Moffitt*

## United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
 UTAH STATE OFFICE  
 136 E. SOUTH TEMPLE  
 SALT LAKE CITY, UTAH 84111

3400  
 U-017354  
 (U-921)

February 7, 1984

## Memorandum

To: Utah Senior Project Manager, CSM, Denver

Attention: Ms. Sarah Bransom

From: Chief, Branch of Mining Law and Solid Minerals

Subject: Valley Camp of Utah, Inc., Belina Complex,  
 Mining and Reclamation Plan (MRP)

The maps and pages to the subject plan that were forwarded to this office with your letter of January 26, 1984, have been reviewed for completeness and technical adequacy. This information submitted with a Valley Camp letter of January 10, 1984, are revisions to the subject MRP in response to CSM letter of December 20, 1983.

The revised material is compatible to the underground mining part of the subject plan and 43 CFR 3482.1(c) rules and regulations.

The coal recovery procedures are not changed and there are no concerns with this information for future recovery of coal resources except the 35 degree angle of draw used under perennial streams and gas lines. Flexibility should be allowed to change the 35 degree angle of draw to the actual angle determined for this coal field. A refinement of this can be accomplished when angle of draw parameters are determined for the mine area.

*Robert J. Randolph*

Acting

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
OFFICE OF SURFACE MINING

CONFIRMATION/REPORT OF TELEPHONE CONVERSATION

T O	<b>Name</b> Sarah Bransom	F R O M	<b>Name</b> Jim Munson
	<b>Office</b> OSM		<b>Office</b> U.S. FWS
	<b>Location</b> WTC		<b>Location</b> Salt Lake City
	<b>Telephone Number</b>		<b>Telephone Number</b>

**Purpose of Call:**

Mr. Munson called to relay the U.S. Fish and Wildlife Service's final comments on the Belina Mines Complex. He stated he had reviewed the latest changes and had no outstanding issues at this time. He also stated that he had discussed the plan with the Utah Division of Wildlife Resources (DWR) to identify their concerns. DWR, according to Mr. Munson, is concerned about the applicant's commitment to involve DWR in the annual spring and seep monitoring program. DWR does not have the staff to assist operators with monitoring. I told Jim that OSM had included a stipulation in the final decision document requiring the applicant to obtain a commitment from DWR; if this commitment cannot be obtained, the applicant must find another source of assistance to identify seeps and springs important to wildlife.

**Explanatory Remarks:**

ES  
FILE

2/16/84  
(Date)

Sarah E. Bransom  
(Signature)



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
OFFICE OF SURFACE MINING

CONFIRMATION/REPORT OF TELEPHONE CONVERSATION

T O	Name Sarah Bransom	F R O M	Name Jim Munson
	Office OSM		Office U.S. FWS
	Location WTC		Location Salt Lake City
	Telephone Number		Telephone Number

**Purpose of Call:**

Mr. Munson called to relay the U.S. Fish and Wildlife Service's final comments on the Belina Mines Complex. He stated he had reviewed the latest changes and had no outstanding issues at this time. He also stated that he had discussed the plan with the Utah Division of Wildlife Resources (DWR) to identify their concerns. DWR, according to Mr. Munson, is concerned about the applicant's commitment to involve DWR in the annual spring and seep monitoring program. DWR does not have the staff to assist operators with monitoring. I told Jim that OSM had included a stipulation in the final decision document requiring the applicant to obtain a commitment from DWR; if this commitment cannot be obtained, the applicant must find another source of assistance to identify seeps and springs important to wildlife.

**Explanatory Remarks:**

ES  
FILE

2/16/84  
(Date)

Sarah E. Bransom  
(Signature)



UTAH STATE HISTORICAL SOCIETY



STATE OF UTAH  
DEPARTMENT OF ENVIRONMENT AND  
NATURAL RESOURCES

Division of  
State History  
(UTAH STATE HISTORICAL SOCIETY)

MELVIN T. SMITH, DIRECTOR  
300 RIO GRANDE  
SALT LAKE CITY, UTAH 84101-1182  
TELEPHONE 801-533-5755

February 29, 1984

Rex L. Wilson  
Chief Archeologist  
Office of Surface Mining  
Reclamation and Enforcement  
Brooks Towers  
1020 15th Street  
Denver, Colorado 80202

RE: Belina Mine, Carbon and Emery Counties, Utah

In Reply Refer To: Case No. F250

Dear Mr. Wilson:

Your letter of February 6, 1984, has been received for consideration by the Utah Preservation Office. After review of the material provided concerning cultural resources at the mine site, our office has the following comments for your consideration.

Our office would concur with the determinations of eligibility for sites 42Cb388 and 42Cb389, and 42Cb390. Also, we would concur in a determination of no effect, considering the committment by the company to do further surveys on areas over underground workings.

The above is provided on request as information or assistance. We make no regulatory requirement, since that responsibility rests with the federal agency official. However, if you have questions or need additional assistance, please let us know. Contact Jim Dykman at 533-7039.

Sincerely,

Wilson G. Martin  
Deputy State Historic  
Preservation Officer

JLD:jrc:F250/0120V



United States  
Department of  
Agriculture

Forest  
Service

Manti-LaSal  
National Forest

599 West Price River Dr.  
Price, Utah 84501

Reply to: 2820

Date: March 7, 1984

Allen D. Klein, Director  
OSM-Reclamation and Enforcement  
Brooks Towers - 1020 15th Street  
Denver, Colorado 80202

Dear Mr. Klein:

We have reviewed the Mining and Reclamation Plan and the draft Technical Analysis (TA) for the Belina Mine received from your office on February 17, 1984. The special stipulations in the lease agreements have been complied with to our satisfaction. We wish to document, however, that the OSM requirement for total protection of surface structures, specifically the existing Mountain Fuel gas pipeline, which is authorized by our Special-Use Permit, exceeds Forest Service requirements contained in the stipulation No. 15 of Federal coal lease U-020305:

15. Existing surface improvements required for the surface uses of the lease area will need to be protected or maintained to provide for the post-mining continuance of the current land use. Existing surface improvements whose utility may be lost or damaged as a result of mining activities are to be replaced, restored, or compensated for at the discretion of the Authorized Officer, Surface Management Agency.

We have discussed this matter with Steve Manger and he indicated such wording has been added to the plan. Therefore, acting for the Secretary, USDA, Forest Service, I consent to the operating plan for Valley Camp of Utah Belina Mines Complex.

REED C. CHRISTENSEN  
Forest Supervisor





# United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
UTAH STATE OFFICE  
136 E. SOUTH TEMPLE  
SALT LAKE CITY, UTAH 84111

IN REPLY REFER TO

3400  
U-017354  
(U-921)

Mr. Allen D. Klein, Administrator  
Western Technical Center  
Office of Surface Mining  
Brooks Towers - 1020 15th Street  
Denver, Colorado 80202

Dear Mr. Klein:

In your letter dated March 2, 1984 you addressed our concern about the requirement for the Belina Mines Complex that coal pillars will not be mined under the gas pipeline or perennial streams in an area computed by using a 35 degree angle of draw. You referred us to our letter of May 30, 1980 to Belina Coal Mines management which proposed that the 35 degree angle was a preliminary determination and that as mine development continued a more specific angle of draw could be determined and the mine plan altered accordingly. Subsequently, in Belina's Hydrology Update, Volume VI, Appendix N, pages 29-30, the applicant states: "When documentation of the angle of draw can be obtained, a request will be made to reduce the size of the buffer zones accordingly."

We still agree in principle with our May 30, 1980 letter and Belina's statement in their Hydrology Update as it applies to buffer zones under oil and gas lines. We see no alternative at this point in time to mitigate potential subsidence under these lines.

However, an additional major point of concern was generated when it was determined that in addition to the buffer zones required for oil and gas lines, buffer zones are now to be required for numerous small headwater streams, now classed as perennial, which cross the mine property. Many of these drainage features flow intermittently or the flow is minimal. Inclusion of these as protected areas when combined with the protective corridors in effect eliminates all possibility of mining using high capacity, high efficiency mining methods, i.e., longwall. These prohibitions effectively substantially reduce the maximum economic recovery possible in this mine.

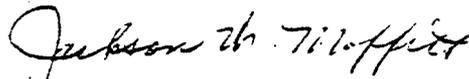
1984 MR - 8  
MAY 11 1984

Attached is a print (Plate 4-MRP) of a map produced by Vaughn Hansen and Associates showing potential subsidence areas. On this map we have roughly shaded that area from the surface to depth within the 35 degree angle of draw within in which only first mining is allowed as a result of protection for streams or oil and gas lines. This print graphically illustrates the magnitude of the problem of protection as it relates to recovery of the resource.

To our knowledge, 100 years of mining experience in the Wasatch Plateau, Book Cliffs Coal Fields has not shown one instance where subsidence caused a stream to enter a mine or where subsidence has caused more than a temporary impact on the flow rate of any stream or waterway.

We recommend that the hydrologists reappraise their determination of what constitutes a perennial stream and hopefully reduce the number so that we can minimize the coal that cannot be mined if buffer zones under these streams are required.

Sincerely yours,



Jackson W. Moffitt  
Area Mining Supervisor

Enclosure

cc: Valley Camp of Utah wo/encl.  
DOGM w/encl.

# VALLEY CAMP OF UTAH, INC.

Scofield Route  
Helper, Utah 84526

9 March 1984

Ms. Sarah Bransom  
U. S. Department of the Interior  
Office of Surface Mining  
Reclamation and Enforcement  
Brooks Tower - Second Floor  
1020 15th Street  
Denver, Colorado 80202

Re: Extension of Five Year Boundary

Dear Ms. Bransom:

Valley Camp of Utah, Inc. originally submitted a Mining Plan application in February, 1981. In that submittal, the permit term applied for was for a period of five (5) years. The southernmost boundary of that particular period was located near the center of Section 36, T13S, R6E, and was indicated on several of the permit maps.

At the time of submittal, this projected "extent of mining" was considered sufficient, considering the geologic and market data available at that time. Even when requested by O.S.M. to revise the five (5) year plan in late 1983, we presumed the south boundary to be acceptable.

This decision, of course, was primarily based upon the revision complications we anticipated incurring if, at that, we attempted to change the boundary on all the permit maps previously submitted. This position was discussed with either you or Steve Manger, at that time.

That decision has proven objectionable, as we are rapidly approaching the end of our proposed five (5) year boundary, as shown in heavy ink on the enclosed map. This condition would not be so important if we had sufficient places elsewhere within this area in which to develop, and were it not for additional geologic data recently acquired which indicates the presence of structural disturbances immediately outside this perimeter.

These disturbances are in the form of a fault, with associated displacement yet undetermined, and another igneous dike. These disturbances will undoubtedly have a major effect upon our proposed mine plan, and their existence and related features should be further confirmed and explored before developing sub-mains as presently planned within the existing permit area.

Therefore, in order to effectively plan for the life of mine development, we request an extension of the present five (5) year boundary which would allow continued development of our South Main Entries through or to, as the case may be, these new found features. This continued advancement would terminate at the south line of Section 36, as shown on the Belina No. 1 Mine Life of Mines Forecast, Drawing No. E1-0005 (see Envelope No. 4 of Volume V), and would be for another 2,700 feet from the present five (5) year boundary.

In addition to the benefits previously mentioned, data acquired from this extended development will certainly assist in improved mine planning for the Belina No. 2 Mine.

For your consideration, and to assist you in your evaluation of this request, I am enclosing a revised copy of Drawing No. D1-0093, with the existing five (5) year boundary shown in red, and a proposed revision of that boundary indicated in yellow.

This extension, if approved, would provide for the acquisition of data pertinent to proper mine design, considering maximum extraction, protection of overlying surface features (i.e. gas lines, perennial streams), and assessment of surface and ground water resources.

If approved, this continued development would be accomplished by Miner Unit No. 3, which is presently working the South Mains. This work would be in conflict with the projected locations as indicated for this unit, as indicated on Map B-2 of Volume IV, and as described in Section 782.17 of Volume VI. A revision of these two parts will be submitted upon request.

If I may be of assistance in your evaluation of this request, please contact me.

Sincerely,



T. G. Whiteside  
Chief Engineer

Enclosures



# United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
UTAH STATE OFFICE  
136 E. SOUTH TEMPLE  
SALT LAKE CITY, UTAH 84111

IN REPLY REFER TO

3400  
U-017354  
U-921

MAR 18 1984

✓  
Mr. Allen D. Klein  
Administrator Western Technical Center  
Office of Surface Mining  
Reclamation and Enforcement  
Brook Towers  
1020 15th Street  
Denver, Colorado 80202

Dear Mr. Klein:

We concur with your reassessment of the headwater streams on the Beline Mine Complex permit area as described in your letter dated March 16, 1984. We also agree that approval be conditioned for restoration of the stream channels should mining activity or subsidence cause a disturbance of the stream flow.

Sincerely,

Chief Branch of Mining Law and  
Solid Minerals

cc: DOGM

MAR 21 1984  
SALT LAKE CITY  
BLM

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
OFFICE OF SURFACE MINING

CONFIRMATION/REPORT OF TELEPHONE CONVERSATION

T O	<b>Name</b> Boyd McKean	F R O M	<b>Name</b> Sarah Branson
	<b>Office</b> BLM Branch of Solid Minerals		<b>Office</b> OSM-WTC
	<b>Location</b> Salt Lake City, Utah		<b>Location</b> Denver
	<b>Telephone Number</b>		<b>Telephone Number</b>

**Purpose of Call:**

I called Mr. McKean to discuss Valley Camp's request to extend mining to the southern boundary of section 36 and in the southeast corner of section 35, lease numbers U-044076 and U-017354. Mr. McKean stated that these two leases were included in the Resource Recovery Protection Plan approval and that BLM would concur with the applicant's request to extend mining into these areas.

**Explanatory Remarks:**

3/13/84  
(Date)

*Sarah Branson*  
(Signature)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
OFFICE OF SURFACE MINING

CONFIRMATION/REPORT OF TELEPHONE CONVERSATION

T O	<b>Name</b> Larry Dalton <b>Office</b> Utah Division of Wildlife Resources <b>Location</b> Price, Utah <b>Telephone Number</b> 801-637-3310	F R O M	<b>Name</b> Don Henne <b>Office</b> OSM-WTC Technical Support <b>Location</b> Denver, CO <b>Telephone Number</b> 303-837-5421
--------	--	------------------	--

**Purpose of Call:**

1. To establish the significance of the Whiskey Gulch, Eccles Creek habitats for moose, and;
2. To discuss impacts of haulroad relocation and pad relocation (Belina mine).

**Explanatory Remarks:**

Larry said that the use of those habitats by moose is limited and not significant. The moose in the area were brought in several years ago and have been decimated by poachers so there are very few in the entire area. Larry said that neither the Whiskey Gulch or Eccles Creek riparian habitats were important to the few moose left due to the steep topography limiting the width of the riparian bottoms.

Regarding relocation, Larry said that he spent the last several years correcting the problems, erosion slope failures, and has finally achieved some stability. An extensive mulching and hydroseeding effort was carried out last year and the last thing the area needs is new disturbance. Larry is opposed to any plans to relocate the road or pad.

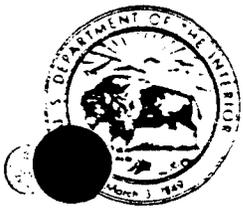
In summary: impacts of the existing Belina operation on moose and riparian habitat are not significant, and; road and pad relocation would result in adverse impact greater than existing impacts.

3/14/84

(Date)

*Don Henne*

(Signature)



United States Department of the Interior  
OFFICE OF SURFACE MINING  
Reclamation and Enforcement  
BROOKS TOWERS  
1020 15TH STREET  
DENVER, COLORADO 80202

MAF 1 9 1984

Jackson W. Moffitt  
Area Mining Supervisor  
Bureau of Land Management  
Utah State Office  
136 E. South Temple  
Salt Lake City, Utah 84111

Dear Mr. Moffitt:

This is in response to your March 8, 1984 letter regarding 3400, U-017354, (U-921). As requested, we have reassessed the determination of perennial streams in the Belina Mine Complex permit area.

The definition of perennial stream in UMC 700.5 states: "Perennial stream means a stream or part of a stream that flows continuously . . ."; therefore, part of a stream can be classified as perennial, while other parts of the stream may be classified as non-perennial. This is the case of the streams that occur within the Belina permit area.

We have determined that no perennial headwater streams occur within the permit area; therefore, this determination eliminates the applicability of UMC 817.126 regarding subsidence control within stream buffer zones for the Belina Mine Complex. It should be noted, however, that these stream channels are protected pursuant to UMC 817.57, "Hydrologic Balance: Stream Buffer Zones." We are conditioning approval of the permit to require restoration of the original stream channels of intermittent streams within the permit area that will be disturbed by underground coal mining activities, including surface subsidence effects.

If you should have any questions concerning this matter, please contact either Scott Grace or Walt Swain of my staff at (FTS) 327-3806.

Sincerely,

Allen D. Klein  
Administrator  
Western Technical Center

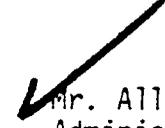
cc: Dianne Nielson, DOGM  
Dave Darby, DOGM  
Wayne Hedberg, DOGM

# United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
UTAH STATE OFFICE  
136 E. SOUTH TEMPLE  
SALT LAKE CITY, UTAH 84111

3400  
U-017354  
U-921

MAR 14 1984



Mr. Allen D. Klein  
Administrator Western Technical Center  
Office of Surface Mining  
Reclamation and Enforcement  
Brook Towers  
1020 15th Street  
Denver, Colorado 80202

Dear Mr. Klein:

We concur with your reassessment of the headwater streams on the Beline Mine Complex permit area as described in your letter dated March 16, 1984. We also agree that approval be conditioned for restoration of the stream channels should mining activity or subsidence cause a disturbance of the stream flow.

Sincerely,

Chief Branch of Mining Law and  
Solid Minerals

cc: DOGM

RECEIVED  
MAR 21 1984  
BLM-NSO

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
OFFICE OF SURFACE MINING

CONFIRMATION/REPORT OF TELEPHONE CONVERSATION

T O	Name	Boyd McKean	F R O M	Name	Stephen F. Manger
	Office	BLM - BSM		Office	OSM - WTC
	Location	Salt Lake City		Location	Denver
	Telephone Number	(FIS) 588-3108		Telephone Number	303-837-3806

Purpose of Call:

To confirm BLM-Branch of Solid Minerals concurrence with the proposed Belina permitting decision.

Explanatory Remarks:

Boyd confirmed that BLM-BSM concurs in the proposed OSM action, including the southern extension, and is forwarding a concurrence letter immediately.

3/22/1984  
(Date)

Stephen F. Manger  
(Signature)



# United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
 UTAH STATE OFFICE  
 136 E. SOUTH TEMPLE  
 SALT LAKE CITY, UTAH 84111

7482  
 U-017354  
 (U-921)

March 22, 1984

Memorandum

To: Utah Senior Project Manager, CSM, Denver

Attention: Ms. Sarah Bransom

From: Chief, Branch of Mining Law & Solid Minerals

Subject: Valley Camp of Utah, Inc., Pelina Complex,  
 Mining Permit Application Package

The 10-volumes of subject material and the related correspondence currently on file in this office has been reviewed and analyzed. The underground mining part of the Resource Recovery and Protection Plan (R2P2) complies with the requirements of the Mineral Leasing Act and 43 CFR 3482.1(c) rules and regulations.

In our opinion, the R2P2 is technically correct and considering the planned technology and the available equipment it should safely achieve maximum economic recovery of the coal deposit within the plan area.

The R2P2 reviewed and analyzed is adequate for BLM administration of the associated Federal coal leases and to become an integral part of the subject permit application package.

*Jackson H. Moffitt*

60 MAR 29 11 33 20



United States  
Department of  
Agriculture

Forest  
Service

Manti-LaSal  
National Forest

599 West Price River Drive  
Price, Utah 84501

Reply to: March 26, 1984

Date: 2820

✓  
Mr. Steve Manger  
OSM - Reclamation & Enforcement  
Brooks Towers - 1020 15th Street  
Denver, Colorado 80202

L

Dear Mr. Manger:

Valley Camp has proposed to add 300 acres from Federal coal leases U-017354 and U-044076, to their existing permit area for the Belina Mines complex. We have discussed this with their personnel and find it acceptable.

If there are any questions, please contact us.

Sincerely,

for  
REED C. CHRISTENSEN  
Forest Supervisor

02-11-84

APR 10 1984

RECLAMATION CENTER



**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
OFFICE OF SURFACE MINING**

**CONFIRMATION/REPORT OF TELEPHONE CONVERSATION**

<b>T O</b>	<b>Name</b>	<b>F R O M</b>	<b>Name</b>
	Boyd McKean		Sarah Bransom
	<b>Office</b>		<b>Office</b>
	BLM, Branch of Solid Minerals		OSM-Western Tech Center
<b>Location</b>	Salt Lake City, Utah	<b>Location</b>	Denver, CO
<b>Telephone Number</b>		<b>Telephone Number</b>	

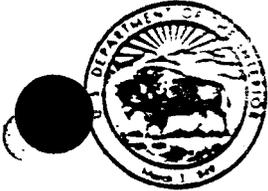
**Purpose of Call:**

I called Mr. McKean to request that a revised concurrence letter be sent to OSM documenting what leases were included in the Resource Recovery and Protection Plan (RRPP). I explained that OSM's correspondence from BLM showed only one lease in the upper right-hand corner (U-017354). Mr. McKean explained that this number was merely a filing system number and did not correspond to the RRPP approval. BLM combines their files under one lease number to avoid having to keep separate files on each lease in the mine plan area. He said he would send a supplemental letter if needed. He confirmed that the RRPP included lease numbers U-044076, U-020305 and U-17354.

**Explanatory Remarks:**

4/3/84  
(Date)

*Sarah E. Bransom*  
(Signature)



# United States Department of the Interior

IN REPLY REFER TO

3482  
U-017354  
(U-921)

BUREAU OF LAND MANAGEMENT  
UTAH STATE OFFICE  
136 E. SOUTH TEMPLE  
SALT LAKE CITY, UTAH 84111

April 5, 1984

## Memorandum

To: Utah Senior Project Manager, OSM, Denver

Attn: Sarah Bransom

From: Chief, Branch of Mining Law & Solid Minerals  
BLM SO, Salt Lake City

Subject: Valley Camp of Utah, Inc., Belina Complex,  
Permit Application Package (PAP)

Ms. Bransom called yesterday (4/3/84) concerning our letter dated March 22, 1984, relative to the subject PAP. An OSM lawyer involved in the review process questioned our file numbers in the upper right hand corner of the March 22, 1984, letter. He was particularly concerned with number U-017354, which happens to be the lead coal lease number of the case files of the Belina mines complex.

