



GARY R. HERBERT
Governor
GREG BELL
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Technical Analysis and Findings

Utah Coal Regulatory Program

PID: C0150007
TaskID: 4604
Mine Name: HIDDEN VALLEY MINE
Title: MIDTERM PERMIT REVIEW

Summary

The midterm review for the Hidden Valley Mine was initiated on June 16th, 2014 (Task ID #4604). As part of the review, the Division of Oil, Gas and Mining (the Division) reviewed the following:

- A. Review of the Plan to ensure that the requirements of all permit condition, division orders, notice of violation (NOV), abatement plans, and permittee-initiated Plan changes approved subsequent to permit approval or renewal (whichever is the most recent) are appropriately incorporated into the Plan document.
- B. Ensure that the Plan has been updated to reflect changes in the Utah Coal Regulatory Program which have occurred subsequent to permit approval or renewal.
- C. Review applicable portions of the permit to ensure that the Plan contains commitments for application of the best technology currently available (BTCA) to prevent additional contributions of suspended solids to stream flows outside of the permit area.
- D. Evaluate the compliance status of the permit to ensure that all unabated enforcement actions comport with current regulations for abatement; verify the status of all finalized penalties levied subsequent to permit issuance or permit renewal, and verify that there are no demonstrated patterns of violation (POV). This will include an AVS check to ensure that Ownership and Control information is current and correct.
- E. Evaluate the reclamation bond to ensure that coverage adequately addresses permit changes approved subsequent to permit approval or renewal, and to ensure that the bond amount is appropriately escalated in current-year dollars.
- F. Evaluate the permit for compliance with variances or special permit conditions.
- G. Optional for active mines, mandatory for reclamation only sites: conduct a technical site visit in conjunction with the assigned compliance inspector to document the status and effectiveness for operational, reclamation, and contemporaneous reclamation practices undertaken on predetermined portions of the disturbed area to minimize, to the extent practicable, the contribution of acid or toxic materials to surface or groundwater, and to otherwise prevent water pollution.

The Division has completed its review. The technical analysis provides the Division staffs findings.

schriste

Operation Plan

Hydrologic General

Analysis:

The Hidden Valley Mine was reclaimed in 1986. The two adits were backfilled and the highwalls graded and seeded. In 1997, the highwall associated with the 'B' seam of the mine was reconfigured and re-seeded per a 1997 amendment submitted to the Division.

In 2006, the Division of Oil, Gas and Mining (the Division) approved a Minor Exploration permit for the advancement of 9 boreholes. Three holes were completed. During the exploration, significant artesian groundwater was encountered. As a result, a new UPDES permit was applied for and approved (Permit No. #UTG040026) on July 26th, 2006. The UPDES permit was modified to allow for the discharge of groundwater from the drilling of the exploration holes.

The Minor Exploration permit was revised to allow for the three exploration holes that were advanced to remain open for groundwater monitoring purposes. Quarterly water monitoring of these wells has been conducted continuously since that time. However; the wells are not documented in the approved mining and reclamation plan (MRP).

The Permittee must revise the Mining and Reclamation Plan (MRP) to document the existence and on-going monitoring activities of the three monitoring wells that were completed in 2006 and 2007 (HV-06-01, HV-06-02, HV-06-03). Currently the monitoring wells are only discussed/identified in the Minor Coal Exploration permit that was initially approved in August of 2006 (Task ID #2604).

The revision to the MRP must include the following:

- (1) Provide an update in the hydrology section of the MRP to discuss the monitoring wells. The update should include a narrative as well as a figure depicting their location.
- (2) Provide an update to the reclamation section of the MRP that discusses how the monitoring wells and associated pads will be reclaimed.
- (3) Provide an update to the reclamation section of the MRP that discusses how the monitoring wells will be capped and sealed.

Deficiencies Details:

R645-301-731, -760, -765: The Permittee must revise the Mining and Reclamation Plan (MRP) to document the existence and on-going monitoring activities of the three monitoring wells that were completed in 2006 and 2007 (HV-06-01, HV-06-02, HV-06-03). Currently the monitoring wells are only discussed/identified in the Minor Coal Exploration permit that was initially approved in August of 2006 (Task ID #2604).

