



0011
STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dr. G. A. (Jim) Shirazi, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

February 23, 1984

Mr. Don W. Nelson, Manager
Mining Development
S. J. Groves & Sons Company
Coal Development Group
2417 Regency Road, Suite D
Lexington, Kentucky 40502

RE: Determination of Completeness
and Technical Deficiencies
Western States Minerals Corp.
J. B. King Mine
ACT/015/002, Folder No. 2
Emery County, Utah

Dear Mr. Nelson:

Enclosed please find a copy of the Division's Determination of Completeness (DOC) for Western States Mineral Corporation's J. B. King Mine.

The enclosed DOC review document contains several questions that were identified during the review of the September 1, 1983 Addendum to the Mining and Reclamation Plan (MRP). These items need to be clarified before the plan can be determined complete and the Technical Analysis (TA) can be drafted. Therefore, please provide an adequate response to these questions on or before April 6, 1984. At the time of the submittal, the Division must request that all original and subsequent MRP submittals be consolidated into one document which are clear and concise. Additional information submitted in the future should be clearly marked for insertion into the appropriate section of the MRP.

Should you or your representative desire to meet with the Division staff or have any questions regarding this review, please contact me or Mary Boucek of my staff immediately.

Sincerely,

James W. Smith, Jr.
Coordinator of Mined
Land Development

JWS/MMB:btb

Enclosure

cc: Allen Klein, OSM
M. Boucek, DOGM
P. Grubaugh-Littig, DOGM

DETERMINATION OF COMPLETENESS
AND
TECHNICAL DEFICIENCIES

S. J. Groves & Sons Company
Western States Minerals Corporation
J. B. King Mine
ACT/015/002, Emery County, Utah

February 23, 1984

DETERMINATION OF COMPLETENESS

UMC 782.18 Personal Injury and Property Damage Insurance Information

DETERMINATION OF COMPLETENESS

The insurance policies have a different number. The new policy number (as of August 26, 1983) is KLA 321 55 83. In the previous submittal, the Certificate of Insurance had a policy number of TR-SLG-165T427-6-80. Please explain the difference. What are the new coverages on the new policy? Please submit this to the regulatory authority.

UMC 783.14 Geology Description

DETERMINATION OF COMPLETENESS

(a)(2)(iii) The applicant is requested to submit analyses of pyritic content and potential alkalinity of the strata immediately above and below the coal seam to be mined (I seam) and the clay content of the stratum immediately below the coal seam to be mined. The analyses provided should be identified as to the location from which samples were taken, indicating those taken from above the coal seam and those from below the coal seam.

(a)(2)(iv) The sulphur content of the coal, shown in the analyses provided by the applicant, should include a breakdown of pyritic sulphur and organic sulphur.

UMC 783.15 Ground Water Information

DETERMINATION OF COMPLETENESS

(b) The applicant has indicated in section UMC 783.15 of the Apparent Completeness Review (ACR) Response that the existing wells can produce over 150 gallons per minute (gpm) in short-term tests. This is not an accurate quantitative measurement of ground water discharge, recharge and storage capacity.

How did the applicant determine that 29 gpm would be adequate to meet the needs shown on Drawing 4050-5-3? Calculations show a 110 gpm withdrawal needed during the shift when the preparation plant is in operation.

Why is the total depth listed on the driller's logs different from the depths shown on the cross-sections of the existing wells?

The applicant has proposed monitoring the ground water withdrawn from the five existing wells which tap the Ferron Sandstone by monitoring Well No. 5. Why was Well No. 5 chosen to be representative of all the wells and what specific tests will be used to characterize the existing aquifer potential? See regulation UMC 817.52 for additional concerns.

