

Appendix G

Construction Quality Assurance Plan

Quality Assurance Plan

Cumberland LLC - Hog Farm & Waste Storage Facility

¼	¼	Section	Township	Range	Project Name	Project No.
	NW	7	T37N	R18W	Hog Farm & WSF	SUIDA-01-19
Town/Village/City			County		Contact Name	Phone
Trade Lake			Burnett		Jeff Sauer	715-773-1976
Site Address (if available)				Contact Address		
12884 State Highway 48 Grantsburg, WI 54840				N13126 Bruce Mound Road Thorp, WI 54771		
Engineer Name				Address		Phone
Erik Lietz, P.E. Oakridge Engineering, Inc.				877 Gaylord Avenue Mondovi, WI 54755		715-926-1110

1.0 GENERAL REQUIREMENTS

The engineering plan and report (construction specifications inclusive) set forth the requirements for the installation of the waste storage facility(s) and associated components. The project shall be constructed at the locations and to the lines and grades as shown on the enclosed construction plan, in accordance with the attached construction specifications. A pre-construction meeting shall be scheduled to review the drawings, construction specifications, and responsibilities of the parties. At this meeting any questions or clarifications shall be addressed.

2.0 RESPONSIBILITIES

2.1 Owner/Operator

The Owner/Operator is the official spokesman for this project. The Owner/Operator is the person who shall review the construction plan, review the engineering report, and make all contractual agreements relative to construction of this project. Further, the Owner/Operator shall ensure that construction is in accordance with the requirements as set forth in the plans, obtain all permits and is responsible for all financial responsibilities associated with these tasks. The Owner/Operator is the sole person who can authorize any changes during construction that incur financial obligations.

2.2 Engineer

The Engineer (Oakridge Engineering, Inc.) has the authority to review construction related practices and make necessary inspections and/or tests to ensure that all work is in compliance with this construction document set. The Engineer shall review all construction changes and ensure that the Owner/Operator approves such changes prior to installation. The Engineer shall maintain a job diary throughout

construction. The Engineer shall prepare as-built drawings to be submitted to the Wisconsin Department of Natural Resources (WDNR) and any other applicable parties upon completion of the construction.

2.3 Contractor

The Contractor has a contractual agreement with the Owner/Operator for the project construction and installation, as set forth in the construction plan. The contractor shall not make changes, alterations or substitutions to the construction plan without the review and approval of the Owner/Operator, Engineer, and the WDNR. The Contractor must obtain the prior approval and acceptance of financial obligation from the Owner/Operator for all such changes, alterations, or substitutions. The Contractor shall comply with all applicable permits and conduct the work in a safe manner.

3.0 SPECIFICATIONS AND CONSTRUCTION PLANS

3.1 Specifications

The Construction Specifications describe minimum acceptable quality of work and materials for the project. If a conflict arises between the construction plans and specifications, the specification governs the work and/or material.

NRCS Wisconsin Construction Specifications		
Number	Title	Version
1	Clearing	5/2018
2	Excavation	5/2018
3	Earthfill	5/2018
4	Concrete	5/2021
4WS	Embedded or Expansive Waterstop	10/2020
8	Drainfill	5/2018
9	Riprap	10/2020
13	Geotextiles	12/2016
15	Plastic Pipe Conduits	10/2019
26	Topsailing	7/2018
44	Corrugated Polyethylene Tubing	7/2020
204	Earthfill for Waste Storage Facilities	9/2018

See Appendix F for copy of the above specifications

3.2 Engineering Plans

The engineering plans are a visual representation to supplement construction specifications. The drawings include locations, profiles, sections, details, and notes necessary to describe the work to be performed under this contract. A copy of the Engineering Plan submitted to applicable agencies for permit review is included in Appendix G. These plans may not be the approved copy as the permitting process may require updates and additional information. It is the responsibility of the Contractor to obtain the approved construction plan for construction activities.

