

LAND RECLAMATION DIVISION MEMORANDUM

00-07

TO: All Underground Coal Mine Operators

FROM: Scott K. Fowler, Supervisor
Land Reclamation Division

DATE: October 16, 2000

RE: Changes in Subsidence Regulations and
Blasting Requirements

Revised regulations concerning subsidence control permitting and performance standards became effective on March 21, 2000. The regulations were promulgated to comply with changes to the Surface Mining Control and Reclamation Act mandated by the Energy Policy Act of 1992. The attached document is Addendum No. 1 to the UCM-1 application. This addendum contains additional application questions designed to address the new subsidence control requirements as well as questions related to blasting at underground mines. All underground operators shall use this addendum in addition to the existing application to address new and revised shadow area applications. This addendum should be used until such time that the UCM-1 application is completely updated.

Please note that the performance requirement to “replace any drinking, domestic or residential water supply that is contaminated, diminished or interrupted” applies to all underground mining activities conducted after **January 19, 1996** pursuant to 62 Ill. Adm. Code 1817.41(j). The changes to permitting requirements necessitate quality and quantity monitoring to document pre-mining conditions. An exemption from conducting monitoring on wells or springs can be obtained on a site specific basis if it can be demonstrated that the water supply will not likely be impacted. The exemption must be specifically requested with adequate justification for the exemption.

Concerning structure condition surveys, only planned subsidence operations are required to conduct such surveys. Unplanned subsidence operations have no requirement to conduct pre-mining condition surveys.

In addition to using the addendum for all new applications submitted to the Department, the subsidence control and mitigation portion of the addendum shall be completed for all permits containing shadow areas that have been or will be mined after March 21, 2000. **The addenda for issued permits are due to the Department by December 31, 2000.**

If you have any questions, please contact this office at (217) 782-4970.

UCM-1 Application Addendum No. 1

Pursuant to rules enacted March 21, 2000
Revisions to subsidence control and mitigation

I. Drinking Domestic and Residential Water Supplies

A. For all underground operations: Shadow area water supply background information.

1. Compliance with 62 Ill. Adm. Code 1784.14(b)(1): The operator shall provide the location and ownership of all existing drinking, domestic and residential water supplies, including private wells, municipal wells and springs. This information shall be provided for all areas within the proposed shadow area and within ½ mile of the boundaries of the proposed shadow area.
2. Compliance with 62 Ill. Adm. Code 1784.14(b)(1)(A)(ii): Provide adequate ground water quality descriptions for the shadow area and it's adjacent area (½ mile). The information shall include at a minimum pH, total dissolved solids, total iron and total manganese. The Department may require additional parameters based on site specific conditions.
3. Compliance with 62 Ill. Adm. Code 1784.14(b)(1)(B): Respond to UCM-1 Application Part III(2)(B)(3).

B. For all underground operations: Qualification for exemption from performing individual water quantity and quality data collection.

1. Compliance with 62 Ill. Adm. Code 1784.20(b)(7) and (b)(8)(B): Provide sufficient documentation concerning site specific geologic, geotechnical and historical performance to demonstrate that existing wells and springs will not be impacted by the operation. Stratigraphic locations of drinking domestic and residential water supplies relative to the seam to be mined shall also be discussed in relation to potential impacts from mine level instabilities such as roof falls.
2. Provide the locations of any water supplies that will be specifically monitored for water quality and quantity based on the potential for adverse impacts from the underground mining operations.

Based on the analysis provided under B above, the Department will determine if any water supplies beyond those proposed to be monitored warrant pre-mining collection of quality and quantity data. In the event the Department determines additional monitoring is required beyond that proposed under B.2. above, the operator will be notified of such determination and will be required to modify the monitoring plan provided under C, below.

C. For all operations where water supplies have not been exempt from monitoring requirements under B, above: Water quality and quantity monitoring plan.

