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DEPARTMENT OF NATURAL RESOURCES
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December 16, 1992

To: Pamela Grubaugh-Littig, Permit Supervisor

From: Susan M. White, Senior Reclamation Biologist *SMW*

Re: Technical Deficiencies, Sunnyside Cogeneration Associates,
Sunnyside Coarse Refuse and Slurry, PRO/007/035, Folder #2,
Carbon County, Utah

Synopsis

Sunnyside Cogeneration Associates submitted a response to the deficiencies identified in my November 10, 1992 memo. This memo will review that response.

R645-301-300. BIOLOGY

R645-301-321.100. Please describe the reference areas and all disturbed communities within the permit area. The description of the Atriplex/Grass community provided in the permit does not accurately depict the community within the permit area.

Please elaborate on the discussion on the Hydrophytic/Riparian vegetation type, this discussion should include grasses, forbs, and shrub found within this zone.

Please list Sagebrush/grass as a disturbed community.

R645-301-321.200. The productivity of the land must be discussed in terms of average yield of forage. The brief discussion provided by the SCS does not accurately depict site conditions.

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R645-301-322.100. Ken Phippen, Regional Habitat Manager, DWR, requested more information on the fish species in Icelander Creek. The permittee must inventory Icelander Creek for fish species to the Price River and incorporate the results of this inventory into the permit. Additionally Mr. Phippen noted that the redbreasted sunfish is not of high interest to the State of Utah as stated on page 300-7.

R645-301-322.210. The Division must make a technical finding as to the presence or absence of listed or proposed endangered or threatened species of plants or animals or their critical habitats listed by the Secretary under the Endangered Species Act of 1973. The permittee states that no federal action is required, therefore, consultation with the U.S. Fish and Wildlife Service is not required. This statement is correct but does not relieve the permittee of their responsibility under R645-301-322.210 to determine if these species or their habitat occur. A statement by a qualified person as to the presence or absence of threatened or endangered species is required.

R645-301-322.230. No discussion is provided as to raptors in the area. An inactive nest is shown on plate 3-2, please provide a discussion as to the importance of the area to foraging eagles and other raptors.

R645-301-323. Plate 3-1 does not depict the existing vegetation types accurately. Vegetation boundaries are not defined. The vegetation map must to be updated to include the current reference areas. Please make these corrections.

Plate 3-1 shows pre and post law disturbances. Please make a statement to identify any of the pre law disturbances with no post law use which the applicant is claiming to be exempt from the act and reclamation.

R645-301-330. Page 300-7 states "Since this Permit Application does not identify any plans to impact the discharge of polluting effluent..." The spring at the base of the refuse pile has been identified to have exceeded standards for iron and TDS. Please provide a discussion as to tolerable limits of iron and TDS in water for livestock, wildlife and fish and the impact of the mining operation on these limits.

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R645-301-340. Please provide a schedule for the completion of each major step in the revegetation plan. This is to include shrub transplant ordering, seed ordering, implementation, repairs and inspection.

The applicant has proposed to use one seed mixture for revegetation three different vegetation types. While the Division can accept this method the seed mixture should incorporate all the components of these three communities. Please revise the seed mixture.

The applicant does not understand that hydroseeding is a form of broadcast seeding. All areas which are broadcast seeded (including hydroseeding) will be raked to provide adequate seed to soil contact. Please revise.

Please explain the necessity of doubling the hand broadcast seeding rate over the hydroseeding rate.

Fertilizer and seed will not be mixed together in the hydroseeder. The salts in the fertilizer will damage the seed. Please make the necessary corrections.

Mechanical scarification, disking, slope chaining, or cat-tracking, the seedbed will only eliminate the desirable surface roughness. If topsoiling activities are timed to coincide with the seeding, no crust will form and scarification will not be required. The only scarification activities should be hand raking if a crust forms. Please make the necessary corrections.

Gouges will be one to two feet deep and three by three feet in width. Please make the necessary changes.

Slopes 2:1 or greater will require netting, please change.

Please add a legume to the interim seed mixture.

Please detail where and what species of shrub will be transplanted in final reclamation.

The permittee states that areas of interim seeding will be mulched, please provide methods, types, and amounts of mulch.

The seeding window should be changed to October 1 to November 30.

A contingency plan should be discussed for soil stabilization if disturbances occur outside the window of seeding. Commitments to applying an annual grain such as barley or oats at 20 lbs. per acre should be made.

R645-301-342. The current plan does not include enhancement measures for wildlife. Seeding or planting is just reestablishing the previous existing vegetation. Please propose detailed enhancement techniques such as guzzlers, rock piles, etc. or explain why enhancement is not practicable.

R645-301-356. The proposed reference areas must be sampled during the height of the growing season and the results of this survey incorporated into the text of the permit. The Division will at that time approve the reference areas. The permit must detail the proposed sampling methods to be used for this survey. Please detail this information and make it consistent with the bond release sampling methodology.

Productivity success standards and sampling is not required for a postmining land use of wildlife, please correct.

Minimum shrub density will be 2000 shrubs per acre. Please commit to this standard and modify the sampling schedule to reflect the 80/60 rule of R645-301-356.232.

Completely random vegetative sampling must be done on the reclaimed site, please make the necessary changes.

R645-301-400. LAND USE

R645-301-411.120. Please provide a discussion in terms of soils and their productivity and capability of the land to support the post mining land use.

Recommendation

The above noted deficiencies must be addressed prior to permit approval.

SCASW.MEM