

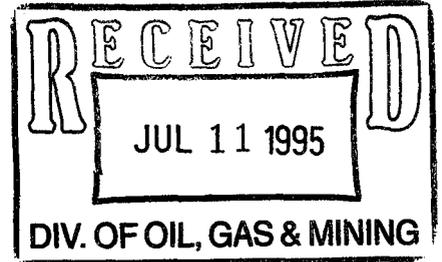
0014

SUNNYSIDE COGENERATION ASSOCIATES

#1 Power Plant Drive
Sunnyside, Utah 84539

July 5, 1995

Mr. Joe Helfrich
Division of Oil, Gas and Mining
3 Triad Center, Suite 350
Salt lake City, Utah 84180-1203



RE: Sunnyside Cogeneration Associates (SCA) Permit No. ACT/007/035
Violation N93-13-2-1

Dear Joe,

ACT/007/035 #3

This letter is written in regards to Violation N93-13-2-1, for

"Failure to comply with the terms and conditions of the permit issued. Failure to provide a complete and concise plan of facilities and structures used in common. Failure to provide complete and adequately detailed information to be included in the plan at a minimum under R645-301 and R645-302."

At this time SCA would like to request an extension to the violation to August 14, 1995 for the reasons outlined below.

Attached with this letter for your review is a draft report which outlines SCA's proposed actions that will be fulfilled to respond to each permit deficiency. SCA would like to meet with the Division on Monday July 10, 1995 to discuss the permit deficiencies and the action plan. The report is a draft and may be changed based upon SCA's and the Division's review. Mr. Bob Evans of NRG discussed this strategy to address the permit deficiencies with Randy Harden on June 7, 1995 and Darron Haddock on June 21, 1995.

In reviewing the Division's Technical Analysis it appears that some deficiencies have been addressed in the permit, but the Division was unable to locate the information. SCA would like to take time during the meeting to present this information to the Division.

Additionally, some permit deficiencies center around the drilling, sampling and analysis of the Coarse Refuse Pile. SCA has negotiated with Layne Environmental to perform the drilling. Drilling should commence the last week in July. SCA would also like to discuss the details of the drilling plan with the Division during the meeting on July 10th.

Mr Joe Helfrich
July 5, 1995
Page Two

SCA looks forward to meeting with you. If you have any questions please feel free to call me at (801) 888-4476 or Bob Evans at (612) 373-5428.

Sincerely,

AEB for Danny Mattingly
Danny Mattingly
Power Plant Manager

cc: Pam Grubaugh-Littig, DOGM
Randy Harden, DOGM
Darron Haddock, DOGM
Bob Evans, NRG
Jim O'Donnell, NRG
Doug Burnham, B&W

PROPOSED ACTIONS TOWARDS DOGM PERMIT DEFICIENCIES

R645-301-142, Map 3-1 must be corrected to include all areas which are subject to the Act and require reclamation. Those areas include, but are not limited to: 1) where the fire was grubbed out in the fall of 1994 during reclamation of the coarse refuse haul road and 2) the southern most portion of the west slurry cell embankment comprised of refuse.

1. Review historical photos to determine potential for qualifications for pre-law disturbance of the southern most portion of the west slurry cell embankment which is comprised of refuse.
2. Revise Plate 3-1 (and corresponding Plates 3-1 A, B, C, D, & E) to show where the fire was grubbed out in the fall of 1994 during 1994 Reclamation of the Old Coarse Refuse Road and, if needed, the southern most portion of the west slurry cell embankment comprised of refuse.

R645-301-233, the permittee must adequately demonstrate the suitability of the proposed in-place substitute topsoil materials from the following areas: lower four lifts of the coarse refuse pile; the material covering the east embankment of the East Slurry Cell; the material covering the north embankment of the West Slurry Cell.

