

VI. MONITORING

IMPLEMENTATION TASK FORCE

The BLM and FS, in light of the magnitude and complexity of the Riley Ridge Project, entered into a Memorandum of Understanding (MOU) in September 1983, for the purpose of overseeing implementation of the Riley Ridge Project. This includes review and quality control of required applicant plans for associated construction, operation, maintenance, and termination of proposed facilities and well field development. As part of the MOU a Task Force made up of BLM, FS, and Wyoming Game and Fish representatives would be established. A copy of the MOU is found as Attachment A.

Although not specifically stated in the MOU, but implied in its purpose, one paramount function of the Task Force would be to ensure that monitoring committed to is carried out. Included in this responsibility is ensuring the development of a BLM comprehensive monitoring plan which will address the scheduling, implementation, agent, applicant responsibility and costs, reporting procedure, etc. for each of the monitoring programs found in Appendix E of the FEIS. In addition, the CU Plan required by each applicant for off-lease use authorizations, approval of which is required prior to granting or issuing a right-of-way (FLPMA, 1976, Sec. 504 (d)), must include a detailed description of all the maintenance and monitoring that will be performed.

IDENTIFIED MONITORING

Groundwater Monitoring - Appendix E-1 (FEIS)

The collection of hydrogeologic information and the design of a groundwater monitoring program have yet to be accomplished. This should be conducted in conjunction with involved state and federal agencies including the U.S. Geological Survey, Bureau of Land Management, U.S. Forest Service, Wyoming State Engineer, Wyoming Oil and Gas Conservation Commission, and the Wyoming Department of Environmental Quality. The Wyoming Department of Environmental Quality has identified requirements for project implementation which are dependent upon the resolution of certain issues related to water resources. These include the following:

1. Potential impacts to water quality must be adequately addressed and information submitted to the Water Quality Division during the permitting process.
2. Any part of the project requiring a Water Quality permit must provide data adequate to allow an evaluation of potential impacts to groundwaters of the state, prior to construction being authorized. Background (baseline) groundwater quality must be submitted to the Water Quality Division, adequate to characterize the groundwater wherever it might be impacted.

3. The applicant should be making the necessary studies and collecting data to fill the data gaps. Detailed information on geology and hydrology is needed.
4. In addition to considerations on pages B-2 and B-3, of Attachment B, the following may also be required.
 - a Potentiometric surface maps;
 - b Periodic analyses and reporting of waste (injected) water quality, and water quality of certain specified monitor wells;
 - c Periodic reporting of daily and maximum injection volumes and pressures as required by any injection well permit issued by the Water Quality Division;
 - d Monitoring of annulus pressure of any injection well permitted by the Water Quality Division;
 - e Mechanical integrity testing of all waste injection wells permitted by the Water Quality Division.
 - f Other Water Quality Division requirements, depending on the contents of the application submitted.
5. Water Quality Division requires waste disposal wells to be constructed with tubing and packer, and the casing-tubing-packer construction tested (mechanical integrity test) prior to first use and at least once every five years thereafter. Casing is to be cemented from the surface to the injection zone; a cement bond log is recommended as an acceptable method to demonstrate absence of channels for fluid movement vertically outside the casing.
6. Water Quality Division often requires ponds to be lined, to protect groundwater.
7. Applicant should ascertain which Water Quality Division permits are required for mancamps, and obtain same before construction of camps begins.

Air Quality Related Values Action Plan - Appendix E-2 (FEIS)

The Wilderness Act (1964) and the Clean Air Act as amended in 1977 gives the Forest Service responsibility to protect the wilderness resource on National Forest System lands from man-caused degradation. However, in response to air pollution, action under the Wilderness Act could probably be taken only after an impact on the wilderness has occurred and consequences may be difficult to reverse once detected.

The action plan has been developed to: (1) identify sensitive receptors, if any, for each air quality related value; (2) determine baseline physical, chemical and/or biological conditions of each identified sensitive receptor; and (3) establish a program to monitor any impact on sensitive receptors caused by changes in air quality.

