**Section 840.146 Construction Quality Assurance Program**

a) The following components must be constructed according to a construction quality assurance program:

1) Installation of the groundwater collection trench and discharge system required by Sections 840.120 and 840.122 of this Subpart;

2) Compaction of the final cover system subgrade and foundation to design parameters;

3) Application of final cover, including installation of the geomembrane; and

4) Construction of ponds, ditches, lagoons and berms.

b) The construction quality assurance program must meet the following requirements:

1) The operator must designate a construction quality assurance (CQA) officer who is an Illinois licensed professional engineer (LPE).

2) At the end of each week of construction of the final cover system until construction is complete, a summary report must be either prepared by the CQA officer or under the supervision of the CQA officer. The report must include descriptions of the weather, locations where construction occurred during the previous week, materials used, results of testing, inspection reports, and procedures used to perform the inspections. The CQA officer must certify the report. The owner or operator of the Hutsonville Power Station shall retain all weekly summary reports certified by the CQA officer until the completion of the post-closure care period and must make those reports available at reasonable times for inspection and photocopying by the Agency.

3) The CQA officer must exercise judgment to certify the following:

A) That the bedding material contains no undesirable objects;

B) That the closure plan has been followed;

C) That the anchor trench and backfill are constructed to prevent damage to the geosynthetic membrane;

D) That all tears, rips, punctures, and other damage are repaired;

E) That all geosynthetic membrane seams are properly constructed and tested in accordance with manufacturer's specifications;

F) That the groundwater trench is constructed to intersect the water table;

G) That the groundwater trench is properly constructed to slope toward extraction points, and the extraction equipment is properly designed and installed;

H) That an appropriate operations and maintenance plan for the trench and extraction and discharge equipment is provided;

I) That proper filter material consisting of uniform granular fill, to avoid clogging, is used in construction; and

J) That the filter material as placed must possess structural strength adequate to support the maximum loads imposed by the overlying materials and equipment used at the facility.

4) The CQA officer must supervise and be responsible for all inspections, testing and other activities required to be implemented as part of the CQA program under this Section.

5) The CQA officer must be present to provide supervision and assume responsibility for performing all inspections of the following activities:

A) Compaction of the subgrade and foundation to design parameters;

B) Application of final cover, including installation of the geomembrane;

C) Installation of the groundwater collection trench and discharge system required by Sections 840.120 and 840.122 of this Subpart;

 and

D) Construction of ponds, ditches, lagoons and berms.

6) If the CQA officer is unable to be present to perform, as required by subsection (b)(5) of this Section, the CQA officer must provide, in writing, the reasons for his or her absence, a designation of a person who must exercise professional judgment in carrying out the duties of the CQA officer-in-absentia, and a signed statement that the CQA officer assumes full responsibility for all inspections performed and reports prepared by the designated CQA officer-in-absentia during the absence of the CQA officer.

7) The sampling program must be implemented as part of the CQA plan for all construction activities in order to ensure, at a minimum, that construction materials and operations meet design specifications.

A) The sampling program must be designed prior to construction.

B) The sampling program must be based upon statistical sampling techniques and must establish and specify criteria for acceptance or rejection of materials and operations.