1. Investigate the availability of existing soil analysis data from the above specified locations.
2. Take soil samples, if needed, to obtain additional analytical information. The samples will be sent to ACZ for analysis and laboratory costs will be billed direct to Sunnyside. (A purchase order will need to be prepared by Sunnyside for this purpose.)
3. Summarize the necessary data and determine the suitability the in-place material for substitute topsoil materials.

R645-301-323.400, information regarding the vegetation adjacent to the permit area must be mapped and provided in the plan. A map sufficiently showing adjacent areas must be included to allow evaluation of vegetation as important habitat for those species as identified under R645-301-322.

1. Review, with DOGM technical staff, the current Plates 3-3 and 3-1 which do currently identify vegetation in areas adjacent to the permit. Evaluate DOGM comments to determine if drawing revisions are necessary to meet permit requirements. Revise Plates 3-3 and 3-1 as needed.
2. Prepare a description of the Hydrophytic Vegetation type which exists in the area of the Coarse

Refuse Seep. Include the description into Chapter 3 and Appendix 3-1.

R645-301-342.100, the plan must describe measures taken to avoid disturbances to, enhance where practicable, restore, or replace wetlands and riparian areas. The water monitoring data from the seep area shows that wetland and riparian areas are being polluted. However, the plan does not address this and instead states that no polluted waters enter Icelander Creek. The requirements of R645-301-342.100 must be addressed as they concern the seep area. The plan must also include a description of the terrestrial wildlife enhancement measures.

1. Review the statements in Chapter 3 which are referred to in the TA concerning flows into Icelander Creek. Preliminary revisions to some of the statements will be made to clear up some issues. A comprehensive analysis of the two years of baseline water quality data and the one year of intensive seep water quality data should be conducted later this summer (See deficiency under R645-301-745 below). Additional revisions to the permit text will be needed following the analysis to complete the requirements of this deficiency.

R645-301-342.200, the permittee must determine which plant species are to be used on reclaimed areas based on their ability to support wildlife.

1. Review the current seed mixtures and revise as requested by DOGM. Describe the benefits and details concerning Pinyon and Juniper transplants and rock piles as referred to on page 900-18 of the permit.

R645-301-358.510, all powerlines within the permit area are to be designed and constructed to minimize electrocution hazards to raptors. The plan states that unsafe powerlines may be in the permit area but are not under SCA ownership or use. Clarification is required in order to determine compliance. All power lines must be identified and described as to ownership and control of such utilities within the permit area.

1. Discuss permit needs with DOGM technical staff. Revise Plate 5-1 to identify ownership and control of power lines crossing the permitted area. Clarify statements in Figure 3-4 and on page 300-14 referring to power lines which may not be raptor safe. If needed, identify which power lines crossing through the permit site which may not be raptor safe.

R645-301-411, the disturbed area maps as provided in the plan as Plates 3-1 through 3-1E must be revised to provide the location and the extent of the coke ovens and the cemetery to show that the areas have been marked and fenced as indicated in the text of the plan so as to prevent any future disturbance of these areas.

1. Review the current version of plates with DOGM staff to determine precise needs concerning the drawings. Revise Plates 3-1 through 3-1E, as needed, to show the locations of the markers and fencing of the coke ovens and cemetery.

R645-301-411, the plan must provide a complete reference to the information for the cultural resource survey in Appendix 4-1, including the scope of the survey, names of persons or organizations that collected the data, and the date in which the survey was conducted.

1. Endeavor to acquire information concerning the source, scope of the survey, author, and date of the survey as requested by DOGM. Revise references to the survey in Appendix 4-1 to reflect the available information.

R645-301-412.110, the plan must explain how the proposed postmining land use is to be achieved and the necessary support activities which may be needed to achieve the proposed land use. The plan fails to provide details as to the proposed wildlife species use and their specific habitat requirements. The plan also fails to provide specific detail as to the disposition of the coke ovens and comments from the City of Sunnyside or other suitable local organizations and the State Historic Preservation Office (SHPO).