The revision to the MRP must include the following:

- (1) Provide an update in the hydrology section of the MRP to discuss the monitoring wells. The update should include a narrative as well as a figure depicting their location.
- (2) Provide an update to the reclamation section of the MRP that discusses how the monitoring wells and associated pads will be reclaimed.
- (3) Provide an update to the reclamation section of the MRP that discusses how the monitoring wells will be capped and sealed.

schrister

Hydrologic Sediment Control Measures

Analysis:

The mine site was reclaimed in 1986. The two adits were backfilled and the highwalls graded and seeded in 1986. In 1997, the highwall associated with the 'B' seam of the mine were reconfigured and re-seeded per a 1997 amendment submitted to the Division. The sediment pond was decommissioned and a riprapped drainage channel was constructed to convey storm water runoff from the A seam pad.

The mine site access road utilizes surface roughening (pocking) and water bars to control storm water runoff and sedimentation. Additionally, surface roughening and vegetation has been utilized on the mine-site to stabilize the slopes and control erosion.

Based on recent Division field inspections, the sediment control measures put in place are functioning as designed and preventing additional contributions of suspended solids to stream flows outside the permit area.

Reclamation Plan

General Requirements

Analysis:

The Mid-Term review for the Hidden valley mine was initiated on June 30, 2014. The following Items were noted for review by the Division:

- A. Review of the Plan to ensure that the requirements of all permit conditions, division orders, notice of violations (NOV), abatement plans, and permittee-initiated Plan changes approved subsequent to permit approval or renewal (whichever is the most recent) are appropriately incorporated into the Plan document.
- B. Ensure that the Plan has been updated to reflect changes in the Utah Coal Regulatory Program which have occurred subsequent to permit approval or renewal.
- C. Review applicable portions of the permit to ensure that the Plan contains commitments for application of the best technology currently available (BTCA) to prevent additional contributions of suspended solids to stream flows outside of the permit area.
- D. Evaluate the compliance status of the permit to ensure that all unabated enforcement actions comport with current regulations for abatement; verify the status of all finalized penalties levied subsequent to permit issuance or permit renewal, and verify that there are no demonstrated patterns of violation (POV). This will include an AVS check to ensure that Ownership and Control information is current and correct.
- E. Evaluate the reclamation bond to ensure that coverage adequately addresses permit changes approved subsequent to permit approval or renewal, and to ensure that the bond amount is appropriately escalated in current-year dollars.
- F. Evaluate the permit for compliance with variances or special permit conditions.
- G. Optional for active mines, mandatory for reclamation only sites: conduct a technical site visit in conjunction with the assigned compliance inspector to document the status and effectiveness for operational, reclamation, and contemporaneous reclamation practices undertaken on predetermined portions of the disturbed area to minimize, to the extent practicable, the contribution of acid or toxic materials to surface or groundwater, and to otherwise prevent water pollution.

During the Emery Deep mine's 2011 annual report review process, a commitment was identified that needed to be addressed. The commitment discusses the development of an investigative study into past reclamation practices conducted at the Emery Deep and Hidden Valley Mines. The following is the commitment as found on page 4a of Chapter 3 of the MRP.

The permittee is committed to develop an investigative study into past reclamation practices conducted at the Emery and Hidden Valley mine sites. The scope of the investigation shall include but not limited to:

- 1. Evaluate current vegetation and soil chemistry of all topsoil and subsoil stockpiles. Past reclamation sites of disturbed land are to be included within the scope of study. "A Reclamation Monitoring Study for the Emery Mine- Vegetation and Soils" was completed in 2003 and can be found in ChIII Appendix III-1.
- 2. Based on findings from the study, plans shall be developed to enhance the vegetation of each site. The plan is to be reviewed with Division of Oil, Gas and Mining (DOG M) prior to implementation of the plan. Period for implementing enhancement methods should be performed when warm season planting may be conducted.
- 3. The qualitative part of the study will be performed annually and the quantitative aspects will be performed between the 4th and 6th year, following initial implementation of enhancement methods. The present reclamation methods shall be correlated with the historical weather information obtained from an on-site weather station.
- 4. Based on the follow-up study, a total reclamation plan shall be developed for the Emery mine site. The plan is to incorporate and utilize the best reclamation practices found through the previous investigative studies. The final reclamation plan will be developed in conjunction with DOGM and submitted 12 months prior to initiating final reclamation.

The site visit conducted individually by Joe Helfrich, (Division Biologist), on July 29th, 2014 indicated that the site was stable and the silt fences were in good repair and functioning adequately. The vegetation on the B area was well established. There have been no reclamation activities initiated on the A site to date. This may have been due in part to the exploration activities that were a part of the exploratory engineering study that was initiated in 2006 wherein several drill holes were completed but the portals on the A area were not opened.

It is recommended that the permittee meet with the Division staff to develop a reclamation strategy for the remaining disturbed portions of the Hidden Valley site.

