

GRC 92

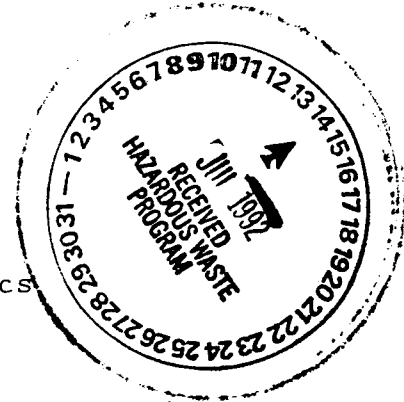


Route 3, Box 7
Gallup, New Mexico
87301

505
722-3833

July 13, 1992

Steve Alexander
Hazardous and Radioactive Materials Bureau
New Mexico Environment Department
P.O. Box 26110
Santa Fe, New Mexico 87502-6110



Re: Annual Groundwater Sampling - Phenolics

Dear Mr. Alexander:

Pursuant to Attachment G, Part 2.D.(i) of Giant Refining Company's (GRC) Part B Permit, GRC submits the enclosed statistical analysis and narrative explanation of the presence of Phenolics in MW-1 as reported in the April 23, 1992 annual groundwater sampling event analytical data.

Attached are statistical worksheets for Cochran's Approximation of the Behrens-Fisher Student-T Test, a statistical method approved in HWMR-5, Part V, Section 264.97. Attached also is the worksheet for Coefficient of Variance, (CV), using the formula outlined in the U.S. EPA Guidance Document "Statistical Analysis of Groundwater at RCRA Facilities - Draft Guidance", October 1988.


Analytical data for MW-1 from 1989 to 1992, for Phenolics, was used to compare to data from background well MW-4 and, as a point of interest, to the data from OW-11, a well upgradient of the facility.

Additionally, GRC has requested that the analytical laboratory re-analyze their testing procedures and reports to insure that an error was not made in the testing or reporting process. The laboratory confirmed that the data was correct.

Attachment G of the GRC Part B Permit requires that GRC determine the coefficient of variance of an indicator parameter, when an indicator parameter is shown to be present, and then perform statistical analysis of that parameter against background values. GRC is also required to investigate the origin of that constituent to determine if an error in testing or reporting has been made.

GRC has satisfied the requirements of the Part B Permit with regards to the CV and statistical analysis. GRC has determined that the source of Phenolics is not the laboratory. To further investigate the occurrence of Phenolics in MW-1, GRC will include Phenolics in the semi-annual groundwater sampling event, in September or October, for wells MW-1, MW-4 and OW-11. Other wells (MW-2, MW-5) will be sampled for constituents listed in Table G-2 of Attachment G of the Part B Permit. The additional sampling will indicate if there is a trend in the Phenolics level.

Sincerely,



Lynn Shelton
Environmental Assistant

TLS:sp

cc: Kim Bullerdick - Corporate Counsel
Giant Industries Arizona, Inc.