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State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340
801-359-3940 (Fax)
801-538-5319 (TDD)

June 1, 1994

TO: Pamela Grubaugh-Littig, Permit Coordinator

From: Daron R. Haddock, Permit Supervisor DRH

Re: Approval of Crusher Facilities Amendment, Sunnyside Cogeneration Associates, Sunnyside Refuse and Slurry, ACT/007/035-94G, Folder #2, Carbon County, Utah

The Technical Staff has completed the review of the Crushing facilities amendment for the Sunnyside Cogeneration facility. The submitted plans (May 16, and 20, 1994) are acceptable for insertion to the SCA plan. There is some additional information that will still need to be submitted. This amendment should be approved as an Incidental Boundary Change with the following stipulations. The stipulations must be completed within 30 days.

1. SCA must provide a reclamation cost estimate for the additional facilities area.

2. SCA must provide an adequate narrative description of the new facilities.

3. SCA must continue to monitor the piezometers or provide adequate justification for discontinuing the monitoring. SCA must correct Table 5 to reflect all inspection requirements.

4. SCA must provide for adequate freeboard in the diversion designs.

5. SCA must provide a discussion as to how the diversions will be monitored for erosion and what constitutes appropriate remediation.

6. SCA must provide the slope for the 6 inch CMP primary spillway shown on the cross section on Plate 7-18.

crushfac.sca

Form DOGM - D1 (Last Revised 6/93)

File Folder #3

PERMIT AMENDMENT APPROVAL

Title: Crusher Facilities	PERMIT NUMBER: ACT/007/035
Description:	PERMIT CHANGE #: 94G
	MINE: ~~SC~~ Refuse + Slurry
	PERMITTEE: SCA

WRITTEN FINDINGS FOR PERMIT APPLICATION APPROVAL	YES, NO or N/A
1. The application is complete and accurate and the applicant has complied with all the requirements of the State Program.	Yes
2. The proposed permit area is not within an area under study or administrative proceedings under a petition, filed pursuant to R645-103-400 or 30 CFR 769, to have an area designated as unsuitable for coal mining and reclamation operations, unless:	Yes
A. The applicant has demonstrated that before January 4, 1977, substantial legal and financial commitments were made in relation to the operation covered by the permit application, or	
B. The applicant has demonstrated that the proposed permit area is not within an area designated as unsuitable for mining pursuant to R645-103-300 and R645-103-400 or 30 CFR 769 or subject to the prohibitions or limitations of R645-103-230.	
3. For coal mining and reclamation operations where the private mineral estate to be mined has been severed from the private surface estate, the applicant has submitted to the Division the documentation required under R645-301-114.200.	NA
4. The Division has made an assessment of the probable cumulative impacts of all anticipated coal mining and reclamation operations on the hydrologic balance in the cumulative impact area and has determined that the proposed operation has been designed to prevent material damage to the hydrologic balance outside the permit area.	Yes
5. The operation would not affect the continued existence of endangered or threatened species or result in destruction or adverse modification of their critical habitats, as determined under the Endangered Species Act of 1973 (16 U.S.C. 1531 et.seq.).	Yes
6. The Division has taken into account the effect of the proposed permitting action on properties listed on and eligible for listing on the National Register of Historic Places. This finding may be supported in part by inclusion of appropriate permit conditions or changes in the operation plan protecting historic resources, or a documented decision that the Division has determined that no additional protection measures are necessary.	Yes
7. The Applicant has demonstrated that reclamation as required by the State Program can be accomplished according to information given in the permit application.	Yes
8. The Applicant has demonstrated that any existing structure will comply with the applicable performance standards of R645-301 and R645-302.	Yes
9. The Applicant has paid all reclamation fees from previous and existing coal mining and reclamation operations as required by 30 CFR Part 870.	Yes
10. The Applicant has satisfied the applicable requirements of R645-302.	NA
11. The Applicant has, if applicable, satisfied the requirements for approval of a long-term, intensive agricultural postmining land use, in accordance with the requirements of R645-301-353.400.	NA

SPECIAL CONDITIONS OR STIPULATIONS TO THE PERMIT AMENDMENT APPROVAL	YES	NO
1. Are there any variances associated with this permit amendment approval? If yes, attach.		X
2. Are there any special conditions associated with this permit amendment approval? If yes, attach.		X
3. Are there any stipulations associated with this permit amendment approval? If yes, attach.	X	

The Division hereby grants approval for Permit Amendment to the Existing Permit by incorporation of the proposed changes described herein and effective the date signed below. All other terms and conditions of the Existing Permit shall be maintained and in effect except as superseded by this Permit Amendment.