UMC 783.19 Vegetation Information

DETERMINATION OF COMPLETENESS

A portion of the reference area as depicted on Exhibit 3 lies outside the "permit boundary" indicated on this map. The applicant is referred to UMC 700.5 which identifies permit area as ". . . all areas which are or will be affected by the underground coal mining activities during the term of the permit." Thus, all areas which are undermined and, therefore, subject to the effects of subsidence must be included within the permit area. If, indeed, part of the reference areas lies outside the true permit area, documentation must be provided to show that the land on which the reference area is located is leased to the operator and can, therefore, be protected and managed until bond release., Nevertheless, the applicant must correct the misidentification of "Permit Boundary" as depicted on Exhibit 3, as well as on Exhibits 1 and 2 relating to soils. In Section 2.5.3 (page 2-5) of the original permit application submittal, the applicant states: "The total acreage to be disturbed by underground mining (permit area) during the life of the entire operation is 440 acres." This section (2.5.3) is in accordance with the definition of permit area as defined in UMC 700.5 and this must be reflected on the aforementioned Exhibits 1, 2 and 3.

The applicant must permanently mark the 3.9 acre reference area in the field for future identification and so state in the response to this document.

UMC 783.25 Cross-Sections, Maps and Plans

DETERMINATION OF COMPLETENESS

(k) Cross-sections must be provided which show sufficient slope measurements to adequately represent the existing surface configuration in accordance with parts (1), (2) and (3) of this section of UMC 783.25.

UMC 784.12 Operation Plan: Existing Structures

DETERMINATION OF COMPLETENESS

The applicant does not include the current condition of the existing structures. It would be easiest for the applicant to include recent photographs of the structure to describe its current condition. The applicant does not state if any monitoring is done to have the structures meet performance standards (in accordance with UMC 817.180 and 817.181). This must be submitted to the regulatory authority.

UMC 784.13 Reclamation Plan: General Requirements

DETERMINATION OF COMPLETENESS

(b)(2) The detailed estimate of the costs of the proposed reclamation needs to account for the distance material will be hauled to cover the disposal site. If material will be acquired elsewhere, what will be the extra cost? Please adjust bond accordingly.

(b)(3) The plan for backfilling and grading has shown what the final topography will be. However, the volumetrics are lacking. It must be decided where the material will come from for reclamation cost estimates (how much and from where).

(b)(4) The applicant must submit a plan clearly indicating the source of fill material that will be used for reclamation. The borrow pit area overlies areas B and C which have a different proposed reclamation plan. The depth of material that will be removed, chemical and physical analyses of the fill material and the exact area that will be used must be included.

Samples of the site facilities pad area must be taken to evaluate the depth of material that must be removed before the redistribution of topsoil. The one foot removal depth, as proposed in the plan, may not be necessary or a depth greater than one foot may be necessary.

(b)(7) The coal processing waste disposal site must be sampled for possible toxic- or acid-forming materials. The depth of fill material required to cover this area cannot be determined until these tests are conducted.

The stabilization of backfilled materials shall be selectively hauled and compacted to prevent leaching of acid-forming and toxic-forming materials into surface or ground waters. There needs to be more specifics (such as the Chen Associates recommendations) before acid-forming or toxic-forming materials are covered. These must be committed to and included in the plan.

UMC 784.17 Protection of Public Parks and Historic Places

DETERMINATION OF COMPLETENESS

On page 29 of the report, the information advising the mining company of whom to consult for eligibility of the sites is wrong. It mentions the Antiquities Section with the Division of State History. A formal determination of eligibility is sought from the Keeper of the National Register. However, before this is done, consultation should take place with the Division of Oil, Gas and Mining and the Office of Surface Mining. The federal agency is responsible for directing consultation then to the Division of State History in the State Historic Preservation Office. This is to be noted and corrected.

The bibliography cited the people who filled out the site forms on related surveys in the project area, but did not cite the reports that those forms were associated with. Please give the citations for these reports.