In our letter dated March 22, 1984, we stated that the Resource Recovery and Protection Plan (R<sub>2</sub>P<sub>2</sub>) or the underground mining part of the subject PAP complied with the Mineral Leasing Act and 43 CFR 3482.1(c) rules and regulations and was adequate for BLM administration of the Associated Federal coal leases. Mine map titled, "Map A-1 Land Map Coal Ownership" located in envelope 2 of Volume IV of the subject mine plan submittal shows the mine plan area to include parts or all of the following Federal coal leases:

U-017354 All  
U-067498 All  
U-020305 Part  
U-044076 Part

Mine map B-2 titled, "Belina No. 1 mine, 5-year Projection" (envelope 5-Volume IV) and Mine map B-3 titled, "Belina No. 2 mine, 5-year Projection" (Envelope 6-Volume IV) shows which parts of the following Federal leases are included in the subject permit area:

U-017354  
U-044076  
U-020305

APR 11 1984  
U-017354

In instance the first Federal lease number indicates to us the location  
of the material and correspondence which relates to the PAP for the Belina  
Mine complex.

*Johnson ch 777 pp. 17*

cc: Moab District  
Valley Camp of Utah  
DOGM



United States Department of the Interior

FISH AND WILDLIFE SERVICE  
ENDANGERED SPECIES OFFICE  
1406 FEDERAL BUILDING  
125 SOUTH STATE STREET  
SALT LAKE CITY, UTAH 84138-1197

IN REPLY REFER TO:

April 19, 1984

SE/SLC:6-5-84-0018

MEMORANDUM

TO: Robert Schuenemon, Chief Technical Support Branch,  
Office of Surface Mining Denver, Colorado

FROM: Field Supervisor, Endangered Species Office,  
U.S. Fish and Wildlife Service, Salt Lake City, Utah

SUBJECT: Section 7 Consultation, Belina Mine Complex

Reference is made to your memorandum dated March 13, 1984 which presented Office of Surface Managements' (OSM) determination that depletion of ground water as a result operation of the Belina Mine Complex (BMC) may effect the Colorado squawfish (Ptychocheilichthys lucius) and the humpback chub (Gila cypha). Your memorandum also requested a biological opinion for the permitting action OSM was contemplating. Our comments have been prepared as prescribed in the Section 7 Interagency Cooperation Regulations, 50 CFR 402, and the Endangered Species Act (ESA), 16 U.S.C., 1531 et. seq.

BIOLOGICAL OPINION

The issuance of a permit to allow continued operation of the BMC is not likely to jeopardize the continued existence of the Colorado squawfish provided the conservation measures outlined are adopted and followed. The above action also is not likely to jeopardize the continued existence of the humpback chub.

PROJECT DESCRIPTION

The BMC is located in Carbon and Emery Counties, Utah. The continued operation will result in an annual depletion of 49 acre-feet per year (af/yr) from ground water sources. Part of this will be consumed by mining equipment and the remainder as evaporation from underground workings. OSM has determined that this loss of underground water will result in a depletion from Eceles Creek and Whiskey Gulch, tributaries to the Price River which eventually flows into the Green River. There are no other potential impacts to currently listed threatened or endangered (T&E) species to be considered.

## BASIS FOR OPINION

### COLORADO SQUAWFISH

Early records indicate that the Colorado squawfish was once abundant throughout the Colorado River system. It was abundant over all of its range prior to the 1850's (Seethaler, 1978). The present range of the squawfish is restricted to the upper Colorado River basin. It is found inhabiting about 345 miles of the main stem Green River from the mouth of the Yampa River downstream to the confluence of the Green and Colorado Rivers (Fish and Wildlife Service, [FWS] 1982).

Decline of the populations of the squawfish correlates very closely with the construction of dams and reservoirs and the removal of water from the Colorado River system. Colorado squawfish evolved in and apparently require habitat conditions typified by great seasonal fluctuations in flow and turbidity, coupled with warm summer temperatures. Additionally, it appears that squawfish require relatively unrestricted movement to satisfy all of their life history requirements. Movement of adult squawfish appears to be related to flow, temperature, feeding and spawning behavior.

The life stages that appear to be most critical are from egg fertilization through its first year of life. It has been demonstrated that these phases of squawfish development are also closely tied to some specific habitat requirements. It is imperative that proper flows and temperatures are provided during these essential life stages. The Conservation Measures outlined below will help meet the habitat requirement needs of the Colorado squawfish.

### HUMPBACK CHUB

Humpback chub generally do not make migrational movements in the Upper Colorado River and tend to reside throughout the year within a limited stretch of river. Humpback chub are found inhabiting narrow, deep canyon areas which are quite restricted in distribution. They seldom leave their canyon habitat (FWS, 1982). While the humpback chub are still occasionally found dispersed in the Green and Yampa Rivers, the only major population of humpback chub conclusively known to exist in the Upper Colorado River Basin are located in Black Rocks and Westwater Canyons on the Colorado River. Since the BMC will not have any effect on the Colorado River at the sites where known humpback chub populations occur, in our opinion, the proposed project is not likely to jeopardize the continued existence of the humpback chub.

## CONSERVATION MEASURES

FWS believes that any further water depletions from the upper basin may have detrimental effects on listed fishes; however it is believed that certain management techniques can be implemented to offset harmful effects from additional development. Two major categories for potential impacts are considered: (1) direct, project specific impacts and; (2) indirect subtle impacts.

### 1. Direct Impacts

In the case of the BMC the direct impacts to the Colorado squawfish are simply the violation of required fish flows in essential reaches for this species. The BMC by depleting ground water a significant distance from occupied habitat, will have an imperceptible effect on minimum flows. The amount and timing of the reduction of minimum flows as a result of depleting 49 af/yr from the ground water will not be measurable and cannot be analyzed by the FWS hydrologic model. Because of the above and because this is a continuing small water depletion project, it is determined that the BMC will not effect FWS minimum flows.

### 2. Indirect Effects

Other impacts resulting from water developments may be more subtle, but just as harmful in a cumulative sense. The fact that water is depleted from the rivers reduces the flexibility of the system to withstand additional water losses without detrimental impacts to essential areas. Creation of habitat favorable to introduced species is an example of how seemingly minor changes in flow regimes may shift the balance between survival and extinction for one or all of these listed fishes.

Depletions that bring present day flows down to the prescribed minimums can only occur if enhancement measures contained in active research and management plans are funded by the project sponsor or proponent. FWS has identified certain conservation measures that are currently considered necessary to maintain the survival of the fish and contribute toward future recovery. These measures include monitoring known populations and attempting to locate new areas containing the fish; further analyzing the potential effects of water depletions and associated flow regime modifications; locating existing and potential spawning and YOY rearing areas; researching and constructing various fish passage and habitat restoration features; and producing the fish in a hatchery facility for research and restocking of individuals in existing and historical habitat.

Since such measures will develop critically important data on the survival needs of the fish, attempt to restore essential habitat, and allow a recovery program to be implemented, funding of these activities by project sponsors is considered a reasonable and

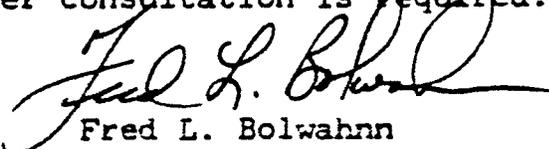
prudent alternative designed to compensate or prevent the adverse effects of water depletion. Under a procedure developed by the FWS, Upper Basin project sponsors are assessed a proportion of the total cost needed to support these conservation measures, currently estimated at approximately 25 million dollars.

The cost assessed any particular project is based upon the amount of water that the project would annually deplete from the upper Colorado River system in proportion to the amount available for development. It has been estimated by the Bureau of Reclamation that a total of 1.906 million af (maf) remains available for development in the Upper Basin under the Colorado River Compact.

Of this amount, 231,000 af are allocated to Arizona and New Mexico and will eventually be diverted from the San Juan River and would not affect areas currently occupied by the endangered fishes in the Upper Basin. This leaves 1.675 maf in the Upper Colorado River as the value against which project depletions are assessed in calculating a project's proportion of the conservation measures. Based upon the use projection of 49 af/yr for the BMC the amount of contribution to the Conservation measures would not exceed \$730. A contribution of this amount to the conservation fund will offset the impacts of the depletion of water on the Colorado squawfish and will not jeopardize the continued existence of this species. The FWS should be notified in writing within three months of the date of this biological opinion whether the OSM and the operators of the BMC agree with this conservation measure. Negotiations for contributing to the fund should be initiated as soon as possible.

The FWS is currently attempting, with the assistance and input of other concerned and interested Federal and State agencies, to develop conservation measures which will provide for the conservation and recovery of the endangered Colorado River fishes. If the results of this coordinated effort is a continuation of minimum flows and contributions of funds towards the conservation effort, then the approach outlined above as an alternative precluding jeopardy to the Colorado squawfish will remain valid. If a different approach is developed it would then be used in future consultations.

Should there be any changes in the amount of water depletion or any other project change from that which was proposed which may affect any endangered or threatened species, or if there is failure to agree to the Conservation Measures the FWS should be contacted to determine if further consultation is required.

  
Fred L. Bolwahn  
Field Supervisor

## REFERENCES

Seethaler, K. 1978. Life History and Ecology of the Colorado Squawfish (Ptychocheilus lucius) in the upper Colorado River basin. Thesis, Utah State University. Logan, Utah.

U.S. Fish and Wildlife Service. 1982. Colorado River Fishery Project Final Report. Part I (42 pp), Part II (356pp), and Part III (324 pp). Prepared for the U.S. Bureau of Reclamation, Salt Lake City, Utah. April 1982.



United States Department of the Interior

OFFICE OF THE SOLICITOR  
WASHINGTON, D.C. 20240

MAY 22 1984

MEMORANDUM

TO: J. Lisle Reed, Acting Director  
Office of Surface Mining

FROM: Christopher B. Cannon, Acting Associate Solicitor  
Division of Surface Mining *Christopher B. Cannon*

SUBJECT: Belina Mines Complex Permit and Mining Plan

My office has reviewed the Decision Package for the Belina Mines Complex Permit and Mining and Reclamation Plan. Based on that review, I concur in your decision to recommend approval of the mining plan, to find the operation compatible with forest use and to issue the permit.

These actions are consistent with the Surface Mining Control and Reclamation Act, the Mineral Leasing Act, and other applicable laws and regulations.

# VALLEY CAMP OF UTAH, INC.

Scofield Route

Helper, Utah 84526

W. L. WRIGHT, PRESIDENT  
& CHIEF OPERATING OFFICER

August 3, 1984

Mr. Allen D. Klein  
United States Department of the Interior  
Office of Surface Mining  
Reclamation and Enforcement  
Brooks Tower  
1020 15th Street  
Denver, CO 80202

Dear Mr. Klein:

Enclosed is one signed copy with original signatures of the Valley Camp of Utah, Inc. revised permit and one copy of the original bond in the amount of \$1,521,000.

I acknowledge that I have read and understand the permit. I retain the right to appeal, negotiate or request modifications to the conditions as appended as Attachment A to the permit.

Thank you for your cooperation in this matter.

Very truly yours,

*W. L. Wright*

W. L. Wright, President  
and Chief Operating Officer

WLW/lf

Enclosures

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
OFFICE OF SURFACE MINING

This permit, UT-0013 which incorporates Utah Permit ACT/007/001, is issued for United States of America by the Office of Surface Mining (OSM) to

Valley Camp of Utah, Inc.  
Scofield Route  
Halper, Utah 84526

for the Belina Mines Complex. Valley Camp of Utah, Inc. is the lessee of Federal Coal Lease U-044076, U-017354 and U-020305. The permit is not valid until a performance bond is filed with the OSM in the amount of \$1,521,000.00, payable to the United States of America and the State of Utah, and the OSM has received a copy of this permit signed and dated by the permittee.

Sec. 1 STATUTES AND REGULATIONS - This permit is issued pursuant to the Surface Mining Control and Reclamation Act of 1977, 30 U.S.C. 1201 et seq., hereafter referred to as SMCRA; the Federal coal leases issued pursuant to the Mineral Leasing Act of February 15, 1920, as amended, 30 U.S.C. 181 et seq.; the Federal Coal Leasing Amendments Act of 1976, as amended 30 U.S.C. 201 et seq.; and in the case of acquired lands, the Mineral Leasing Act for Acquired Lands of September 7, 1947, as amended, 30 U.S.C. 351 et seq. This permit is also subject to all regulations of the Secretary of the Interior including, but not limited to, 30 CFR Chapter VII and 43 CFR 3400, and to all regulations of the Secretary of Energy promulgated pursuant to Section 302 of the Department of Energy Organization Act of 1977, 42 U.S.C. 7152, which are now in force or, except as expressly limited herein, hereafter in force; and all such regulations are made a part hereof.

Sec. 2 The permittee is authorized to conduct surface coal mining and reclamation operations on the following described Federal lands (as shown on Figures 2 and 3 in Map section) within the permit area at the Belina Mines Complex situated in the State of Utah, Carbon and Emery Counties, and located:

(Please note, the attached legal description of the SMCRA permit and the mining plan area were derived from PAP Map A-1, Land Map Coal Ownership dated December 16, 1980)

SMCRA Permit Area:

T. 13 S., R. 6 E., portions of sec. 24, portions of sec. 25, portions of sec. 35, and portions of sec. 36;

SMCRA Permit Area:

T. 13 S., R. 6 E., portions of sec. 24, portions of sec. 25, portions of sec. 35, and portions of sec. 36;

T. 13 S., R. 7 E., portions of sec. 8, portions of sec. 9, portions of sec 16, portions of sec. 17, portions of sec. 18, portions of sec. 19, portions of sec. 20, portions of sec. 21, portions of sec. 30 and portions of sec. 31;

Mining Plan Approval Area:

T. 13 S., R. 6 E., portions of sec. 24, portions of sec. 25, portions of sec. 35 and portions of sec. 36;

and to conduct surface and reclamation operations connected with mining on the foregoing described property subject to the conditions of the lease(s), the approved mining plan; the complete permit application unless otherwise modified in accordance with UMC 788; and Utah State permit ACT/007/001, issued concurrently with OSM, including all conditions, and all other applicable conditions, laws and regulations.

- Sec. 3 This permit is issued for a term of five (5) years effective on the date the signed permit is received by the regulatory authority, except that this permit will terminate if the permittee has not begun the surface coal mining and reclamation operations covered herein within three (3) years of the effective date.
- Sec. 4 The permit rights may not be transferred, assigned, or sold without the approval of the Director, OSM. Request for transfer, assignment, or sale of permit rights must be done in accordance with UMC 788.18
- Sec. 5 The permittee shall allow the authorized representatives of the Secretary, including, but not limited to, inspectors, fee compliance officers, and the Utah Division of Oil, Gas and Mining without advance notice or a search warrant, upon presentation of appropriate credentials, and without delay to:
- a. Have the rights of entry provided for in UMC 840.12 and 842.13; and
  - b. Be accompanied by private persons for the purpose of conducting an inspection in accordance with UMC 842.12, when the inspection is in response to an alleged violation reported by the private person.

- Sec. 6 The permittee shall conduct surface coal mining and reclamation operations only on those lands specifically designated as within the permit area on the maps submitted in the mining plan and permit application and approved for the term of the permit and which are subject to the performance bond.
- Sec. 7 The permittee shall minimize any adverse impact to the environment or public health and safety resulting from noncompliance with any term or condition of this permit, including, but not limited to:
- a. Accelerated monitoring to determine the nature and extent of noncompliance and the results of the noncompliance;
  - b. Immediate implementation of measures necessary to comply; and
  - c. Warning, as soon as possible after learning of such noncompliance, any person whose health and safety is in imminent danger due to the noncompliance.
- Sec. 8 The permittee shall dispose of solids, sludge, filter backwash, or pollutants removed in the course of treatment or control of waters or emissions to the air in the manner required by the approved Utah State Program and the Federal Lands Program which prevents violation of any applicable State or Federal law.
- Sec. 9 The lessee shall conduct its operations:
- a. In accordance with the terms of the permit to prevent significant, imminent environmental harm to the health and safety of the public; and
  - b. Utilizing methods specified as conditions of the permit by Utah Division of Oil, Gas and Mining and OSM in approving alternative methods of compliance with the performance standards of the Act, the approved Utah State Program, and the Federal lands Program.
- Sec. 10 The permittee shall provide the names, addresses, and telephone numbers of persons responsible for operations under the permit to whom notices and orders are to be delivered.
- Sec. 11 The permittee shall comply with the provisions of the Water Pollution Control Act (33 U.S.C. 1151 et seq.) and the Clean Air Act (42 U.S.C. 7401 et seq.).
- Sec. 12 Upon expiration, this permit may be renewed for areas within the boundaries of the existing permit in accordance with the Act, the approved Utah State Program and the Federal lands Program.

Sec. 13 If during the course of mining operations previously unidentified cultural resources are discovered, the applicant shall ensure that the site(s) is not disturbed and shall notify OSM. The operator shall ensure that the resource(s) is properly evaluated in terms of National Register Eligibility Criteria (36 CFR 60.6). Should a resource be found eligible for listing in consultation with the OSM, the land managing agency (if the site is located on Federal lands), and the State Historic Preservation Officer (SHPO), the operator shall confer with and obtain the approval of these agencies concerning the development and implementation of mitigation measures.

Sec. 14 APPEALS-The lessee shall have the right to appeal: (a) under 30 CFR 775 from actions or decisions of any official of OSM; (b) under 43 CFR 3000.4 from an action or decision of any official of the Bureau of Land Management; (c) under 30 CFR 290 from an action, order, or decision of any official of the Minerals Management Service; or (d) under applicable regulations from any action or decision of any other official of the Department of the Interior arising in connection with this permit.

Sec. 15 SPECIAL CONDITIONS-In addition to the general obligations and conditions of performance set out in the leases, Utah State permit ACT/007/001 and this permit, the permittee shall comply with the special conditions of Utah State permit ACT/007/001 and the conditions appended hereto as Attachment A.

These conditions are also imposed upon the permittee's agents and employees. The failure or refusal of any of these persons to comply with these conditions shall be deemed a failure of the permittee to comply with the terms of this permit and the lease. The permittee shall require his agents, contractors, and subcontractors involved in activities concerning this permit to include these conditions in the contracts between and among them. These conditions may be revised or amended, in writing, by the mutual consent of the grantor and the permittee at any time to adjust to changed conditions or to correct an oversight. The grantor may amend these conditions at any time without the consent of the permittee in order to make them consistent with any new Federal or State statutes and any new regulations.

ATTACHMENT "A"  
BELINA MINE COMPLEX

Conditions

Condition No. 1

Surface Water Monitoring: Valley Camp must revise and submit to the regulatory authority for approval its surface water monitoring schedule within sixty (60) days of the effective date of this permit. Surface water monitoring shall be performed at stations VC-1, VC-2, VC-4, VC-5, VC-10, VC-11, and VC-12. Streams will be monitored monthly during the period from April through July and late September or early October. The monthly monitoring of streams shall include measurements of stream flow and water quality parameters according to the abbreviated water quality parameter list (i.e. sodium, calcium, magnesium, potassium, sulfate, bicarbonate, carbonate, chloride, total dissolved solids, total suspended solids, pH, field-specific electrical conductance, and field temperature.) Measurements of turbidity may be substituted for the measurement of total suspended solids following the development of an adequate site-specific relationship between the two parameters. Twice a year, the full suite of water quality parameters (according to the UDOGM guidelines) will be analyzed. The samples can correspond to one of the monthly high flows (May or June) and the low flow (September or October). A corresponding flow measurement will be taken at the same time that any water quality samples are collected.

Ground Water (Springs): Each spring that is included in the monitoring network will be monitored during the same period as surface water. These springs are S24-12, S25-13, S36-17, S36-23, S36-19, S31-13, and S7-11. During the monthly monitoring period, measurements of flow, pH, specific electrical conductance (EC), and temperature shall be made. Also a water sample shall be analyzed according to the abbreviated schedule mentioned previously, excluding total suspended solids. Twice a year (spring and fall) a flow measurement shall be made and a water quality sample taken. The sample shall be analyzed according to the complete suite of parameters listed in the UDOGM guidelines. Data shall be submitted quarterly to UDOGM and an annual analysis and summary of the data shall be provided. Spring depletion curves shall be developed for each monitoring point to establish baseline conditions. This may require determining the flow rate more frequently during the first year (possibly weekly).

Data Reports

The data collected shall be sent to UDOGM on a quarterly basis and shall include data collected from this permit condition and Condition No. 3. The annual report shall contain a summary of the quarterly data and analytical interpretations. The first annual report shall contain the baseline conditions and the spring depletion curves. Recommendations for changes in the monitoring plan shall be presented for approval by UDOGM. These changes must be supported by data analysis and sound hydrologic reasoning.

Condition No. 2

Valley Camp shall restrict mining in Section 36; S1/2, Federal lease U-017354 and Section 35; E1/2 SE1/4, SE1/4 NE1/4, Federal lease U-044076, to the development of the South Main Entries only. The applicant shall submit to the regulatory authority all information confirming the presence and nature of the geologic structures (faults, dikes, fractures, channel sandstones, etc.) and ground water encountered in this section of the mine as a result of development of the South Main Entries. In addition, the applicant shall establish an in-mine groundwater monitoring program for this area as required condition number 3. The applicant may proceed to fully develop Section 36; S1/2, Federal lease U-017354 and Section 35; E1/2SE1/2, SE1/4NE1/4, Federal lease U-044076, upon review and approval of the applicant's underground observation data by the regulatory authority.

Condition 3

Within sixty (60) days of the effective date of this permit, Valley Camp of Utah, Inc. shall develop an in-mine ground water monitoring program. This monitoring program shall be submitted for approval by the regulatory authority.

The results of the monitoring program (data analysis) shall be reported on an annual basis and shall include a map of all points and/or areas of defined measurable flow [greater than one (1) gpm] as well as an indication of the geologic source of the flow (channel sandstone, fault, fracture, lineament system, etc.). The map shall also show the location of in-mine sumps used to collect water as well as updated information on the geologic structures (faults, dikes, fractures, channel sandstones, etc.) encountered in the mine as a result of extended mining into Federal lease U-017354 and U-044076. The report shall also contain a discussion of the quantity, quality, and source of the water encountered. When new points or areas of measurable flow are first encountered, flow data and field water quality parameters shall be measured monthly until the inflow stabilizes. After stabilization, sampling shall be conducted on a quarterly basis. Field water quality parameters shall, at a minimum, consist of: pH, temperature, and electrical conductance. A relationship shall be developed between electrical conductance and total dissolved solids from the quarterly monitoring.