Signed Dave R. Haddock

~~Director~~, Division of Oil, Gas and Mining

6/1/94

EFFECTIVE DATE

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TO: Daron Haddock, Permit Supervisor

FROM: Wayne H. Western, Reclamation Engineer WHW

DATE: May 25, 1994

RE: Crushing Facilities, SCA ACT/007/035

R645-301-526 Mine Facilities

Synopsis of Proposal

The Operator proposes incorporating the crushing facility into the permit area. The facility contains primary and secondary crushers and the coal pile runoff basin. An inspection schedule for the pond was included in the submittal.

Analysis

The Division was supplied with limited information on the permit expansion. There was enough information to determine that the permit area must include the crusher facility. The Operator should be allowed to add the crusher facility to the permit area on the condition that he supplies the Division with additional information. The Operator must supply the Division with information on the reclamation bond (R645-301-830.140), cross-sections of the pond (645-301-521.100) and a narrative of the facilities (R645-301-526.100).

Recommendation

Approve the proposal on the condition that the Operator provide the Division with information on the reclamation bond, cross-sections of the pond and a narrative of the facilities.

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May 24, 1994

TO: File, ACT/007/035, Folder #2

FROM: Ken Wyatt, Senior Reclamation Hydrologist

RE: Crushing Facilities Addition Amendment Review, Sunnyside Cogeneration Associates, Sunnyside Refuse Pile, ACT/007/035, Folder #2, Carbon County, Utah

SYNOPSIS

On May 20, 1994, Sunnyside Cogeneration Associates (SCA) submitted an amendment to add the coal crushing facility located at the power plant site into the SCA plan.

ANALYSIS

Included in the submittal for hydrology were revised plates 7-1A, 7-3, 7-6, 7-18. Additional text was included to insert into the SCA plan. These included a new Chapter 7: Hydrology, Appendices 7-3 and 7-8.

An inspection schedule was included as table 5-1 which describes the inspection frequency for spoil piles, refuse piles and impoundments. This schedule shows the annual inspections and certifications for the East and West Slurry Cells, but does not show the annual sediment pond inspections and certifications as required by R645-514.311.

Appendix 7-3 in the plan includes all of the designs for the sediment ponds. In this amendment, the Coal Pile Sediment Pond (CPSP) was added to the SCA permit area and its design was submitted for inclusion into Appendix 7-3.

Appendix 7-8 includes the operational and baseline water monitoring schedule. As mentioned many times in the past, the permittee must monitor baseline water quality sites to acquire baseline water quality data. Following complete acquisition of the baseline data then these sites are to be monitored for operational parameters.

The permittee continues to submit information stating that baseline monitoring sites are separate from the operational sites. The permittee continues to submit the operational water monitoring sites as those described in the UPDES

permit. All UPDES permitted sites must be monitored in accordance with the UPDES permit. Baseline water monitoring should continue to be collected and then these sites will be monitored for the operational parameters.

Other editorial changes were incorporated into this amendment. Most were changes to numbers as a result of the additional pond being placed into the permit area. On page 2 of Appendix 7-8, the permittee has deleted the requirement to monitor the piezometers located in the refuse piles. This deletion was again done on page 700-21. These changes are not acceptable unless the permittee can justify these changes.

The CPSP design drawing and cross section are located on Plate 7-18. The watersheds are drawn on Plate 7-1A. The CPSP includes 1 watershed consisting of 2.0 acres. The pond is another 0.30 acres. These areas were digitized and matched very closely with those in the plan. Curve numbers used for the runoff analysis were adequate.

The pond volumes based on the maps provided were checked using OSM's TIPS, Earth Vision volumetrics utility program. These volumes based on elevations are provided in the table below. The volumes calculated were generally larger than those provided in the plan and are within acceptable limits.