UMC 784.20 Subsidence Control

DETERMINATION OF COMPLETENESS

The application should include a survey which shall show whether renewable resource lands exist within the proposed permit and adjacent areas and whether subsidence, if it occurred, could cause material damage or diminution of reasonably foreseeable use of such structures or renewable resource lands. Such renewable resource lands are defined as aquifers and areas for the recharge of aquifers and other underground waters, areas for agricultural and silvicultural production of food and fiber, and grazing lands.

(a)(2) The plan should include the extent to which controlled subsidence is expected and its method of calculation, the areas of the mine for which subsidence is expected and the projected maximum surface effect based on overburden depth and depth of coal extraction.

(c) The plan does not include a detailed description of measures to be taken to mitigate the effects of any material damage as required by this section. This should be submitted for the Division's review.

(d) The plan should include the measures to be taken to determine the degree of material damage caused by subsidence.

UMC 784.22 Diversions

DETERMINATION OF COMPLETENESS

The applicant still has not provided maps or cross-sections of all the existing diversions and disturbed ditches on-site. The applicant must also provide supportive sizing calculations and detailed cross-sections of all hydrologic structures found on-site (see UMC 817.43).

Specifically, the applicant has responded by addressing the refuse site diversion in adequate detail, but has not addressed any of the other diversions or ditches found on-site in regards to supportive hydrologic sizing calculations and detailed cross-sections. This should include a depiction of undisturbed drainage areas which flow onto the minesite or diversions.

Drawing #4050-5-13 shows the locations of some, but not all, culverts, ditches, slurry ponds and sediment ponds, but does not include the design calculations for all these structures. The design calculations for the drainage ditch on the southern end of the disturbed area and the diversion of disturbed runoff into the main sediment pond from the refuse pile does not show up any place in the plan.

The applicant must also show where energy dissipators and sediment controls are located in areas not currently referenced in the plan. The applicant may want to show this on Drawing #4050-5-13.

UMC 784.23 Operation Plan: Maps and Plans

DETERMINATION OF COMPLETENESS

(b)(3) Each area of land for which a performance bond will be posted must be delineated on a map.

UMC 817.13 Casing and Sealing

DETERMINATION OF COMPLETENESS

The applicant must show that proper casing and sealing is planned or has been accomplished for all exploratory boreholes within the permit area. Data submitted should include borehole locations, depth and type of casing or sealing.

UMC 817.22 Topsoil: Removal

DETERMINATION OF COMPLETENESS

(e) The applicant must submit the exact source of the soil material that will be used as a topsoil substitute. The only mention in the plan is on Map Exhibit #2 which only indicates possible locations.

It would be best to use soil material that is presently found in the disturbed area rather than disturb any additional areas.

The acreage of disturbance must be clarified. In one portion of the plan, it is quoted as being 28.3, 36, and according to the topsoil volume, 34 acres.

UMC 817.41 Hydrologic Balance: General Requirements

TECHNICAL NOTE

The applicant is advised that, prior to reactivation of the mine and increasing the workforce, plans and specifications for improving the drinking water facilities will need to be approved, as well as the sanitary waste water system, by the Division of Environmental Health (Bureaus of Public Water Supplies and Water Pollution Control). It is expected that this issue will be stipulated upon final approval of the mining and reclamation plan.

UMC 817.43 Hydrologic Balance: Diversions and Conveyance of Overland Flow, Shallow Ground Water Flow and Ephemeral Streams

DETERMINATION OF COMPLETENESS

The applicant must provide supporting calculations to show that all the diversions and culverts found on-site have been designed, constructed and maintained in a manner which prevents additional contributions of suspended solids to stream flow.

Culverts and diversions must be designed to handle peak flows from the 10-year, 24-hour precipitation event.

The applicant has only addressed the design and construction of the intercept ditch above the refuse pile. The applicant must also discuss the design and construction of all other diversions, ditches and culverts.

UMC 817.46 Hydrologic Balance: Sedimentation Ponds

DETERMINATION OF COMPLETENESS

The applicant has shown that the pond is capable of containing the 10-year, 24-hour storm, plus sediment volume and freeboard.

