



Manure Holding Tanks



2024

ABOUT THIS PROJECT:

Market Segment:
Wastewater Collection
& Treatment

Owner/ Developer:
Vanguard Ag

Products Used:
Xypex Patch'n Plug,
Xypex Concentrate,
Xypex Modified

Engineer:
Vanguard Ag

General Contractor:
Sunland Construction

Location:
Clovis, New Mexico, USA

This project involved the application of Xypex crystalline waterproofing across 60,000 sq ft of concrete manure holding tanks in Clovis, New Mexico, for Vanguard Ag, a developer specializing in agricultural waste-to-energy systems. The tanks support anaerobic digestion, a process that breaks down farm and food waste to produce renewable biogas and agricultural byproducts.

Given the harsh operating environment—exposure to manure slurry, hydrogen sulfide (H₂S), methane, and fluctuating pH levels—Xypex was selected for its chemical resistance, self-sealing properties, and long-term durability.

Key engineering advantages of this solution include:

- Self-healing capability (sealing cracks up to 0.5mm over time), critical for dynamic wastewater structures.
- Elimination of membrane delamination risks, as the treatment is integral to the concrete.
- Sustainability benefits, including VOC-free composition and extended infrastructure lifespan.



Sunland Construction, the general contractor, self-performed the application across six tanks using Xypex Concentrate (primary waterproofing), Xypex Modified (enhanced protection in high-stress zones), and Xypex Patch'n Plug (for crack repair prior to treatment).

The concrete surfaces were prepared by cleaning, pre-wetting, and repairing defects to ensure optimal crystalline penetration. Xypex's unique technology reacts with moisture and unhydrated cement particles to form insoluble crystals, permanently sealing the concrete against water and chemical ingress.

The project was completed successfully, providing Vanguard Ag with a low-maintenance, corrosion-resistant solution tailored to the demands of large-scale anaerobic digestion. Xypex's performance aligns with USDA and wastewater industry standards, making it a proven choice for agricultural and industrial concrete protection.