Quarterly, sampling for the abbreviated water quality parameters list shall be completed. The abbreviated water quality analytical schedule shall, at a minimum, consist of the laboratory measurements for: sodium, potassium, calcium, magnesium, iron (total), chloride, bicarbonate, sulfate, carbonate, pH, and TDS as well as the field parameters. A cation/anion balance shall be calculated on sufficient quarterly samples (approximately 10%) to assure accuracy of the laboratory data.

Semi-annually, and at the approximate same time each year, (corresponding to two of the quarterly samples) a comprehensive water quality analytical schedule for the samples shall be completed. The full suite of parameters to be analyzed shall include those recommended in the UDOGM guidelines for establishment of a surface and ground water monitoring program. If the number of measuring points becomes excessive, the applicant may request a modification of the number of sampling sites from the regulatory authority.

In addition to the in-mine monitoring of ground water flow, the applicant must account for all groundwater consumption (evaporation and other losses) and transfers of water in and out of the mine.

Condition No. 4

Within sixty (60) days of the effective date of this permit, Valley Camp of Utah, Inc., shall revise and submit to the regulatory authority for approval the subsidence monitoring program to include the intermittent streams in the permit area. The applicant shall commit to restore the original stream channels of intermittent streams within the permit area that may be disturbed by underground coal mining activities, including surface subsidence effects.

Condition No. 5

Within sixty (60) days of the effective date of this permit, Valley Camp of Utah, Inc. shall provide to the regulatory authority for approval a plan to redistribute substitute topsoil material at a uniform thickness over all disturbed areas to be reclaimed, taking into consideration the total volumes of substitute topsoil materials available at all substitute topsoil material sources.

Condition No. 6

Within sixty (60) days of the effective date of this permit, Valley Camp of Utah, Inc. shall provide a sound design to the regulatory authority for approval for either field site trials or a revised greenhouse study. The permittee shall also provide a commitment to conduct either of these tests and to submit results of test selected to the regulatory authority to demonstrate the feasibility of using the proposed topsoil substitute material pursuant to UMC 817.22 (e).

If Valley Camp of Utah, Inc. elects to conduct field site trials, the design of the trials must include, at a minimum, the following: test sites at both the Belina portal area and the Utah No. 2 loadout area; the test of types and rates of soil amendments; a test for optimum topsoil depth; tests for each proposed seed mixture by appropriate aspect; and establish control plots for each test.

If Valley Camp of Utah, Inc. elects to conduct greenhouse studies, the existing design proposed in the permit application must be revised to include at a minimum, tests for soil samples from both Belina portal area and Utah No. 2 loadout area, tests for types and rates of soil amendments, tests for optimum topsoil depth, tests for each proposed seed mixtures by appropriate aspect; and establish control plots for each study. The design of the greenhouse study shall simulate environmental conditions in the greenhouse (such as growing season, air temperature, soil temperature, soil moisture, precipitation, light, available rooting depth, and aspect) to those at the mine site.

The design of either the field site trials or the greenhouse study must provide a monitoring schedule, identify methods for monitoring, analysis of seedling establishment and plant mortality, and standards for determining success of each test.

The applicant must provide types and rates of application for amendments to be added to the respread substitute topsoil based on the laboratory data from either the greenhouse study or field site trials.

Condition No. 7

Within 180 days of the effective date of this permit, Valley Camp of Utah, Inc. shall submit to the regulatory authority for approval an implementation plan for monitoring wetland and riparian areas in the entire subsidence area. The plan shall include: (1) a map locating all wetland and riparian areas; (2) a description of the size and plant characteristics of each wetland; (3) the source of water supporting each wetland; (4) details and commitment to replace affected sources; and (5) a monitoring schedule.

Condition No. 8

Within thirty (30) days of the effective date of this permit, the permittee shall implement the mitigation measures identified in the USFWS letter dated April 19, 1984, and submit proof of such compliance to the regulatory authority.

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Condition No. 9

Within 180 days of the effective date of this permit, Valley Camp of Utah, Inc. shall submit to the regulatory authority, for review and approval, a detailed reclamation plan to restore the Belina haulroad in accordance with UMC 817.156. This plan must address, at a minimum, removal and disposal from fill slopes vegetative cover that would interfere with backfilling and grading operations, slope stability, backfilling and grading, topsoil handling, disposal of concrete and asphalt, removal of culverts and reestablishment of natural drainages, sediment-control measures, and revegetation of the road surfaces and adjacent slopes.

THE UNITED STATES OF AMERICA

By: Richard E. Dawes

Date: 9 July 1984

I certify that I have read and understand the requirements of this permit and any special conditions attached.

WALTER L. GIBERT  
Authorized Representative of  
the Permittee

August 3, 1984  
Date

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## TECHNICAL ANALYSIS

### I - INTRODUCTION

This technical analysis (TA) evaluates the application from Valley Camp of Utah, Inc. (Valley Camp) for a permanent program coal mining permit for their Belina Mines Complex in Carbon County, Utah. A permit application package (PAP) was submitted to the Utah Division of Oil, Gas, and Mining (UDOGM) and the Office of Surface Mining (OSM) on 13 February 1981 (UT 0013 and UT 0049), that would bring the Belina Mines Complex into compliance with the Utah State Coal Program for the next 5 years of mining. The Belina Mines Complex consists of the Belina Nos. 1 and 2 mines and a loadout area at the inactive Utah No. 2 mine.

In addition to providing the application requirements for a Utah coal mining permit, the PAP also includes the necessary information for the Secretary of the Interior to make a decision on Valley Camp's mining plan for their Belina Mines Complex. Figure 1 shows the proposed Surface Mining Control and Reclamation Act (SMCRA) Permit Area, and the proposed area of mining plan approval (which is identical to the resource recovery and protection plan boundary). Figures 2 and 3 show the five year progression of mining for the Belina No. 1 and No. 2 Mines within the proposed SMCRA Permit Boundary. Figure 4 shows the proposed life of mine boundaries for the Belina Mines Complex (see Exhibits A and A-1 in the PAP). This permitting action does not include: 1) the southeast lease area (lease number U-067498) and 2) mining of Utah No. 2. Unless otherwise indicated, all references in this TA are to the Utah Regulations Pertaining to the Surface Effects of Underground Coal Mining Activities (UMC 700 et seq. and UMC 800 et seq).

The Belina Mines Complex is located about 3 miles southwest of Scofield, Utah, and 20 miles northwest of Price, Utah (Figure 5). Figure 5 also shows other existing and proposed mines in the vicinity of the Belina Mines Complex. The proposed permit area encompasses the following lands: T13S, R6E, SLM: portions of sections 24, 25, 35 and 36; T13S, R7E, SLM: portions of sections 8, 9, 16, 17, 18, 19, 20, 21, 30, and 31. The mining plan approval area encompasses T. 13 S., R. 6 E., SLM: portions of sections 24, 25, 35 and 36. (see Figure 1). Coal that will be removed by Valley Camp's operation over the life of the mine (i.e., to the year 2010 or 26 years of mining) will include 8,438 acres, of Federal coal, 640 acres of private coal, and 305 acres of Carbon County-owned coal. Federal coal leases to be mined over life-of-mine include: U-020305, U-017354, U-044076, U-067498, U-47974 and U-47975. The proposed 5-year permit application area and proposed area of mining plan approval are not the same and comprise about 2,424 and 1,378 acres, respectively (Figure 1). The mining plan approval will exclude county and fee coal. Federal leases U-067498, U-47974 and U-47975 are not included within the permit area boundary, but is indicated on Figure 2 as being within the proposed life of mine area.

Valley Camp began construction operations in 1976. A permit was issued by the UDOGM on 8 October 1976, under the Utah Mined Land Reclamation Act. This permit is considered to be Valley Camp's interim permit for the Belina mines. Production of 1.1 million tons of coal per year began under a 30 CFR 211 coal mining permit from the U.S. Geological Survey (USGS) and a UDOGM permit issued on 10 February 1977. The proposed action is to continue mining coal underground at 0.972 million tons per year and increase to a maximum of 1.93 million tons per year from the Upper and Lower O'Connor Seams in the years 1988 through 2010.

The PAP does not include the necessary information for permitting mining at Valley Camp's current inactive Utah No. 2 Mine in Pleasant Valley. The Utah No. 2 Mine site is proposed to be used only as a loadout site during the term of this permit.

Approval of both the SMCRA permit by the State of Utah and the mining plan by OSM would provide for mining at the Belina Mine Complex through the year 1988 at a maximum rate of 0.972 million tons per year. Valley Camp presently has contracts to supply this coal to buyers in Utah, California, and Idaho. Coal is and would continue to be transported to the buyer by unit train. Valley Camp currently employs approximately 214 people at its Belina Mine Complex. Employment would increase to 425 in order for production to reach 1.93 million tons per year, beginning in the year 1988.

Accompanying this TA is an environmental assessment (EA) on the Mining Plan that was prepared pursuant to the National Environmental Policy Act (NEPA). The EA and TA frequently cross reference one another.

## II - DESCRIPTION OF THE EXISTING ENVIRONMENT

### Topography

The mine site is located on the northern Wasatch Plateau and consists of rugged mountain slopes and narrow valley bottoms. Elevations within the mine plan area range from about 7,840 feet mean sea level (m.s.l.) near the railroad loadout facilities to 9,200 feet m.s.l. near the Belina portals. Topography of the proposed permit area is marked by one main drainage, Mud Creek (sometimes referred to as Clear Creek and Pleasant Valley Creek), which empties into Scofield Reservoir north of the mine plan area. Several other lateral drainages flow into Mud Creek. Belina Nos. 1 and 2 Mines are located on a tributary, Whiskey Gulch, to one of these lateral drainages, Eccles Creek. These drainage areas are V-shaped valleys with very steep slopes and narrow bottoms. The Mud Creek drainage has a more U-shaped valley with steep slopes and a broad, relatively flat bottom. The slopes within the permit area range from 10 to 70 percent.

### Geology

The proposed permit area is underlain by the Musuk Shale Member of the Mancos Shale, the Star Point Sandstone, the Blackhawk Formation and Price River Formation of the Upper Cretaceous Mesa Verde Group. The Blackhawk Formation is the coal-bearing unit. The area is cut by several faults, the largest being the north-northeast-trending Pleasant Valley Fault, east of the mining area. Other important faults that influence the ground water flow in the vicinity of the Belina mines are the O'Connor and Connelville Faults.

The coal at the Belina Nos. 1 and 2 mine sites is classified as high volatile B bituminous steam coal. Belina coal samples from the Upper and Lower O'Connor beds have an average heat content of approximately 12,212 and 12,496 Btu/lb and a sulfur content of 0.61 and 0.54 percent, respectively. Total recoverable reserves are estimated to be 161.8 million tons.

Exploration for oil and gas has resulted in the discovery and development of the Clear Creek gas field. Three non-producing gas wells and a gas pipeline are present within the permit area (see Figure 1).

#### Climate and Air Quality

The general climate of the area consists of average monthly temperatures ranging from 15°F in January to 60°F in July. Extreme temperatures are about -40°F and 80°F. Average annual precipitation is 25 to 30 inches, including 8 inches of rainfall from May to September. Snow generally falls from October through May, and snow accumulation averages above 4.5 feet. Maximum snow accumulation expected is 8 feet.

An annual average background level for total suspended particulates (TSP) in rural central and southern Utah is estimated at 20 micrograms per cubic meter (ug/m<sup>3</sup>) (AeroVironment, 1977). This is significantly below the Federal secondary standard of 60 ug/m<sup>3</sup>.

#### Hydrology

The Price River/Huntington Creek drainage divide crosses the permit area. On the east side of the divide, Mud Creek drains into the Scofield Reservoir, which releases water into the Price River. On the west side, water from Huntington Creek drains into the San Rafael River. Average annual runoff is about 10 inches, based on water yield maps of Utah (Bagley et al., 1964).

The portals to the Belina mines are located along an intermittent stream in Whiskey Gulch, a tributary of Eccles Creek. Eccles Creek, a perennial stream, joins Mud Creek above Scofield Reservoir. Within the Mud Creek basin, the primary points of ground water discharge are related to fault zones and associated fractured Star Point Sandstone. In addition, an

intrusive dike extends through the area and is believed to serve as an east-west ground water barrier through the Belina Mines Complex. Intercepted ground water within the mines will likely decrease ground water flow to the springs that are related to these geologic structures. Although ground water movement primarily occurs along the zones mentioned above, numerous small seasonal springs also occur from the Blackhawk Formation. Subsidence effects of the Belina mines will likely cause some of the Blackhawk springs to dry up or be relocated.

### Water Supply

All water is committed through water rights, mainly for irrigation downstream (about 98 percent). Scofield Reservoir, which regulates runoff from the upper Price River basin, has a usable storage capacity of 65,780 acre-feet. Annual releases average about 45,000 acre-feet. Water in the area of the Belina mines is used for watering livestock and wildlife, mining coal, domestic use, fisheries, and recreation; the first three consume less than 0.1 percent of the water in the area. The communities of Clear Creek and Scofield are supplied with surface water from Finn Canyon and springs in Boardinghouse Canyon; domestic use is estimated to be 40 acre-feet per year. The OSM CHIA report concludes that there is no apparent hydrologic connection with the Belina mines and water supplied from Finn Canyon.

### Water Quality

Surface waters in the upper Price River basin are fresh and are of a calcium bicarbonate type (Mundorff, 1972). Chemical analyses of 10 samples collected from Pleasant Valley Creek above Scofield Reservoir in 1975 to 1976 contained dissolved solids concentrations ranging from 380 to 566 milligrams per liter (mg/l); only one sample exceeded the limit of 600 mg/l recommended by the Public Health Service for human consumption.

Ground water in this mountainous area normally contains concentrations of less than 500 mg/l of dissolved solids. However, three samples of Belina mine drainage, probably from the Blackhawk Formation, contained dissolved solids ranging from 374 to 794 mg/l. All three exceeded allowable limits for human consumption in iron content but were within allowable limits for heavy metals and trace elements. Dissolved solids concentrations from natural sources increase as ground water migrates eastward toward the discharge areas of the Price and Green Rivers. (Reilly, et. al., 1982 and Bowles, et. al., 1982).

### Soils

Soils over the Belina Mines Complex belong to the Canyon and Ridgeland Association as described in the Soil Resource Inventory, Ferron-Price Planning Unit, Manti-LaSal National Forest, 1977. The portal and mine facilities sites for each of the mines occupy steeply sloping (30 to 50 percent) canyon

sideslopes. The dominant soils have developed in colluvial parent materials derived from sandstone. They have dark colored surface horizons with a silt loam to loam texture over sandy loam to clay loam textured subsoils, contain 20 to 60 percent coarse fragments, and are 20 to 40 inches deep. Because of soil conditions, steep slopes, and climate, only 50 to 80 percent of annual revegetation attempts are expected to be successful (Hagihara et al., 1972). Natural erosion by water where vegetation is present is estimated at about 0.2 cubic yards per acre per year, but the erosion potential could approach 20 cubic yards per acre per year when the soils are exposed (estimated using the universal soil loss equation described by the Soil Conservation Service, 1975). The soils lie on steep slopes which make them physically difficult to manage, increase the chance of instability, and increase the runoff potential (U.S. Geological Survey, 1979).

### Vegetation

Most of the permit area is covered with conifer-aspen type vegetation on north-facing slopes and aspen type vegetation interspersed with sagebrush on south-facing slopes. Mountain meadow communities are scattered on upper slopes and ridges. No threatened or endangered plants have been identified within the permit area.

### Wildlife and Fisheries

The permit area is located in a mule deer summer range on Utah deer herd unit 32. The present deer population is below the carrying capacity of the range and productivity is slightly below the State average. Parts of the permit area are known to be used by deer and elk for fawning. Winter ranges for deer and elk are somewhat remote from the mine complex area. The ranges are located 7 to 8 miles to the northeast and southeast from the permit area. Therefore, movement of these animals from summer to winter range parallel the permit area. This being the case, movement generally takes place in the lower valleys, i.e., the Pleasant Valley corridor. The mine currently does not restrict or impede movement to summer and winter range for mule deer and elk (Utah Division of Wildlife Resources, September 8, 1983 letter to Valley Camp).

Regionally, moose are known to use riparian bottoms as wildlife habitat. Moose were introduced into the Pleasant Valley area several years ago, however, poaching has reduced their number. Whiskey Gulch and Eccles Creek are not considered as important habitat for moose due to the steep topography limiting the width of the riparian bottoms (DWR, March 14, 1984).

Drainages within the mining plan area provide habitat for beaver. The trapping unit that includes this area ranks as one of the better beaver trapping areas in the State. Other species within the permit area include various raptors, bears, snowshoe

hares, blue grouse, ruffed grouse, and mourning doves. Sage grouse inhabit the area north and east of Scofield. The American peregrine falcon is an occasional visitor and bald eagles are fall visitors at Scofield Reservoir.

Fisheries in and near the area include Scofield Reservoir, Mud Creek, Huntington Creek, and their tributaries (Figure 3). Low flows due to seasonal water runoff, are the critical limiting factors controlling cutthroat trout reproduction in these streams.

### Land Use

The zoning ordinances of Carbon County permit coal mining in the proposed area. All mining development on national forest land will be subject to the U.S. Forest Service (USFS) Ferron-Price Unit Management Plan, which was completed in 1978, and the present Price Ranger District Multiple Use Plan.

The USFS, through the land use planning process, has determined that subsurface mining is compatible with other uses of this land. Principal surface uses at present include producing forage and habitat for livestock and wildlife, watershed, recreational use by sightseers and hunters, and timber production.

There are special land use permits within the lease boundaries. Tenneco Oil has a 1.8-mile road right-of-way, which is used for access and maintenance of well sites on private land. Mountain Fuel Supply Company and Utah Natural Gas Company have a gas pipeline easement and a public utility has a special use permit for a communications building. The building is a small concrete structure used for telephone communications. The building, located in the south half of section 25, is within the gas pipeline easement and on top of the dike. Therefore, the building will not be impacted by potential subsidence. (See TA Chapter XXVI).

### Cultural Resources

A cultural resources inventory of mine portals, transportation corridors, and service areas has been prepared for the Belina mines permit area, including Belina No. 1, Belina No. 2, and Utah No. 2 (Hauck, 1980). Five historic sites have been recorded within the permit area. Sites 27OU/1 and 27OU/2, both cabin foundations, will be directly affected by mining operations. Both sites were determined ineligible for nomination to the National Register of Historic Places (NRHP) by OSM and the Utah State Historic Preservation Officer (SHPO) (February 29, 1984) in conjunction with approval of the Skyline Mine. Therefore, mining operations will constitute a "No Effect".

Historic sites 42Cr388 (Utah No. 1 Mine), 42Cr389 (Green Canyon Sawmill) and 42C4390 (Nicolitus Mine) are located outside

the direct impact areas but within the permit area. All three sites have been recommended ineligible for nomination to the NRHP. OSM has received SHPO concurrence (February 29, 1984) on this determination (see the separate Cultural Resources TA included as Appendix B).

Additional cultural resources inventory will be conducted within the permit area during 1984. The applicant, in consultation with OSM and the Utah SHPO, has proposed measures to ensure that No Adverse Effects to any significant cultural sites which may be located within the permit area will occur as a result of mining operations.

### Transportation

The permit area is accessible from U.S. Highway 6 via Utah Highway 96 and existing roads up Eccles Creek and Whiskey Gulch. Utah Highway 96 is the only all weather or improved asphalt access route to the Pleasant Valley-Scofield area. The Utah Department of Transportation is currently completing an improvement project on Utah Highway 96 which includes resurfacing and some widening.

Eccles Canyon Road is the only direct access route from the Sanpete Valley and Huntington Canyon to recreation areas and mines near Scofield. Summer traffic averages 50 vehicles per day, including recreation traffic, but snow closes the road in winter. The road is unimproved and is single-lane-wide above the Skyline Mine. However, the lower portion has been improved and widened to accommodate traffic to the Belina and Skyline mines. Current plans include completing the improvements, including asphalt surfacing to Utah Highway 31, in 1984. This will provide year-round access between Pleasant Valley, the Belina mines, and Sanpete County (UDOT, 1983).

Few vehicles travel the unimproved roads ascending Finn and Boardinghouse Canyons. These roads are private with locked gates to prevent through traffic.

The Denver and Rio Grande Western Railroad maintains the rail spur from the main line at U.S. Highway 6 to the Utah No. 2 Mine loadout facilities. The section south of the Utah No. 2 Mine is in disrepair. However, the track is being reconstructed to facilitate the Skyline loadout facilities at Eccles Creek.

### Esthetics

Both national forest and private lands within and adjacent to the proposed project have a moderate scenic quality which is common throughout the area. They have few outstanding, unique, or distinctive qualities (Torgeson and Carpenter, 1975).

### Socioeconomics

The Belina Mine Complex is located in the Pleasant Valley area of Carbon County, Utah. Scofield and Clear Creek, small communities near the mine, were created near the turn of the century as a result of coal mine development. The early mines began closing down in the 1930's and community populations dwindled. The communities are composed primarily of small wood frame and mobile homes. Because of nearby Scofield Reservoir, the communities and adjacent area are popular with fisherman and summer home owners. A lack of developable land and a lack of public services, particularly water and wastewater treatment systems, limit the growth potential of these communities. A moratorium on new hookups in Scofield has been in effect for over 5 years and will continue until adequate infrastructure facilities are developed. A number of ranches on leased land also occur in the area. Most miners working in the area live in the Price-Helper area and in northern Sanpete County (U.S. Office of Surface Mining, 1981).

### III - SUMMARY OF THE OPERATIONS AND RECLAMATION PLAN

Valley Camp's Belina No. 1 Mine began operations in 1976 and is currently active in the Upper O'Connor Seam. At present, only limited amounts of coal are mined in the Belina No. 2 Mine. The proposed mine plan will include the operation of both the Belina No. 1 (Upper O'Connor Seam) and Belina No. 2 (Lower O'Connor Seam) Mines. Utah No. 2 (Upper O'Connor Seam) will not be in operation and no mining of the McKinnon Seam will occur under this permit action. Mining techniques employed by Valley Camp are room and pillar operations with secondary recovery of pillars. Coal is transported out of the mines by conveyor belts to a stacking tube and loadout facility. The coal is then transported by haul trucks to the main preparation plant and railroad loadout facilities adjacent to Utah No. 2. The coal is transported by rail to the buyers.

