Reset Form

PROFESSIONAL ENGINEER CERTIFICATION FOR CONSTRUCTION OF GEOMEMBRANE LINED LIQUID MANURE STORAGE STRUCTURES

State Form 55716 (11-14)
CONFINED FEEDING OPERATION

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Confined Feeding Section
Office of Land Quality
100 North Senate Avenue
MC 65-45, IGCN 1101
Indianapolis, Indiana 46204
(800) 451-6027 extension 2-4473

INSTRUCTIONS:

1. *Use this form to certify construction of a liquid manure storage structure as required in 327 IAC 19-12-4(d).*
2. *Fill in all information requested COMPLETELY.*
3. *Attach narratives, supporting documentation and testing results identified below in the Construction Details Section.*
4. *This certification form must be completed, signed, dated, and submitted to IDEM within thirty (30) days of completing construction and prior to introduction of any animals or manure.*
5. *An Indiana registered professional engineer must certify this form.*
6. *Please submit the Completed Construction Affidavit (State Form 51255) with this certification as required by 327 IAC 19-12-4(d).*
7. *Please send this form to the address listed above.*
8. *Please maintain a copy of these forms in your facility operating record.*
9. *For more information, contact IDEM's Office of Land Quality, Confined Feeding Permits Section, at (317) 232-4473.*

GENERAL FACILITY INFORMATION

Name of Facility	Farm Identification Number
Date of Approval *(month, day, year)*	Approval Number, AW Number
Name of Permittee	
Address of Location	Telephone Number
City	ZIP Code
County of Operation	E-mail Address of Facility Contact
Location of Operation *(nearest crossroads or mailing address)*:	

GENERAL CONSTRUCTION INFORMATION

Start Date of Construction *(month, day, year)*	Complete Date of Construction *(month, day, year)*
Name of Contractor *(If Applicable)*	Telephone Number of Contractor
Name(s) of Structure(s) *(P1, P2, etc.)*:	

CONSTRUCTION DETAILS: The following are the aspects of the geomembrane lined liquid manure storage structure that must be reviewed by the certifying engineer or his representative for compliance with the approved plans and specifications, and the facility permit. Please attach narratives, supporting documentation and the testing results with this form.	Is a Narrative Attached?	
1. **LAGOON CONSTRUCTION**: Please attach required documentation and a narrative discussing the following construction activities. Does the attachment address the following? If not, provide an explanation of why it is not included or not needed.	**Yes**	**No**
a. Subgrade Preparation/Earthen Berms		
i Describe the excavation, subgrade preparation, keyway and fill placement for any berms. Address the following: Was the subgrade prepared as required by the plans and specifications? Was the subgrade free from uncompacted fill, standing water, mud, ice, frozen ground or snow before the liner was installed? Did the subgrade preparation comply with the geomembrane installer's subgrade requirements? Was the subgrade inspected and approved by the certifying engineer?	☐	☐

ii	Identify Contractor(s) that performed the work.	☐	☐
iii	Identify construction specifications, construction quality assurance (CQA) requirements and the CQA consultant(s).	☐	☐
iv	Include daily inspection notes, results of CQA tests, map(s) showing testing locations, pictures, etc.	☐	☐
v	Include PE's opinion that subgrade preparation and earthen berm construction was performed in accordance with the approved plans, specifications and CQA. Include any additional information regarding the earthwork and site preparation.	☐	☐
Comments:			
b.	Perimeter Drain System (if applicable)		
i	Describe the excavation and the installation of the perimeter drain system.	☐	☐
ii	Identify contractor(s) that performed the construction work.	☐	☐
iii	Include inspection notes, construction pictures, etc.	☐	☐
iv	Include PE's opinion that perimeter drain installation was performed in accordance with the approved plans and specifications. Address the following: Was the perimeter drain system installed as specified on the approved drawings? Was the observation/standpipe installed? Was a shutoff valve installed? Was the drain pipe installed within a granular fill? Were pump(s) installed *(if applicable)*? Were pump(s) connected to an electric supply?	☐	☐
Comments:			
c.	Geomembrane Installation		
i	Identify geomembrane liner installation contractor(s).	☐	☐
ii	Identify the construction quality assurance (CQA) requirements, the CQA consultant and testing lab.	☐	☐
iii	Include copies of manufacturer's quality control certificates, daily inspection notes, results of CQA tests (peel and shear), map(s) showing geomembrane panel layout, etc.	☐	☐
iv	Describe how the geomembrane panels were seamed together. Describe certification seams (trial seams) performed by each seamer. Describe non-destructive and destructive tests performed on seams (frequency, vacuum box, peel shear, test results, etc.).	☐	☐
v	Identify any quality control and conformance testing performed on samples of the geomembrane and who performed the tests.	☐	☐
vi	Include the geomembrane manufacturer's written certifications for: a. The suitability of the material for the intended use. b. The expected service life of the geomembrane under the anticipated conditions. c. The physical properties of the liner for meeting the requirements of the appropriate ASTM standards.	☐	☐
vii	Include a letter from the geomembrane installation contractor stating the geomembrane liner was installed according to the approved plans and specifications and the manufacturer's recommendations.	☐	☐
Comments:			

2.	SUMMARY CONCLUSION	Yes	No
a.	Does the certification include a brief narrative summarizing the results of the construction of the lagoon? The documentation should include test procedures, sampling details, analytical methods, laboratory data, field data, etc.	☐	☐

Comments:

3.	RECORD/AS-BUILT DRAWINGS	Yes	No
a.	Provide a set of record/as-built drawings of the lagoon that include a plan(s), cross section(s), detail(s), etc. Do the drawings show the following? If not, please provide an explanation.:	☐	☐
i	The lagoon system dimensions.	☐	☐
ii	The depth of the lagoon.	☐	☐
iv	The top width of the earthen berm(s).	☐	☐
v	The elevations at; the top of berm(s), the bottom of lagoon (top of clay liner) and the operating level (elevation of the bottom of the two feet of freeboard).	☐	☐
vi	The operating volume of the lagoon(s), (volume excluding the freeboard volume).	☐	☐
vii	The slope of the lagoon's interior and exterior side (H/V).	☐	☐
viii	Dimensions of berm's cutoff trench.	☐	☐
ix	Inlets, access ramps, agitation pads, spillways, splash pads, staff gauges, etc.	☐	☐
xi	Identify the geomembrane liner material and thickness.	☐	☐
xii	The location of perimeter drain around the lagoon.	☐	☐
xiii	The location of the perimeter drain's discharge point.	☐	☐

Comments:

5. AMENDMENT APPROVAL

Provide an explanation for any items answered "NO". Any deviation from the approved plans and specifications must have received amendment (327 IAC 19-8-3) approval from IDEM prior to construction. Construction of manure structures not meeting the approved plans, specifications, and the facility permit may result in an enforcement action against the facility.

6. PROFESSIONAL ENGINEER'S CERTIFICATION STATEMENT

I, _____ (your name), being a Registered Professional Engineer in the State of Indiana, do hereby state that the information on and attached with this construction certification report form for _____ (type of structure), constructed at _____ (name of facility), is true and accurate, and contains all information required by the permit and complies with the approved plans and specifications. The construction inspection activities are either directly overseen by _____ or as required in IC 25-31-1-16(b).

The information contained within this report is provided from various sources. This information includes direct observation by _____ personnel, personnel directly supervised by _____, independent off-site testing laboratories, construction contractors and survey firms.

By signing this form, I attest that the information provided above is true and accurate.

Signature	Date *(month, day, year)*

Name

License Number

Date of Expiration *(month, day, year)*

"SEAL"