

**STATEMENT OF WORK (SOW)
WASTE TREATMENT (629)
SOUTH DAKOTA
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These deliverables apply to this individual practice. For other planned practice deliverables refer to those specific SOW's.

DESIGN

Deliverables

1. Pre-design conference with client and Natural Resources Conservation Service (NRCS) representative.
2. Design documentation that will demonstrate that the criteria in NRCS practice standard have been met and are compatible with other planned and applied practices.
 - a. Practice purpose(s) as identified in the conservation plan.
 - b. List of required permits to be obtained by the client.
 - c. Compliance with NRCS national and state utility safety policy (National Engineering Manual (NEM), Part 503 - Safety, Subpart A, Engineering Activities Affecting Utilities, 503.00 through 503.06).
 - d. Practice standard criteria related computations and analyses to develop drawings, plans, and specifications including but not limited to:
 - i. Objectives and outcomes of implementation.
 - ii. Process diagram showing volumetric flow rates, waste load projections, unit process volumes and hydraulic retention times, projected air emissions, and projected nutrient fate.
 - iii. Expected system performance.
 - iv. Annual operating costs where appropriate.
 - v. Quantities and fate of any byproducts.
 - vi. Control system requirements.
 - vii. Process monitoring requirements.
3. Documentation showing the facility or process has achieved the intended purpose in similar situations and locations
4. Sufficient copies of written plans and specifications including sketches and drawings shall be provided to the client that adequately describes the requirements to install the practice and obtain necessary permits.
5. Specific detailed requirements for the waste treatment design and the development of construction plans and specifications are outlined in the South Dakota Engineering and Spot-Checking Manual (SDEDSCM), under the Waste Management Structure Practice Requirements. Where specific forms or job sheets are mentioned in the SDEDSCM, an equivalent may be substituted. The guidance contained in this manual shall be considered as the minimum acceptable for this practice.
6. Detailed operation and maintenance (O&M) requirements including such things as loading rates, O&M manuals for specific components, start-up procedures, trouble shooting guide(s), and monitoring and reporting plans.
7. Certifications that the design meets practice standard criteria and comply with applicable laws and regulations (NEM, Subpart A, 505.03(b)(2)).
8. O&M Plan.
9. Develop and sign an engineer's cost estimate based on project quantities. Provide revised cost estimates in the event of changes to project quantities or completion of final design.
10. Develop a list of practices for the project that includes the practice unit and extent. Provide a revised list of practices, practice units, and extents in the event of changes to these values or completion of the final design.
11. Provide an anticipated installation schedule.
12. Design modifications during installation as required.

INSTALLATION

Deliverables

1. Pre installation conference with client, contractor, and NRCS representative.
2. Verification that client has obtained required permits.
3. Staking and layout of components as shown on the drawings. Includes layout notes as appropriate.
4. Installation inspection (according to inspection plan as appropriate):
 - a. Actual materials used (NEM, Part 512, Subpart D, Quality Assurance Reviews, 512.33).
 - b. Inspection records.
5. Specific detailed requirements for waste treatment installation are outlined in the SDEDSCM, under the Waste Management Structure Practice Requirements. Where specific forms or job sheets are mentioned in the SDEDSCM, an equivalent may be substituted. The guidance contained in this manual shall be considered as the minimum acceptable for this practice.
6. Facilitate and implement required facility design modifications with client and system provider.

7. System start-up assistance and initiate process monitoring.
8. ***Advise client/NRCS on compliance issues with all federal, state, Tribal, and local laws, regulations, and NRCS policies during installation.**
9. Certification that the installation process and materials meet design and permit requirements.

CHECK OUT

Deliverables

1. As-Built documentation:
 - a. Extent of practice units applied.
 - b. Drawings.
 - c. Final quantities.
2. Specific detailed requirements for Waste Storage Facility checkout design and the development on construction plans and specifications are outlined in the SDEDSM, under the Waste Management Structure Practice Requirements. Where specific forms or job sheets are mentioned in the SDEDSM, an equivalent may be substituted. The guidance contained in this manual shall be considered as the minimum acceptable for this practice.
3. ***Start-up data showing facility or process is working as intended.**
4. ***Certification that the facility or process meets NRCS standards and specifications and is in compliance with permits (NEM, Subpart A, 505.03(c)(1)).**
5. ***Test results and interpretations as required.**
6. Progress reporting.

Items marked with an asterisk (*) will be delivered to the designated conservationist.

REFERENCES

- South Dakota Technical Guide (eFOTG), Section IV, Conservation Practice Standard – Waste Treatment (629) and other related practices
- NRCS Agricultural Waste Management Field Handbook, 210-VI-NEH, 651
- SDEDSM
- NRCS NEM