Underground mining operations in Belina Nos. 1 and 2 Mines will progress in a southwest direction from the portal to approximately the center of Section 36 (T13S, R6E, SLM) and west to the Connelville Fault in Section 25 (T13S, R6E, SLM).

Reclamation of the surface facilities will commence upon completion of mining operations. All buildings will be dismantled and removed. Sediment ponds will remain operational throughout the reclamation operations and until soil stability has been achieved. Backfilling and grading operations will occur to bring the cut slopes to a stable grade. The culvert that diverts undisturbed surface runoff under the surface facilities will be plugged and left in place.

When the mine was originally constructed, soil was not salvaged at the portal areas, haul roads, and the railroad loadout facilities. The Belina Mine Complex was originally constructed prior to the passage of SMCRA. After the passage of SMCRA, soil was salvaged from the office and main warehouse

construction site and from expansion at the Belina portals area. Soil removed at the Belina portals area has already been used for ongoing reclamation at the mine site and hence, will not be available for final reclamation. Substitute topsoil material to be used for final reclamation will come from within the permit area.

The substitute topsoil will be distributed over all disturbed areas except on slopes greater than 1.5 H:1V. The steeper slopes will have soil deposited in basins. These basins will then be hand planted at spacing of about 6 foot centers.

Revegetation will occur in the first favorable season following topsoil distribution. The topsoil will be scarified using a disc and harrow. The flatter areas will be seeded using a seed drill, while the steeper slopes will be both hydroseeded and hand seeded. The proposed seed mixture is found in Volume III, Appendix B, pages 22-34 of the PAP.

IV - LEGAL, FINANCIAL, AND COMPLIANCE INFORMATION - UMC 782.13, 782.14, 782.15, 782.16, 782.17, 782.18, 782.19, AND 782.21

#### UMC 782.13 Identification of Interests

Information required by this rule is provided in Volume I (Section 782.12), Volume V (Section 782.13), and Volume VI (Section 782.13) of the PAP, and responses to determinations of adequacy. The applicant is in compliance with UMC 782.13.

#### UMC 782.14 Compliance Information

Compliance information can be found in Volume I (Section 782.14), Volume V (Section 782.14), and Volume VI (Section 782.14) of the PAP. The applicant is in compliance with UMC 782.14.

#### 782.15 Right-of-Entry and Operation Information

Information on the applicant's right-to-enter and mine coal can be found in Volume I (Section 782.15), Appendices A and B, and Volume VI (Section 782.15) of the PAP. The applicant is in compliance with UMC 782.15.

#### UMC 782.16 Relationship to Areas Designated Unsuitable for Mining

Volume I (Section 782.16) of the PAP states that the permit area is not within an area designated or under study for designation as unsuitable for mining (see BLM concurrence letter, October 21, 1983). The application is in compliance with this section.

#### UMC 782.17 Permit Term Information

Permit term information can be found in Volume I (Section 782.17) of the PAP and the 16 November 1983 response to the determination of adequacy. The applicant is in compliance with 782.17.

UMC 782.18 Personal Injury and Property Damage Insurance Information

A telephone conversation with Shannon Storrud, UDOGM, on 28 September 1983 verified that Valley Camp has an insurance policy in effect which meets the requirements of UMC 806.14. Therefore, the applicant is in compliance with this section.

UMC 782.19 Identification of Other Licenses and Permits

Licenses and permits are identified in Volume I (Section 782.19), Volume V (Section 782.19), and responses to determinations of adequacy. The applicant is in compliance with 782.19.

UMC 782.21 Newspaper Advertisement and Proof of Publication

The applicant has provided a copy of its notice of application for a permit to mine (addenda received by OSM 14 October 1983) as well as verification from the "Price Sun-Advocate" that the advertisement was published in four consecutive weekly editions (28 September to 19 October 1983). The application is in compliance with this section.

V - LAND USE - UMC 783.22, 784.15, AND 817.133

The applicant adequately describes the premining land uses in terms of environmental capability and productivity, and historical and existing uses (Volume II, page 104 through 109A, and Volume VI, pages 783.22-1 and -2 of the PAP).

Valley Camp of Utah has committed to a primary post-mining land use of wildlife (Volume VI, Appendix M) and a secondary land use of livestock grazing. The applicant has provided a description of the proposed use and the methods to achieve this use. All issues concerning reclamation of the haul road from Eccles Creek to the Belina mine portals may be found under UMC 817.156. The post-mining land use sections of the permit application are in compliance with UMC 784.15(b) and 817.133(a)

VI - CULTURAL AND HISTORIC RESOURCES - UMC 761.11(a)(3), 783.12(b) AND 784.17

Cultural and historic resources information is presented in Section 5 and Appendix C of Volume II of the PAP.

A cultural resources TA has been completed by OSM. Although not required by the Utah Surface Mining Act, various Federal laws require further consideration of cultural and historic resources

eligible for listing on the National Register of Historic Places (see Appendix B of this TA).

OSM has received concurrence from the Utah State Historic Preservation Officer (SHPO) (February 29, 1984) with a Finding of No Effect/No Adverse Effect. On the basis of this concurrence, UDOGM and OSM find that the proposed mining operation will not adversely affect any publicly owned park or place listed on the National Register of Historic Places.

The proposed operation will be in compliance with the requirements of UMC 761.11(a)(3), 783.12(b) and 784.17. The following standard condition is included as a condition of this permitting action.

Condition No. 1

If any previously unidentified cultural resources should be discovered during mining operations, the operator shall ensure that the site is not disturbed and shall notify the regulatory authority. The operator shall ensure that the resource(s) is/are properly evaluated in terms of the National Register of Historic Places eligibility criteria (36 CFR 60.6). Should a resource be determined eligible for listing on the NRHP, the operator shall consult with and obtain the approval of the regulatory authority concerning the development and implementation of mitigation measures as appropriate.

VII - GEOLOGY - UMC 783.13 AND 783.14

The description of the geology in the permit area is presented in: (1) The Geology and Coal Reserve Study (Gates Engineering Company, 1982); (2) Volume II of the PAP, Part 783.13 and 783.14, excerpted from the Hydrologic Inventory and Baseline Study of the Valley Camp Lease Area Carbon and Emery Counties, Utah, by Vaughn Hansen and Associates, 1980; (3) Volume IV of the PAP; Map B Coal Maps, Maps B-1a and b columnar sections; Maps F-1 and F-2 longitudinal and cross sections of the mine plan area; (4) Volume V of the PAP Part 783.14; (5) Volume VI of the PAP Appendix N; (6) a submittal dated 14 October 1983 showing a geologic cross section of the Belina mines and adjacent area; and (7) in the complete cumulative hydrologic impact assessment (CHIA report) report available from OSM.

The description of the geology provided in the sources mentioned above provides sufficient information down to the first aquifer [as required by UMC 783.14(a)] to be affected below the coal seam (i.e., the Star Point Sandstone) to serve as the basis of the ground water description for Section 783.15. The geology information has been reviewed and is determined to be complete and technically adequate. Key geohydrology issues addressed in the PAP and the CHIA report include: (1) the location of the intrusive dike encountered in the Belina mines and its influence on ground water flow; (2) the faulting present in the Belina

permit and adjacent area in relation to ground water discharge points; and (3) the offset of strata along faulted zones and the resultant potential to have more significant aquifers adjacent to mine workings. Additional information can be found in the CHIA report summary, Appendix A of this TA.

VIII - HYDROLOGIC BALANCE: SURFACE WATER - UMC 783.16, 784.16, AND 784.22

### 783.16 Surface Water Information

Surface water information can be found in Section 783.16 (Volume II of the PAP) and the Hydrologic Inventory and Baseline Study of the Valley Camp Lease Area, Carbon and Emery Counties, Utah (Vaughn Hansen Associates, January 1980).

Completeness was evaluated with regard to UMC 783.16 and 783.24(g) (Maps: General Requirements), UMC 793.25(g) (Maps: Cross-Sections, Maps, and Plans), and UMC 784.14(a) and (b) (Reclamation Plan: Protection of Hydrologic Balance). All sections are complete.

Compliance was determined as it relates to the technical adequacy of UMC 817.52 (Hydrologic Balance: Surface and Ground Water Monitoring) and UMC 817.54 (Hydrologic Balance: Water Rights and Replacement). The applicant's existing surface water monitoring program is in compliance; however, Valley Camp proposes to modify this program. The technical analysis of the proposed modification is presented below. In summary, the PAP complies with UMC 817.54 as it relates to surface water.

Valley Camp's original surface water monitoring program collected data from thirteen sites on and adjacent to the Valley Camp lease area. Currently, there are premonitoring sites upstream and downstream from the mine site monitoring for all disturbed areas. Originally, the monitoring was performed on a monthly basis (when accessible i.e., not snow covered) for water quantity and quality. After about one year the monitoring program was reduced to bimonthly (when accessible).

The applicant proposed (Vaughn Hansen Associates, 1980) several changes in his surface water monitoring program. These changes are being approved in part. In summary, Valley Camp has substituted stations VC-11, VC-12, and VC-13 for VC-7 and VC-8. Stations CS-1, CS-7, UPL-3, and UPL-10 are to be abandoned from the Valley Camp surface water monitoring program. Monitoring at Station VC-13 (Long Canyon) is suspended until at least one year prior to any potential underground impact (see Figure 6 for hydrology monitoring sites). Potential underground impact is defined as mining underneath the surface water drainage basin. No mining is proposed in this 5-year period application under the Long Canyon drainage basin. The applicant's recent request to extend mining into the south half of section 36 requires monitoring at VC-12, in Finn Canyon (see TA p. 26 for additional information).

Valley Camp also proposed to reduce their surface water monitoring schedule from every other month to quarterly (i.e. February, May, August, and November). This proposal is rejected. The CHIA report with respect to the Belina mines documented that there has been a large increase in total suspended solids corresponding to construction activities associated with the portal and haul road. Quarterly, or even bi-monthly, sampling is not sufficient to adequately measure the effects of mining or changes in total suspended solids concentrations. The following condition is designed to improve the Valley Camp surface water monitoring program to a level where total suspended solids can be accurately estimated. The condition also incorporates recent UDOGM policy regarding surface and ground water monitoring.

Condition No. 2

Valley Camp shall revise and submit to the regulatory authority for approval, their surface water monitoring schedule within 60 days of permit issuance. Surface-water monitoring shall be performed at stations VC-1, VC-2, VC-4, VC-5, VC-10, VC-11 and VC-12. Streams shall be monitored monthly during the period from April through August. The monthly monitoring of streams shall include measurements of streamflow and water quality parameters according to the abbreviated water quality parameter list (i.e., sodium, calcium, magnesium, potassium, sulfate, bicarbonate, carbonate, chloride, total dissolved solids, total suspended solids, pH, field specific electrical conductance, and field temperature). Measurements of turbidity may be substituted for the measurement of total suspended solids following the development of an adequate site specific relationship between the two parameters. Twice a year the full suite of water quality parameters (according to the UDOGM guidelines) shall be analyzed. The complete suite of water quality samples shall be taken during a period of flow representative of the warm season low flow and the spring snowmelt highflow. A corresponding flow measurement shall be taken at the same time that water quality samples are taken

Ground Water (Springs): Each spring that is included in the monitoring network shall be monitored during the period from June through August. These springs are S24-12, S25-13, S36-17, S36-23, S36-19, S31-13 and S7-11 (see Figure 6). During the monthly monitoring period, measurements of flow, pH, specific electrical conductance (EC), calculated total dissolved solids, and temperature must be made. A quarterly flow measurement shall be taken together with a water quality sample. The water sample shall be analyzed according to the abbreviated schedule mentioned previously, excluding total suspended solids. Twice a year (spring and fall) a flow sample shall be analyzed according to the complete suite of parameters listed in the UDOGM guidelines. Data shall be submitted quarterly to UDOGM and an annual analysis and summary of the data will be provided.

784.16 Reclamation Plan: Ponds, Impoundments, Banks, Dams, and Embankments

(b)(1) Sedimentation Ponds

Valley Camp has already constructed five sedimentation ponds: two at the Belina mines and three at the Utah No. 2 facilities. Ponds Nos. 1, 2, and 3 are located at the Utah No. 2 facilities. These ponds were built in 1979 and 1980. However, Valley Camp has proposed modifications to Pond No. 3 (approved with conditions by UDOGM dated 20 June 1983), and Valley Camp has proposed a new truck scale installation that would change the size of the disturbed area that drains into Pond No. 2 (letter from Valley Camp to UDOGM dated 25 July 1983).

Information pertaining to the sedimentation ponds can be found in section 784.12 (Volume III), Appendix A (Volume V), Section 784.16 (Volume VI of the PAP), and in "Office of Surface Mining Reclamation and Enforcement Compliance Survey in Clear Creek, Utah Area" (Vaughn Hansen Associates, October 1978), and in the modification letters cited above.

All sedimentation ponds were reviewed for technical adequacy for UMC 817.45 (Hydrologic Balance: Sediment Control Measures), UMC 817.46 (Hydrologic Balance: Sedimentation Ponds), and UMC 817.49 (Hydrologic Balance: Permanent and Temporary Impoundments). Sections 817.48 (Hydrologic Balance: Discharge Structures), 817.56 (Hydrologic Balance: Postmining Rehabilitation of Sedimentation Ponds, Diversions, Impoundments, and other Treatment Facilities), and 817.57 (Hydrologic Balance: Stream Buffer Zones) were also reviewed as they pertain to sedimentation ponds. The existing Ponds Nos. 1, 3, and 4 and the mine-water discharge pond were found to be in compliance with all pertinent sections, although Ponds Nos. 3 and 4 and the mine-water discharge pond have special conditions that must be noted.

The two sedimentation ponds located at the Belina mines are Pond No. 4 and a pond for the mine-water discharge. Mine water was originally discharged into a filter pond that was built in 1977 and discharged into an undisturbed drainage above the portal yard. This original pond did not perform adequately and Valley Camp stopped using the pond. During this period, Valley Camp conveyed the mine water to Pond No. 4. Partially because of this inflow of mine water (mean flow of about 0.5 cfs), Pond No. 4 has had a series of violations for exceeding the total suspended solids effluent limitations and for failure to prevent short circuiting (NOV Nos. 82-1-9-2 and 82-4-11-1). Remedial action for these violations included reconstruction of the filter ponds at the Belina mines. Approval of the new filter pond was given by UDOGM (letter to OSM dated 29 June 1983). The new filter pond was constructed in November, 1983 and has been functioning to reduce the TSS levels in Pond No. 4. No new violations have issued by the State or OSM since the construction of the pond.

The existing design for Pond No. 3 is totally in compliance. However, there were questions in the PAP pertaining to a modification of this pond. Specifically, the new modifications had a designed side slope of 1.8H:1V which is steeper than that allowed for in UMC 817.46C. UDOGM has received plans and design calculations (dated 1 June 1983) from Valley Camp's consultant that adjust the side slopes to 2H:1V or shallower on inside slopes and 3H:1V or shallower on outside slopes.

Sedimentation Pond No. 4 will be left as a permanent impoundment. Before abandoning the permit area, Valley Camp will remove the accumulated sediment, remove the principal spillway and seal that portion of the pond, and place a minimum of 18 inches of riprap material (12 inches or larger) on the interior of the fill slope (Section M, 9/14/83). The postmining landuse for the Belina portal area will be wildlife and livestock grazing.

The pond is large enough to prevent drying out due to evapotranspiration if the pond is full in May; therefore, the level of water will be sufficient to serve as a reservoir for macroinvertebrates. Because the area below the pond is already stabilized, the postmining pond should not result in the diminution of quality of water downstream, but the impoundment of water will reduce the water quantity. The pond has a storage volume of about 10 acre-feet, and the average annual volume of Whiskey Gulch above the mine area is about 29 acre-feet. Therefore, about one-third of the volume of flow from this part of Whiskey Gulch will be impounded. This storage volume will reduce as sediment accumulates and fills the pond.

Design of the permanent impoundment meets the criteria established under the U.S. Soil Conservation Service Practice Standard 378, "Ponds". This technical guide is appropriate since it covers ponds for livestock, fish and wildlife, recreation, and other uses for small ponds where failure will not result in loss of life or damage to homes, buildings, main highways, or public utilities. No principal spillway will be used, rather flow in excess of the storage volume will discharge through the emergency spillway. Perimeter slopes of the pond are presently stable and should remain stable after mining. The perimeter slopes are not steeper than 2h:1v. Revegetation of the pond area will be of the same type and timing as for the portal yard; therefore, erosion at the pond should be minimized.

In summary, Sedimentation Pond No. 4 meets the performance standards for permanent impoundments (817.49) and postmining rehabilitation of impoundments (817.56). However, Valley Camp still needs to get approval of the Utah State Engineer before they modify the pond and abandon the site. No condition is needed because this requirement is already part of their approval from the Utah State Engineer when they built the pond.

Pond No. 4 is designed to be in compliance with the regulations. However, the addition of mine-water discharge into the pond has exceeded the ability of the pond to properly treat the water. The diversion of the mine-water discharge into a separate pond should allow Pond No. 4 to again have the storage capacity to properly treat the water from the portal pad. Pond No. 4 also complies with the requirements of a permanent impoundment.

The mine-water discharge pond is technically classified as a sedimentation pond (UMC 701.5), but it is built of concrete in the shape of a rectangular box. Current sedimentation pond regulations are not flexible enough to allow for these types of treatment devices. The pond should be treated as an alternative treatment system. The pond is designed for and is currently meeting effluent limitations for total dissolved solids and to be stable; therefore, the pond is in compliance.

Buffer zone regulations require that no land within 100 feet of an intermittent stream with a biological community be disturbed by coal mining activities (unless the regulatory authority authorizes such action). Whiskey Gulch is an intermittent stream. It is uncertain whether there is a biological community in Whiskey Gulch, but these facts must be considered:

- . Eccles Canyon Creek adjacent to and downstream of Whiskey Gulch has a biological community (Coastal States Energy, 1980);

- . Underground mine-water discharge from the Belina mines has resulted in almost continuous flow in Whiskey Gulch below the portal yard since 1982 (Valley Camp surface water monitoring program); and

- . Salamanders have been found at the Belina portal yard in Sedimentation Pond No. 4.

Because there is a biological community on the upstream and downstream reaches of Whiskey Gulch and because there has been almost continuous flow in Whiskey Gulch below the portal yard for the past two years, it is assumed that Whiskey Gulch has a biological community. Since Whiskey Gulch is an intermittent stream with a biological community, buffer zone requirements are applicable.

Most of the 1.79 mile haul road is within 100 feet of Whiskey Gulch. The portal pad site is located on a fill over Whiskey Gulch. Both of the structures were built prior to the passage of SMCRA, but they still must be considered as to whether the regulatory authority may authorize their placement within the buffer zones. The regulatory authority may authorize such activities if they comply with UMC 817.41 through 817.44 and that there will be no degradation of water quantity or quality.

This technical analysis has found that temporary and permanent diversions are already in compliance with UMC 817.41 through 817.44 (see page 16). Analysis of the surface water monitoring data confirms that there is no reduction in water quantity in Whiskey Gulch. However, the Belina CHIA report determined that during construction and early use of the road and pad there was degradation of water quality due to increases in total suspended solids (TSS). The CHIA report also suggested that these increases in TSS concentration were not at the level to cause material damage because the level does not exceed surface water quality standards for domestic, recreational, cold water aquatic life and agricultural uses.

Degradation of the water quality due to increases in TSS have been reduced since construction of the road and pad because of stabilization of the areas, flushing away of available material, and sediment control measures implemented by Valley Camp. Valley Camp continues to provide extra control measures such as their recent paving of the haul road and building of a mine-water discharge pond. TSS levels should continue to decrease over time, but they are likely to remain above levels found in undisturbed areas.

Most of the water quality impacts associated with the road and pad have already occurred. Levels of degradation have continued to decrease since the road and pad were constructed. OSM has considered (see EA page 6) the potential environmental benefits of enforcing the buffer zone requirements, however, reconstruction of the road and pad outside of the Whiskey Gulch buffer zone would not be prudent for the following reasons: 1) reconstruction of the road and pad would essentially cause the mine to close; there are no feasible alternative access routes to the portal area, 2) relocation of the pad would require closure and relocation of the Belina No. 2 portal and truck loadout facilities; this would create additional disturbance, and 3) relocation of the road and pad would create a new wave of sediment (3-10 years) into Whiskey Gulch. Therefore, the regulatory authority authorizes the use of the pre-existing haul road and portal yard within the Whiskey Gulch buffer zone.

The Utah No. 2 facilities were regraded around 1981 in order to decrease the drainage area flowing into Pond No. 2. According to the revised plans, Pond No. 2 has less than four acres draining into it, including the bath house and truck stop area and part of the truck loadout scales. In addition, Valley Camp cleaned out Pond No. 2 in the fall of 1983. A review of Valley Camp's NPDES self-monitoring reports shows no reported discharge from Pond No. 2.

Pond No. 2 is too small to achieve a detention time of 24 hours (UMC 817.46(c)). The pond is currently .4 acre/foot too small for total containment of the 10-year 24-hour event. However, Valley Camp has committed to enlarging the pond during the next construction season, spring of 1984 (July 25, 1983

letter to UDOGM). Valley Camp has further committed to submitting plans to the regulatory authority for review and acceptance prior to construction.

In summary, Sedimentation Ponds Nos. 1, 3, and 4 and the mine discharge pond are presently in compliance with 817.46. Valley Camp has committed to bringing Pond No. 2 into compliance with 817.46(c).

Pond No. 2 is the only sedimentation pond at the operation within 100 feet of a perennial stream. Pond No. 2 is adjacent to Mud Creek. Site visits have confirmed that the downstream embankment slope is riprapped all the way to the stream.

Analysis of the surface water monitoring data indicates that there are no adverse effects on the quality or quantity of waters in Mud Creek adjacent to Pond No. 2. The analysis was performed in the Belina CHIA report on monitoring stations VC-1 and VC-2. Therefore, the Utah No. 2 facilities are in compliance with UMC 817.57 (Hydrologic Balance: Stream Buffer Zones).

#### 784.22 Diversions

Valley Camp uses diversions both at the Belina mines and the Utah No. 2 facilities. At the Belina mines, there are six open channel ditches and two culverts that drain unaffected runoff away from the disturbed areas. At the Utah No. 2 facilities, there are five culverts and one ditch that drain the undisturbed water away from or the disturbed water into the sedimentation ponds. All present diversions are temporary.