The applicant also needs to address the following additional issues found in regulation UMC 817.46. They are:

(i) An appropriate combination of principal and emergency spillways shall be provided to discharge safely the runoff from a 25-year, 24-hour precipitation event, or larger event specified by the Division, plus any inflow from the underground mine. The elevation of the crest of the emergency spillway shall be a minimum of 1.0 foot above the crest of the principal spillway. Emergency spillway grades and allowable velocities shall be approved by the Division.

(j) The minimum elevation of the top of the settled embankment shall be 1.0 foot above the water surface in the reservoir with the emergency spillway flowing at design depth. For embankments subject to settlement, this 1.0 foot minimum elevation requirement shall apply at all times, including the period after settlement.

(k) The constructed height of the dam shall be increased a minimum of five percent over the design height to allow for settlement, unless it has been demonstrated to the regulatory authority that the material used and the design will ensure against all settlement.

(l) The minimum top width of the embankment shall not be less than the quotient of $(H + 35)/5$, where H, in feet, is the height of the embankment as measured from the upstream toe of the embankment.

(m) The combined upstream and downstream side slopes of the settled embankment shall not be less than 1v:5h, with neither slope steeper than 1v:2h. Slopes shall be designed to be stable in all cases, even if flatter side slopes are required.

The applicant has also shown a sediment storage volume of 4,550 yards which is adequate, but needs to indicate where the clean out level of 60 percent of this sediment volume will be located in the sediment pond by referencing the design drawings.

UMC 817.49 Permanent and Temporary Impoundments

DETERMINATION OF COMPLETENESS

No detailed information is contained in the plan on the two slurry ponds except that the locations of the ponds were shown on Drawing 4050-5-13.

A description and cross section of the slurry ponds is necessary to evaluate compliance (UMC 784.16[a][1][ii]).

Additionally, the hydrologic impacts of the slurry ponds cannot be assessed without a surface drainage map showing ditches, berms, culverts, flow directions and other appropriate drainage information for the disturbed area.

Have the embankments been graded, fertilized, seeded and mulched (UMC 817.49[e])?

What are the spillway configurations of the slurry ponds (UMC 817.46[g]) as well as spillway heights and design capacities?

Is there an inspection program to assure structural weaknesses, erosion damages and other hazards are detected (UMC 817.46[t])?

UMC 817.52 Surface and Ground Water Monitoring

DETERMINATION OF COMPLETENESS

The applicant's ground water monitoring proposal does not comply with the regulations. At a minimum, the applicant should be monitoring depths of water in two of the five wells as well as performing chemical analysis on the wells at least quarterly for a year to establish baseline water quality data. A proposal for ground water monitoring is needed.

The surface water monitoring plan appears inadequate. No characterization of water quality or quantity of undisturbed drainage is proposed. A plan to monitor undisturbed flows when flowing should be included in the MRP. This should encompass water quality and quantity.

UMC 817.55 Discharge of Water Into An Underground Mine

DETERMINATION OF COMPLETENESS

The plan does not contain a surface drainage map. Compliance cannot be ascertained until a surface drainage map is received. The applicant must submit such a map.

UMC 817.56 Postmining Rehabilitation of Sedimentation Ponds, Diversions, Impoundments and Treatment Facilities

DETERMINATION OF COMPLETENESS

The applicant has not defined a postmining drainage plan for the reclaimed minesite. Division staff have personally observed significant flows (one to two cfs) in the drainage ditch along the south side of the minesite. These flows would be highly erosive if not adequately planned for.

The applicant must submit a postmining drainage scheme encompassing a restored ephemeral channel to route flows safely through the reclaimed area.

