



NDEQ RCRA Enforcement Case Study: Ag Chemical Facility

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Environmental Quality,
Waste Management Section
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The Company:

- Multistate Agrichemical Company
- Formulation and Mixing of liquid chemical products
- Bulk Liquid Storage
- Transportation and Distribution



The Facility:

- Company Branch in Southwestern Nebraska
- Liquid Chemical Facility
- Dry Fertilizer Facility
- Warehouse Facility
- Product Trucked Off Site



Total Cost:

- Fines and SEPs:
–\$175,000
- Overall cost estimate for Closure and Post-Closure:
–\$2,724,775.00+
- Total Expense: \$2.9 Million

The Complaint:

- Received September 11, 2001 from local Police Department about The Facility, a local Fertilizer Plant
 - Alleged large chemical spill inside building
 - Alleged contaminated soil disposal at local farm
 - Alleged burial of hazardous waste on site

The Internal Spill:

- Photo shows 20,000 gallon bulk tanks containing Penncap-M insecticide
- Stands had been propped up with wood blocks
- Closest tank toppled into next three tanks



The Internal Spill (cont):

- Forth tank canted but not toppled
- Fifth tank still intact
- Bottom valves sheared off on fallen tanks
- Approx 16,000 gallons of Penncap-M spilled in contained area



The Internal Spill (cont):

- Spilled product was contained within building, no release to the environment
- Spilled product was recovered via vacuum pumping to empty, untoppled 5th tank in containment area (#79 in previous picture)
- Investigation showed that concrete foundation under cone stand failed and allowed tank to topple forward and to the side into neighboring tanks
- Wood bracing was completely inadequate to prevent or mitigate this structural failure

The Contaminated Soil:

- Photo shows where old Quonset Hut was located, used to store 2,4-D herbicide since mid-1970's
- Building was torn down to construct truck off-loading area



The Contaminated Soil (cont):

- Soil and concrete were excavated during Quonset demolition project
- Discolored soil with an odor is discovered beneath the Quonset floor slab
- Arrangements made to transport and dispose of soil and concrete on nearby Farm as fill, material was never tested to determine if hazardous
- Fill material was then covered with several truckloads of clean clay at farm site

The Contaminated Soil (cont):

- Photo shows soil pile on site at local Farm
- The landowner remarked that the soil had a definite chemical odor when it arrived on site



The Investigation:

- Conducted by NDEQ on September 24, 2001
- Confirmed large Methyl Parathion spill (Penncap-M) inside building's secondary containment, though no release to the external environment
- Confirmed disposal of 2,4-D contaminated soil to a local Farm (LDR restriction requirements, Title 128 – Chpt 20, §005)
- Unable to confirm burial of waste onsite at The Facility until November, 2001

The Investigation (Cont):

- Discovered improper shipment of tank rinsate waste to related out-of-state facility without a Hazardous Waste determination, shipped while labeled as a product not as waste (Title 128, Chpt 10, §002.01)
- Facility was also storing Hazardous Waste from another related plant on site in tanks that did not meet 264, Subpart J requirements of 40 CFR (75 barrels of Lindane)
- Waste buried on site was composed of tank scrapings from tank cleaning

Soil Sampling:

- Photo shows soil samples taken from local Farm
- Holes were dug approximately 18 inches deep through clean cover soil to reach the contaminated material



Soil Sampling (cont):

- Photo of 300+ drums of contaminated soil excavated from The Facility plant
- Approximately every 30th drum sampled



Soil Sampling (cont):

- 8 samples taken from fill material at local Farm, 4 were hazardous for 2,4-D
- 10 samples were taken from The Facility plant burial of tank scrapings, 9 were hazardous for 2,4-D
- Both sites also had high levels of Methyl Parathion (P071) and detectable levels of Lindane (pesticide, currently banned)

Remediation Efforts:

- Notice of Violation issued in April 18, 2002
 - Illegal Storage and Disposal
 - Storage – 75 barrels of Lindane waste stored at The Facility
 - Disposal – Burial of tank scrapings along east property line
 - Unmanifested Waste Shipments
 - Land Disposal Restriction violations (Farm)
- Remedial activities required at farm
 - Part of NOV (informal enforcement)
 - Immediate removal of contaminated soil
 - Immediate water well monitoring
 - Submittal of a Closure Plan

