AGRICHEMICAL HANDLING FACILITY

DESIGN AND CONSTRUCTION CHECK REQUIREMENTS

The following items must be addressed in the design folder for the agrichemical handling facility. The following pages shall be included:

(1) Table of Contents
(2) Design Data Summary
(3) Soils and Foundation Data
(4) Engineering Drawings
(5) Construction Specifications
(6) Operation and Maintenance Plan
(7) Erosion & Sediment Control Plan
(8) Construction Check Data

Listed below are specific items that are required in the design:

(1) Table of Contents

This organizes the design folder.

(2) Design Data Summary

Important data is recorded and is consistent with the standard and specification. This includes:

- Survey data
- Soils investigation information
- Types of pesticides used
- Volume of existing or proposed sprayers
- Required design loads and calculations
- Dimensions and material requirements for structures, including wash bays, sumps, etc.
- Materials, including coatings, liners, concrete type, manufactured components, etc.
- Ventilation, where required.
- Utility details, including plumbing, electrical, etc.
- Cost estimate
- Roof and surface water controls
- Vegetation requirements
- Source of useable water

(3) Soils and Foundation Data

Written soils description and map for project location and with site specific comments. Soils test pit information if determined necessary.

Document need for rock excavation, drainage, isolation from open foundation rock, and depth limitations based on soils investigation.

(4) Engineering Drawings

GENERAL
On each drawing sheet, the title block shall show the operator's name, type of operation, county and the persons involved in designing, and checking the agrichemical handling facility design.

All agrichemical handling facility designs require approval by a registered Professional Engineer or an individual with NRCS job approval authority for the type and dimensions of the facility.

Listed are items that should be included:

PLAN VIEW SHEET(S)
North arrow
Utilities/roads
Bench mark(s)
Spot elevations or contours
Apparent property lines (if appropriate)
Water supply location
Water courses
Structure locations
Scale
Legend
Access
Centerlines
X-section locations
Test pit or auger hole locations (if done)
Construction limits
Borrow area
Spoil area
PA One-Call statement

CROSS-SECTION SHEET(S)
Two sections, minimum
Scale(s)
Test pit or auger hole profile(s) if done.
Original ground and proposed grade
Structure dimensions and slopes Earth fill zones and slopes
Concrete and reinforcement
Access
Reference to detail drawings

(5) Construction Specifications

Enclose the applicable specification(s), e.g. 313, 362, 561, 342.

Complete all site specific items of work in Section 8 (Additional Conditions).

(6) Operation and Maintenance Plan

A site specific plan is written and indicates as a minimum:

- Brief description of the facility. Define parameters used to size and design the facility such as storage tank and equipment sizes.
- The facility will not be used for purposes other than the storing, mixing, loading, cleaning, and maintenance of materials and equipment used for agrichemical application.
- An inventory of agrichemicals to be stored or handled at the facility. Material Safety Data Sheets must be available on site.
- The proposed method of handling and disposing of rinsate, washwater, and spills.
- A process for handling accumulated rainfall.
- A process for handling accumulated sediment.
- A strategy for cleaning surfaces between different agrichemical mixing operations.
- An inspection plan of structural components such as the condition of concrete, curbing, sump, access roads, building structure, etc. Note the timing of inspections, conditions that would cause concern, and required actions as appropriate.
- Any weekly, monthly, or annual maintenance that may be necessary for the proper functioning of the system components including, but not limited to, concrete surfaces, sumps, pumps, hoses, pipelines, building materials, electrical equipment, and other materials and equipment.
- A schedule of any required written inspection and maintenance reports.
- Proper winterization of the facility.
- Required safety signage.
- An Emergency Response Plan
- Safety features in place; e.g. warning signs, shower, eyewash, ventilation, fencing?

(7) Erosion and Sediment Control Plan

Refer to DEP Erosion and Sediment Pollution Control Program Manual and consult with the local Soil Conservation District.

(8) Construction Check Data

QUALITY ASSURANCE PLAN

A 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 the:

1. Start of construction.
2. Completion of foundation excavation, to observe and record the foundation conditions encountered and compare with the conditions assumed in the design.
3. Completion of reinforcing steel placement.
4. Roof post installation.
5. Truss installation
6. Placement of concrete floor or walls.
7. Application of concrete coating and joint sealing.
8. Completion of final grading.

DOCUMENTATION

Project documentation shall include:

1. A full set of as-built drawings, with construction certification signatures. Any modifications should be recorded in red.
2. Cover sheet shall be clearly marked “As-Builts” and include list of contractors involved and persons involved in the inspection and documentation of the as-builts.
3. Checked survey notes.
4. Material certifications, photographs, etc. as applicable.
5. Contractors’ certifications of conformance.