

## **Long Term Monitoring and Measurements of Explosives at the Louisiana Army Ammunition Plant, Minden, Louisiana**

By:

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Louisiana Army Ammunition Plant is a 14,974-acre government owned contractor operated facility located 22 miles east of Shreveport, Louisiana. The plant was placed on the EPA National Priorities List in 1989 due to contamination caused by past disposal of explosives- laden wastewater. An interim remedial action consisting of draining and treating wastewater and soil incineration was initiated in 1988 and completed in 1994.

A demonstration of natural attenuation of explosives was conducted at Area P, a former waste lagoon area. The objective of the demonstration was to establish through appropriate site monitoring that natural attenuation is occurring.

The site has unique geologic formations, which promotes natural attenuation. Regionally, the plant lies within the North Louisiana Syncline, a subsurface structural feature located to the east of Sabine Uplift and west of the Monroe-Sharkey Platform. The stratigraphy of the plant reflects the Syncline by anomalous thickening or thinning of lithologic units including surficial Pleistocene deposits and older Eocene, Cretaceous and Jurassic formations found in the subsurface. Small uplifts exist in the area and significantly modify the local structural geology (i.e., formation dip) and the groundwater flow regime.

Long term remediation strategy continues and consists of ground water monitoring, monitored natural attenuation and numerical modeling. The groundwater data indicate slow subsurface flow due to the low permeability media. Trends in contaminant concentration are generally static to declining over time. This poster will illustrate the role of the site geology and monitoring in regards to the natural attenuation of explosives.