UMC 817.81-.88 Coal Processing Waste Banks: General Requirements

DETERMINATION OF COMPLETENESS

A commitment must be made by the operator that site inspections will be done by a registered engineer at least quarterly. A description of the inspection must include observations as may be necessary to evaluate potential hazard to human life and property. Copies of the inspection findings must be maintained at the minesite. If a potential hazard exists, the regulatory authority shall be informed promptly of the findings and of emergency procedures formulated for public protection and remedial action.

A narrative by the operator must be included as to how coal processing waste fires will be handled. If any burned coal processing waste is removed from the disposal area, a plan must be submitted and approved by the regulatory authority. Please include in the plan.

UMC 817.89 Disposal of Noncoal Waste

DETERMINATION OF COMPLETENESS

The applicant must submit a plan that outlines the construction of the noncoal waste site indicating the type of water barriers that will be used on the sides and bottom

UMC 817.95 Air Resources Protection

The Division of Environmental Health, Bureau of Water Pollution Control questions the use of MgCl₂ sprays for dust suppression. The applicant must coordinate fugitive dust control plans with this agency and provide the Division with fugitive dust control measures that are acceptable. The applicant is advised to contact Mr. Steve McNeal at the above agency, located in Salt Lake City.

UMC 817.97 Protection of Fish, Wildlife and Related Environmental Values

DETERMINATION OF COMPLETENESS

As was noted in the ACR Review and in a subsequent meeting with the applicant, specific information regarding wildlife resources in the vicinity of the mine is lacking. The applicant was advised to contact the Division of Wildlife Resources (DWR) in order to develop this needed information. The applicant must still develop specific information regarding wildlife resources in the vicinity of the mine, including discussions relative to any areas which would be classified as high value for wildlife (e.g., cliffs and outcrops used for nesting, springs, riparian areas, etc.). Two publications by the DWR would be useful in developing this information: Vertebrate Species of Southeastern Utah, L. B. Dalton et al., Publication No. 78-16 (refer to biogeographic area D) and Vertebrate Wildlife Species of Utah, E. A. Sparks, Publication No. 81-2 (Southern and Southeastern Regions). The applicant is again urged to contact the DWR, specifically Mr. Wes Shields, Resource Analyst for the Southern Region, Cedar City, Utah.

UMC 817.99 Slides and Other Damage

DETERMINATION OF COMPLETENESS

A commitment should be made to immediately notify the regulatory authority at anytime a slide occurs which may have a potential adverse affect on public property, health, safety or the environment and to comply with any remedial measures required by the regulatory authority.

UMC 817.100 Contemporaneous Reclamation

DETERMINATION OF COMPLETENESS

The seed mix proposed for temporary reclamation in Table 3-1, page 3-46 of the original MRP is different from that contained in the September 1, 1983 Addendum (under Section UMC 783.19, addressed in UMC 817.100). The Division assumes that the latter takes precedence; however, this contradiction must be corrected.

UMC 817.150-.156 Roads: Class I

DETERMINATION OF COMPLETENESS

If the mine access road is to be retained, a letter indicating such from the county should be included.

A narrative of the maintenance of the road must be included.

Cross-sections of the road should be in the Mining and Reclamation Plan (MRP) with the drainage (culvert spacing) indicated on the map.

The surface of the road must be indicated in the MRP.

UMC 817.160-.166 Roads: Class II

DETERMINATION OF COMPLETENESS

If the roads are used more than six months of the year, but do not transport coal, they are classified as Class II roads. Is this applicable for any roads at this facility? If so, the requirements for the roads in UMC 817.160-.166 must be addressed.

UMC 817.170-.176 Roads: Class III

DETERMINATION OF COMPLETENESS

The requirements for the Class III roads (jeep access road and others) should be addressed in accordance with UMC 817.170 to 817.176.

UMC 817.153, 817.163, 817.173 Roads: Class 1, 2, 3: Drainage

DETERMINATION OF COMPLETENESS

The applicant has not supplied design flow calculations, ditch sizing calculations or depicted existing drainage control structures (ditches and culverts). This information is necessary before the plan can be determined complete.