Valley Camp proposes to reconstruct the stream channel at Whiskey Gulch at the Belina portal yard after mining. This diversion of the stream channel will be a permanent diversion. The permanent diversion will be a channel over the portal yard, through Sedimentation Pond No. 4, and down the outslope along the edge of the fill. Information is available for the longitudinal profile and cross-section for the channel over the portal yards (Section 784.22, Volume VI of the PAP).

Diversions were evaluated for compliance for UMC 817.43 (Hydrologic Balance: Diversions and Conveyance of Overland Flow, Shallow Ground Water Flow, and Ephemeral Streams), UMC 817.44 (Hydrologic Balance: Stream Channel Diversions), UMC 817.56 (Hydrologic Balance: Postmining Rehabilitation of Sedimentation Ponds, Diversions, Impoundments, and Treatment Facilities), and UMC 817.57 (Hydrologic Balance: Stream Buffer Zones) were reviewed as they pertain to diversions.

All of the temporary diversions at the Belina portal yard are in compliance. Special note should be made of the flow velocities in the ditches and culverts. Peak flow velocities for the ditches will be in the range of 10 to 12 feet per second. Normally, this velocity range would be excessive, but the ditches

are on competent sandstone that functions as a rigid channel lining and should be stable at these velocities.

Where Ditch A-B enters Whiskey Gulch, the outflow velocity from the ditch may be greater than the flow velocity in Whiskey Gulch. Section 817.43(f)(3) requires that energy dissipators be used at these locations. Valley Camp has committed to use straw bales at this location as an energy dissipator (March 6, 1984). This will be adequate due to the small size of the area. This will provide the control necessary to show compliance with this section.

Flow velocity in the 42-inch culvert under the portal yard at the outlet would be over 10 feet per second for the 100-year, 6-hour precipitation event. The outlet is on top of the rock toe buttress of the fill. The rock toe buttress consists of boulders and cobbles from one to four feet in diameter placed by end dumping or moving with dozers in order to insure interlocking and proper resting of individual boulders. This compaction of the boulders and cobbles along with the large size of the rock will allow the rock toe buttress to be stable with the discharge flow from the culvert.

The inlet for the 42-inch culvert was designed with a trash rack (Figure D-1, Revision No. 3, November, 1983). A site visit showed that the designed trash rack has not been installed, although a substitute structure is in place. Trash racks are not required in the performance standards, but properly installed and maintained trash racks are necessary to help prevent clogging of the culvert. The newly designed trash rack has been constructed; however, due to snow cover, it has not been installed. Valley Camp has committed (March 6, 1984) to installing the new trash rack during the first construction season, spring 1984.

There is and will be no permanent diversion at the Utah No. 2 facilities (OSM Compliance "Survey on Clear Creek, Utah Area ", Vaughn Hansen Associates, 1978). There will be one permanent diversion at the Belina mines (see TA 18 for description). General riprap sizing information is presented in the PAP, November 15, 1983 DOA response. Valley Camp has provided information pertaining to riprap gradation in their letter of 15 November 1983. Valley Camp has committed to follow the guidelines established in the Army Corp of Engineers Riprap Design Manual, HEC11 for riprap gradation for the reconstructed stream channel. This will be adequate to establish appropriate gradation.

The channel drop section for the overland channel below Pond No. 4 was constructed as part of the modification to the lower pad and Pond No. 4. Work was completed in 1980. Field inspections by the OSM staff and the consultants confirm that the channel drop section is stable due to the size of the riprap and the absence of the erosional problems.

In summary, the current temporary diversions at the Belina mines and the Utah No. 2 facilities and the proposed permanent diversion at the Belina mines are in compliance with UMC 817.43, 817.44, and 817.56. Compliance with respect to reclamation of the haul road from Eccles Creek to the Belina portals is addressed under UMC 817.156.

IX - HYDROLOGIC BALANCE: GROUND WATER - UMC 783.13 AND 783.15

The ground water resources are described in the following parts of the PAP:

- . Volume II, Part 783.14;
- . Hydrologic Inventory and Baseline Study of the Valley Camp Lease Area, Carbon and Emery Counties, Vaughn Hansen and Associates, 1980;
- . Volume IV, Maps F, F-3, and F-5;
- . Volume V, Part 783.15; and
- . Volume VI, Appendix N.

The description of ground water resources in the sources mentioned above for the permit and adjacent area of the Belina mines has been reviewed and found to be complete and technically adequate. The information from these sources has been used to define the ground water resources in the permit and adjacent area of the Belina mines as presented in the complete report, Appendix B Chapter 2. Also see CHIA report summary, Appendix A of this TA.

The most significant ground water resources identified in the PAP and CHIA report (see Appendix B, Chapter 2) that are or appear to be in hydraulic connection with the Belina mines and, hence, may be impacted include:

- . The baseflow of Eccles Creek via the O'Connor Fault zone;
- . The Boardinghouse Springs that supply the Town of Clear Creek (water right Number 91-3586 belonging to Valley Camp of Utah, Inc.). This potential hydraulic connection to the Belina mines was interpreted as part of the CHIA report Report (see Chapters 2, 4, 5, and 6);
- . The fractured Star Point aquifer associated with the O'Connor and Connelville Faults;
- . The Star Point aquifer east of the O'Connor Fault; and
- . Minor springs issuing from the Blackhawk Formation overlying the Belina mines.

The PAP is in compliance with UMC 783.13 and UMC 783.15

X - ALLUVIAL VALLEY FLOORS - UMC 785.19 AND 822

Eccles Creek within Eccles Canyon has been determined to not be an alluvial valley floor (AVF). This issue was addressed in the OSM technical analysis for the Skyline Mine. In addition, Whiskey Canyon and Pleasant Valley above the Utah No. 2 facilities were observed by OSM (August 1983) to be too narrow for flood irrigation or subirrigation agricultural activities.

Valley Camp's response (Volume V Apparent Completeness Review) mentions that the upper part of Pleasant Valley has historically not been flood irrigated. The PAP indicates that the lower part of Pleasant Valley (i.e., below the proposed Belina permit area) has historically been flood irrigated and may also be subirrigated near the stream channel. OSM staff evaluated the AVF characteristics of Pleasant Valley during a field trip in early August 1983. The field investigation confirmed the statements in the PAP, that the upper part of Pleasant Valley (near the Utah No. 2 Mine) is narrow and is generally not suitable for flood irrigation development. The lower part of the valley was observed to be flood irrigated. In addition, it appeared that grasses on the valley bottom may be subirrigated.

On the basis of the information presented in Volume V of the PAP and information gained during the field investigation, it is concluded that the surface topography, soils, water quality, and water quantity of lower Pleasant Valley (i.e., below the Utah No. 2 mine) are all suitable for flood irrigation agricultural activities. It is also likely that portions of Pleasant Valley are subirrigated for agriculturally useful species of plants. It is concluded, therefore, that lower Pleasant Valley is an AVF with the essential hydrologic functions of flood irrigation and possibly subirrigation. Conversely, it is concluded that the narrow valleys of Whiskey Canyon, Eccles Canyon, and Pleasant Valley above the Utah No. 2 mine facilities are not AVFs.

The analysis of probable hydrologic consequences and the CHIA report indicate that the base flow component of streamflow from Eccles Creek could be diminished by the Belina mining operations (see CHIA report Chapters 4, 5, and 6). However, during mining the ground water discharges from the mine would maintain flow in Eccles Creek. In addition, the applicant has committed to seal the mine workings (i.e. as determined safe by MSHA, see page 784.14-2 & 3 of the PAP) in the vicinity of the O'Connor Fault to allow accumulation of water to recharge the fractured materials that currently convey water to Eccles Creek. Within the mine, water encountered will be pumped to the vicinity of the O'Connor Fault. In this way, recharge to the O'Connor Fault zone and the corresponding discharge to Eccles Creek will be maintained during mining. Following mining, ground waters will flood the mine workings, after an unknown period, and ground

water flow to Eccles Creek will be maintained. Therefore, it is concluded that the quantity of water in Eccles Creek will be maintained to support the irrigation operations on the Pleasant Valley AVF.

Additional information developed in the CHIA report shows that water quantity will not be impacted either at the Belina mines nor the Utah No. 2 facilities. This study also shows that water quality will be within the agriculture and livestock limits for protection of beneficial uses of water (Utah Division of Health, October 1978). These conditions will prevail not only for the proposed 5-year permit term but also for the life of the mine. Therefore, the proposed operation will not materially damage the water supplied to the Pleasant Valley AVF and the Belina mines will not interrupt, discontinue, or preclude farming on the AVF.

The stream flow monitoring stations on Eccles Creek (see Chapter VIII of this TA) are considered adequate to determine if the Belina mines are affecting the water supply to the irrigation operation on the Pleasant Valley AVF. If water supplies are affected, the applicant has committed additional water rights to replace affected water supplies (see Chapter XI, UMC 783.17 and 817.54 in this TA). Therefore, the PAP is in compliance with respect to UMC 785.19 and 822.

#### XI - WATER RIGHTS AND REPLACEMENT - UMC 783.17, 817.53, AND 817.54

The applicant has identified and evaluated the probable impact of mining operations on existing ground water and surface water rights (see pages 36 to 42 of Supplement N, Volume VI of the PAP). The applicant also provides an adequate monitoring system for surface and ground water (see Chapter XII, UMC 817.52) to detect if mining-associated water losses will occur. If mining causes an interruption or cessation of flow associated with an existing water right or a perennial spring, the applicant has provided a sequence of measures to be taken to maintain the source of water including: diverting water to the site, hauling water, using Valley Camp's wells, developing a new source, or transferring water rights (see Volume VI, Appendix N, pp. 41-42 of the PAP). The PAP is therefore deemed in compliance with respect to UMC 783.17, 817.53, and 817.54).

#### XII - PROBABLE HYDROLOGIC CONSEQUENCES OF MINING CHIA REPORT SUMMARY - See Appendix A of this TA

##### Surface Water

The applicant has made a determination of the probable hydrologic consequences (PHC) of mining in Section 784.14 (Volume III of the PAP) and in the "Hydrologic Inventory and Baseline Study of the Valley Camp Lease Area, Carbon and Emery Counties, Utah" (Vaughn Hansen Associates, 1980). Valley Camp has provided

baseline hydrologic data from January 1976 to September 1979. Additional hydrologic data were obtained from the quarterly hydrologic monitoring programs from October 1979 through June 1983.

Completeness was evaluated with respect to UMC 784.14(c) (Reclamation Plan: Protection of Hydrologic Balance). The applicant's PHC, along with subsequent submittals, was determined to be complete. Most of the evaluation of the anticipated hydrologic consequences was based on further analyses made in the CHIA report. A summary of the CHIA is found in Appendix A of this TA.

Compliance was determined for UMC 817.41 (Hydrologic Balance: General Requirements), UMC 817.42 (Hydrologic Balance: Water Standards and Effluent Limitations), and UMC 817.48 (Hydrologic Balance: Acid-forming and Toxic-forming Materials) as they pertain to surface water.

Analysis of the surface water monitoring data shows that the total suspended sediment concentration and load has increased below the Belina Nos. 1 and 2 Mines. Based on field observations and analysis of the NPDES records, it is concluded that the increases in suspended sediment are coming from the haul road and the portal area.

The Belina CHIA report determined that the increase in suspended solids load ranged from 2.5 to 20 tons per disturbed acre per year. The range is because the sediment carrying capacity increases during a high stream flow year versus a low stream flow year. The CHIA report also documented that impacts on Eccles Canyon are the result of other mining activities (Skyline Mine) and non-mining activities, i.e., on-going construction and improvements to the Eccles Canyon Road.

The increases in suspended sediment has impacted the fisheries production of Eccles Canyon Creek (see Chapter XVI). Recent improvements at the Belina mines will reduce the suspended sediment concentration and load. These improvements include paving the haul road and building a new filter pond for the mine discharge. It is unknown at this time to what magnitude these improvements will reduce the total suspended sediment concentration and load. The CHIA report estimates that 2-20 tons/acres/year of sediment may be produced at the mines; therefore, paving of the 11 acre haul road may potentially reduce the sediment load by 22-220 tons per year. A detailed analysis of the anticipated hydrologic consequences is presented in the CHIA report. Sufficient information is provided in the PAP and the CHIA report to find compliance with respect to the surface water aspects of UMC 784.14. Compliance with respect to reclamation of the haul road from Eccles Creek to the Belina portals is addressed under UMC 817.156.

Ground Water - UMC 784.14, 817.50, 817.52, and 817.55

The probable ground water hydrologic consequences of the Belina mines with respect to UMC 784.14 are discussed in the following parts of the PAP:

- . Volume III, Part 784.14;
- . Hydrologic Inventory and Baseline Study of the Valley Camp Lease Area, Carbon County, Utah, January 1980, pages 114-117;
- . Volume V, Part 784.14; and
- . Volume VI, Appendix N, pages 23-36.

In addition, the CHIA report defines the ground water impacts that are expected with respect to the Belina mines (see Chapters 4, 5 and 6). Ground water impacts that are predicted in the PAP and/or the CHIA report are as follows:

- . Effects of ground water discharges from the Belina mines to the quality and quantity of receiving streams that are discussed in the CHIA report. Additional details of ground water/surface water interactions are discussed below.

- . Under standard operating procedures, ground water intercepted in the Belina mines will be pumped from the mines and will be discharged from sediment ponds to Eccles Creek via Whiskey Canyon. This intercepted ground water is also the recharge to the local ground water system. More specifically, ground water flow via the O'Connor Fault (i.e., 200 gallons per minute) to Eccles Creek provides the principle baseflow to Eccles Creek. The Belina mines might potentially intercept almost all of the recharge to the O'Connor Fault zone, and therefore, could cause declines in the discharge of ground water to Eccles Creek along the O'Connor Fault. However, as described previously (see Chapter X), Valley Camp has committed to maintain water in the mine in the vicinity of the O'Connor Fault in order to preserve the base flow of Eccles Creek.

- . The subsidence effect of the Belina mines indicates that surface cracks and potholes may reach the surface in areas where overburden is less than 400 feet over the Upper O'Connor Coal Seam (see Volume VI, pages 24-30 of the PAP). Plate 4, Volume VI shows the areas of potential subsidence. Within the area of potential subsidence water rights associated with 3 springs (91-1643, 91-3499, and 91-3500) may be impacted. For the three springs with water rights that may be affected, Valley Camp has developed a plan and has committed to replacing the water supply for the water users that may be affected (see Chapter XI-UMC 817.54).

- . The CHIA report described the potential relationship between recharge intercepted in the Belina Mines Complex and the springs in lower Boardinghouse Creek, the main source of water for the

Town of Clear Creek. The source of recharge to this spring is believed to be primarily from the fault zones, south of the dike, just upgradient from the spring. There is a possibility that some reduction of flow will occur in the Boardinghouse Spring as a result of ground water intercepted within the Belina mine. The amount of expected decrease in flow is considered to be minimal. The average annual flow from the Boardinghouse Spring is 250 gpm; Clear Creek utilizes 61 gpm or 24 percent of this flow. A worst case analysis indicates that the Belina mines could intercept 26 gpm of ground water flow, or result in a 10.4 percent reduction. The town would still have 163 gpm available for use after removing the 61 gpm from the spring. In addition, no decrease of flow was reported as a result of the mining operations in the O'Connor mine which was located in Boardinghouse Creek (Jack Otanni; personal communication, 3/2/84). Due to the closer proximity of the O'Connor mine to the spring, the O'Connor mine would conceivably cause a greater reduction in flow than the Belina mine would; however, since no reduction occurred during the O'Connor mining activities, it is anticipated that no significant reduction of flow will occur as a result of the Belina operations. Therefore, this impact is not considered to be significant.

. Two wells, one in the Connelville Fault Zone (i.e., Coastal States Energy Well 91-1560) and one in the O'Connor Fault zone (i.e., Valley Camp's well 91-1691) may experience declines in well yield. These water reductions are not seen as significant and can be corrected by increasing the depth of the wells in the fractured Star Point Sandstone.

. Valley Camp's water rights associated with mine tunnel discharges (91-3596 and 91-3595) will also likely experience decreases in discharge as a result of dewatering operations in the Belina Mines Complex. However, these water rights are not currently being used and the impact is, therefore, considered not significant. The applicant is in compliance with UMC 784.14.

UMC 817.50 Hydrologic Balance: Underground Mine Entry and Access Discharges

The CHIA report concludes that gravity drainage will not occur from any mine access points because intercepted ground waters in the mine will move down dip (i.e., to the west) away from the mine entries. Therefore, UMC 817.50 does not apply to this PAP.

UMC 817.55 Hydrologic Balance: Discharge of Water into an Underground Mine

The applicant plans to discharge all excess water encountered in the mine workings via the portals and the system of sedimentation ponds they have constructed and have planned. Therefore, UMC 817.55 does not apply to this PAP.

UMC 817.52 Hydrologic Balance: Ground Water Monitoring

The Belina mines ground water monitoring program can be found in Volume VI, Appendix N, pages 18-21 of the PAP.

Several issues that have previously been raised with regard to the ground water monitoring program have been addressed in the recent addition to the PAP (Volume VI). The issues that have been adequately addressed include:

- . Valley Camp will initiate sampling of springs 18 months prior to potential disturbance by the Belina mines;

- . A commitment by Valley Camp to monitor all springs in the adjacent area that have water rights associated with them (i.e., 531-1, 531-5, and 531-11);

- . A commitment by Valley Camp to monitor larger springs in the adjacent area of the Belina mines (i.e., 56-3, S25-2, S25-6, and 536-3), including the Boardinghouse Spring (532-3), which may receive recharge from the mine area via the intrusive dike that was encountered in the mines and which occurs near the Boardinghouse Spring.

In a letter dated March 9, 1984 to OSM, Valley Camp requested an extension of the present 5-year permit boundary, which would extend mining in Federal lease U-044076 to the southern boundary line of section 36 and in the southeast corner of section 35, Federal lease U-017354 (see correspondence section). The applicant requests this extension for the purpose of confirming newly acquired geologic (seismic) data. This tentative geological information indicates that in this area, additional fault(s) up to 350 feet in displacement and another intrusive dike are present. Valley Camp is concerned about the location of the faulting and the dike and how it may interfere with the present layout of the mine. In order to effectively plan for the continuation of the Belina mine development, Valley Camp requested to extend development of their South Main Entries, or to (as the case may be) through the faulting and dike.

OSM has considered the hydrological implications of the requested extension. The CHIA considered all anticipated mining, which included the area of the requested extension. Since this area has already been included in the assessment of the cumulative hydrologic impacts, and faulting and intrusives have been considered on the whole, potential impacts have been addressed. The development of main entries into this area will provide additional confirmation on the hydrogeology as required by Conditions 3 and 4.

The determination of the anticipated hydrologic impacts relied heavily on information concerning the occurrence of ground water in mines in the Mud Creek drainage. The data search for the CHIA report concerning ground water inflow to mines

originated from personal communications with individuals that have worked extensively in the mines.

Ground water inflow information is considered important to document mining impacts on ground water resources in general. More importantly, monitoring of ground water inflow to the Belina mines would also document whether or not a significant water bearing zone had been encountered that may require some mitigating measure. Therefore, in order for the PAP to be in compliance with UMC 817.52, condition is necessary.

### Condition No. 3

Valley Camp shall restrict mining in section 36; S1/2, Federal lease U-017354 and section 35; E1/2SE1/4, SE1/4NE1/4, Federal lease U-044076, to the development of the south Main Entries only. Updated information on the geologic structures (faults, dikes, fractures, channel sandstones, etc.) encountered in the mine as the result of this development shall be submitted as part of the applicant's annual in-mine ground-water monitoring program (see Condition 4).

### Condition No. 4

Within 60 days of permit issuance, Valley Camp of Utah, Inc. shall develop and implement an in-mine ground-water monitoring program. This monitoring program shall be submitted for approval by the regulatory agency. The results of the monitoring program shall be reported on a quarterly basis and include a map of all points and/or areas of defined measurable flow (greater than 1 gpm) as well as an indication of the geologic source of the flow (channel sandstone, fault, fracture, lineament system, etc.). The map shall also show the location of in-mine sumps used to collect water as well as updated information on the geologic structures (faults, dikes, fractures, channel sandstones, etc.) encountered in the mine as a result of extended mining into Federal lease U-017354 and U-044076. The report shall also contain a discussion of the quantity, quality, and source of the water encountered. When new points or areas of measurable flow are first encountered, flow rate and field water quality parameters shall be measured. Field water quality parameters shall, at a minimum, consist of: pH, temperature, electrical conductance, and calculated total dissolved solids. Monthly, flow and field water quality parameters shall be measured. Quarterly, an abbreviated water quality analytical schedule for the samples shall be completed. The abbreviated water quality analytical schedule will, at a minimum, consist of the laboratory measurements for: sodium, potassium, calcium, magnesium, iron (total), chloride bicarbonate, sulfate, carbonate, pH, and TDS. A mass balance table of the cations/anions in milliequivalents per liter shall be required for each sample analysis. Biannually, and at the approximate same time each year, a comprehensive water quality analytical schedule for the samples shall be completed. The full suite of parameters to be analyzed

shall include those recommended in the UDOGM guidelines for establishment of surface and ground-water monitoring programs. If the number of measuring points becomes excessive, the applicant may request a modification of the number of sampling sites from the regulatory authority. In addition to the in-mine monitoring of ground water flow, the applicant shall account for all ground water consumption (evaporation and other losses) and transfers of water in and out of the mine.

UMC 817.57 Hydrologic Balance: Stream Buffer Zones

The applicant has committed to establish a buffer zone, where pillars will not be pulled, on either side of the perennial streams within the permit area to avoid the surface effects of subsidence. All the stream reaches within the permit area have been reclassified as intermittent streams by OSM (January 26, 1984). As a result of this new classification the intermittent streams are no longer protected under UMC 817.126.

However, pursuant to this section: "...no land within 100 feet of...an intermittent stream and which contains a biological community...shall be disturbed by surface (underground) coal mining activities,...unless the Division specifically authorizes surface (underground) coal mining activities closer to or through such a stream upon finding- 1) that the original stream channel will be restored; and 2) during and after the mining, the water quantity and quality from the stream section within 100 feet of the underground coal mining activities shall not be adversely affected..." In the absence of information on biological communities in these intermittent streams, it will be assumed that each stream contains a biological community.