PURPOSE	ELEV. (Feet)	CALCULATED VOLUME (Acre Feet)	PROPOSED PLAN VOLUME (Acre Feet)
Pond bottom	6476.0	0.0	0.00
Max. sediment level	6477.5	0.54	0.30 [1]
Primary spillway	6478.5	0.94	0.60 [1]
10 yr. 24 hr. storm	6478.0	0.74	0.14 [2]
Emergency spillway	6479.5	1.39	0.90 [1]
Dam crest	6480	1.63	1.00 [1]

1: This value from the Sedimot II model for the 10 yr. 24 hr. event.
2: This value from the stage capacity curve on design plate 7-18.

Stage discharge and stage capacity curves are provided on the design drawing, Plate 7-18. Sedimot II was used to calculate runoff volumes, peak flows, and sediment loads. The numbers generated produced a sediment load of 1.4 tons and a runoff volume of 0.14 acre feet from the 10 year 24 hour event.

The 25 year 6 hour Sedimot model produced a peak flow of 2.2 CFS. The 6 inch CMP spillway is capable of discharging up to 0.9 CFS and in combination with the open channel emergency spillway the pond can pass the peak runoff from the 25 year 6 hour event.

Sediment calculations from the 10 year 24 hour event produced 1.4 tons of sediment. Converting this amount to a volume produces 0.001 acre feet of sediment per storm event. According to the volume analysis mentioned above the pond has 0.54 acre feet of sediment capacity.

The diversions associated with the CPSP are erroneously labeled in table 5. These diversions are labeled as CPR-Inlet and CPR-Outlet whereas on plates 7-1A, 7-6, and 7-18 these diversions are all labeled CPSP-D1 and CPSP-D2. The SCA plan designs diversion by two calculations for channel depth and riprap requirements. To calculate channel depth the maximum Manning's n value and a minimum channel slope are used to calculate the flow depth and then 0.5 feet was added to the channel depth to insure adequate freeboard. The maximum calculated flow depth was 0.84 feet. The permittee has stated in table 5 that the depth of these channels will be 0.8 feet. This does not provide the adequate freeboard.

The use of riprap is determined by calculating flow velocity using a minimum Manning's n value and a maximum channel slope. This was done for the two diversions associated with this pond. Velocities for these diversions are under 4.5 feet per second. No riprap will be installed. Again the permittee has stated: "All diversion channels will be monitored. If excessive erosion occurs, appropriate remediation is required." There is no discussion as to how these diversions will be monitored and what constitutes appropriate remediation.

RECOMMENDATION

This submittal can be approved and accepted when the following items are corrected.

1. The permittee must provide adequate justification for not continuing the monitoring of the piezometers or continue monitoring these piezometers.

2. Table 5 will need to be corrected.

3. The diversions design will need to be changed to include adequate freeboard. A discussion as to how these diversions will be monitored for erosion and

what constitutes appropriate remediation will be required. When has excessive erosion occurred?

4. No slope is provided for the 6 inch CMP primary spillway shown on the cross section on Plate 7-18 and the maximum sediment level was not shown.

cc
Pam Grubaugh-Littig
Randy Harden

Norman H. Bangerter
Governor
Dee C. Hansen
Executive Director
Dianne R. Nielson, Ph.D.
Division Director

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File ACT/007/035 #2

DATE: May 24, 1994

TO: Pamela Grubaugh-Littig, Permit Supervisor

FROM: Wm. J. Malencik, Reclamation Specialist

RE: Sunnyside Co-Gen ACT/007/035, Permit Amendment

On May 19, 1994 in response to your request the undersigned reviewed the proposed addition to the Co-Gen permit area. The additional area concerns the two crushers, the belt line between two the crushers, pad, sediment pond and ditches. The belt line coming out of the secondary crusher is not included in the permit area even though the final ditch alignment may border on this belt line. The DOGM jurisdictional area now parallels MSHA jurisdictional boundaries.

Because of the lay of the land all the disturbed area involved in this amendment can easily be directed to the new pond. This pond may require some additional consideration by the permittee as related to the decant and the open emergency spillway.

Coal fines is the only matter of conjuncture. However, since the winds are primarily north-westerly, wind coal fines problems will primarily be associated with incoming weather fronts. No coal fines were observed outside of the proposed permit area.

Recommend the proposal be approved.