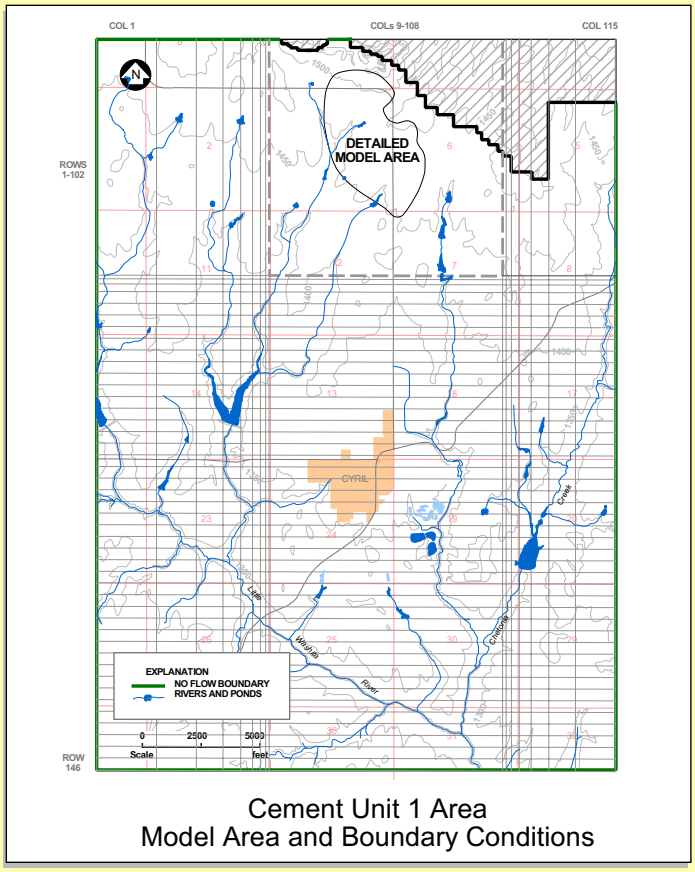
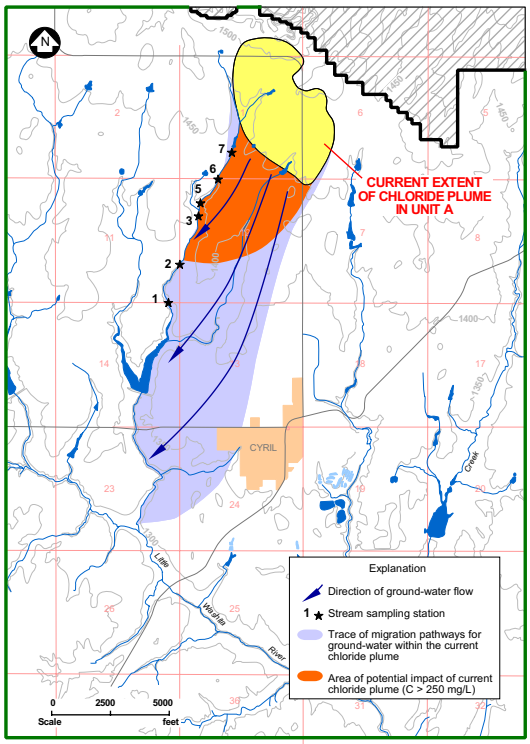


Cement Unit 1 Area
Model Area and Boundary Conditions



Cement Unit 1 Chloride Plume

Cyril Site, Caddo County, Oklahoma

Problem

Chloride contamination of ground water as a result of former oil production operations. Plume in excess of 400 acres. Derogation of municipal water supplies.

Geologic/Hydrogeologic Conditions

About 60 to 100 feet of fine-grained commonly calcareous/gypsiferous sandstones of the Rush Springs Sandstone, overlying approximately 235 feet of red shales with sand and carbonate stringers, of the Marlow Formation.

SSP&A's Role

Construction of multi-layered model to simulate ground water flow conditions.

Coupling of ground water flow model with particle tracking and mass transport codes to evaluate fate and transport of chloride plume under natural and pumping conditions. Provided litigation support.

Dr. Stavros Papadopulos is a member of the Cyril technical committee.

Software

ModIME (MODFLOW Integrated Modeling Environment)
PATH3D particle tracking code, MT3D mass transport code

Key Personnel

Stavros Papadopulos, Gordon Bennett, Weixing Guo, Christopher Neville, Yiqiang Zhang

Recommended Remedy

Using results obtained from model simulations the Cyril technical committee will recommend "natural attenuation" with extensive stream and ground-water monitoring program.