The portions of the stream reaches that are potentially going to be affected from subsidence (a disturbance of underground coal mining activities) are the headland reaches of these intermittent streams, which are adjacent to the Mud Creek/Huntington Creek basin divide. The main hydrologic role of the stream headlands is to receive snowmelt runoff waters and allow it to flow downstream. It has been determined that subsidence would not adversely affect the ability of these headlands to receive snowmelt runoff waters and allow it to flow downstream, nor would subsidence affect water quality. Even if subsidence cracks occurred in the stream channel, the effects would only be temporary as subsidence cracks have been shown to be self-healing within a relatively short period of time (few days to a couple of weeks). Even if subsidence cracks intercepted snowmelt runoff, it would tend to recharge the aquifer systems that provide baseflow to the respective streams, until such time that the subsidence cracks self-heal through the aid of runoff. (DeGraff, S.V., 1981, Subsidence Crack Closure: Rate, Magnitude, and Sequence: Bulletin of the International of Engineering Geology, No. 23, p. 123-127)

The subsidence monitoring plan as described in the September, 1983 Hydrology Update (Appendix N) on page 30 commits to a plan which includes a late summer visual inspection of potential subsidence areas above the mines and an annual aerial photogrammetric survey. The visual inspection shall include the intermittent streams above the mines.

The applicant has not committed to restore the original stream channel of an intermittent stream, only a perennial stream. The applicant must commit to restore the original stream channels of the intermittent streams if disturbance occurs to be in compliance with UMC 817.57; therefore, the following condition is required.

Condition No. 5

Within 60 days of permit issuance, Valley Comp of Utah, shall revise and submit to the regulatory authority for approval the subsidence monitoring program to include the intermittent streams in the permit area. The applicant shall commit to restore the original stream channels of intermittent streams within the permit area that may be disturbed by underground coal mining activities, including surface subsidence effects.

XIII - CLIMATOLOGICAL INFORMATION AND AIR RESOURCES

UMC 783.18 Climatological Information and Air Resources

The applicant has provided references for the information required by UDOGM under this section in the Coastal States Energy Skyline Mine permit application. Valley Camp's application (Volume V, 783.18, page 14) is in compliance with Section UMC 783.18.

UMC 784.26 Air Pollution Control Plan

No air quality monitoring program has been required by UDOGM. The applicant has a fugitive dust control plan and the approval of the Utah Department of Health to operate within limits which it set. The applicant is, therefore, in compliance with this section (Volume V, 783.18, page 14A-C).

XIV - TOPSOIL - UMC 783.21, 784.13(b)(3 AND 4), AND 817.21 THROUGH .25

Soil resource information can be found in Volume II (pages 83 through 103 and Appendix D) and Volume VI (pages 83 through 83B) of the PAP. Information pertaining to topsoil handling is presented in Volume III (page 27), Volume V (pages 22 through 22D), and Volume VI (pages 784.13(b)(4) - 1 and 2 and Appendix P) of the PAP.

Existing surface disturbance including interim reclamation areas (approximately 13 acres), occurs within three portions of

the permit area. The first disturbed area of approximately 20 acres is the Belina portals area. The second disturbed area of approximately 18 acres is the Utah No. 2 loadout and yard area. The third disturbed area of approximately 25 acres is the haul road from Eccles Creek to the Belina portals. The only topsoil salvaged from the previously disturbed areas has been redistributed for interim reclamation at the Belina portals area (approximately 4 acres). The applicant has proposed the use of substitute topsoil material for reclamation. Two sources of material are available; one source is located within the Belina portals and the other source is at the Utah No. 2 loadout and yard areas.

Specific information pertaining to the two sources of substitute topsoil material, including location and extent of source areas, laboratory data, suitability evaluations, volume calculations, and a design for a greenhouse study, have been provided by the applicant. However, for the application to be in compliance, deficiencies in the design of trials testing the feasibility of using substitute topsoil as a plant growth medium must be corrected. In addition, the applicant must provide more detailed information on the depth and location of substitute soil redistribution and the types and rates of soil amendments, including fertilizer, to be added to the respread substitute topsoil (see Condition No. 6 and 7).

The calculations of substitute topsoil volumes provided by the applicant are estimates of the amount of available material which must be removed in order that the areas currently occupied by the substitute topsoil be reclaimed to the final reclaimed grades. More precise calculations of volumes (includes swell factor) conducted by OSM for the two substitute topsoil sources indicate availability of approximately 2,204,290 cubic feet of material at the Belina portals area and 415,393 cubic feet of material at the Utah No. 2 loadout and yard area, based upon the applicant's maps and cross sections. The volume for the Belina portals source indicates substitute topsoil material is available in an amount sufficient to spread a thickness of approximately 6 inches over disturbed areas yet to be reclaimed within the Belina portals area. This source of substitute topsoil will also serve for the reclamation of the haul road. Compliance with respect to reclamation of the haul road from Eccles Creek to the Belina portals is addressed under UMC 817.156. The volume for the Utah No. 2 loadout and yard area source indicates substitute topsoil material is available in an amount sufficient to spread approximately six inches thick over disturbed areas yet to be reclaimed within the Utah No. 2 loadout and yard area. In order to provide a substitute topsoil redistribution plan that commits to spreading a uniform amount of substitute material at the Belina and Utah No. 2 sites, Condition No. 6 is required.

An evaluation of the physical and chemical data developed for both sources of substitute topsoil indicates both materials are capable of supporting plant growth and would enhance the

feasibility of reclamation of the Belina Mines Complex disturbed areas. This determination is based on the review of physiochemical and productivity data for soils, as described by the Soil Conservation Service (SCS), which occur in areas adjacent to the Belina Mines Complex. SCS soils reviewed in the evaluation of reclamation feasibility includes the Daybell soil series which is described as a poor source of topsoil due to an excess of coarse fragments (USDA-SCS and USDI-BLM 1981). However, this soil series produces an annual yield of air-dry herbage of 2,600 lbs per acre in favorable years and 1400 lbs per acre in unfavorable years for use primarily as forage for livestock and wildlife. The substitute topsoil materials have similar chemical and physical characteristics, except for the absence of excessive number of coarse fragments, to the Daybell soil. Therefore it is concluded that the substitute topsoil material will support revegetation. To substantiate this evaluation, greenhouse or field trials must be conducted.

The proposed design for a greenhouse study provided by the applicant to test the two substitute topsoil sources is inadequate in scope. The purpose of the trial is to confirm the ability of the substitute topsoil sources to support successful revegetation under environmental conditions (constraints) which are characteristic of the site and the site-specific reclamation plan. Therefore, for a greenhouse study to provide data valuable to the evaluation of the two substitute topsoil materials and vegetative response to each substitute topsoil material must be assessed under conditions such as: 1) moisture availability, 2) precipitation, 3) air and soil temperature ranges comparable to the sites of reclamation. In addition to standard background conditions, the greenhouse study must consider response to variables including thickness of topsoil over substrate, seed mixtures, fertilization rates, and aspect.

Due to the complexity of a greenhouse study which would require site-specific environmental conditions and testing in response to a number of variables, a favorable alternative to a greenhouse study would be field trials conducted at each of the disturbed areas. Field trials would provide the site-specific environmental conditions including choices of aspect and would eliminate problems associated with the greenhouse study.

When Condition No. 6 and No. 7 are satisfied, the applicant will be in compliance with UMC 784.13(b)(4) and UMC 817.21 through 817.25.

#### Condition No. 6

Within 60 days of permit issuance, Valley Camp of Utah, Inc. shall provide for review and approval by the regulatory authority, a plan to redistribute substitute topsoil material at a uniform thickness over all disturbed areas to be reclaimed, taking into consideration the total volumes of substitute topsoil materials available at all substitute topsoil material sources.

Condition No. 7

Within 60 days of permit issuance, Valley Camp of Utah, Inc. shall provide for review and approval by the regulatory authority, a sound design for either field site trails or a revised greenhouse study. The permittee shall also provide a commitment to conduct either of these tests selected to the regulatory authority to demonstrate the feasibility of using the proposed topsoil substitute material pursuant to UMC 817.22(e). If Valley Camp of Utah, Inc. elects to conduct field site trials, the design of the trials shall include at a minimum: test sites at both the Belina portal area and the Utah No. 2 loadout area; the test of types and rates of soil amendments; a test for optimum topsoil depth, tests for each proposed seed mixture by appropriate aspect; and establish control plots for each test.

If Valley Camp of Utah, Inc. elects to conduct greenhouse studies, the existing design proposed in the permit application shall be revised to include at a minimum: tests for soil samples from both Belina portal area and Utah No. 2 loadout area, tests for types and rates of soil amendments, tests for optimum topsoil depth, tests for each proposed seed mixtures by appropriate aspect, and establish control plots for each study. The design of the greenhouse study shall simulate environmental conditions in the greenhouse (such as growing season, air temperature, soil temperature, soil moisture, precipitation, light, available rooting depth, and aspect) to those at the mine site.

The design of either the field site trials or the greenhouse study shall provide a monitoring schedule, identify methods for monitoring, analysis of seedling establishment and plant mortality, and standards for determining success of each test.

The applicant shall provide types and rates of application for amendments to be added to the respread substitute topsoil based on the laboratory data from either the greenhouse study or field site trials.

XV - VEGETATION - UMC 783.19, 784.13(b), AND 817.111-.117

Vegetation information can be found in the following sections of the PAP:

- . Volume II, pages 39 through 51, Appendix F, and Appendix H.
- . Volume V, pages 15 through 15N.
- . Volume VI, pages 783.19-1 and 2, and replacement pages 15D through 15N-32.

. Volume VI, replacement page 783.19-3, (November 1983).

. Volume VI, replacement pages 783.19 through 783.19-4 (January 1984).

The Belina Mines Complex is an existing operation which was disturbed prior to collection of any vegetation information. The vegetation information provided in the PAP was taken from similar areas adjacent to the surface facilities within the proposed permit area.

A riparian community along Whiskey Gulch was buried by a valley fill when the Belina portals were constructed. The riparian community in all probability consisted of a narrow zone along the valley bottom composed of redtop, silver sagebrush, sedges, grasses, and numerous forbs.

The applicant has provided statistical analyses of sample adequacy for cover (Figure 2-15, Volume II and pages 783.19-1 and 2, Volume VI of the PAP) productivity (replacement pages 783.19-3 dated 4 January 1984), and tree density (replacement pages 783.19-3 and 783.19-4 dated 4 January 1984). The results of this analysis indicate that a sufficient number of samples were collected for the lower canyon spruce-fir sites, sagebrush site, Whiskey Canyon aspen and spruce-fir sites, and the portal yard spruce-fir site. The applicant collected the required number of samples to establish vegetation conditions within the 80 percent confidence level.

Reference areas have been established for all vegetation types that have been disturbed and which will require reclamation. The reference areas are at a minimum 56 percent similar in species composition to the validation sites. The reference areas (7) have been located on maps of the permit area.

Restoration of the riparian community has been adequately addressed. Adequate details on plant species composition, planting density, planting areas, and methods of planting were provided. As proposed, restoration efforts in Whiskey Gulch would result in the development of approximately 0.3 acres more riparian habitat than was lost because of mining activities. An estimated initial loss of approximately 0.1 acres of riparian community resulted from mining.

The application contains adequate site-specific seed mixtures for existing conditions within the permit area (see Appendix B, Volume III of the PAP). These seed mixtures provide a diverse plant composition and are of adequate amounts. Also, planting details are sufficient to determine the feasibility for successful reclamation. An interim seed mixture slightly different from that in the PAP was proposed by Valley Camp for interim reclamation of the Belina haul road (see September 15, 1983 letter from Trevor Whiteside of Valley Camp to Lynn Kuntzler of UDOGM). UDOGM, in a subsequent letter (29 July 1983)

determined the interim seed mixture to be adequate and approved Valley Camp's request.

Mining operations have disturbed a total of approximately 76 acres of vegetation (Belina Mine portals 29.5 acres; loadout facilities 21.6 acres; haul road 25.0 acres). Of this total, about 75 acres would be revegetated. Approximately 1 acre would remain unvegetated because of retention of Sedimentation Pond No. 4 as a wildlife mitigation measure (see TA page 34). In addition, it is estimated that 1,043 acres within the permit area may be subject to subsidence . (OSM CHIA, Figure 2).

The PAP is in compliance with UMC 783.19, 784.13(b), and 817.111 through 817.117. Compliance with respect to reclamation and revegetation of the haul road from Eccles Creek to the Belina portals is addressed under UMC 817.156.

XVI - FISH AND WILDLIFE RESOURCES - UMC 784.21 AND UMC 817.97

The applicant's fish and wildlife protection plan are found in the PAP and in the sections shown below:

FISH AND WILDLIFE RESOURCE SUBMITTALS

Section	Date of Submission	Pages
<b>Fish and Wildlife Resource Data</b>		
Vol. 2	November 1980	52-82F
Vol. 2, Appendix E	-	-
Vol. 2, Appendix I	-	1-68
Vol. 3, Section 784.21	-	86-88A
Vol. 5, Appendix I	12 May 1982	1-22
VCI Letter	29 July 1983	1-4
<b>Fish and Wildlife Plan</b>		
Vol. 3, Section 784.21	November 1980; January 1981 14 September 1982	86-88A
Vol. 3, Appendix D	27 January 1981	1-14
Vol. 5, Appendix I	12 May 1982	1-22
Vol. 6, Section 784.15	13 September 1983	1-5
Vol. 6, Section 784.21	14 September 1983	1-5
Vol. 6, Section 817.97	15 September 1983	1-5
Vol. 6, Appendix M	September 1983	+8
Attachments 1-4		
VCI Letter	29 July 1983	1-4
Supplemental Responses, Section 784.21	17 November 1983	17-17a
Supplemental Responses, Section 817.97	15 November 1983	18-18c
Supplemental Responses, Section 784.21	5 January 1984	17b-17d
Supplemental Responses, Section 817.97	6 January 1984	1-3

No threatened or endangered fish or wildlife species occur on the proposed mining plan area and no Federally-designated critical habitats are present (Volume 5, Appendix I of the PAP). The bald eagle, American peregrine falcon, and arctic peregrine falcon occur sporadically in the region, but do not reside or depend on habitats in the mining plan area. Documentation regarding threatened and endangered species from U.S. Fish and Wildlife Service (USFWS) has been received (letter dated 20 December 1983, from USFWS to OSM). Design and construction of power transmission and distribution lines will be in accordance with guidelines set forth in Environmental Criteria for Electric Transmission Systems and REA Bulletin 61-10, Powerline Contacts by Eagles and Other Large Birds (Volume III, Section 784.21). The golden eagle inhabits the mining plan area but no nest sites are known. The mining activities will not significantly affect the status of golden eagles in the area.

Five major fish and wildlife issues have been identified: (1) alteration of key wildlife areas; (2) disruption of raptor nest sites; (3) loss and degradation of riparian habitat; (4) degradation of aquatic habitat in Eccles and Whiskey Creeks; and (5) the lack of specifics in the applicant's fish and wildlife plan. Each of these issues is resolved in the following narrative.

The USFWS identified potential jeopardy to active raptor nest sites in Eccles Canyon (letters dated 13 September 1982 and 8 April 1983). The PAP is in compliance with UMC 784.21(b)(3) and UMC 817.97(d) because mining operations would occur outside the recommended 0.25 mile buffer zone during the breeding season as suggested by USFWS (see Volume VI, Attachments of the PAP and the USFWS letter of 13 September 1982). No jeopardy of the raptor nest sites should occur.

The USFWS (letter dated 8 April 1983), the Utah Division of Wildlife Resources (UDWR) (letters dated 8 September 1983 and 4 October 1983) and the UDOGM (letter dated 23 May 1983) expressed concerns about the protection and restoration of key wildlife habitat. Key wildlife habitat and features within the permit area include portions of deer and elk summer range. An estimated 17 perennial springs and seeps are scattered throughout the permit area and may constitute another high value habitat feature. The UDWR has designated the entire permit areas as being included in deer and elk summer range. Past mining activities have resulted in a total of about 76 acres of disturbance. The applicant has committed to restoring all 75 acres (Pond No. 4, 1 acre, will not be reclaimed) with a vegetative cover and composition conducive to wildlife uses. The applicant has: (1) provided a commitment to protect and restore wildlife habitat; (2) provided plans for restoring useable wildlife habitat; (3) committed to revegetate all disturbed areas (excluding Pond No. 4); (4) provided habitat enhancement measures; (5) committed to incorporating the recommendations of

the UDWR in locating random wildlife habitat plantings of trees and shrubs on reclaimed areas; and (6) provided a feasible plan for restoring lost riparian habitat (discussed in greater detail below). Compliance with respect to reclamation of the haul road from Eccles Creek to the Belina portals is addressed under UMC 817.156.

The generic, non-site specific nature of the provisions described in the proposed Fish and Wildlife Protection Plan in the initial PAP was a consistent concern expressed by the USFWS (letters dated 13 September 1982 and 8 April 1983) and the UDOGM (letters dated 25 June 1980 and 23 May 1983). The UDWR found the reclamation plan adequate (letters dated 4 October 1983 and 13 August 1982), but still had concerns regarding water quality impacts on the Eccles Creek fishery (letters dated 8 September 1983 and 14 September 1983) and the proposed permanent retention of the haul road (letter dated 4 October 1983). The submission of supplemental data and commitments by the applicant (November 1983 and January 1984) provided adequate information to resolve concerns about specific mitigation and/or restoration questions.

The degradation of water quality in Eccles Canyon Creek by siltation from the haul road and its resultant effects on the downstream fishery and aquatic life status was a concern expressed by the USFWS (letters dated 19 May 1980, 13 September 1982, and 8 April 1983) and the UDWR (letters dated 8 September 1983 and 14 September 1982). The applicant provided adequate plans and planting schedules for stabilizing the road shoulder with soil binding agents, implementing a suitable planting plan, utilizing suitable soil amendments, and selecting adequate plant species for the existing road conditions. Compliance with respect to reclamation of the haul road from Eccles Creek to the Belina portals is addressed under UMC 817.156.

The USFWS (letters dated 19 May 1980 and 8 April 1983), the USFS (letter dated 20 April 1983), and the UDOGM (letters dated 25 June 1980 and 23 May 1983) expressed numerous concerns about several aspects of riparian habitat. Concerns included the absence of: (1) riparian habitat mapping; (2) protection and restoration commitments; (3) description of restoration methods; and (4) subsidence impacts on riparian/wetland habitats. The PAP and applicant do: (1) provide a commitment to protect, enhance, and restore riparian habitat; (2) provide adequate plans for revegetating and developing riparian habitat in selected areas (Whiskey Gulch); (3) acknowledge impacts to riparian wetland habitats; and (4) propose a plan for monitoring, evaluating, and mitigating spring subsidence effects on wetlands and wildlife use.

The applicant's riparian habitat restoration plan will result in approximately 0.3 acres more habitat being available than was estimated present before mining disturbances began. Part of this area will include the sedimentation pond in Whiskey Gulch that will be retained as a wildlife watering source.

The PAP recognizes the potential effects of subsidence-induced losses of wetlands, riparian areas, and potential wildlife watering areas caused by dewatering of springs and seeps, some of which are perennial. Replacement and/or restoration of springs and seeps for wildlife purposes are addressed (as required by UMC 817.97(a) and UMC 817.41(a)(b)) in the PAP. Commitments are made to (1) monitor perennial springs and seeps within the subsidence zone, and (2) provide replacement flows for the loss of important springs and seeps. However, the PAP lacks mapping and descriptions of riparian and other wetland habitat, considered important in light of recent determinations of potential subsidence effects on springs and seeps. Such data are considered essential since both the USFWS and USFS identified potential impacts to streams, springs and seeps, and riparian habitats (USFWS letter April 8, 1983 and USFS letter April 20, 1983). The position of UDWR is that springs and seeps provide critical wildlife habitat for all wildlife and mitigation will be expected for any spring or seep impacted by the mining activity (UDWR letter to UDOGM, February 3, 1983). Even though the applicant has committed to a conceptual plan to identify and monitor springs and seeps and potential wetlands, specific details for implementing the plan were not provided, therefore, the following condition is required.

Condition No. 8

Within 180 days of permit issuance, Valley Camp of Utah, Inc. shall submit to the regulatory authority for review and approval an implementation plan for monitoring wetland and riparian areas in the entire subsidence area. The plan shall include: (1) a map locating all wetland and riparian areas; (2) a description of the size and plant characteristics of each wetland; (3) the source of water supporting each wetland; (4) details and commitment to restore or replace affected areas and water sources; and (5) a monitoring schedule.

The USFWS initially concluded that the Belina Complex would not affect threatened and endangered species (December 20, 1983). However, in a subsequent letter to OSM (January 16, 1984), the USFWS identified concern with all Utah mines utilizing and potentially depleting water from the Upper Colorado River system. The agency has identified the need to analyze the impacts of the depletions of water from the river as habitats for the Colorado squawfish and humpback chub. The USFWS feels there is a need for those who deplete the source to contribute to the conservation program designed to compensate for the loss of water from the system. The USFWS currently assesses a one-time fee of \$15 per acre/foot to each water user depleting the source.

OSM's CHIA concludes, based on the applicant's estimate of evaporative losses and other information collected from nearby mines, that Valley Camp depletes approximately 49 acre/feet per year of water. Based on this figure, the applicant would be

obligated to contribute a one-time fee of \$735 to the USFWS study program.

OSM is currently consulting with the USFWS on this issue. If the USFWS determines that the Valley Camp operation constitutes a significant effect on the river system, OSM will enforce the following condition:

Condition No. 9

Within 30 days of permit issuance, the permittee shall implement the mitigation measures identified in the USFWS letter dated April 19, 1984, and submit proof of such compliance to the regulatory authority.

XVII - PRIME FARMLAND - UMC 783.27, 785.17, AND 823

Valley Camp has provided documentation from the Soil Conservation Service stating that there are no prime farmland soils within the permit area.

XVIII - EXPLOSIVES - UMC 784.23(b)(9) AND 817.61 THROUGH .68

Valley Camp states in Volume VI, Section 784.11, page 4 of the PAP that there would be no blasting associated with its surface operations. Therefore, these sections of the Utah regulations are not applicable.

XIX - OPERATION DESCRIPTION - UMC 784.11 AND 784.12

Volume III of the PAP (pages 3A, 4, and 5 of UMC 784.11) contains a description of the existing and proposed mining support facilities. Map No. C-6 illustrates the facilities in place at the Belina No. 1 and No. 2 mine sites, and Map No. C-3 shows the facilities at the Utah No. 2 portal. Included in these facilities are the three sedimentation ponds at the Utah No. 2 mine and one sedimentation pond at the Belina site. Also included are the domestic wastewater treatment plant, the mine wastewater settling and filtration unit, culinary water well, Belina bathhouse, Belina shop/warehouse and Valley Camp mine office west of the Utah No. 2 mine. Further details of the domestic wastewater plant are shown on Figure 3-6B and the mine wastewater facility is shown in detail on Figure 3-6C. A section of the existing culinary water well is illustrated on Figure 3-6A.