Deficiencies Details:

During the Emery Deep mine's 2011 annual report review process, a commitment was identified that needed to be addressed. The commitment discusses the development of an investigative study into past reclamation practices conducted at the Emery Deep and Hidden Valley Mines. The following is the commitment as found on page 4a of Chapter 3 of the MRP.

The permittee is committed to develop an investigative study into past reclamation practices conducted at the Emery and Hidden Valley mine sites. The scope of the investigation shall include but not limited to:

1. Evaluate current vegetation and soil chemistry of all topsoil and subsoil stockpiles. Past reclamation sites of disturbed land are to be included within the scope of study. "A Reclamation Monitoring Study for the Emery Mine- Vegetation and,Soils" was completed in 2003 and can be found in ChIII Appendix III-1.
2. Based on findings from the study, plans shall be developed to enhance the vegetation of each site. The plan is to be reviewed with Division of Oil, Gas and Mining (DOG M) prior to implementation of the plan. Period for implementing enhancement methods should be performed when warm season planting may be conducted.
3. The qualitative part of the study will be performed annually and the quantitative aspects will be performed between the 4th and 6th year, following initial implementation of enhancement methods. The present reclamation methods shall be correlated with the historical weather information obtained from an on- site weather station.
4. Based on the follow-up study, a total reclamation plan shall be developed for the Emery mine site. The plan is to incorporate and utilize the best reclamation practices found through the previous investigative studies. The final reclamation plan will be developed in conjunction with DOGM and submitted 12 months prior to initiating final reclamation.

The site visit conducted individually by Joe Helfrich, (Division Biologist), on July 29th, 2014 indicated that the site was stable and the silt fences were in good repair and functioning adequately. The vegetation on the B area was well established. There have been no reclamation activities initiated on the A area to date. This may have been due in part to the exploration activities that were a part of the exploratory engineering study that was initiated in 2006 wherein several drill holes were completed but the portals on the A side were not opened.

It is recommended that the permittee meet with the Division staff to develop a reclamation strategy for the remaining disturbed portions of the Hidden Valley site.

jhelfric

Contemporaneous Reclamation General

Analysis:

The B-seam portals were contemporaneously reclaimed in 1997. A commitment in the plan describes proceeding with reclamation of the A seam portals using techniques noted as successful on the B-seam area (MRP page 2-97B).

Because the A-seam portals provide access to the A seam reserve, a request for deferral of the A seam portal reclamation until permit renewal in 2017 was included with the 2013 Annual Report, No further information on monitoring or mining activity at the site was provided. In accordance with R645-301-521.190, An update on the proposed coal recovery (R645-301-522) and mining methods (R645-301-523) are requested.

Deficiencies Details:

Because the A-seam portals provide access to the A seam reserve, a request for deferral of the A seam portal reclamation until permit renewal in 2017 was included with the 2013 Annual Report, No further information on monitoring or mining

activity at the site was provided. In accordance with R645-301-521.190, An update on the proposed coal recovery (R645-301-522) and mining methods (R645-301-523) are requested.

pburton

Bonding Determination of Amount

Analysis:

Per Division of Oil, Gas and Mining's (the Division) bonding policy, the Permittee will need to revise their current bond amount to adjust for inflation. Additionally, the Permittee needs to provide a line-item in their bonding calculations for the final reclamation, back-filling/plugging of the three water monitoring wells (HV 06-01, HV 06-02 and HV-06-03) installed in 2006 and 2007. It's the Division's understanding that the monitoring wells continue to be utilized for groundwater data collection. However; the monitoring wells are not identified or discussed in the approved Mining Reclamation Plan (MRP). Though the monitoring well sites have been contemporaneously reclaimed, final reclamation work and plugging of the wells needs to be bonded for in the event that the Division must complete the work.

Deficiencies Details:

R645-301-830.140: Please provide updated information for estimated bonding costs with supporting calculations for the estimates. This includes updated unit costs (to be used to update bonding calculation spreadsheets) and updated escalation factors. Updates should be provided using the 2013 data from R.S. Means Heavy Construction Cost data manual and the Caterpillar Handbook or other appropriate resources. The bonding summary sheet and corresponding bond calculation sheets need to be updated and appropriately escalated to 2019 dollars using the Divisions approved 1.9% and 5-year escalation.

The revised/updated bonding costs must also provide a line-item for the final reclamation and plugging/sealing of the three monitoring wells (HV 06-01, HV 06-02 and HV-06-03) installed in 2006 and 2007.

schriste