**Section 1817.41 Hydrologic Balance Protection**

a) General.

All Underground mining and reclamation activities shall be conducted to minimize disturbance of the hydrologic balance within the permit and adjacent areas, to prevent material damage to the hydrologic balance outside the permit area such as diminution of recharge capacity, and to support approved post-mining land uses in accordance with the terms and conditions of the approved permit and the performance standards of this Part. The Department shall require additional preventative, remedial, or monitoring measures to assure that material damage to the hydrologic balance outside the permit area is prevented if the current approved plan is not sufficient to assure this protection. Mining and reclamation practices that minimize water pollution and changes in flow shall be used in preference to water treatment.

b) Ground water protection. In order to protect the hydrologic balance, underground mining activities shall be conducted according to the plan approved under 62 Ill. Adm. Code 1784.14(g). Ground water quality shall be protected by handling earth materials and runoff in a manner that minimizes acidic, toxic, or other harmful infiltration to ground water systems and by managing excavations and other disturbances to prevent or control the discharge of pollutants into the ground water.

c) Ground water monitoring.

1) Ground water monitoring shall be conducted according to the ground water monitoring plan approved under 62 Ill. Adm. Code 1784.14(h). If unanticipated conditions develop, or if an approved operation or reclamation plan is modified or revised, such that the current monitoring program would not detect possible adverse impacts to the hydrologic balance, then the Department shall require additional monitoring including, but not limited to, increased monitoring frequency, additional monitoring wells, or change in the number of parameters being monitored, when it is determined that the proposed, or approved, monitoring plan is not adequate to detect adverse impacts to the hydrologic balance.

2) Ground water monitoring data shall be submitted every three months to the Department or more frequently if necessary to detect possible adverse impacts to the hydrologic balance as prescribed by the Department. Ground water monitoring reports shall be submitted by the first day of the second month following the reporting period, unless the Department specifies an alternative reporting schedule. Monitoring reports shall include analytical results from each sample taken during the reporting period. When the analysis of any ground water sample indicates noncompliance with the permit conditions, then the permittee shall promptly notify the Department and immediately take the actions provided for in 62 Ill. Adm. Code 1773.17(e) and 1784.14(g).

3) Ground water monitoring shall proceed through mining and continue during reclamation until bond release. Consistent with the procedures of 62 Ill. Adm. Code 1774.13, the Department may modify the monitoring requirements when such changes do not diminish the ability to detect adverse impacts to the hydrologic balance, including the parameters covered and the sampling frequencies, if the permittee demonstrates, using the monitoring data obtained under this subsection that:

A) The operation has minimized disturbance to the prevailing hydrologic balance in the permit and adjacent areas and prevented material damage to the hydrologic balance outside the permit area; water quality and quantity are suitable to support approved post-mining land uses; or

B) Monitoring is no longer necessary to achieve the purposes set forth in the monitoring plan approved under 62 Ill. Adm. Code 1784.14(h).

4) Equipment, structures, and other devices used in conjunction with monitoring the quality and quantity of ground water onsite and offsite shall be properly installed, maintained, and operated and shall be removed by the permittee when no longer needed, except as provided for under subsection (g).

d) Surface water protection. In order to protect the hydrologic balance, underground mining activities shall be conducted according to the plan approved under 62 Ill. Adm. Code 1784.14(g) and the following:

1) Surface water quality shall be protected by handling earth materials, groundwater discharges, and runoff in a manner that minimizes the formation of acidic or toxic drainages; prevents, to the extent possible using the best technology currently available, additional contributions of suspended solids to streamflow outside the permit area; and otherwise prevents water pollution. If drainage control, restabilization and revegetation of disturbed areas, diversion of runoff, mulching, or other reclamation and remedial practices are not adequate to meet the requirements of this Section and Section 1817.42, the permittee shall use and maintain the necessary water treatment facilities or water quality controls.

2) Surface water quantity and flow rates shall be protected by handling earth materials and runoff in accordance with the steps outlined in the plan approved under 62 Ill. Adm. Code 1784.14(g).

e) Surface water monitoring.

1) Surface water monitoring shall be conducted according to the surface water monitoring plan approved under 62 Ill. Adm. Code 1784.14(i). If unanticipated conditions develop, or if an approved operation or reclamation plan is modified or revised, such that the current monitoring program would not detect possible adverse impacts to the hydrologic balance, then the Department shall require additional monitoring including, but not limited to, changes in the number of parameters or frequency of sample collection when it is determined that the approved plan is not designed to detect adverse impacts to the hydrologic balance.