1. Review with SCA, the surface land owner, concerning their proposed postmining land use. Assist SCA in discussions with DOGM to negotiate a suitable method to meet permit requirements concerning the final disposition of the coke ovens. Endeavor to obtain comments from cities or other suitable local organizations which would be willing to accept final caretaker responsibilities for the coke ovens.

R645-301-512, maps and plans which show the location and the extent of the area to be affected throughout the life of the mining and reclamation operations are not consistent throughout the plan and fail to clearly depict the areas to be affected over the life of the mining and reclamation operations.

1. Revise Plate 9-7 to show the Reclamation Borrow Area as a future disturbed area affected by the mining operation.

R645-301-514.312, the plan does not specify that copies of the certified sediment pond inspection reports are to be promptly sent to the Division, as required.

1. Revise the text in Chapter 5 concerning quarterly inspections to be sure that the permit explicitly

states that inspection reports will be promptly sent to DOGM each quarter following the inspections.

R645-301-515.300, the plan must incorporate a description of procedures for temporary cessation of operations. Each person who conducts SURFACE COAL MINING AND RECLAMATION ACTIVITIES will effectively secure surface facilities in areas in which there are no current operations, but in which operations are to be resumed under an approved permit.

1. Add a statement to the text of Chapter 5 providing additional details concerning information that will be provided to DOGM in the event that temporary cessation of operations occurs.

R645-301-521.141, the permittee must provide a map which effectively provides the boundaries of all areas proposed to be affected over the estimated total life of the coal mining and reclamation operations.

1. Discuss concerns with DOGM about required details to show affected area boundary.
2. Revise Plates 5-1, 5-1A, 5-1B, 5-1C, 5-1D, 5-1E as determined necessary.

R645-301-527, the permittee has failed to locate and identify which roads and other transportation facilities are to be reclaimed, retained or otherwise modified following reclamation as part of the post mining land use. The permittee must provide a description, with supporting designs, for roads and other transportation facilities which details their design, construction, operation, maintenance, removal or retention throughout mining and reclamation operations or as otherwise retained as part of the approved post mining land use.

1. Discuss concerns with DOGM and review existing descriptions and maps which show transportation facilities. Determine what revisions will be needed to meet requirements of the permit.
2. As determined necessary, revise text in Chapters 5 and 10 to discuss road classifications and other transportation facilities and describe methods of reclamation. As determine necessary revise plates associated with Chapters 5, 8, and 10 to show the needed detail.

R645-301-527, the plan must include the location and description of all transportation facilities--not just roads--in order to meet the minimum regulatory requirements of this section. The maps and text of the plan must clearly and concisely describe the conveyor and coal handling and crushing

facilities and to show that the conveyor is located with the approved permit/affected area boundaries.

1. Review existing plates and text with DOGM to verify that the deficiency still exists and determine what revisions will be needed to meet the requirements of the permit.
2. Revise text in Chapter 5 to better describe the conveyor and coal handling facilities as transportation facilities.
3. Revise other plates as determined necessary following discussions with DOGM.

R645-301-528, the plan fails to include an adequate description of measures to be employed to ensure that all debris, acid-forming and toxic-forming materials, and materials constituting a fire hazard are disposed of in accordance with R645-301-528.330, R645-301-537.200, R645-301-542.740, R645-301-553.100 through R645-301-553.600, R645-301-553.900, and R645-301-747 and a description of the contingency plans which have been developed to preclude sustained combustion of such materials, the handling and disposal of coal, excess spoil, and coal mine waste. The plan must adequately demonstrate that acid- and toxic-forming materials, and combustible materials exposed, used, or produced during mining will be adequately covered with nontoxic and noncombustible materials, or treated, to control the impact on surface and ground water in accordance with R645-301-731.100 through R645-301-731.522 and R645-301-731.800, to prevent sustained combustion and to minimize adverse effects on plant growth and the approved postmining land use.

