

DuPont Performance Coatings

COMPANY BACKGROUND



DuPont, formally named E.I. du Pont de Nemours and Company, was established in 1802. The company began as a gun powder manufacturer but diversified throughout the years to be a leader in innovation, creating such products as nylon and Teflon. With 215 different sites across the globe, a variety of different products are created and developed. DuPont produces electrical materials, construction materials, and inoculants. The Fort Madison site focuses on performance polymers, ink jet inks, and other performance materials.



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PROJECT BACKGROUND

DuPont, concerned with the environmental problems plaguing the world today, has made sustainable growth a priority. With the environment in mind, DuPont has made it a corporate policy for all facilities to develop and implement a groundwater protection plan. The plans must identify and prioritize all potential sources of groundwater contamination and then determine the appropriate steps to eliminate the risk of a spill reaching groundwater.

INCENTIVES TO CHANGE

DuPont's concern for the welfare of the environment is the driving force for protecting groundwater. In addition, it is also economically beneficial, as remediation costs can be in the millions of dollars. In addition, if the groundwater were to become contaminated it could harm DuPont's public image as an environmentally concerned company. Since such a contamination could be harmful for the company, the environment, and the surrounding community, it is in the company's best interest to take steps to protect groundwater.

RESULTS

Relocation

Upon investigation, it was determined that the storage of hazardous waste tank wagons was the highest priority source. The tank wagons are stored in a gravel lot, offering little protection for the groundwater. It is recommended that they be relocated to another area on site that already offers containment. Another identified potential source was a portion of raw materials stored in a building offering no containment. It is recommended that these materials also be relocated to a different building where containment is already provided. The relocation of these materials is a simple and inexpensive solution to protecting the groundwater.

Spill Berm Installation

Several of the storage buildings on sight offer no containment in the event of a release. For these buildings, it is recommended that spill berms be installed in the doorways to prevent spilled material from exiting the building and entering the groundwater. The spill berms are also capable of withstanding fork truck traffic without losing shape and are relatively inexpensive. This could prevent up to 550 gallons of material from entering the groundwater.

Spill Berm and Level Probe Installation

A building housing several large storage tanks was identified as another potential source for groundwater contamination. The building is relatively small, making it difficult to install dikes and trenches. Therefore, it is recommended that spill berms be installed in the doorways and level probes be installed in the tanks. The berms



will prevent spilled material from exiting the building while the level probes alert employees to the problem.

Spill Decks for Smaller Inventory Materials

Several smaller inventory storage areas were recognized as potential sources for groundwater contamination. For these materials, it is recommended that spill decks be purchased. The spill decks function with fork trucks and are capable of containing any spilled material. This could prevent a safety hazard in high traffic areas and up to 55 gallons of material from entering the groundwater.

Drive Through Containment

Several of the tank wagon loading areas around the plant are potential sources for groundwater contamination. For these areas it is recommended that drive-through spill berms be purchased. The berms are capable of containing possible spills and withstanding the weight of tank wagons. They are less expensive than repaving the loading areas; however, more research must be done to determine their life span and integrity.

Project	Annual Cost Savings	Environmental Results	Status
RELOCATION	\$905-\$50,500	55 - 5,000 GALLONS	RECOMMENDED
SPILL BERM INSTALLATION	\$905-\$5,070	55 - 550 GALLONS	RECOMMENDED
SPILL BERM AND LEVEL PROBE INSTALLATION	> \$17,020	35,000 GALLONS	RECOMMENDED
SPILL DECKS	\$905	UP TO 55 GALLON SPILL PREVENTION	RECOMMENDED
DRIVE THROUGH SPILL BERMS	\$11,260	5,000 GALLONS	RECOMMENDED

*Estimation based on soil contamination only, does not include remediation cost for groundwater or federal fines.