1. Provide a plan for obtaining adequate pre-mining water quality and quantity data from wells and springs potentially impacted by subsidence. Specific parameters to be monitored and method(s) for defining approximate water supply quantities shall be detailed.
2. Provide a time table for collection of data sufficiently in advance of underground mine development to document pre-mining quality and quantity. Data collection should reflect seasonal fluctuations.

D. For all underground operations: Replacement of impacted water supplies.

1. Compliance with 62 Ill. Adm. Code 1784.20(b)(9): Provide a general plan for replacing any contaminated, diminished, or interrupted drinking, domestic or residential water supply. The plan should include possible contingencies for emergency, temporary and permanent replacement of affected water supplies. Replacement of water supplies must comply with the definition found under 62 Ill. Adm. Code 1701.Appendix A Definitions: “Replacement of Water Supply”.
2. Compliance with 62 Ill. Adm. Code 1784.20(b)(9)(A): Provide a procedural plan for determining the existence and degree of material damage, loss or diminution of water quality and quantity. Address resolution of disputes over the existence, amount or level of water quality and quantity such as third party arbitration.
3. Compliance with 62 Ill. Adm. Code 1784.20(b)(9)(B): Provide a plan for determining the present worth of the cost to replace a water supply if the operator wishes to pursue a one time lump sum payment for costs associated with provisions for an equivalent water delivery system and payment of operation and maintenance costs in excess of customary and reasonable delivery costs for pre-mining water supplies. Any lump sum payments for future costs must be agreed to by the water supply owner.

II. Structures, Facilities and Occupied Dwellings

A. For operations proposing planned subsidence.

1. Compliance with 62 Ill. Adm. Code 1784.20(b)(8)(A) and 1817.121(a)(3): Provide a general plan for the following:
 - a. A description of the methods that will be employed to minimize damage from planned subsidence to structures and facilities.

Please note that if minimization methods are not proposed for a given structure or facility, the written consent of the owner must be obtained and provided to the Department in advance of any planned subsidence impacts.

- b. A description of the procedure that will be used to demonstrate that the costs of minimizing damages exceeds the anticipated cost of repair. This option is not possible if subsidence material damage would constitute a threat to health or safety.
 - c. A time table for submitting to the Department the specific minimization method for each structure or facility sufficiently in advance of underground mine development to comply with 62 Ill. Adm. Code 1784.20(b)(8)(A).
- B. For operations proposing planned subsidence: Qualification for exemption from performing individual structural condition surveys.
- 1. Compliance with 62 Ill. Adm. Code 1784.20(b)(7) and (b)(8)(B): Provide sufficient documentation concerning site specific geologic, geotechnical and historical performance to demonstrate that a given structure or facility will not be impacted by the operation.
 - 2. Provide the locations of any structures and facilities for which an exemption to conduct condition surveys is requested in B.1. above.

Based on the analysis provided under B above, the Department will determine if any structures qualify for an exemption. In the event the Department determines structures can be exempted, the operator will be specifically notified of such determination.

- C. Compliance with 62 Ill. Adm. Code 1784.20(b)(8)(B): Conducting pre-subsidence condition surveys. Provide a description of procedures to determine the condition of structures and facilities in accordance with 62 Ill. Adm. Code 1817.121(a)(2).
- D. For all underground operations, compliance with 62 Ill. Adm. Code 1817.121(c)(3): Adjustment of bond due to material damage from subsidence. When material damage resulting from subsidence occurs to land, structures and facilities, the operator must comply with 1817.121(c)(3). Describe how the operator will adjust the bond or alternatively assure financial responsibility with appropriate liability insurance if repair, replacement or compensation is not accomplished within the allocated time frames.

Mining Operations - Blasting

- I. Will the applicant be conducting any surface blasting activities incident to underground mining, including, but not limited to, initial rounds of slopes or shafts that are within 50 vertical feet of the original ground surface. Yes No

- II. If the answer to the above is “yes”, please describe how the applicant will comply with 62 Ill. Adm. Code 1817.61 through 68.