1. Review comments from DOGM concerning the design of the Excess Spoil Disposal Area. Discuss concerns with DOGM staff. Make necessary revisions to the chapter 9 text, design appendix 9-5, and Plates 9-1 A-C as needed to describe measures to preclude combustion and identify adequate cover for reclamation.

R645-301-535.100, maps and designs must be revised to clearly show that the planned construction of the Excess Spoil Disposal Area meets the design parameters for stability. Plate 9-1B of the plan must be revised as well as other related drawings and design information to reflect that the set back of a minimum of 25 feet of the natural material be provided at the base of the pile as prescribed in the stability analysis and committed to in the text of the plan. The plan must include discussion and design requirements for placing the material in lifts, equipment and methods used for placing and compacting waste materials during operations, and the anticipated results of the compaction of the materials to ensure that materials placed in the pile meet the design requirements for stability. Testing methods and analysis of the engineering characteristics of the materials placed in the Excess Spoil Disposal Area must be detailed in the plan and reported to the Division in conjunction with the required quarterly engineering inspection reports.

1. Review comments from DOGM concerning the design of the Excess Spoil Disposal Area. Discuss concerns with DOGM staff. Make necessary revisions Plate 9-1B to clearly show the 25-foot set back along the northern side of the Excess Spoil Area.
2. Make necessary revisions to the Chapter 9 text, and design Appendix 9-5 as needed to describe measures of placing materials in the pile. Include discussion of the analytical testing methods to be used for the required sampling. Discuss with DOGM concerning their request for sampling from every 2-foot lift instead of every 4-foot lift as committed in the permit.

R645-301-535.100, the plan fails to account for removal and disposal of acid/toxic-forming materials within the permit area. Until such time as an adequate analysis of the precipitate material can be accomplished, it should be anticipated that removal or cover requirements will exist for these precipitate materials, where encountered. Disposal of acid-/toxic-forming or other unsuitable materials during reclamation may have a significant affect on the capacity and configuration of the Excess Spoil Disposal Area and designs for their disposal must be provided in the plan.

1. This deficiency will not be addressed as a permit revision until following the analysis of information from the drilling program on the refuse pile.

R645-301-553.250, the plan must suitably indicate that adequate cover material will be placed over the refuse material in the Excess Spoil Disposal Area. Plate 8-4 of the plan must be revised as well as all related requirements associated with the design of the Excess Spoil Disposal Area to show that a minimum of four feet of non-toxic cover material will be placed over all refuse or other acid-/toxic-forming material.

1. Review comments from DOGM concerning the design of the Excess Spoil Disposal Area. Discuss concerns with DOGM staff. Make necessary revisions to the Chapter 9 text, design Appendix 9-5, and Plates 9-1 and 8-4 as well as the bond calculations in Appendix 8-2 concerning four feet of cover over the Excess Spoil Disposal Area.

R645-301-624, the permittee has failed to provide sufficient information characterizing all potentially acid- or toxic-forming strata down to and including the stratum immediately below the coal seam (materials) to be mined. Additional drilling, sampling and analysis must be accomplished to meet the minimum requirements of R645-301-624.200. Although the permittee has committed to conduct the drilling and analysis of the refuse material and to sample for the quantity and quality of water underneath the refuse and extent and quality of the underlying precipitate layer, such sampling and analysis has not been provided to date. Results of these analyses must be presented in the plan and utilized in demonstration of the reclaimability of the reclamation design. The results

of the 1992 drilling program and the map depicting the 1991 sample locations must be reinserted into the plan.

1. This deficiency will not be addressed as a permit revision until following the analysis of information from the drilling program on the refuse pile.

