**Section 371.224 Chapter IV − Description, Operation and Control of Sludge Handling Facilities**

a) Include a layout illustration of the sludge handling facilities which clearly shows the following:

1) Location of all buildings and other structures;

2) Location of all equipment, units, and processes;

3) Location of all major bypasses and alternate flow paths.

b) Trace the sludge flow through the sludge handling facilities and describe the operation of each unit in detail. The following information must be provided for each unit:

1) Purpose

2) Equipment

A) Manufacturer

B) Model number

C) Number of units

D) Description of equipment

3) Unit illustration − individual unit drawings, diagrams, etc., which clearly illustrate the following:

A) Piping layout

B) Numbered valves, stop gates, slide gates, etc.

C) Unit bypasses and alternate flow paths

4) Relationship to other units

5) Operation

A) Initial start-up

B) Normal operation

C) Alternate modes of operation

D) Bypassing, shut-down and drainage

E) Emergency operation

6) Controls

A) Flow controls

B) Electrical controls

C) Laboratory and other process control techniques

7) Operational problems

A) Unit problems

B) Mechanical problems

C) Troubleshooting guide

8) Routine maintenance considerations

A) Schedule the inspection, cleaning, lubrication, adjustment, calibration, painting, and any other routine maintenance activities recommended by the equipment manufacturer. Maintenance tasks must be scheduled on a daily, weekly, monthly, quarterly, semi-annual, and annual basis. If appropriate, use "hours of operation" to schedule preventive maintenance for equipment.

B) List materials, including paints and lubricants, needed to maintain each unit.

c) Include a valve index with the following information:

1) Number all valves as shown in the unit illustrations required in subparagraph (b)(3) above.

2) Identify the size and type of all valves.

3) Indicate the normal operational setting, i.e., open, closed, etc. for each structure listed.

d) Discuss the importance of numbering and tagging the facility valves in accordance with the valve index.

e) Outline a comprehensive plan for sludge handling and disposal for this facility. The plan must consider seasonal variations, wet and dry weather conditions, weekend operation, and any other conditions that may affect sludge handling and disposal.

f) List the references in the O&M library that supplement discussions of:

1) Operation

2) Laboratory and other process control techniques

3) Operational problems

4) Maintenance