3.3 Changes to Plans and Specifications

Proposed engineering changes or modifications to the design plans and specifications must be submitted to the Engineer for review and approval **at least 48 hours before** commencement of construction related to the proposed change.

4.0 PERMITS & NOTIFICATIONS

All permits, rights-of-way, and/or easements that are applicable for the construction and/or operation of the facility are the responsibility of the Owner/Operator and shall be available for review by the Engineer. The following notifications are required for the construction of this project:

1. The Engineer must be notified **at least 48 hours prior** to commencement of construction.
2. Post-Construction documentation must be submitted within 60 days of completion to the WDNR.

5.0 SAFETY

The contractor is responsible for compliance with all state and local laws, ordinances, codes, and/or regulations applicable for all construction operations and associated work. Any safety violations witnessed during construction quality assurance visits may be documented by the Engineer. Liability for remedial action or penalties related to all such safety, law, ordinance, code or regulatory violations remain the sole responsibility of the Contractor.

Owner/Operator and the Contractor must coordinate to confirm that Diggers Hotline has been notified a (800) 242-8511 or 811 before construction begins. Diggers Hotline maintains a 72-hour lag period between notification of work to be done and site marking.

6.0 ACCEPTANCE

The Engineer will perform quality assurance (QA) checks of the Contractor's work during construction and upon completion as outlined in this Quality Assurance Plan. **It is the Contractor's responsibility to provide the Engineer with appropriate timelines and notice that items listed in this Quality Assurance Plan are, or will be, ready for QA checks.** All items constructed by the Contractor without the proper QA verification by the Engineer shall be deemed the sole responsibility of the Contractor. If deficiencies are found, Contractor will be responsible for remedial work to bring the installation into conformance with the approved plans and specifications.

Final acceptance of the work will be based on the final Certification Report and as-built drawings prepared by the Engineer. The QA checks during construction and final walk-through will be provided by the Engineer.

It is imperative that the Contractor work in close coordination with the Engineer/Field Representative throughout construction proceedings. Final certification of the construction project depends on proper and complete documentation of critical tasks. Only items made available for timely and complete inspection by the Contractor can be assumed to be certifiable. Improper notification or negligence by the Contractor to inform the Engineering of items requiring inspection, as listed in this Quality Assurance Plan, may require remedial and/or compensatory measures on behalf of the Contractor.

Items which will require field observation by the Engineer or a person working under direct supervision of the Engineer include:

1. Excavation and fill required to construct the feed storage area, planned grade verification of elevations, locations, and soil conditions. Construction staking can be provided as part of this task.
 - a. Elevations may not be adjusted unless prior approval is granted from the Engineer. If a limiting factor is encountered during excavation for the feed storage area (i.e. bedrock or subsurface saturation), contact Oakridge Engineering, Inc. immediately to address the situation and determine how to rectify the problem.
 - b. Engineer shall take verify that the sub-grade is within tolerance of the planned grade. Notification of readiness for verification by the Contractor is essential. Any grades established by the Contractor that are further constructed upon without field verification remain the sole responsibility of the Contractor. All liability for established grades remains solely on the Contractor.
2. Concrete forming, steel placement
 - a. Engineer shall inspect steel and verify conformance with the plans before concrete is poured.
 - b. Verify that any reinforcement steel is supported as necessary.
 - c. Contractor and Engineer shall verify markings on waterstop or other liquid tight seals and containers from curing compound for field verification of conformance with the specifications.
3. Concrete placement
 - a. Concrete mix design shall be coordinated with Contractor a minimum of 48 hours prior to ordering any concrete. Engineer shall review the mix design for compliance with Wisconsin Construction Specification #4, Concrete, and notify Contractor of acceptance or deficiencies. NOTE: WISCONSIN CONSTRUCTION SPECIFICATION 4 "CONCRETE" WAS UPDATED IN MAY, 2020.
 - b. Concrete batch tickets shall be collected by the Contractor and provided to the engineering consultant during CQA site visits. Batch ticket information shall include: site location; farm name; date and time delivered; amount of cement; aggregate size, weight, and moisture content; total water additions; admixture information and quantities; and any other pertinent information shall also be included.
 - c. Engineer will obtain and check water to cement ratio as evidenced by quantities shown on batch tickets.
 - d. Continuous inspection is required for all concrete placement, including that around piping and waterstop, including, but not limited to, areas around expansive waterstops.
4. Curing compound application
 - a. White pigmented curing compound shall be used on all exposed concrete surfaces according to the curing compound manufacturer's recommendations. Concrete surfaces shall be kept moist until curing compound can be applied. Curing compound shall be applied within 24 hours of placement of concrete and/or removal of forms. Form tie sealing shall be completed prior to curing compound application. Curing compound shall cover entire exposed concrete surface.