The action plan has been designed to look at not only those impacts from the Riley Ridge projects but at those impacts resulting from future oil and gas developments.

Fisheries and Surface Water Quality Monitoring Program - Appendix E-3 (FEIS)

1. Fisheries

The fisheries monitoring program will be implemented to observe changes in fish habitat (including water quality) or fish populations that would be detrimental to the fishery. Should a change be observed that is linked to the applicant's development, the applicant will take corrective measures to eliminate the cause. The monitoring program will be set up in three major areas: (1) a site-specific monitoring station; (2) three or four long-term monitoring stations to observe cumulative well field development effects, and (3) annual reconnaissance of all applicant-constructed facilities to observe changes that could harm the fishery. The determination of the type of monitoring program will be made at the time a specific development site is located.

2. Surface Water

The surface water monitoring program is primarily intended to detect changes in water quality which may affect aquatic life. Additionally, the program will detect changes from baseline conditions which may indicate the need for more extensive monitoring. Sampling will be supervised by the BLM or FS. Stream sampling locations will include the four established stations in the well field on Fish Creek, Beaver Creek, Pine Grove Creek, and Black Canyon Creek as well as others that may be specified by the Authorized Officer. These stations will coincide with locations for aquatic monitoring stations (Stations f-1, B-1, PG-1, BC-1, see Wildlife and Fisheries Technical Report).

Cultural Resources Compliance Guidelines - Appendix E-4 (FEIS)

It is BLM and FS policy to protect cultural resources by avoiding or mitigating any adverse effects that may occur to cultural resources from a Bureau-authorized action. The Environmental Impact Statement for the Riley Ridge Project stated that adverse impacts would occur to cultural resources. Therefore BLM, Wyoming State Office Manual 8143 Procedures for Avoidance and/or Mitigation of Effects on Cultural Resources and appropriate Forest service procedures will be followed for the Riley Ridge Project. The Cultural Resources Compliance Guidelines provide a brief overview of work that has been completed and a guide to future work needed for compliance with historic preservation legislation and BLM policy.

Roads - Attachment B.6 (ROD)

1. Quality Control - Road Construction

The operator has the responsibility to ensure that each road is constructed according to plans and specifications approved by the FS or BLM. Forest Service Standard Specifications for the Construction of Roads and Bridges shall be utilized to establish and maintain construction standards. Copies are available from the Forest Supervisor's Office. The degree of construction control should complement the survey and design methods utilized. Lower standard surveys and designs may require more intensive construction engineering to assure an acceptable end product.

The FS or BLM will make periodic inspections to ensure that each road is properly constructed, at which time control tests and charts maintained by the operator shall be made available for review. This shall include density tests, aggregate gradations, photographs showing construction techniques, daily diaries, etc.

2. Quality Control - Road Maintenance

The applicant's CU Plan shall include a maintenance plan for all roads constructed or used by the applicant on or off lease.

Users of forest development roads shall pay their fair share of maintenance costs, and use of forest roads will be approved by FS road permits. This includes roads which lead to the area where additional access is needed. Lessees may either perform actual maintenance activities or pay cooperative deposits as the FS approves. Before a bond release is signed, all road damage caused by the user shall be repaired in a manner approved by the FS (this will not apply to BLM lands).

The maintenance plan should have definite provisions for preventing undercutting of cut banks and the unnecessary removal of established stabilizing vegetation on fill side of road (operators should be given special instructions).

Erosion Control, Revegetation and Restoration - Attachment B.7 (ROD)

Maintenance and Monitoring

Joint inspection of the right-of-way by the applicant and authorizing agency will be conducted to monitor the success and maintenance of erosion control measures and revegetation programs on disturbed land for two growing seasons, or for a period determined by the landowner on private land, or the authorized agency official on state or federal land. The monitoring program will identify problem areas and corrective measures to ensure vegetation cover and erosion control. Successful revegetation and erosion control will be determined and certified by the landowner or authorized agency official.