UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

DP Barcode: 259794
Case No: 046754
Chemical: 123000 Isoxaflutole

MEMORANDUM

Date: October 7, 1999

To: Dan Kenny
Herbicide Branch
Registration Division

From: Ian Kennedy, Ph.D., Hydrologist Ian Kennedy 10/07/99
Environmental Risk Branch 2
Environmental Fate and Effects Division

Thru: Pat Jennings, Acting Branch Chief Pat Jennings 10/7/99
Environmental Risk Branch 2
Environmental Fate and Effects Division

Subject: Site Selection for Isoxaflutole PGW study

The registrant for isoxaflutole, Rhône-Poulenc Ag Company, has submitted four candidate sites for a prospective groundwater (PGW) study to be conducted on a vulnerable soil. We believe the third of these four, called 99IN05 will make the best site for a PGW study.

Four sites were presented in this report, all in northern Indiana, and all on Tracy (Coarse-loamy, mixed, mesic Ultic Hapludalfs) or Coupee (Fine-loamy over sandy or sandy-skeletal, mixed, mesic Ultic Hapludalfs) soils. The organic matter content in the top twelve inches of all the soils is on the high side, but in light of the difficulty in finding a suitable site for this study we believe a study should proceed anyway.

Rhône-Poulenc Ag Company did some preliminary soil tests on the potential plots, giving us some confidence about organic matter contents, soil textures and permeabilities. Although these tests do not preclude the requirements for a full site characterization, as described in the PGW guidance, they do help us to choose the best site and make it less likely the chosen site will have characteristics which fail to meet PGW requirements. Except as mentioned above with the high organic matter content, the sites all seem to meet PGW requirements. All have a water table depth of less than 20 feet, an unconfined aquifer, and no flow restrictive layers apparent from the preliminary measurements. All generally have 2% or less slopes and areas of two to five acres.

Land adjacent to site 99IN06 slopes away from the plot, which may make the hydraulic gradient of this site a bit less stable than the others. Additionally, site 99IN04 was described as being on a hilltop with land also sloping away at the edges The depth to the water table in 99IN04 varies betweek 13 and 17 feet – greater than the variation at the other proposed sites, so this site too could have a less stable hydraulic gradient. Site 99IN02 had the highest organic matter content of the four proposed sites, and was the only one of the four to have greater than 2% OM in the 12-18 inch zone. Site 99IN04 had the lowest OM content measured, just slightly over 2% in the top 12 inches. Site 99IN05 had the highest measured permeability.

Although 99IN04 has the lowest organic matter content, the fact that the site slopes downhill at its edges coupled with the higher permeability of site 99IN05 lead us to choose 99IN05 as the best of these four sites for a prospective groundwater study.