

PA367. ROOFS AND COVERS

DESIGN AND CHECK REQUIREMENTS

The following items must be addressed in the design folder for the roof or cover:

Design Data Summary

Important data is recorded and is consistent with the rest of the conservation system. This includes design calculations & documentation for:

- 1) Type of facility for waste, agri-chemical, etc. to be covered
- 2) Type of roof or cover (rigid, semi-rigid, flexible)
- 3) Dimensions of roof or cover
- 4) Roof or cover support, or floatation system
- 5) Anchorage system and/or pressures
- 6) Material compliance with appropriate specification(s)
- 7) Precipitation removal
- 8) Venting
- 9) Gas collection, removal and/or utilization
- 10) Access to facility
- 11) Safety and biosecurity items

Operation & Maintenance Plan

A written site specific O&M Plan, including:

- 1) Instructions for maintaining support or floatation of the cover, as applicable.
- 2) Precipitation removal
- 3) Procedures and recommended frequency for checking cover and anchorage for leaks or other defects
- 4) Instructions for removing or opening and replacing the cover for operation and maintenance of storage or treatment facility
- 5) Emergency action plan, including how to deal with excessive gas production
- 6) Safety precautions, including confined space procedures
- 7) Manufacturers' warranties

Construction Specifications

Enclose construction specifications PA367, PA313S, PA558, PA632, or others as applicable.

Include any "additional conditions" or items that are site specific, or must be defined to supplement the standard specification. (See instructions for use of each utilized specification.)

Add any special or "by-other" specifications for all materials & equipment to be included in the cover, support or floatation system, anchorage, precipitation removal, and gas collection and removal.

Engineering Drawings

GENERAL

On each drawing sheet, the title block should show the operator's name, type of operation, county and the persons involved in drawing, designing, and checking the storage facility.

Include any standard drawings made by NRCS, or designed by others and concurred in by NRCS that are needed, and include them in the drawing index on the cover sheet.

Listed are items that should be included:

PLAN VIEW SHEET(S)

- North arrow
- Bench mark(s)
- Scale
- Legend
- Existing structures
- Designed structures
- Future structures
- X-section locations
- Construction access
- Construction limits

CROSS SECTION SHEET(S)

- Two sections, minimum
- Scale(s)
- Loading structure/pipe
- Unloading structure/pipe
- Reference to detail drawings

DETAIL SHEET(S)

- Cover
- Anchorage
- Cover removal or openings
- Gas collection
- Flare or utilization equipment
- Water removal
- Safety signs & fence

SEQUENCING STATEMENT:

- E&S control
- Construction sequences
- Special considerations
 - Equipment
- Permits & agreements
- Manure management
- Vegetative requirements
- Fencing and safety features
- References to specific standards and drawings
- One-Call statement

Erosion & Sediment Control Plan

See DEP's Erosion and Sediment Pollution Control Program Manual or Conservation District guidance.

Construction Check Data

Quality Assurance Plan

Site-specific plan that addresses, but is not limited to:

- What specific items need inspection and when?
- Who will do the actual inspection?
- Is any testing equipment required for the inspection?

ONSITE VISITS

The QAP must include, at a minimum, as applicable to the specific job, onsite visits prior to:

- 1) Start of construction.
- 2) Installing cover.
- 3) Backfilling the anchor trench.
- 4) Completion of gas collection system.
- 5) Completion of water removal system.
- 6) Backfilling gas transfer pipe & water removal pipe.
- 7) Completion of the flare or gas utilization system.
- 8) Completion of all construction.

Documentation

A full set of as-built drawings, with construction certification signatures.

Check survey notes.

Documentation of cover seam tests and sealing of cover perimeter.

Material certifications, photographs, warranties, etc. as applicable.

Contractors' certifications of conformance.
Engineer's certification of completion.

