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United States Department of the Interior

OFFICE OF SURFACE MINING
Reclamation and Enforcement
WASHINGTON, D.C. 20240

TAKE PRIDE IN AMERICA

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Mine files for Convulsion Canyon and Hidden Valley

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DIVISION OF
OIL GAS & MINING

Dianne R. Nielson, PhD
Director, Division of Oil, Gas and Mining
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355 West North Temple
Salt Lake City, Utah 84180-1203

Dear ~~Dr. Nielson~~: Diane

This is in response to your March 26, 1991, letter requesting interpretive guidance on appropriate design documentation for alternative sediment control practices using Best Technology Currently Available (BTCA), as well as to further explain my written decisions of March 26, 1991, on the Convulsion Canyon Mine [Ten-Day Letter (TDL) 90-02-246-01] and the Hidden Valley Mine (TDL 91-02-246-01) cases.

In the informal review decisions for Convulsion Canyon and Hidden Valley, I informed you that the regulations governing BTCA at 30 CFR 817.45 and R614-301-742-110 did not require that a permittee specifically demonstrate during the permitting process that effluent limits and water quality standards would be met. Although I found that those sections did not require such a "demonstration," my ruling should not be interpreted to mean that certain "demonstrations" are not necessary during the permitting process or that designs for BTCA structures are not required. Nothing in the above-referenced decisions may be construed to circumvent the permitting requirements for sediment control measures, regardless of whether those measures consist of siltation structures or alternative sediment control practices.

The written findings at 30 CFR 773.15(c)(1), (2), and (6) require, in part, that a permit application shall not be approved unless:

> the application affirmatively demonstrates and the regulatory authority finds in writing, on the basis of information set forth in the application or from information otherwise available that is documented in the approval: * * * (R614-300-133)
>
> > (1) The application is complete and accurate and the applicant has complied with all the requirements of the Act and the regulatory program. (R614-300-133.100)
> >
> > (2) The applicant has demonstrated that reclamation as required by the Act and the regulatory program can be accomplished under the reclamation plan contained in the permit. (R614-300-133.710)

> (6) The applicant has demonstrated that any structure will comply with * * * applicable performance standards of subchapter * * * K of this chapter. (R614-300-133.720)

When the application is technically adequate, by definition the requirement for such a demonstration has been met. The information to make the findings required by Utah's counterpart to 30 CFR 773.15(c) is found in several sections of the permitting and performance standards regulations of the Utah program. Some of the applicable requirements are discussed below.

The Utah regulation at R614-301-741 provides the general design criteria and plan requirements for sediment control measures, siltation structures, sedimentation ponds, other treatment facilities, and other water and sediment control structures. The rule states:

> Each permit application will include site-specific plans that incorporate minimum design criteria as set forth in R614-301-740 [Design Criteria and Plans] for the control of drainage from disturbed and undisturbed areas.

The general design criteria and plan requirements for sediment control measures are found at R614-301-742.100 [Design Criteria and Plans, -- Sediment Control Measures]. The Utah rules are substantively identical to the Federal rules at 30 CFR 817.45(a) and require that:

> Appropriate sediment control measures will be designed * * *

Further, the performance standards at R614-301-752 require that:

> Sediment control measures must be located, maintained, constructed and reclaimed <u>according to plans and designs given under R614-301-732 [Operation Plan -- Sediment Control Measures], R614-301-742 [Design Criteria and Plans -- Sediment Control Measures] and R614-301-760 [Reclamation]</u>. (Emphasis added.)

As with the Federal rules, the Utah rules require that the designs for all sediment control measures in the permit application contain detailed and site-specific information indicating how, when, where, and for what purpose they will be constructed and maintained. The word designed, as used by engineers and other technical professionals, cannot be construed to mean a simple statement of a type of control measure to be used. Designs must include plans and descriptions of activities, structures, location, and timing intended to accomplish the specific performance requirements; e.g., preventing additional contributions of sediment, minimizing erosion, and meeting applicable effluent limitations. Sediment control measures are not adequately designed, unless the permit application contains information describing the location, size, configuration and timing of construction, and how the performance requirements will be satisfactorily met. There must be sufficient detail for the regulatory authority to find that the permit applicant has provided information which concludes that the

sediment control measures will be constructed and maintained to meet the performance requirements.

Another regulation that requires specific information in the permit application for sediment control is related to the determination of probable hydrologic consequences (PHC). The permit application must contain a determination of the PHC of the proposed operation upon the quality and quantity of surface and groundwater (R614-301-728.100). As part of the PHC, the application must contain an evaluation of the quantity and quality of water handled, both inflowing and discharged, the capability and location of the sediment control measures to be applied, and other design parameters. Inherent in the preparation of plans for sediment control measures are design calculations that apply engineering principles to the size and location of a structure for a particular task. Several design manuals for sediment/erosion control currently provide information for the planning and design of sediment/erosion control measures. The Office of Surface Mining Reclamation and Enforcement (OSM) contracted for the "Handbook of Alternative Sediment Control Methodologies for Mined Land," which was finalized in March 1985. The document contains design and implementation guidelines for most well known erosion control measures such as check dams, dikes, vegetation filters, straw bales, silt fences, etc.

The PHC determination is to include findings on the impact the proposed coal mining and reclamation operation will have on sediment yield from the disturbed area (R614-301-728.330). Each permit application is to include descriptions of the methods and calculations utilized to achieve compliance with hydrologic design criteria and plans given under R614-301-740 (R614-300-711.300). A similar requirement is found in the engineering section wherein each permit application will include descriptions of the proposed mining operation and its potential impacts to the environment as well as methods and calculations utilized to achieve compliance with design criteria (R614-301-511.200).

Finally, R614-301-512.100 specifies that certain cross sections and maps required to be included in a permit application will be prepared by, or under the direction of, and certified by a qualified, registered professional engineer or land surveyor, with assistance from experts in related fields such as hydrology. The hydrology section at R614-301-731.720 states:

> A map showing the location of each water diversion, collection, conveyance, treatment, storage and discharge facility to be used . . . will be prepared and certified according to R614-301-512.

Your March 26, 1991, letter listed four other mines (Cottonwood/Wilberg, Emery, Hiawatha, and Horse Canyon) where the Albuquerque Field Office (AFO) had identified issues relating to the adequacy of BTCA approvals. AFO withdrew those Ten-Day Notices and TDL's at the time of my decisions on the Convulsion Canyon and Hidden Valley Mines pending guidance from this office regarding the BTCA requirements to be addressed in the permitting process. I am requesting that the AFO in conjunction with Western Support

Center personnel, review with you the specific facts at those mines as well as at the Convulsion Canyon and Hidden Valley mines to assure that alternative sediment control structures are adequately designed.

If I may be of further assistance, please contact me.

Sincerely,

W. Hord Tipton, Deputy Director
Operations and Technical Services

cc: Robert H. Hagen, AFO