

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

****POLICY/PROCEDURE DIRECTIVE****

UNDERGROUND 93-1

Subject: Water Monitoring - Shadow and Adjacent Areas
Effective: February 15, 1993
Purpose: To establish policy for submitting water monitoring reports for areas overlying the underground workings and within the adjoining hydrologic boundary, and to establish criteria for cessation of monitoring.

The procedures established by PPD, Inspection and Enforcement 88-10, are applicable to the permit area of underground mining operations. The procedures established by this PPD are applicable to those areas above the underground workings (shadow area), and the adjoining hydrologic boundary (adjacent area).

Each permit application contains a specific water monitoring plan for the areas above the underground workings. Whenever the permit requires monitoring for quantity in the well, the operator shall report the depth of the well and static water level. Quantity monitoring for springs and streams is to be reported as discharge or flow in cubic feet per second (cfs) or gallons per minute (gpm). Permits requiring quality monitoring are to be sampled for pH, total acidity, total alkalinity, total iron, total manganese, total suspended solids, total hardness, total sulfate, and specific conductance or total dissolved solids. Full coal recovery operations are required to monitor nitrate concentrations, in addition to the previously stated parameters, for domestic water supplies that are within 500 feet horizontally of a septic system.

Full coal recovery operations must also include daily precipitation data for each month of the quarter. This data is to be collected in the vicinity of the mine site and should be attached to each quarterly report as addenda.

The quality and quantity measurements are to be reported on the Underground Mining - Shadow Area Water Monitoring Report. The report has been designed to record data collected at one site on twelve different dates as needed. The report is to be cumulative and reflect previously collected data as well as data for the current quarter. The monitoring site identification number, surface elevation, well depth, and coal elevation, is to be reported for each site monitored. Once a site is undermined, the specific date of undermining is to be reported. Full coal recovery operations must also report the location of the active face relative to the monitoring site. The face location is to be reported as the horizontal distance in feet from the monitoring site; an advancing face should be reported as a negative value and a retreating face as a positive value. The site location relative to the panel is also to be reported as above panel (PAN), above gate (GTE), or within 500 feet of panel (ADJ). Any site within 500 feet horizontally of a full coal recovery area will be monitored as if it were over the panel.

Monitoring must commence one year before the monitoring site is undermined, shall continue during mining, and for at least one year after the site is undermined. It is important to maintain the correct interval for the frequency required by the monitoring plan. Quarterly monitoring should be done approximately every ninety days, and monthly monitoring should be done approximately every thirty days.

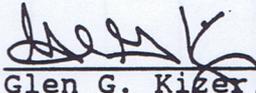
Whenever a new monitoring site is added to the monitoring report for the first time it is also to be shown on a copy of the mine progress map. This map is to be submitted as an addendum to the ground water monitoring report. The map should indicate the location of all monitoring stations relative to the underground workings, utilizing the site identification used in the reports. Monitoring reports should list a site at the time monitoring is scheduled to commence, even if the required data is not available. As an addendum, a full explanation must be provided for any missing data. If a site remains inaccessible, it may be removed from the

monitoring plan after it has been undermined, but only upon the written approval of an operator's written request to delete it as a monitoring site.

Post-mining monitoring may be ceased in accordance with the approved plan if at least thirty days prior to the proposed date of cessation of monitoring the operator provides notice to the Division of the specific sites to be deleted using the Underground Mining - Request to Cease Monitoring form. Upon receipt of such a request, the operator's monitoring data will be reviewed by a Division permitting hydrologist to determine if additional monitoring is necessary to achieve the purpose of the monitoring plan as set forth in OAC 1501:13-9-04(N)(3) and 1501:13-4-14(F).

Individual sites will be reviewed to determine if they have been impacted; the degree of recovery, if any; and, if appropriate, whether an impacted water supply has been replaced. If the monitoring site is no longer needed to assess either the operation's impact on an individual water supply or the availability of water in sufficient quantities to support the foreseeable land uses, then monitoring may be ceased. If the Division has not responded to the operator's request within thirty days of receipt, then monitoring may be ceased until such time as the Division notifies the operator otherwise.

The information required by this PPD is to be submitted on the attached water monitoring report. The original and three copies of the complete monitoring report should be submitted to the appropriate Division district office no later than fourteen days after the end of the quarter.



Glen G. Kizer, Chief

GGK:pmp

Attachments