R645-301-724.500, the flow of the water through the refuse materials has, at a minimum, the potential for adversely affecting water quality as described under the requirements of R645-301-724.500. Adverse impacts on or off the proposed permit area may occur to the hydrologic balance, or acid-forming or toxic-forming material present may result in the contamination of ground-water or surface-water supplies. Information supplemental to that required under R645-301-724.100 and R645-301-724.200 must be provided to evaluate such probable hydrologic consequences and to plan remedial and reclamation activities. Such supplemental information may be based upon drilling, aquifer tests, hydrogeologic analysis of the water-bearing strata, flood flows, or analysis of other water quality or quantity characteristics. Monitoring plans, remedial work necessary during mining operations, and mitigation plans for final reclamation must be presented in the plan as necessary following submittal of the supplemental information required by the Division and DWQ.

1. This deficiency will not be addressed as a permit revision until following the analysis of information from the drilling program on the refuse pile and analysis of the Water Monitoring programs (2-year Baseline Data and 1-year Coarse Refuse Seep).

R645-301-724, the permittee must incorporate a discussion of baseline water quality into the plan following complete baseline data collection in 1995

1. Review and analyze data collected from the Baseline Monitoring Program and from the Coarse Refuse Seep Monitoring. Add a discussion of the water quality into Chapter 7 of the permit.
2. Assist SCA in negotiating the program required for continued monitoring of the baseline sites for operational parameters throughout the life of the mine. (Several discussions will be needed with DOGM and DWQ). Add this negotiated monitoring plan to the permit as an appendix to Chapter 7 and modify Appendix 7-8 to indicate that the two year baseline program has been completed.
3. Assist SCA in negotiating the finalization to concerns about the Coarse Refuse Seep and requests from DOGM that the site be permitted as a UPDES point.

R645-301-728, the Permittee has failed to adequately demonstrate whether or not acid-/toxic-

forming conditions exist within the refuse pile. Additional water monitoring of the seep and more extensive drilling programs of the refuse pile must be accomplished to provide additional information and the permittee must include that information in the PHC determination as specified in accordance with R645-301-728.320.

1. This deficiency will not be addressed as a permit revision until following the analysis of information from the drilling program on the refuse pile and analysis of the Water Monitoring programs (2-year Baseline Data and 1-year Coarse Refuse Seep).

R645-301-728, the Permittee must provide sufficient information to determine the net surface water consumption for the mining and reclamation operations. Such information shall include, but not be limited to, the source and use of waters to be used for dust control within the permit area and if necessary, alternate water sources required to mitigate any net consumptive use of surface waters such that no net surface water depletion occurs in regard to the Colorado River system. Following submittal of this information, the Division will prepare a Biological Assessment to be provided to the U.S. Fish and Wildlife Services through OSM to study and report water loss in the Colorado River basin. Written findings made by the USFWS will be incorporated into the permit document.

1. Review with DOGM staff the existing information in the permit to determine if this deficiency does really exist. Endeavor to obtain additional information desired by DOGM to determine a net surface water consumption for the Biological Assessment.
2. Include available information into the permit concerning water rights agreements for the Dragerton Well between SCA and East Carbon City to clarify SCA's right to use water from this source for dust control purposes.

R645-301-732, -740, -744, the Permittee must provide design and cross-sections of the spillways for the Clear Water Pond, the Coarse Refuse Toe Pond, and the East Slurry Cell. The Clear Water Pond spillway must be provided on Plate 7-15, or design Plate 7-4. The East Slurry Cell spillway cross-section must be provided on Plate 7-16, or design Plate 7-12. Plate 7-15 must be revised to show correct elevations for the pond bottom and maximum sediment level.

1. Review with DOGM staff the information concerning spillways which currently exists in the permit. Revise Plates 7-4, 7-12, 7-13, 7-15, and 7-16 and Appendix 7-3 as needed to show the design cross-sections of the above listed spillways. Show revised elevations for the Clearwater pond on Plates 7-4 and 7-15.
2. Revise hydrologic calculations in Appendix 7-3 for the East Slurry Cell based on reduced watershed characteristics such that construction of a new spillway is not required by the regulations.