The mine operation plan outlines the methods proposed for extraction of coal from Belina No. 1 and No. 2 mines. The Utah No. 2 mine is presently not active except for the coal loading facilities. Room and pillar coal extraction methods are presently being used at the Belina mines. Roof control plans found in Appendix B, Volume V of the PAP illustrate the proposed underground mining system. The applicant has committed to limit extraction of coal from areas defined by a 35 degree angle of

draw under existing gas pipelines, perennial streams, and other surface or near-surface structures (Volume VI, Appendix N). In accordance with the applicant's subsidence monitoring program this figure may be reduced as mining conditions change (see MMS letter, May 23, 1980, to Valley Camp and Chapter XXVI of this TA). The description of operations is in compliance with the requirements of the UMC 784.11 and UMC 784.12 regulations.

XX - BACKFILLING AND GRADING - UMC 784.13(b)(3), 817.101, 817.72, 817.73 AND 817.74

Post mining topography in the vicinity of the Belina portal area is illustrated on Map D-1 and post mining topography for Utah No. 2 is shown on Map D-3 (see Volume IV of the PAP). The information provided in the PAP demonstrates compliance with UMC 817.101, 817.72 - .73.

Because terrace slopes adjacent to the Belina portals exceed the allowable 2H:1V Valley Camp provided a plan for stabilizing the terrace slopes. The plan is considered adequate and therefore the applicant is in compliance with respect to UMC 784.13(b)(3).

XXI-COAL PROCESSING WASTE AND NON-COAL PROCESSING WASTE - UMC 784.13(b)(6), (b)(7), 784.16(c) AND (d), 784.19, 784.25, 817.71, 817.93, AND 817.103

The applicant has stated in paragraph 784.11, Volume VI, page 4, and paragraph 784.13(b)(7) page 1 and 2 of the PAP that no coal processing wastes are generated and that all non-coal wastes are disposed of at the Carbon County Sanitary Landfill. All non-coal wastes are stored at the mine site in metal trash containers prior to being transported to the landfill. The operation is in compliance with the requirements of these regulations.

XXII - MINE FACILITIES, COAL HANDLING STRUCTURES, AND SUPPORT FACILITIES - UMC 784.11, 784.12, 784.16(a)(2) AND (a)(3), 817.181

The description of mine facilities, coal handling structures, and support facilities can be found in Volume VI, paragraphs 784.11, 784.12, and 784.13 of the PAP. These structures are shown on map C-6 of Appendix O, Volume VI of the PAP. The major mine facilities include the main coal conveyor, stacker tube, underground coal reclaimer, and truck loading bin. Coal is hauled by truck to the railroad loadout facility at the Utah No. 2 facility or directly to the consumer. Support facilities include the office/warehouse west of Utah No. 2, the Belina shop/warehouse, and the Belina bathhouse. No coal washing is performed. The operation and facilities described are in compliance with the facilities' requirements listed above.

XXIII - ROADS - UMC 784.18, 784.24, AND 817.150 THROUGH 817.180

As-built drawings of the Whiskey Canyon access road, including road profile, plan location, sections, details of drainage, and auxiliary items, are shown on the supplementary road drawings, sheets No. 1, T-1, S-1 through S-4, P-1 through P-7, and D-1 through D-5 of the PAP. Sections and details of the ancilliary roads at Belina Nos. 1 and 2, Utah No. 2, and the Valley Camp office and warehouse are shown on Figure 3-32 and described on page 92 in Volume III of the PAP. Geotechnical analysis reports for slope stability of steep cut and fill slopes have been furnished in Appendix L of the PAP. Inclusion of the corrective measures for steep slopes recommended in Appendix L brings the work described in compliance with the requirements of those regulations.

Valley Camp has proposed to leave the Belina haul road from the Eccles Canyon Road to the Belina portal area after completion of mining and reclamation operations. The haul road and Belina portals are located on fee land. In accordance with UMC 817.133 and 817.156, OSM consulted with the private land owners to determine the acceptability of the applicant's plan and if the surface owners would accept responsibility to maintain the road (see OSM letter, December 14, 1983). Based on the applicant's as-built drawings of the road, OSM determined that maintenance would be essential to ensure the stability of the road after mining operations cease. The applicant and the landowners declined to accept liability and maintenance responsibilities for the haul road after bond release; therefore, the regulatory authority is requiring the applicant to restore the haul road right-of-way to a condition meeting the requirements of UMC 817.156. OSM informed the applicant (see letter of January 27, 1984) of its decision to establish a bond amount sufficient to cover the reclamation costs for the road. After permit issuance, Valley Camp may choose to submit a revision to the permit consisting of an alternative plan for reclamation which would be compatible with proposed (i.e. wildlife habitat) or revised post mining land use. If Valley Camp's alternative plans are found to be acceptable, the bond can be adjusted accordingly (see Chapter XXIV of this TA).

The applicant must prepare and submit to the regulatory authority a reclamation plan for restoring the haul road right-of-way (Condition No. 10). Preparation of this plan will require the applicant to revise the topsoil handling portions of the reclamation plan for the portal area. Review of the available substitute topsoil volume for the portal area indicates sufficient material to cover the portal area and haul road right-of-way with no less than 6 inches.

#### Condition No. 10

Within 180 days of permit issuance, Valley Camp of Utah, Inc. shall submit to the regulatory authority for review and approval a detailed reclamation plan to restore the Belina haul road in accordance with UMC 817.156. This plan must address, at a

BELINA HAUL ROAD BOND CALCULATIONS

Earth work (assuming section at 60 + 100 as typical)  
 Approximate volume to be removed from side slope  
 Volume to be placed in cut = 106,000 yd<sup>3</sup>  
 (Unit costs are from Dodge Guide)

- (1) Clearing and grubbing (assume disturbed width 200')  
 Area = 25 ac  
 Light clearing and grubbing with disposal  
 $\$617/\text{ac} \times 25\text{ac} = \underline{\$15,425}$
- (2) Remove and dispose of bit. concrete (asphalt surfacing)  
 9,300 tons @ 149 lbs/ft<sup>3</sup> T=6"  
 Volume =  $\frac{9,300 \times 2,000 \text{ lbs./ft}^3}{149 \text{ lbs}} = 124,832 \text{ ft}^3$   
 Area =  $\frac{124,832 \text{ ft}^3 \times \frac{\text{yd}^2}{9\text{ft}^2}}{.5 \text{ ft}} = 27,740 \text{ yd}^2$   
 Cost =  $27,740 \text{ yd}^2 \times .59/\text{yd}^2 = \underline{\$16,367}$
- (3) Remove culverts  
 900' l.f. 24" csp  
 $900' \times (\$4.62/\text{ft}) = \underline{\$4,158}$
- (4) Earthwork  
 (a) Remove earth from down slope  
 (Assume total volume can be removed with dragline)  
 Assume hard clay and a 3 yd<sup>3</sup> dragline and casting to road surface  
 $\$1.30/\text{yd}^3$  (1,300 yd<sup>3</sup>/day)  
 $106,000 \times \$1.30 = \underline{\$137,800}$
- (5) Move and spread by dozer, shape and compact  
 $\$1.97/\text{yd}^3 \times 106,000 \text{ yd}^3 = \underline{\$208,820}$
- (6) Revegetation  
 Area = 25 ac  
 (a) Haul and spread topsoil  
 $25 \text{ ac} \times 43,560 \times .5 \times \frac{1}{27} = 20,167 \text{ yd}^3$   
 $20,167 (.67 + 2.58) = \underline{65,543}$   
 (b) Area preparation  
 $25 \text{ ac} \times \$468/\text{ac} = \underline{\$11,700}$

(c)	Fertilizing 25 ac x \$428.33/ac	= <u>\$10,708</u>
(d)	Seeding 25 ac x \$600.90/ac	= <u>\$15,022</u>
	TOTAL	\$ 485,543
	10% mobilization-demobilization	48,554
	13% profit + adm.	<u>63,121</u>
		<u>\$ 597,218</u>
	Maint. 10 years at \$100/ac	= <u>\$25,000</u>
	TOTAL BOND	= <u>\$622,000</u>

2. Hydroseeding (Fert. and seed) 649.35/ac x 41.4	26,883
3. Fertilizer and seeding 794.27/ac x 37.7	29,944
4. Mulching 12.5 ac (VCC's Figure) 400/ac x 12.5	5,000
5. Shrubs and Trees 750 x .78/ea.	562
Total Item D	<u>\$ 99,007</u> =====
10% Contingency (Items A, B, C, D)	\$ 41,000
13% Profit and Adm (Items A, B D)	37,322
10% Mobilization and Demob. (Items A, B, C, D)	41,000
<b>TOTAL</b>	<b>\$899,000</b>
Haul Road (See Exhibit 1)	622,000
<b>TOTAL BOND</b>	<b>\$1,521,000</b> =====

The applicant has posted a \$190,000 interim surety bond assessed for the disturbance of 38 acres at \$5,000 per acre. Upon submittal of a bond to cover reclamation costs of \$1,521,000.00, prior to permit issuance, the applicant will be in compliance with this section.

**XXV - SEALING OF DRILLED HOLES AND UNDERGROUND OPENINGS - UMC 817.14 AND 784.13(b)(8)**

The methods which have been used to plug and seal exploration holes are described in paragraph 817.31(b)(8) page 1, and illustrated in Figure 3-9A in Volume IV of the PAP. Proposed sealing of the existing culinary water well during the reclamation phase is also described on page 1 of the same paragraph.

Because the inactive Utah No. 2 mine will not be utilized for extraction of coal during the term of this permit, the mine has been sealed approximately 700 feet back from the portals. The portion of the mine between the portals and the seal is currently being used for material storage. The existing portals provide access to this storage area and are being ventilated. Access to the storage areas through the portals is controlled by locked doors which prevent unauthorized entry into the mine. The applicant is in compliance with UMC 817.14 and 784.13(b)(8).

**XXVI - SUBSIDENCE - UMC 817.126 AND 784.20**

The PAP includes a subsidence base map for the Valley Camp lease area (see Plate 3 of the PAP) and an illustration of

potential subsidence areas within the Valley Camp lease area (see Plate 4 of the PAP). Analysis of the potential for subsidence due to mining is included in Appendix N of the PAP as part of the Hydrology Update. This material is found at the back of Volume IV of the PAP. Using this information, OSM estimates that approximately 1,043 acres within the permit area may be subject to subsidence. Maps E2-006 and E1-0005 are included in Appendix C, Volume V and are used to illustrate how the applicant proposes to protect the existing gas transmission pipeline which crosses the mine site, a gas well and Boardinghouse Creek. The subsidence monitoring plan in use is described in Volume V and Appendix H.

The monitoring plan provides for establishing ground stations located by physical survey for vertical and horizontal position. Under agreement with the U.S. Forest Service, these points will be checked for movement by aerial photogrammetric methods on an annual basis. An angle of 35 degrees from the vertical is used at this mine. Where overburden depths are less than 400 feet, there should be no surface cracking or displacement due to the applicant's commitment to establish a sufficient buffer zone on either side of the pipeline within which no coal will be mined.

The applicant has committed to a similar approach to avoiding the effects of subsidence for the perennial streams and a gas well within the mining plan area. The applicant has acknowledged that springs may be lost in areas where overburden is less than 400 feet thick. A commitment is provided with respect to perennial streams to leave coal pillars in place beneath the streams within the angle of draw. OSM has reclassified the streams within the permit area as intermittent, therefore, Valley Camp's commitment and monitoring plan must be adjusted (see TA discussion under UMC 817.57, page 28). In accordance with information collected through the applicant's subsidence monitoring program, the angle of draw may be adjusted. This approach was approved by MMS on May 23, 1980, in a letter to Valley Camp (see correspondence section). The USFS lease (Utah 067498; January 1, 1962) covering the Belina Mines Complex stipulates that: 1) underground mining operations shall be conducted in such a manner so as to prevent surface subsidence that would cause damage to surface structures (USFS Condition 11), and 2) surface structures lost or damaged as a result of mining activities are to be replaced or restored (USFS Condition 15). The requirements of this permit are in agreement with the applicant's commitments and will provide for the protection of the gas pipeline in accordance with UMC 817.126 and 784.20. The angle of draw may be reduced, as supported by the applicant's monitoring plan. If subsidence affects the pipeline, the applicant must replace or restore the structure in accordance with the USFS lease condition (see USFS letter to OSM, March 7, 1984). The information provided is considered adequate and the PAP is in compliance with UMC 817.126 and 784.20.

Not applicable.

#### XXVIII - MISCELLANEOUS COMPLIANCE

##### Regrading or Stabilizing Rills and Gullies - UMC 817.106

The applicant has committed to regrading and stabilizing rills and gullies (Volume V). The applicant would accomplish this operation after the rills or gullies have been filled and graded. These areas would then be reseeded, interseeded, and replanted, and appropriate measures taken to avoid additional erosion. The PAP has complied with the requirements of UMC 817.106.

##### Contemporaneous Reclamation - UMC 817.100

The applicant has provided sufficient documentation that reclamation efforts would be carried out contemporaneously throughout the mining operations. This specifically includes backfilling, grading, topsoil handling, and revegetation (Volume III, page 23). The PAP demonstrates compliance with UMC 817.100.

##### Signs and Markers - UMC 817.11

Valley Camp states in its PAP (Volume VI, Section 784.11, page 5) that the required signs and markers would be posted. Drawings are included illustrating specifications of these signs and markers (Volume VI, Section 784.11, Drawings A5-0064 and A5-0065). The applicant has complied with this section.

##### Compliance with Clean Air and Clean Water Acts - UMC 784.13(b)(9)

The applicant's two requests for approval for development and an amendment for increased production were approved by the Utah Department of Health in letters dated 23 May 1975, 7 May 1980, and 17 August 1981, respectively, with 14 conditions attached. The stipulated approvals are sufficient for the State of Utah and OSM (conversation with Floyd Johnson, OSM, 29 September 1983) to find the applicant in compliance with the Clean Air Act. The Utah Department of Health determined that no PSD permit would be required (17 August 1981 letter from Utah Department of Health to Valley Camp, Inc.). The applicant has not exceeded the tonnage limit of 2.25 million tons of coal per year set in the approval letter. The 5-year plan projects an increase in production to 1.93 million tons per year.

The applicant holds an NPDES permit (No. UT0022985) from EPA Region VIII which allows discharge to Mud and Whiskey Creeks. Violations issued in the past historically exceed TSS limits. There are no current outstanding violations due to the applicant's redesign and construction of the mine water filtration pond. No fines have been levied against the company. According to Rob Walleen (EPA Region VIII, 6 October 1983), the applicant is in compliance with the Clean Water Act since no

dredge and fill permits are required from the Corps of Engineers and the applicant currently holds the proper NPDES permits. The applicant is in compliance with the Clean Air and Clean Water Acts.

Public Notices of Filing of Permit Applications - UMC 786.11

The applicant has placed an advertisement in the Price Sun-Advocate (addenda received by OSM 14 October 1983) which complies with the requirements of this section.

XXIX - OPERATIONS ON LANDS SUBJECT TO LIMITATIONS OR PROHIBITIONS - UMC 762.11 AND 786.19(d)(2)

The proposed permit area is not within an area designated or under study for designation as unsuitable for mining. The applicant's statement required by UMC 782.16 is located in Volume I, page 24 of the PAP. The proposed operation is in compliance with the requirements of this section.

## APPENDIX "A"

### CUMULATIVE HYDROLOGIC IMPACT ASSESSMENT SUMMARY MUD CREEK BASIN

#### INTRODUCTION

This is an assessment of the probable cumulative hydrologic impacts of all anticipated mining in the Mud Creek Drainage Basin with respect to Valley Camp's Belina mine.

The lease area of the Belina Mine Complex is located within two major drainage basins: the Price River and Huntington Creek drainage in the northern Wasatch Plateau. On the Huntington Creek side of the divide, the hydrology is related to runoff from undisturbed surface lands only and is, therefore, not considered as part of the cumulative impact area since there are no anticipated effects to this basin as a result of mining.

On the east side of the drainage divide, Mud Creek (previously known as Clear Creek and Pleasant Valley Creek) drains into the Scofield Reservoir which in turn releases water into the Price River. The portals to the Belina mine are located along an intermittent stream in Whiskey Gulch, a tributary to Eccles Creek. Eccles Creek, a perennial stream, drains into Mud Creek. Also draining into Mud Creek in the vicinity of the Belina Mine Complex are Boardinghouse Canyon and Slaughterhouse Canyon, both perennial streams. Other tributaries to Mud Creek above Scofield Reservoir are Long, Finn, Broads, Green, Winter Quarters, and Woods Canyon Creeks.

#### GEOLOGY

The lowermost strata of importance in the area is the Masuk Shale member of the Mancos Shale formation. Above the Masuk are the Star Point Sandstone, the Blackhawk Formation, and the Price River Formation including the basal Castlegate Sandstone member.

The Masuk Shale grades upward into, and interfingers with, the Star Point Sandstone. The hydrologic characteristics of the Masuk are very poor: and the Masuk is considered as a lower confining bed for the Star Point, characterized by low vertical and horizontal permeabilities even when associated with faulting.

The Star Point Sandstone generally consists of the predominant sandstone tongues with interbedded shales and siltstones in between. The Star Point is about 600 feet thick in this area and interfingers with the Blackhawk formation above. The Star Point Sandstone tongues are generally massive and medium grained and are occasionally broken by shale lenses of low permeability. These massive sandstones have generally poor hydraulic characteristics, but the water-bearing characteristics of the more massive units are greatly enhanced by the localized faulting and secondary fracturing and jointing that has occurred. Springs and seeps in the Star Point area are common. Fractured and faulted zones in the Star Point are characterized by relatively large discharge rates and low seasonal variability inflow rates.

The Blackhawk Formation is about 1500' thick in the area and consists of fluvial channel sandstones and intercalated shale, siltstone, and coal. The channel sands are more dominant in the upper half of the Blackhawk than in the lower half. The channel sandstones are generally local in extent in that they are relatively narrow across but are long lengthwise, meandering as fluvial deltaic streams will. The discontinuous nature of these channel sandstones makes ground-water movement through the Blackhawk formation somewhat irregular, resulting in perched aquifers within the channel sandstones.

About 300 feet of the Castlegate Sandstone member of the Price River Formation overlies the Blackhawk Formation. The Castlegate is a cliff-forming, coarse-grained, fluvial, sandstone-and-pebble conglomerate that is considered to be good aquifer material. Springs and seeps are common in the gradational contact of the Castlegate and Blackhawk.

Several major en echelon (step-like) faults trending northeast-southwest and a dike up to 230' thick trending east-west at Boardinghouse Canyon extend through the Mud Creek drainage. The major faults in the area are (from east to west) the Pleasant Valley, the O'Connor, the Connelville, and the Valentine faults. These faults are generally scissors faults with varying amounts of displacement (ranging from only a few feet to over a thousand feet) at the northern and southern ends of the faults. They are generally high-angle, normal faults, down-dropped on the west.

Available information indicates that faulted zones in the Blackhawk Formation have not significantly increased the hydraulic properties except where sandstone strata are connected across the faulting, whereas faulted zones within the Star Point do have greatly improved hydraulic properties. The lamprophyre dike is believed to be a low permeability ground-water flow barrier.

Ground-water movement down and through the Blackhawk to recharge the Star Point is enhanced by faults and fault zones. It should be noted that lateral ground-water movement and discharge from its faulted zones in the Blackhawk to streams is negligible. Ground-water movement in the Star Point moves preferentially along fractured zones in the sandstone tongues and is discharged where these fractured sandstones are exposed along the valley margins. Discharge from fractured Star Point occurs at a relatively high rate, with little seasonal fluctuation. As a result, the Star Point is the main source of baseflow in the Mud Creek and Eccles Creek drainages.

#### DELINEATION OF CUMULATIVE IMPACT AREA

Different areas have been delineated for the ground-water and surface-water cumulative impact areas (CIA's). The ground-water CIA was delineated on the basis of the hydrogeology of the area. The eastern boundary of the CIA is the Pleasant Valley Fault zone, a major ground-water system in itself which will buffer ground-water effects from the Belina mines from occurring east of the fault. The northern and

southern boundaries were placed on arbitrary topographic boundaries, and the western boundary was placed on the Huntington Creek-Mud Creek drainage divide. For the surface-water CIA, drainage that does not contribute to the Mud Creek was assumed to be outside the limits of the CIA. Drainage from the Belina lease area in the Huntington Creek basin is from undisturbed surface lands only. The only possible impact to this area is from possible subsidence, which, in the undisturbed area, is determined to be unlikely; therefore, this area was excluded from the Belina CIA.

#### ANTICIPATED MINING

Three mines are currently operating in the CIA. These mines are the Skyline No's 1, 2, and 3; the Blazon No. 1 (temporarily closed); and Belina No's 1 and 2. Proposed mining includes the Scofield mine and the Kinney No. 2 mine. The assessment considered that all five mines would be operating for approximately forty years.

#### HYDROLOGY

##### General

Surface water is a calcium bicarbonate type and is generally of good quality. Baseline total dissolved solids (TDS) has ranged from 171 to 391 mg/l with a mean of 315 mg/l. Ground water is also of a calcium bicarbonate type and is also of good quality. Values for ground water are generally between 300 and 600 mg/l TDS.

Mud Creek provides about 16 percent of the annual flow into Scofield Reservoir, estimated to be 8,844 acre-feet per year with an average flow rate of 2 to 4 cfs. Estimated ground-water flow into Scofield Reservoir from the Mud Creek basin is about 15 acre-feet per year (.02 cfs average).

##### Surface Water Impacts

Four scenarios were used in the computer model to evaluate potential cumulative effects from all anticipated mining in the CIA, using variable mine discharge rates and either a high or low value for the water quality parameters.

**Quantity:** Increases in streamflow were predicted for all four scenarios. The predicted streamflows into Scofield Reservoir are almost double the present 2-4 cfs average flow. The largest increases were predicted for baseflow conditions August through March.

**Quality:** Increases were predicted for all dissolved and suspended sediments. Quality will be discussed here with respect to total dissolved and suspended solids (TDS and TSS). Predicted increases in TDS load for the four scenarios ranged from 210 to 720 tons per year using scenario baseline values of 393 to 526 mg/l. This compares with a current mean TDS load of 3000 tons/year (7 to 24 percent increases). The EPA has set a primary drinking water criteria for TDS at 2000 mg/l.

