ILLINOIS
DEPARTMENT OF
NATURAL RESOURCES
Office of Mines and Minerals
524 South Second Street, Springfield 62701-1787 Jim Edgar, Governor ● Brent Manning, Director

LAND RECLAMATION DIVISION
MEMORANDUM NO. 96-3

TO: All Underground Coal Mine Operators

DATE: February 27, 1996

FROM: Scott Schmitz, Supervisor
Land Reclamation Division

SUBJECT: Water Replacement Rules and Regulations.

The Energy Policy Act of 1992, among other things, mandated water replacement requirements in relation to the effects of mine subsidence. Currently, the Land Reclamation Division is awaiting OSM's final approval of the state counterpart regulation as indicated in the underlined language below. It is anticipated that final approval is forth coming.

1817.121(c) The operator shall:

1) Correct any material damage resulting from subsidence caused to surface lands....

2) Correct material damage resulting from subsidence to any structures or facilities...

3) <u>Promptly replace any drinking, domestic, or residential water supply from a well or spring in existence prior to the application for a surface coal mining and reclamation permit, which has been affected by contamination, diminution, or interruption resulting from underground coal mining operations.</u>

Upon approval of this regulation change, language will be added to the UCM-1 application addressing the new water replacement requirements. The following draft language is provided so those operators planning to submit applications for either planned or unplanned subsidence mining in the future can be aware of the type of information which will be required to implement the regulations.

PLANNED SUBSIDENCE UNDER Part IV(3)(B)

8) Water Supply Background Information and Monitoring Program for Planned Subsidence:

a) Provide the location of existing drinking, residential and domestic water supplies, including private wells, municipal wells, and springs, on an appropriate map. The

Effective July 1, 1995, the Illinois Department of Natural Resources was created through the consolidation of the Illinois Department of Conservation, Department of Mines and Minerals, Abandoned Mined Lands Reclamation Council, the Department of Transportation's Division of Water Resources, and the Illinois State Museum and Scientific Surveys from the Illinois Department of Energy and Natural Resources.

[printed on recycled and recyclable paper]

ownership of each water supply shall also be identified. This information shall be provided for all water supplies within the planned subsidence shadow area and adjacent area. The adjacent area shall be considered that area within 1/2 mile of the planned subsidence shadow area.

b) Explain what precautions if any will be taken to prevent adverse impacts to the above-listed water supplies. Also, discuss whether the proposed planned subsidence could result in contamination, diminution or interruption of any drinking, domestic or residential water supply within the planned subsidence shadow area or adjacent area

c) For all drinking, domestic or residential water supplies over or within 500 feet of the angle of draw of planned subsidence areas:

1) Provide the depth of the well and the water bearing strata tapped.

2) Provide a description of seasonal groundwater quality including at a minimum the following:

pH	alkalinity
total dissolved solids	sulfates
total suspended solids	total iron
hardness	total manganese
acidity	total chlorides

Note: Background water quality shall be obtained by sampling at a rate of six samples within the year prior to planned subsidence. The location, frequency and duration of post-subsidence well monitoring will be addressed on a case-by-case basis.

d) Provide a description of seasonal groundwater quantity of each water bearing stratum used as a source of drinking, domestic or residential water supply which may be potentially impacted. Include at a minimum the appropriate rates of discharge and/or the potentiometric elevation of each stratum.

e) Provide a plan for replacing any contaminated, diminuted or interrupted drinking, domestic or residential water supply. The plan should include possible contingencies for emergency, temporary and permanent replacement of affected water supplies.

UNPLANNED SUBSIDENCE UNDER Part IV(3)(C)

6) Water Supply Background Information for Unplanned Subsidence:

a) Provide the location of existing drinking, residential and domestic water supplies, including private wells, municipal wells, and springs, on an appropriate map. The ownership of each water supply shall be identified. This information shall be provided for all water supplies within the unplanned subsidence shadow area and adjacent area. The adjacent area shall be considered that area within 1/2 mile of the unplanned subsidence shadow area.

b) In the unlikely event subsidence occurs, explain what precautions if any will be taken to prevent adverse impacts to the above-listed supplies. Also, discuss whether an unplanned subsidence event could result in contamination, diminution or interruption of any drinking domestic or residential water supply within the unplanned subsidence shadow area or adjacent area.

c) Provide a general plan for replacing any contaminated, diminuted or interrupted drinking, domestic or residential water supply. The plan should include possible contingencies for emergency, temporary and permanent replacement of affected water supplies.

As can be seen, unplanned subsidence operators will have less permitting standards as the effects on ground water will be rare. However even unplanned subsidence operators are encouraged to collect good background data in the event allegations of contamination or diminution are made. The more background information available, the easier it will be to determine if subsidence is the actual cause of alleged problems.