- b. Engineer shall document time and method of application of the curing compound.
- 5. Backfilling of waste storage facility components.
 - a. Use of appropriate soils and methods.
- 6. Storm water and erosion control practices
 - a. To be monitored by the Contractor. Contractor shall maintain notes on erosion control Best Management Practices (BMPs) either in a field notebook or in an provided on the plan sheets at a frequency of at least once per week. Documentation of BMP inspection after heavy rainfall events of one-half inch or more is required.
 - b. Will be observed by the Engineer at each Quality Assurance site visit. Condition of practices shall be noted and any deficiencies will be brought to the Contractor's attention.
- 7. Final grades and vegetation establishment.
 - a. Contractor shall document applied fertilizer constituents in accordance with the plans and provide tags to Engineer upon CQA observation visit.
 - b. Contractor shall obtain seed tag and document the pure live seed rating. Contractor shall forward seed tag or evidence of the seed mix to the Engineer for verification.

It is the responsibility of the Contractor to notify Oakridge Engineering, Inc. at (715) 723-6777 **at least 48 hours prior** to the above items being ready for quality assurance checks.

7.0 PRE-CONSTRUCTION MEETING

The Owner/Operator, Engineer, and Contractor (including all subcontractors) shall attend a pre-construction meeting held prior to the start of construction. This meeting is critical for proper conveyance of design purpose and discussion of construction methods, materials, and quality assurance responsibilities. The responsibilities of each party include but may not be limited to those described in Section 2.0 "Responsibilities" of this report. Upon completion of the pre-construction meeting, all parties are to sign the "Understanding of Responsibilities" under Section 8.0 of this report.

8.0 UNDERSTANDING OF RESPONSIBILITIES

By signing this Quality Assurance Plan, I attest that I have reviewed and accept the responsibilities assigned herein and agree to have this project inspected and constructed in accordance with the approved plans and specifications. I understand that items listed within this plan must be field observed by the Engineering and construction documentation items listed are required to obtain the Engineer's certification of constructed practices. I understand that all changes or modifications to the approved plans must be approved by the Engineer, WDNR, and Owner/Operator prior to installation. I have read and understand the "Acceptance" terms stated above.

Owner/Operator

_____ Printed Name	_____ Company or Farm Name
_____ Signature	_____ Date
_____ Phone Number	_____ Email

General Contractor

_____ Printed Name of Contractor Representative	_____ Company Name
_____ Signature	_____ Date
_____ Phone Number	_____ Email

Earthwork Contractor

_____ Printed Name of Contractor Representative	_____ Company Name
_____ Signature	_____ Date
_____ Phone Number	_____ Email

Concrete Contractor

Printed Name of Contractor Representative

Company Name

Signature

Date

Phone Number

Email

County Representative

Burnett County

Printed Name of County Representative

County

Signature

Date

Phone Number

Email

Engineer

Oakridge Engineering, Inc.

Printed Name of Engineer Representative

Company Name

Signature

Date

Phone Number

Email