R645-301-732, the Permittee must provide adequate plans and hydrologic designs for the Coal Pile Sediment Pond. The permittee must update Plate 7-1 to reflect the location and watershed of the Coal Pile Sediment Pond. Stability analysis for the pond embankment must be provided.

1. Review with DOGM staff the existing information in the permit concerning the Coal Pile Sediment Pond. Update Plates 7-1, and 7-18 and Appendix 7-3 as needed to show the hydrologic designs of the Coal Pile Sediment Pond.
2. Add a stability analysis for the pond embankment.

R645-301-760, the reclamation plan must adequately demonstrate that before abandoning a permit area or seeding bond release, the operator will ensure that all temporary structures are removed and reclaimed, and that all permanent sedimentation ponds, diversions, impoundments and treatment facilities meet the requirements of R645-301 and R645-302 for permanent structures and have been maintained properly and meet the requirements of the approved reclamation plan for permanent structures and impoundments. The operator will renovate such structures if necessary to meet the requirements of R645-301 and R645-302 and to conform to the approved reclamation plan.

1. Review with DOGM staff the existing information in the permit concerning the commitment to reclaim temporary structures and to ensure that permanent structures meet permanent program standards. Revise permit text in Chapters 9 and 10 if needed to further describe SCA's intentions concerning temporary and permanent structures.

R645-301-244, the plan must provide suitable designs and plans for soil stabilization and a commitment stating that all exposed surface areas shall be protected and stabilized to effectively control erosion and air pollution attendant to erosion. Rills and gullies which form in areas that have been regraded and topsoiled and which either disrupt the approved postmining land use or the reestablishment of the vegetative cover, or, cause or contribute to a violation of water quality standards for receiving streams, shall be filled, regraded, or otherwise stabilized; topsoil shall be replaced; and the areas shall be reseeded or replanted.

1. Show DOGM staff where in the permit SCA has already made commitments for stabilization of surface areas. Add additional statements in Chapter 10 of the permit as needed to provide additional references to the existing commitments.

R645-301-250, the permittee has failed to provide a comprehensive soils design for reclamation. The plan must include designs which adequately characterize the quantity of suitable topsoil

substitute material requiring excavation, transport, redistribution and grading. The regrading and topsoil handling plan must be accurately reflected in the reclamation bond estimate (Figure 8-1) and (Appendix 8-1).

1. Revise statements in Appendix 2-9 to reflect the amount of soil available for salvage.
2. Identify sources of soil material which may be available for fire suppression.
3. Discuss with DOGM staff additional information and revisions needed for the grading plans and borrow material distributions associated with the reclamation bond calculations in Chapter 8 and Appendix 8-2. Revise calculations if needed.
4. Review Section 9-8-4 to determine if adjustments are needed concerning language describing soil distribution amounts.
5. Review Sediment Waste Guidelines and add a section to Chapter 9 concerning testing and disposal of sediment which accumulates in the existing ponds.

R645-301-350, the plan fails to demonstrate that the standards for revegetation success can be met. The plan must include steps according to R645-301-341.300 to demonstrate that revegetation is feasible. These steps must address how the coarse refuse material will be revegetated since the initial test methods, as previously proposed in the plan, did not produce vegetation that met success standards. The plan must also include test methods to demonstrate that species diversity can be met. Weed control on topsoil piles and borrow areas must be described and methods to reduce weed competition during revegetation must be demonstrated.

1. Subcontract for a vegetation monitoring trip to determine if existing revegetation efforts and the existing test plot meet success standards. Monitoring will also be done on the two reference areas for comparison.
2. Assist SCA in conducting or contracting for needed maintenance of the existing revegetation test plot in order to improve the likelihood of demonstrating that revegetation of the refuse material can meet success standards.
3. Describe in Chapter 9 methods for weed control on topsoil piles, borrow areas and during reclamation.
4. Revise statements on page 900-18 concerning revegetation of the third lift of the refuse pile.
5. Add additional details concerning the plan for temporary stabilization of regraded areas until

seeding can be accomplished during the approved seeding window.