2) Surface water monitoring data shall be submitted to the Department every three months, or more frequently if necessary to detect possible adverse impacts to the hydrologic balance as prescribed by the Department. This shall include, but not necessarily be limited to, copies of reports submitted for the National Pollutant Discharge Elimination System (NPDES) sent to the Illinois Environmental Protection Agency (EPA). Copies of NPDES reports shall be sent to the Department by the first day of the second month following the reporting period. Monitoring reports shall include analytical results from each sample taken during the reporting period. When the analytical results of any surface water sample indicates noncompliance with the permit conditions, the permittee shall notify the Department within five days and immediately take the actions provided for in 62 Ill. Adm. Code 1773.17(e) and 1784.14(g). The reporting requirements of this subsection do not exempt the permittee from meeting any NPDES reporting requirements.

3) Surface water monitoring shall proceed through mining and continue until bond release. Consistent with 62 Ill. Adm. Code 1774.13, the Department may modify the monitoring requirements, except those required by the Illinois EPA, when such changes to the approved plan do not diminish the ability to detect adverse impacts to the hydrologic balance, including the parameters covered and sampling frequency if the permittee demonstrates using the monitoring data that:

A) The operation has minimized disturbance to the hydrologic balance in the permit and adjacent areas and prevented material damage to the hydrologic balance outside the permit area; water quantity and quality are suitable to support approved post-mining land uses; and

B) Monitoring is no longer necessary to achieve the purposes set forth in the monitoring plan approved under 62 Ill. Adm. Code 1784.14(i).

4) Equipment, structures, and other devices used in conjunction with monitoring the quality and quantity of surface water onsite and offsite shall be properly installed, maintained, and operated and shall be removed by the permittee when no longer needed, except as provided for in Section 1817.49(b).

f) Acid- and toxic-forming materials.

1) Drainage from acid- and toxic-forming materials and underground development waste into surface water and ground water shall be avoided by:

A) Identifying and burying and/or treating, when necessary, materials which may adversely affect water quality, or be detrimental to vegetation or to public health and safety if not buried and/or treated; and

B) Storing materials in a manner that will protect surface water and ground water by preventing erosion, the formation of polluted runoff, and the infiltration of polluted water. Storage shall be limited to the period until burial and/or treatment first become feasible, and so long as storage will not result in any risk of water pollution or other environmental damage.

2) Storage, burial or treatment practices shall be consistent with other material handling and disposal provisions of Section 1817.102.

g) Before final release of bond, exploratory or monitoring wells shall be sealed in a safe and environmentally sound manner in accordance with Sections 1817.13 and 1817.15. With prior approval of the Department, wells may be transferred to another party for further use. At a minimum, the conditions of such transfer shall comply with State and local law and the permittee shall remain responsible for the proper management of the well until bond release in accordance with Sections 1817.13 and 1817.15.

h) Discharge of water into an underground mine

1) Discharges into an underground mine are prohibited, unless specifically approved by the Department after a demonstration that the discharge will:

A) Minimize disturbance to the hydrologic balance on the permit area, prevent material damage outside the permit area and otherwise eliminate public hazards resulting from underground mining activities;

B) Not result in a violation of water quality standards or effluent limitations set forth in Section 1817.42;

C) Be at a known rate and quality which shall meet the effluent limitations of 62 Ill. Adm. Code 1817.42 for pH and total suspended solids, except that the Department may allow pH and total suspended solids to exceed effluent limits so long as they will not result in any adverse impacts to the hydrologic balance; and

D) Meet with the approval of the Mine Safety and Health Administration.

2) Discharges shall be limited to the following:

A) Water;

B) Coal processing waste;

C) Fly ash from a coal-fired facility;

D) Sludge from an acid-mine drainage treatment facility;

E) Flue-gas desulfurization sludge;

F) Inert materials used for stabilizing underground mines; and

G) Underground mine development wastes.

3) Water from one underground mine may be diverted into other underground workings according to the requirements of this Section.

i) Gravity discharges from underground mines.

1) Surface entries and accesses to underground workings shall be located and managed to prevent or control gravity discharge of water from the mine. Gravity discharges of water from an underground mine, other than a drift mine subject to subsection (i)(2), shall be allowed by the Department if it is demonstrated that the untreated or treated discharge complies with the performance standards of this Part and any additional NPDES permit requirements.

2) Notwithstanding anything to the contrary in subsection (i)(1), the surface entries and accesses of drift mines located in acid-producing or iron-producing coal seams shall be located in such a manner as to prevent any gravity discharge from the mine.

j) Drinking, domestic or residential water supply. The permittee must promptly replace any drinking, domestic or residential water supply that is contaminated, diminished or interrupted by underground mining activities conducted after January 19, 1996, if the affected well or spring was in existence before the date the Department received the permit application for the activities causing the loss, contamination or interruption. The baseline hydrologic information required in 62 Ill. Adm. Code 1780.21 and 1784.14 and the geologic information concerning baseline hydrologic conditions required in 62 Ill. Adm. Code 1780.22 and 1784.22 will be used to determine the impact of mining activities upon the water supply.

(Source: Amended at 24 Ill. Reg. 5938, effective March 21, 2000)