The amount of total suspended solids has occurred in two extreme conditions as a result of variations in flow: 2.5 tons/acre/year in a low streamflow year to 20 tons/acre/year in a high streamflow year, making prediction of TSS increases as a result of mining operations difficult. Over the life of the mines (40 years), an additional 4120 to 33,000 tons is expected to be deposited in Scofield Reservoir. This will only reduce the storage capacity of Scofield by a maximum of 0.2 percent.

Since no water quality criteria are expected to be exceeded and since reduction of storage capacity at Scofield Reservoir is basically insignificant, water quality impacts are considered minimal.

#### Ground-Water Impacts

Ground-water quality was determined to not be affected from the mining operations. The impact of this intercepted ground water on the flow and quality of Mud Creek has been evaluated in the surface-water analysis.

The amount of ground water that will be intercepted in the mines cannot be quantified with the available information; however, mine discharges can be reasonably predicted using ground-water inflow data from other mines in the area. At a maximum, mine inflow will be on the order of 224 gpm.

Ground-water baseflow to Eccles Creek is believed to be primarily from the O'Connor fault zone which crosses the permit area. The baseflow from the O'Connor fault to Eccles Creek is on the order of 200 gpm. If ground water in the vicinity of the O'Connor fault is intercepted within the mine, then this would also intercept the baseflow to Eccles Creek. The applicant has committed to maintain water in the mine in the vicinity of the O'Connor fault in order to preserve the baseflow to Eccles Creek from this source; therefore, this impact is considered minor.

Within the areas of potential subsidence, three springs with water rights may be affected from subsidence. For these springs, the applicant has committed to replacing the water supply for the water users that may be affected; therefore, this impact is considered not significant.

Ground water intercepted in the mines may result in minimal reduction of flow to the spring in lower Boardinghouse Canyon. The reduction in flow to this spring is considered minimal and, consequently, this potential impact is considered to be not significant (see TA chapter XII, UMC 784.14, 817.50, 817.52, and 817.55).

Two wells, one in the Connelville fault zone and the other in the O'Connor fault zone, may experience declines in well yield as water is intercepted from these fault zones in the mines. These wells are owned by the mining companies and can be made deeper to improve yield, if necessary. This impact is considered minimal.

The applicant holds water rights associated with mine tunnel discharges. These discharges will likely experience some decrease in flow rate as a result of dewatering the aquifer system; however, these water rights are not currently being used, and the impact is considered not significant.

#### FINDING

It is concluded from the cumulative hydrologic impact assessment report and the technical assessment that increases in total dissolved solids, total suspended solids, calcium, magnesium and phosphate will occur; however, these increases have been determined to not cause material damage to the surrounding hydrologic balance. In addition, springs with water rights (other than Valley Camp's) may have a diminution in flow; increased streamflow from mine discharges will occur in Eccles Creek and Mud Creek; and an unknown number of springs currently used by wildlife may possibly decrease in flow. The applicant provided mitigating measures to minimize impacts to the hydrologic balance where potential impacts were considered important to local users or wildlife; therefore, it is determined that the mining operation has been designed to prevent material damage to the hydrologic balance outside the proposed mine plan area for the life of the proposed mining operation.

## Appendix B

### TECHNICAL ANALYSIS BELINA MINES VALLEY CAMP OF UTAH, INC. Carbon and Emery Counties, Utah

#### Cultural Resources

##### A. Description of Existing Environment

A cultural resources inventory of mine portals, transportation corridors and service areas has been prepared for the Belina Mines permit area (including Belina #1, Belina #2 and Utah #2) (Hauck 1980). Five historic sites have been recorded within the permit area. Sites 270U/1 and 270U/2, both cabin foundations, will be directly affected by mining operations. Both sites were determined ineligible for nomination to the National Register of Historic Places (NRHP) by OSM and the Utah State Historic Preservation Officer (SHPO) in conjunction with approval of the Skyline Mine (Attachment 1). Therefore, mining operations will have No Effect on these sites.

Historic sites 42Cr388 (Utah No. 12 Mine), 42Cr389 (Green Canyon Sawmill) and 42Cr390 (Nicolitus Mine) are located outside the direct impact areas but within the permit area. All three sites have been recommended ineligible for nomination to the NRHP, and OSM has received SHPO concurrence with the recommendations (Attachment 2). There is no need to seek Determinations from the Keeper of the National Register of Historic Places or to consult with the Advisory Council on Historic Preservation, due to the SHPO's concurrence.

##### B. Description of Applicant's Proposal

OSM's apparent completeness review of the cultural resources documentation submitted with the application identified nine deficiencies which required the submittal of additional information. In subsequent submittals (November 16, 1983; January 4, 1984) the applicant satisfied all nine deficiencies.

The applicant will complete a 100% pedestrian inventory of cultural resources of certain areas over the underground workings as designated by OSM (October 14, 1983 Determination of Adequacy) and will submit an acceptable cultural resources inventory report prior to December 31, 1984 to the Division of Oil, Gas and Mining; the Utah SHPO; the BLM; Manti-LaSal National Forest; and OSM. The applicant will conduct additional inventory to assess the effects of subsidence upon sensitive sites as may in the future be deemed necessary by the above agencies, and will

consult with the regulatory authority concerning the necessity of impact mitigation and/or monitoring of sensitive sites. If mitigation measures are deemed necessary, the applicant will consult with the regulatory authority concerning the development of an acceptable mitigation plan.

The proposed measures, in conjunction with the stipulation concerning emergency discoveries of cultural sites during mining (Section F) and the cultural/paleontological resource stipulations to the Federal coal leases (Attachment 3) are sufficient to allow OSM to seek SHPO concurrence with a Determination of No Effect/No Adverse Effect.

#### C. Evaluation of Compliance

##### Applicant's Compliance

Adherence to the measures proposed in the application and acceptance and implementation of the proposed Stipulation (Section F) will indicate the applicant is in compliance with all applicable regulations and legislation.

##### OSM Compliance

OSM has received concurrence from the Utah SHPO concerning the recommended ineligibility of sites 42Cr388, 389 and 390 and a determination that permit approval will have No Effect/No Adverse Effect upon significant cultural sites (Attachment 2). OSM has also received concurrence from the Forest Service on March 12, 1984 (See correspondence section).

#### D. Revision to Applicant's Proposal

Upon plan approval, the applicant shall satisfy the stipulations identified in Section F and Attachment 3.

#### E. Reevaluation of Compliance

The Utah SHPO has concurred with OSM's recommendation concerning site eligibility and the effect of the undertaking; therefore, OSM does not need to consult with the Keeper of the National Register of Historic Places and/or the Advisory Council on Historic Preservation. Additional consultations with the SHPO and the Advisory Council on Historic Preservation may be necessary if mitigation measures must be implemented to avoid adverse effects resulting from subsidence.

#### F. Stipulation

1. If any previously unidentified cultural resources should be discovered during mining operations, the operator shall ensure that the site is not disturbed and shall notify the regulatory authority. The operator shall ensure that the resource(s) is/are properly evaluated in terms of the National Register of Historic

Places eligibility criteria (36 CFR 60.6). Should a resource be determined eligible for listing on the NRHP, the operator shall consult with and obtain the approval of the regulatory authority concerning the development and implementation of mitigation measures as appropriate.

#### G. Summary of Compliance

The applicant will be in compliance if the stipulation in Section F and the measures proposed in the application are adhered to. The SHPO and USFS concurrences have been received and OSM will ensure that the stipulation is followed; therefore, OSM is found to be in compliance with the National Historic Preservation Act.

#### H. Proposed Departmental Action

The Secretary can approve the application with the proposed stipulation in accordance with the SHPO concurrence with recommendations concerning site eligibility and project effect, and USFS concurrence concerning completeness and adequacy of the application.

#### I. Residual Impacts of Proposed Departmental Action

At least two historic sites, which are currently considered ineligible for nomination to the NRHP will be directly impacted and an unknown number of sites will be indirectly affected by the proposed undertaking. Cultural resources that are considered insignificant today may contain information that would be recognized as significant in the future. These sites could be adversely affected, making future data recovery impossible. Unknown cultural sites may also be affected through operator activities, vandalism and unauthorized collection.

#### J. Alternatives to the Proposed Action

One alternative would be disapproval of the permit. Another would be to require complete inventory of the permit area and avoidance of all cultural sources during construction of surface facilities. Disapproval of the permit is not appropriate (See EA, Page 3). The applicant is required (Stipulation No. 1) to ensure that no disturbances occur to cultural resource sites discovered during mining operations until NRHP eligibility is determined.

The preferred alternative is to approve and implement the measures described in the application and in Section F. This allows the applicant to proceed and allows OSM to comply with all applicable federal legislation and regulations.

Reference Cited

Hauck, F.R.

1980 Intensive Archaeological Surface Evaluations in the Proposed Whiskey Creek Canyon - Pleasant Valley Project in Carbon County, Utah. Coal Mine and General Services Facilities Relative to Belina #1, #2 and Utah #2. AERC Paper No. 21.

- Attachments:
- (1): OSM Request for SHPO Concurrence With Skyline Mine SHPO Concurrence with Finding and Determination for Skyline Mine.
  - (2): OSM Request for SHPO Concurrence with Belina Mines SHPO Concurrence with Findings and Determination for Belina Mines.
  - (3): Federal Coal Lease Stipulations

## United States Department of the Interior

## OFFICE OF SURFACE MINING

Reclamation and Enforcement

BROOKS TOWERS

1020 15TH STREET

DENVER, COLORADO 80202

OFFICE OF THE REGIONAL DIRECTOR

113 JUN 1980

Melvin T. Smith  
 State Historic Preservation Officer  
 Utah State Historical Society  
 307 West 200 South, Suite 1000  
 Salt Lake City, Utah 84101

Attn: Jim Dykman

Dear Sir:

We have reviewed the archaeological survey reports submitted by Coastal States Energy Company for their Skyline Mine Plan (UT-0003). These surveys were performed by Archaeological - Environmental Research Corporation (AERC) between 1975 and 1980. Two historic sites, AERC 270U/1 and AERC 270U/2, were located in the SE 1/4 of the SE 1/4, Section 17, T13S, R7E, Carbon County. One historic site, as yet unnumbered, was located in the SE 1/4 of the SW 1/4, section 13, T13S, R6E, Carbon County. It was recorded on June 10, 1980 by OSM archaeologists. Site forms for this site, the Abandoned Eccles Canyon Mine, are attached. Photographs will be forwarded when available.

None of the historic sites appear to be eligible for nomination to the National Register of Historic Places, as they meet none of the criteria in 36CFR60.6. Additional information has been submitted by AERC for the applicant further documenting sites AERC 270U/1 and 270U/2, and should be on file at your office. Based on the above, OSM's approval of this mine plan will have no effect on known significant cultural resources, with the following stipulations:

- 1) The applicant will submit, within 60 days of acceptance of departmental approval of the mine plan, additional information to OSM and the Utah SHPO on the Abandoned Eccles Canyon Mine. (This information is available from Joe Harvey of Price, Utah, and the Utah State Industrial Commission.)
- 2) The applicant shall ensure that a sample survey for cultural resources is performed in areas of the mine plan that may be affected by subsidence. This survey should concentrate on locating sites that may be especially sensitive to the effects of subsidence. These site types include, but are not limited to: standing wall structures, both historic and prehistoric; rock art; and rock shelters. A minimum of 10% of the area that may be impacted by subsidence shall be surveyed. Areas that have previously been surveyed (excluding drill hole and corresponding access road surveys) may be used in this 10% survey. This additional survey may be random, or may concentrate on areas that, in the judgment of a professional archaeologist, would be more likely to contain sensitive cultural resources. Methods used to survey the additional areas will be justified in the survey report. This survey will commence within 60 days of acceptance of departmental approval of the mine

- 2 -

plan, and the report will be submitted to the OSM and the SHPO within 120 days of approval. The report shall be written using the standards outlined in OSM's draft "Proposed Guidance to Applicants". If cultural resources are located that are eligible for nomination to the National Register of Historic Places (36CFR60.6) and which may be adversely impacted by subsidence; a plan to mitigate these impacts shall be prepared and submitted to the regulatory authority for approval. Impacts will be mitigated prior to commencement of subsidence-causing activities.

3) If, during the course of mining operations, previously unidentified cultural resources are discovered, the applicant shall ensure that the site is not disturbed and shall notify the regulatory authority. The operator shall ensure that the resource(s) is properly evaluated in terms of the National Register of Historic Places eligibility criteria (36CFR60.6). Should a resource be determined eligible for listing, the operator shall consult with and obtain the approval of the regulatory authority and the Utah SHPO concerning the development and implementation of mitigation measures as appropriate.

4) All vehicular traffic, personnel movement, and construction be confined to the locations examined for the mine plan by the cultural resources survey and the access roads leading into these locations.

5) The company shall instruct their personnel that it is a violation of federal and state laws to collect individual artifacts or to otherwise disturb cultural resources. All personnel shall refrain from any such disturbance.

We request your concurrence in this Determination of No Effect pursuant to 36CFR800.4. We would appreciate your response at your earliest possible convenience. If you have any questions, please contact Judy Shafer or Bill Killam at (303) 837-5656.

Sincerely,



DONALD A. CRANE

Attachment

cc: ✓ Keith Welch  
Coastal States Mining Company  
Reed Christensen  
Manti-LaSal National Forest  
Jim Smith  
DOGM



SCOTT M. MATHESON  
GOVERNOR



STATE OF UTAH  
DEPARTMENT OF COMMUNITY AND  
ECONOMIC DEVELOPMENT

March 20, 1980

Division of  
State History  
(UTAH STATE HISTORICAL SOCIETY)

MELVIN T. SMITH, DIRECTOR  
307 WEST 2ND SOUTH  
SALT LAKE CITY, UTAH 84101  
TELEPHONE 801/533-3755

Chairperson  
Environmental Coordinating Committee  
State Planning Office  
118 State Capitol  
Salt Lake City, Utah 84114

RE: Skyline Mine , Carbon Co.

Dear Chairperson:

In response to your request for review and in accordance with your responsibility as outlined in 36 CFR 800.4 we are happy to consult with you concerning your project.

The staff has determined, after review, that if the stated procedures, projects or regulations are followed as outlined, there will be no known effect upon any potential or listed National Register historic, archeological or cultural sites.

If you have any questions or concerns, please contact James L. Dykman, Compliance Administrator, or Wilson G. Martin, Preservation Development Coordinator, Utah State Historical Society, 307 West 200 South, Salt Lake City, Utah 84101, 533-6017.

Sincerely,

Melvin T. Smith  
Director and  
State Historic Preservation Officer

JLD:re: C942 Carbon

(3) Concur with findings/recommendations  
cc: Keith W. Welch, Environmental Coordinator, 411 West 7200  
South Suite 200, Midvale, Utah 84047



February 29, 1984

Division of  
State History

UTAH STATE HISTORICAL SOCIETY

MELVIN T. SMITH - DIRECTOR  
307 P.O. BOX 2000  
SALT LAKE CITY, UTAH 84143  
TELEPHONE 531-8300

Rex L. Wilson  
Chief Archeologist  
Office of Surface Mining  
Reclamation and Enforcement  
Brooks Towers  
1020 15th Street  
Denver, Colorado 80202

RE: Belina Mine, Carbon and Emery Counties, Utah

In Reply Refer To: Case No. F250

Dear Mr. Wilson:

Your letter of February 6, 1984, has been received for consideration by the Utah Preservation Office. After review of the material provided concerning cultural resources at the mine site, our office has the following comments for your consideration.

Our office would concur with the determinations of eligibility for sites 42Cb388 and 42Cb389, and 42Cb390. Also, we would concur in a determination of no effect, considering the commitment by the company to do further surveys on areas over underground workings.

The above is provided on request as information or assistance. We make no regulatory requirement, since that responsibility rests with the federal agency official. However, if you have questions or need additional assistance, please let us know. Contact Jim Dykman at 533-7039.

Sincerely,

Wilson G. Martin  
Deputy State Historic  
Preservation Officer

JLD:jrc:F250/0120V

- f. (1) Before undertaking any activities that may disturb the surface of the leased lands, the Lessee may be required to conduct a cultural resource intensive field inventory in a manner specified by the Regional Director and the Authorized Officer of the surface managing agency on portions of the mine plan area and adjacent areas, or exploration plan area, that may be adversely affected by lease-related activities and which were not previously inventoried at such a level of intensity. The inventory shall be conducted by a qualified professional cultural resource specialist (i.e., archaeologist, historian, or historical architect, as appropriate), approved by the Authorized Officer of the surface managing agency and a report of the inventory and recommendations for protecting any cultural resources identified shall be submitted to the Regional Director (or the District Mining Supervisor if activities are associated with coal exploration outside an approved mining permit area) and the Authorized Officer of the surface managing agency. The Lessee shall undertake measures, in accordance with instructions from the Regional Director (or the District Mining Supervisor if activities are associated with coal exploration outside an approved mining permit area), to protect cultural resources on the leased land. The Lessee shall not commence the surface disturbing activities until permission to proceed is given by the Regional Director or the District Mining Supervisor as appropriate.
- (2) The Lessee shall protect all cultural resource properties within the lease area from lease-related activities until the cultural resource mitigation measures can be implemented as part of an approved mining and reclamation plan or exploration plan.
- (3) The cost of conducting the inventory, preparing reports, and carrying out mitigation measures shall be borne by the Lessee.
- (4) If cultural resources are discovered during operations under this lease, the Lessee shall immediately bring them to the attention of the Regional Director (or the District Mining Supervisor as appropriate), and the Authorized Officer, Surface Management Agency. The Lessee shall not disturb such resources except as may be subsequently authorized by the Regional Director (or the District Mining Supervisor).

Within two (2) working days of notification, the Regional Director (or the District Mining Supervisor, as appropriate) will evaluate or have evaluated any cultural resources discovered and will determine if any action may be required to protect or preserve such discoveries. The cost of data recovery for cultural resources discovered during lease operations shall be borne by the surface managing agency unless otherwise specified by the Authorized Officer, Surface Management Agency.

(5) All cultural resources shall remain under the jurisdiction of the United States until ownership is determined under applicable law.

- g. Before undertaking any activities that may disturb the surface or the leased lands, the Lessee shall contact the Regional Director and Authorized Officer of the Surface Management Agency to determine whether the Lessee will be required to conduct a paleontological appraisal of the mine plan and adjacent areas, or exploration plan areas, that may be adversely affected by lease-related activities. If the Regional Director and Authorized Officer, Surface Management Agency, determines that one is necessary, the paleontological appraisal shall be conducted by a qualified paleontologist approved by the Authorized Officer of the surface management agency, using the published literature and, where appropriate, field appraisals for determining the possible existence of larger and more conspicuous fossils of scientific significance. A report of the appraisal and recommendations for protecting any larger and more conspicuous fossils of significant scientific interest on the leased lands so identified shall be submitted to and approved by the Regional Director and the Authorized Officer, Surface Management Agency. When necessary to protect and collect the larger and more conspicuous fossils of significant scientific interest on the leased lands, the Lessee shall undertake the measures provided in the approval of the mining and reclamation plan or exploration plan.

(1) The Lessee shall not knowingly disturb, alter, destroy, or take any larger and more conspicuous fossils of significant scientific interest, and shall protect all such fossils in conformance with the measures included in the approval of the mining and reclamation plan or exploration plan.

(2) The Lessee shall immediately bring any such fossils that might be altered or destroyed by his operation to the attention of the Regional Director or the District Mining Supervisor, as appropriate. Operations may continue as long as the fossil specimen or specimens would not be seriously damaged or destroyed by the activity. The Regional Director or the District Mining Supervisor, as appropriate, shall evaluate or have evaluated such discoveries brought to his attention and, within five (5) working days, shall notify the Lessee what action shall be taken with respect to such discoveries.

(3) All such fossils of significant scientific interest shall remain under the jurisdiction of the United States until ownership is determined under applicable law. Copies of all paleontological resource data generated as a result of the lease term requirements will be provided to the Regional Director or the District Mining Supervisor, as appropriate.



U.S. DEPARTMENT OF THE INTERIOR  
OFFICE OF SURFACE MINING  
RECLAMATION AND ENFORCEMENT  
NOTICE OF A DECISION AND AVAILABILITY  
OF BOTH A TECHNICAL ANALYSIS AND AN  
ENVIRONMENTAL ASSESSMENT FOR  
VALLEY CAMP OF UTAH, INC.  
PERMANENT PROGRAM PERMIT  
BELINA MINES COMPLEX  
CARBON AND EMERY COUNTIES, UTAH

The United States Department of the Interior, Office of Surface Mining Reclamation and Enforcement (OSM), has approved, with conditions, a five-year permit for Valley Camp of Utah, Inc. to mine coal at its Belina Mines Complex.

The Belina Mines Complex underground coal mine is located in Carbon and Emery Counties, Utah, about three miles southwest of Scofield, Utah, and twenty miles northwest of Price, Utah. The mine has been in operation since 1976. The proposed SMCRA permit area will cover approximately 2,837 acres. The mining plan approval, which excludes county and fee coal, will cover approximately 1,378 acres. Mine production is at a rate of .97 million tons of coal over five years, increasing to a maximum production of 1.93 million tons a year beginning in 1988.

Any person with an interest which is or may be adversely affected by this Federal permit approval action may request an adjudicatory hearing on the final decision within thirty (30) days after publication of this notice, in accordance with Section 514(c) of the Surface Mining Control and Reclamation Act (SMCRA). Any hearing will be governed by provisions of 5 U.S.C. Section 554. A petition for review of the OSM decision should be submitted to:

Hearings Division  
Office of Hearings and Appeals  
U.S. Department of the Interior  
4015 Wilson Boulevard  
Arlington, Virginia 22203

Pursuant to 40 C.F.R. Sections 1501.4(c) and 1506.6, notice is hereby given that OSM has completed a technical analysis (TA) for the mining and reclamation plan (mining plan) for the Belina Mines Complex, Carbon and Emery Counties, Utah. OSM has also prepared an environmental assessment (EA). OSM's recommendation to approve the Valley Camp of Utah, Inc. mining plan and the permit application, with conditions, is in accordance with sections 510 and 523 of SMCRA. OSM's analysis is that no significant environmental impacts would result from such approval. For information or clarification concerning the approval of the Belina Mines Complex, please contact Sarah Bransom or Walter Swain at (303) 837-3806, Office of Surface Mining, Denver, Colorado.

Both the TA and the EA are available for public review at the following locations:

Office of Surface Mining Reclamation and Enforcement  
Western Technical Center  
1020 15th St.  
Denver, Colorado 80202

Office of Surface Mining Reclamation and Enforcement  
219 Central Avenue, N.W.  
Albuquerque, N.M. 87102

Utah Division of Oil, Gas and Mining  
4241 State Office Building  
Salt Lake City, Utah 84114