6. Remind DOGM that a copy of Table 6 to Appendix 3-3 and pages 21 to 30 of Appendix 3-5 was recently provided since they lost their copy. If needed, provide another copy.
7. Include commitments to meet shrub success standards for reclaimed areas.

R645-301-352, the plan fails to adequately demonstrate that reclamation will occur as contemporaneously as possible. Designs and a schedule for contemporaneous activities must be presented in the plan. Reclamation efforts, including but not limited to backfilling, grading, topsoil replacement, and revegetation, on all areas affected by surface impacts incident to an underground coal mine shall occur as contemporaneously as practicable with mining operations.

1. Review existing information in the permit with DOGM staff to explain mining constraints and contractual restrictions which currently impede immediate reclamation of the Slurry Pond area.
2. If needed, provide additional information detailing specific areas proposed to be reclaimed within the current permit term.

R645-301-353.200, the plan fails to provide adequate seeding and planting requirements for revegetation. The plan for the reestablishment of plant species must: be compatible with the approved postmining land use; have the same seasonal characteristics of growth as the original vegetation; be capable of self-regeneration and plant succession; be compatible with the plant and animal species of the area; and meet the requirements of applicable Utah and federal seed, poisonous and noxious plant; and introduced species laws or regulations. The plan must be revised to eliminate undesirable species from the seed mix and develop a mixture compatible with the land use plans.

1. Revise the seed mixtures specified for reclamation in accordance with the new recommendations from DOGM staff.
2. Remove the old seed mixtures from Appendix 3-3 which conflict with the already revised seed mixtures in Figures 10-2, 10-3, and 10-4.

R645-301-357.365, the plan fails to adequately demonstrate by specific plans and designs the methods to be used for the treatment of highly erodible areas and rills and gullies. These will be based on a combination of treatments recommended in the Soil Conservation Service Critical Area Planting recommendations, literature recommendations including those found in Appendix C of the

Division's "Vegetation Information Guidelines", and other successful practices used at other reclamation sites in the State of Utah. Specific plans and designs for treatment practices used must be incorporated into the reclamation plan and approved by the Division.

1. Review with DOGM existing statements in the permit. Add statements to Chapter 9 providing additional details concerning treatment of highly erodible areas.
2. Modify the statement on 900-17 concerning the requirement to install erosion matting.
3. Specify that the last pass during regrading be made in the direction of the contour, not perpendicular to the contours.

R645-301-550, maps and plans describing the reclamation requirements for the plan were found to be inadequate. Maps, plans and cross-sections must be revised in the plan to reflect those changes required in the deficiencies enumerated in this Technical Analysis. Maps must be revised to consistently show the location and the extent of permit and affected area boundaries, and adequately detail backfilling and grading operations required for reclamation, as well as other reclamation treatments and facilities to be left as part of the final surface configuration.

1. This deficiency is mainly written as an overall statement that reclamation maps are not yet completely adequate to meet all requirements. Discussion in the TA concerning this deficiency mainly refers back to other deficiencies noted in the TA. Some statements reflect apparent conflicts between different plates due to updating. It is likely that DOGM staff see conflicts by continuing to review old plates and text which has been updated more recently than the version that they are still reviewing.
2. Review the permit documents being used by the DOGM staff for analysis to determine accuracy and completeness by comparing with the permit at the office of EWP.

R645-301-553, information found in the plan is insufficient to determine whether or not the reclamation meets Approximate Original Contour (AOC) requirements. Deficiencies related to the performance standards for reclamation activities must be addressed as enumerated in this Technical Analysis before an AOC determination can be made by the Division.

