

STATEMENT OF WORK

USDA, Natural Resources Conservation Service
Wisconsin

ANAEROBIC DIGESTER (366)

DESIGN (911)

Deliverables:

1. Design Survey – The following information should be obtained and recorded in the field notes:
 - a. Topographic information
 - b. Location of features that could affect the facility location
 - c. Subsurface soils investigation and/or foundation investigation
 - d. Well location(s)
2. Design Data – The following information should be recorded in the design notes:
 - a. Digester type selected
 - b. Biogas collection, transfer, and utilization alternatives
 - c. Analysis of soils investigation
 - d. Location of the facility
 - e. Volume determination for sizing the facility
 - f. Liner selection
 - g. Safety features
 - h. Erosion control
 - i. Structural design computations
 - j. Quantity computations
 - k. Vegetation establishment requirements
 - l. O&M plan
 - m. Cost estimate
 - n. Quality assurance plan
3. Drawings and Specifications – The conservation practice standard may contain a list of required items for inclusion in the plans and specifications. Typical contents include:
 - a. Location map
 - b. Plan view of system layout
 - c. Minimum two cross section of the facility perpendicular to each other
 - d. Structural details of components
 - e. Details for joining different liner types or new lines to existing liners
 - f. Locations, size, and type of pipelines and appurtenances, including a profile of the waste transfer system
 - g. Details of biogas collection, transfer and utilization
 - h. Requirements for foundation preparation and treatment, including bedrock treatment
 - i. References to components supplied by others (pumps, etc.)
 - j. Vegetative requirements
 - k. Surface drainage/grading plan
 - l. Subsurface drainage details
 - m. Location of soil test pits within 100 feet of the facility footprint on the plan view

- n. Summary of soil logs plotted on the cross sections or profile showing the USCS
 - o. Identification of borrow source location(s)
 - p. Safety features
 - q. Construction site erosion control practices
 - r. Approximate location of utilities
 - s. Specifications of materials and installation
 - t. Quantities
 - u. Quality assurance plan
4. Certification that the design meets practice standard criteria and complies with applicable laws and regulations (NEM Part 505, Non-NRCS Engineering Services)

INSTALLATION (912)

Deliverables:

1. Documentation of pre-construction conference with client and contractor
2. Verification that client has obtained required permits
3. Layout Survey Notes – The following information should be recorded in the field notes:
 - a. Location and alignment stakes
 - b. Grade stakes with offset reference stakes
 - c. Location of all appurtenances
 - d. Location of erosion control features
4. Compliance Checks – The complexity of the project will dictate the need for compliance checks during construction. All surveyed compliance checks shall be recorded in the field notes. Narratives of compliance checks shall be entered on a sheet in the field notes or the job diary. Compliance checks should include:
 - a. Measurements of embankments or wall length
 - b. Required elevations
 - c. Required component dimensions
 - d. Required component materials
 - e. Steel reinforcement placement
 - f. Profiles of embankments
 - g. Facility cross sections
 - h. Soil material and compaction testing
 - i. Quality and quantity of materials
 - j. Adequacy of vegetation establishment
 - k. Adequacy of erosion control
 - l. Maintaining a job diary with the dates and record of inspections made, testing completed, instruction provided to the contractor, etc., to document compliance with standards and specifications
5. Facilitate, implement, and document required design modifications with client, original designer, permitting and funding agencies
6. Advise client/NRCS on compliance issues with all federal, state, tribal, and local laws, regulations and NRCS policies during installation
7. Certification that the installation process and materials meet design and permit requirements

CHECKOUT (913)

Deliverables:

1. As-Built Documentation – As-Built documentation shall include:
 - a. As-Built drawings showing all significant changes in linear measurements, alignment, or design changes
 - b. The final quantities must be shown on the as-built drawing
 - c. Signed statement that the installed practice meets NRCS standards and specifications
 - d. Survey field notes
 - e. Job diary
 - f. Material compliance data
 - g. Photo of completed practice and any components
 - h. Practice location placed on the conservation plan map
2. Provide the following information to the NRCS field office servicing the relevant land unit for entry into the Performance Results System (PRS):
 - a. Technical Service Provider name
 - b. Customer name
 - c. USDA program funding the practice (if known)
 - d. Location of work (state, county, conservation district, land tract identifier)
 - e. Land use of field where the practice was installed (cropland, etc.)
 - f. NRCS practice name and quantity of practice installed in appropriate unit

REFERENCES

- Wisconsin NRCS Field Office Technical Guide (eFOTG), Section IV, Conservation Practice Standard 366, Anaerobic Digester
- NRCS National Engineering Manual (NEM)
- NRCS National Environmental Compliance Handbook
- NRCS Cultural Resources Handbook
- Technical Note 1, An Analysis of Energy Production Cost from Anaerobic Digestion Systems on U.S. Livestock Production Facilities
- Guide to Anaerobic Digesters. US EPA AgSTAR Program, April 2008
- Methane Recovery from Animal Manures: The Current Opportunities Casebook, P. Lusk, Resource Development Associates, Washington, DC, September 1998, NREL/SR-580-25145

CERTIFICATION OF COMPLETION

ANAEROBIC DIGESTER (366)

PROGRAM PARTICIPANT INFORMATION

Name (print): _____

TECHNICAL SERVICE PROVIDER INFORMATION

Name (print): _____

TSP ID Number: _____ Expiration Date: _____

TECHNICAL SERVICE PROVIDED

Design (911)

Installation (912)

Checkout (913)

I hereby certify that the technical services I provided as a Technical Service Provider for this component(s) checked above: (1) comply with all applicable Federal, State, Tribal, and Local laws and requirements, (2) meets applicable USDA NRCS conservation practice standards, specifications, and program requirements, (3) are consistent with and meet the particular conservation program goals and objectives, (4) that I have provided the above named Program Participant the Deliverables in this Statement of Work for this component, and (5) comply with all "Certification Terms" as identified in the Technical Service Provider Certification Agreement.

Technical Service Provider Signature

Date