Formal Enforcement:

- Formal enforcement began May 24, 2002
 - Conduct a Criminal Investigation
 - Proceeded with civil enforcement
 - Penalties
 - Corrective Measures
 - Closure/Post Closure

Informal Enforcement:

- Remedial Activities at The Facility plant site
 - Partial Excavation of Burial Site
 - Excavated Soils Shipped off-site Oct. 2001
- Remedial Activities at Farm Site
 - Water Well tested June 2002, no contamination above MCL's
 - Contaminated soils excavated and shipped off-site in August of 2002

Site Status:

- Farm:
 - Contaminated soil removed in 2002 and properly disposed
 - Contaminated soil has been replaced with clean fill





Site Status:

- The Facility plant:
 - RCRA Post-Closure Permitting
 - No remedial activities have begun beyond initial soil removal
 - Methyl parathion has been eliminated from the site
 - Waste reduction efforts have been implemented

Site Status:

- New covered 2,4-D loading dock where Quonset used to be and farm soil generated
- Cover built to reduce amount of wastewater generated by precipitation events



Site Status:

- Tipped tanks now on cradle stands
- All transfers now through dedicated hard piping to reduce waste from line flushing



Fines and Settlement:

- On November 25, 2003 the Nebraska A.G. Office settled the Civil Enforcement Action for 8 violations of State Hazardous Waste Regulations
 - Failure to complete Hazardous Waste determination on 2,4-D soil
 - Disposal of Hazardous Waste (2,4-D) at local Farm
 - Failure to determine if 2,4-D soil needed treatment before disposal (LDR Violation)
 - Hired hauler to transport Hazardous Waste w/o proper documentation
 - Illegal storage of Hazardous Waste (Lindane barrels)

Fines and Settlement (cont):

- Failure to make Hazardous Waste determination on waste water/scrapings from tank cleaning
- Shipped Hazardous Waste w/o proper documentation/manifest
- Operating illegal/unpermitted Hazardous Waste management unit
- Total Fines and SEP: \$175,000.00
- Remediation Cost: \$2,724,059.00

Closure/Post Closure:

- December 2005 – C/PC plan for the facility was submitted
 - Clean Closure achieved for the Farm site!
- December 2006 – Closure/Post Closure plan approved
- 2007 – 2 Letters of Warning issued for failure to comply with that C/PC plan



Permit Application:

- October 2008 – NDEQ & EPA submitted a call letter for a Part B permit application
 - This begins several years of comments, responses, delays, and requests for extensions on the part of the facility
- 2011 – Issuance of 2 Notices of Deficiencies, and 1 Notice of Violation from failure to complete Part B permitting process

Permit Application (cont):

- 2011-2012 – more changes to Part B permit application and more NODs
- May 2012 – Administrative Order issued by NDEQ including detailed compliance schedule. (contested)
- January 2013 – Completed Post-Closure Permit application is received
- April 2013 – Permit issued (finally!)

Permit Application (cont):

Major Events for The Facility plant

2001	Complaint Received
2002	NOV & Penalties (Closure Plan and Immediate Removal Farm A)
2003	Consent Decree
2004	C/PC Plan Preparation (Closure Plan approved for Farm A)
2005	C/PC Plan Submitted (Clean Closure for Farm A)
2006	C/PC Plan Approved
2007	1st and 2nd LOW
2008	Part B Call In
2009	Part B Submitted
2010	NDEQ Comment
2011	1st, 2nd NOD and NOV
2012	Administrative Order
2013	Part B Completed and Permit Issued



Lessons Learned:

- Understand the Waste Management aspects of your operation
 - Don't concentrate only on profit!
- Understand the environmental regulations that apply to your business
- Engage in Waste Management Planning
- Strengthen your Environmental Management System

Thank You for Your Time

- NDEQ – Waste Management Section
– (402) 471-4210
- William Gidley – Section Supervisor
- Please address additional questions to the number above, email NDEQ.moreinfo@nebraska.gov or call Erik Waiss, our Environmental Assistance Coordinator at (402) 471-8308