1. The TA indicates that the plan generally appears to meet AOC requirements but DOGM cannot make an AOC determination until all other deficiencies concerning the reclamation plan are satisfied. No action will be taken by EWP on this deficiency at this time.

R645-301-553, the plan fails to provide adequate backfilling and grading plans which reflect the performance standards as required under this section. Backfilling and grading plans must be revised to account for all materials which must be relocated during reclamation. These plans must also be revised to accommodate other deficiencies as found in this Technical Analysis.

1. Explain to DOGM staff concerning the depression shown on Plates 10-3D, 10-4D, and 10-5D.
2. Correct the alleged mis-labeled contours on Plates 10-3 and 10-4.
3. Discuss with SCA concerning their intended mining plan and the decision of whether or not to utilize refuse material existing at the toe of the pile. Some changes to permit text and/or drawings may be needed depending on SCA's decision.
4. Additional changes to drawings, contours, grading calculations, and bond calculations may be needed following the completion of the drilling program for the refuse pile and a determination of the quantity and quality of DOGM's alleged precipitate layer underlying the refuse material.

R645-301-724.300, no design specifications were found for the natural channel in the canyon bottom. This permanent diversion requires reclamation designs as described in the performance standards.

1. Review existing channel designs. If necessary, provide additional design information concerning the natural channel in the canyon bottom.

R645-301-742.220, the permittee must demonstrate that the sediment ponds which have an increase in total watershed area after Phase 1 reclamation will be adequate to contain or otherwise treat the runoff from the design storm event to meet water quality standards. Merely passing a storm through a pond does not constitute treatment. This includes, but is not limited to, the Coarse Refuse Toe pond and the Railcut pond.

1. Review with DOGM staff the existing hydrologic calculations provided in Appendix 8-1 and Appendix 10-2 which do show that the runoff will be adequately treated for sediment loads by the designed ponds.

R645-301-800, the plan fails to provide a sufficiently detailed cost estimate with supporting designs and other information sufficient to determine the amount of performance bond required for reclamation. The amount of the bond required for each bonded area will be determined by the Division, and will depend upon the requirements of the approved permit and reclamation plan, reflect the probable difficulty of reclamation, giving consideration to such factors as topography,

geology, hydrology, and revegetation potential, and be based on, but not limited to, the detailed estimated cost, with supporting calculations for the estimates, submitted by the permit applicant. Information in the reclamation plan as noted under other deficiencies found in the Technical Analysis and cost estimate reflecting those revisions must be provided in the plan and approved by the Division in order to determine the bond amount required.

1. Review information with DOGM staff concerning current bond calculation documentation. The TA reviewed information previously contained in Figure 8-1 as representing the bond calculations. This information should have been removed from the permit during 1994 when it was replaced with Appendix 8-2, Bond Estimate Verification.
2. Evaluate the need to include additional costs for regrading of the site prior to covering with reclamation soil.
3. Additional calculations and cost estimates may need to be prepared following conclusion of the drilling program for the refuse pile. This would be based on additional reclamation efforts required to properly dispose of the underlying precipitate layer alleged by DOGM to exist.
4. Additional calculations and cost estimates may need to be prepared following conclusion of the evaluation of the Coarse Refuse Seep water quality monitoring. DOGM indicates in the TA that mitigation of the seep will be necessary.

R645-302-320, the plan must present adequate resource information to support findings regarding designated alluvial valley floors (AVFs). A map showing the location of the designated AVF and current and historic farming activities within and adjacent to the permit area which could potentially be affected by mining and reclamation operations must be incorporated into the plan.

1. Prepare a map or include information on an existing plate showing that the AVF previously determined by DOGM to exist in Whitmore Canyon is not part of the SCA Permit Area.

Sediment Control Program Directive

1. Several modifications will be needed throughout chapter 7 and 9 to bring the permit into compliance with the DOGM Sediment Control Program Directive conveyed to all mining operations in the June 7, 1995 letter.