**Section 240.850 Concrete Storage Structures**

a) The requirements of this Section apply to:

1) All concrete storage structures existing on July 1, 1995 which will continue to be used.

2) Any new concrete storage structures constructed after May 13, 1994.

b) Definitions

"Concrete Storage Structure", as used in this Section, is a formed concrete impoundment, the base of which is at or below ground level, used for temporary storage of liquid oilfield waste or produced water prior to disposal.

"New Concrete Storage Structure" means a concrete storage structure permitted and constructed after May 13, 1994.

"Existing Concrete Storage Structure" means a concrete storage structure constructed prior to May 13, 1994.

c) Concrete Storage Structure Permitting Procedures

All new concrete storage structures constructed after May 13, 1994 are required to be permitted and may not be used until the permit is issued. All existing concrete storage structures constructed prior to May 13, 1994 must be permitted by July 1, 1995 or restored in accordance with subsection (e) below. The permittee shall apply for a permit on a form prescribed by the Department which shall include the following:

1) A map drawn to scale showing the location of the concrete storage structure relative to the lease boundaries, potable water wells and local surface drainage located within 1/4 mile of the proposed structure.

2) Concrete storage structure dimensions.

3) Soil types in the area of concrete storage structure construction.

4) Chemical analysis of produced water to be temporarily stored in the concrete storage structure showing TDS and chlorides.

5) A description of the method for disposal of the produced water or liquid oilfield waste temporarily stored in the concrete storage structure.

d) General Location and Construction Requirements for New and Existing Concrete Storage Structures

1) New concrete storage structures shall not be located:

A) within 200 feet of an existing inhabited structure, unless the current owner of the structure has provided a written waiver consenting to the construction closer than 200 feet. Any concrete storage structure located closer than 200 feet shall be completely fenced to prevent unauthorized access;

B) within 200 feet of a domestic water supply well or 2,500 feet of a municipal water supply well;

C) within 200 feet of a stream, body of water, or marshy land, unless the permittee can demonstrate to the Department that construction standards or topography will prevent discharge from the concrete storage structure;

D) in an area which is subject to annual flooding by streams, rivers, lakes, or drainage ditches.

2) Existing concrete storage structures shall be completely fenced to prevent unauthorized access when located, at the time of permitting, within 200 feet of an existing inhabited structure.

3) Surface water drainage shall be diverted away from all concrete storage structures.

4) Contents from any concrete storage structure shall not be discharged onto the surrounding land surface or into a stream or other body of water unless a permit has been obtained from the Illinois Environmental Protection Agency ("IEPA").

5) The concrete storage structure permit number and the name of the permittee must be posted at all concrete storage structures in a legible and visible manner.

6) All concrete storage structures shall be covered with bird netting or other system designed to keep birds and flying mammals from landing in the concrete storage structure.

7) New concrete storage structures shall be constructed utilizing standard engineering practices using formed concrete bottom and sides and be underlain by a drainage system constructed to allow the monitoring and sampling of fluids present under the structure. After installation of the concrete liner and prior to concrete storage structure use, the structure shall be inspected by a Department Well Inspector. The permittee shall correct damages or imperfections before placing liquid oilfield waste or produced water in the concrete storage structure. The fluid drainage from beneath the pit shall be sampled quarterly. The sample shall be analyzed for chlorides by an "independent testing" facility. The results of the analysis shall be maintained at the facility offices for review upon request, by the Department. If the fluid analysis indicates a leak is present, the Department shall be notified within five (5) days and the pit shall be drained and repaired.

8) Existing concrete storage structures shall have been constructed utilizing standard engineering practices using formed concrete bottoms and sides. Existing concrete structures shall be exempt from the under structure drainage provision specified in subsection (d)(7) above for new structures. However, existing structures shall be subject to inspection and repair in accordance with subsection(f) of this Section.

9) Puncturing or perforating the concrete liner or installing any type of drainage system which penetrates the sides or bottom of any structure is prohibited.

e) Concrete Storage Structure Abandonment and Restoration

1) Prior to removal and or burial of the concrete storage structure:

A) All of the liquid oilfield waste shall be removed and disposed of in a Class II UIC well.

B) Crude oil bottom sediments shall be disposed of in accordance with Section 240.940(a) and (b) or with Department approval, disposed of in a production well equipped with tubing and packer set in accordance with Section 240.760(b) under observation by an inspector from the District Office in which the well is located. If the Department determines through field observations that the disposal activities are endangering the freshwater, the disposal activities shall cease until the condition is corrected. Disposal activities shall not exceed 45 days, after which time the well must be plugged.

C) For new and existing concrete storage structures permitted in accordance with this Subpart and restored after July 1, 1995, the pit residue, not disposed of in accordance with subsection (e)(1)(A) or (B) above, shall be removed from the storage structure and disposed of at an Illinois Environmental Protection Agency permitted non-hazardous special waste landfill provided that concrete storage structures residue containing NORM may be required to be disposed of at a waste facility permitted by the Illinois Department of Nuclear Safety.

D) For existing concrete storage structures not permitted for continued use in accordance with this Subpart by July 1, 1995, and required to be restored, or permitted existing pits restored by July 1, 1995, the pit residue can be buried on site within the concrete structure.

2) If the base of the structure is less than three feet below the ground surface, the structure must be completely dismantled and removed from the site. The surface area shall be leveled and restored in such a manner as to prevent the ponding of water and erosion.

3) If any portion of the structure is below the ground surface, the portion of the structure within three feet of the surrounding surface shall be removed. Any remaining structure must be configured to prevent the accumulation of water within the remaining structure and backfilled to prevent surface ponding and subsidence.

f) Inspection of Concrete Storage Structure

All new and existing concrete storage structures shall be subject to inspection by a Department Well Inspector. If requested at time of the inspection, the concrete storage structure shall be emptied in order to examine the integrity of the structure. The Department may order any remedial work it deems necessary to ensure compliance with Department regulations.

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