

U.S. EPA SITE Program Investigative Samples: Navy Base / NEX Service Station Area Testing Total Petroleum Hydrocarbons



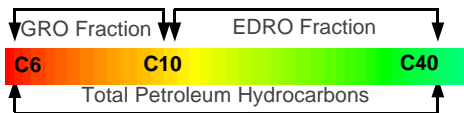
Navy BVC Site: NEX Service Station Area - Port Hueneme, California

The Naval Exchange Service Station Area is located within the Navy Base Ventura County site. In the mid-1980s, thousands of gallons of gasoline had been released from underground storage tank pipelines. In addition, another spill north of the area may have resulted in a commingled plume of gasoline and diesel fuel. Soils tested consisted of silty sands and were contaminated with low to high concentrations of weathered gasoline with a carbon range from C7 through C14.

siteLAB® analyzed twenty samples, plus four extract duplicates, for both Gasoline Range (GRO) and Diesel Range (EDRO) compounds. Results were added together and reported as total petroleum hydrocarbons (TPH). The TPH action level used to evaluate analytical accuracy for this site was 50 ppm.

DRO in TPH Test Results...

This table compares the performance of siteLAB® to the reference laboratory analyzing soils for the Extended Diesel Range Organic (EDRO) fraction in TPH.



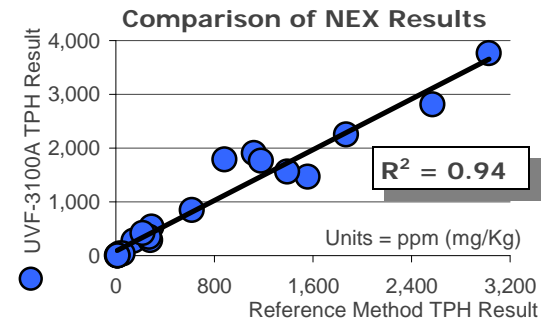
Sample ID #	siteLAB® DRO	Lab DRO
NEX A01	31	23
NEX A02	70	45
NEX A03	150	117
NEX A04	94	56
NEX B01	140	122
NEX B02	220	223
NEX B03	180	224
NEX B04	1.9	<4.6
NEX B05	130	141
NEX B06	220	224
NEX B07	190	250
NEX B08	1.9	7.0
NEX C01	27	21
NEX C02	280	506
NEX C03	290	476
NEX C04	2.5	6.2
<u>Extract Duplicates:</u>		
NEX B09	150	102
NEX B09-ED	150	100
NEX B10	210	288
NEX B10-ED	210	278
NEX B11	190	332
NEX B11-ED	180	328
NEX B12	1.9	<4.6
NEX B12-ED	1.9	<4.6

GRO results not illustrated here.

Units = ppm (mg/Kg).

Correlation of TPH Results...

EPA performed linear regression analysis to determine whether significant correlation existed between the siteLAB® UVF-3100A and the reference method TPH results, as illustrated here:



“Based on the R² and probability values, the UVF-3100A and reference method results were considered to be (1) highly correlated for NEX Service Station Area...”

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TPH Action Level Conclusions...

Percentage of samples for which UVF-3100A and Reference Method conclusions agreed =

A!
95%

Sitelab ITVR: Page 65, Table 7-3

Source: ITVR# EPA/600/R-01/080, September 2001

Sitelab data was generated in the U.S. EPA's Superfund Innovative Technology Evaluation (SITE) Program's "Field Measurement Technologies for Total Petroleum Hydrocarbons in Soil," directed by EPA's Office of Research and Development. Date: June 2000.

Disclaimer: EPA does not endorse any product offered for sale by developers in the SITE Program.