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ENVIRONMENTAL TESTING & ENGINEERING  
(A Division of Engineering Plus, Inc.)  
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Northport, Alabama 35476  
(205) 339-0216

February 1, 1994

Mr. Jim McIntyre  
Precision Tank Testers, Inc.  
Northport, AL

Dear Mr. McIntyre:

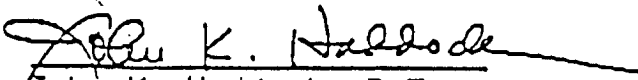
Enclosed is an analytical report which summarizes the results of Total Petroleum Hydrocarbon (TPH) analyses of soil samples from the bioremediation project at the \_\_\_\_\_ in Tuscaloosa. I have also enclosed a graph showing the steady decline in the TPH concentration throughout the project. The project was begun on July 26, 1993 when a waste oil tank was removed from the site. The contaminated soil around the tank was excavated and placed upon a level area nearby where the soil was mixed with a clean sand (about 10% of the original soil volume) and a cultured bacterial product known as "Oil Gator" was added at the recommended application rate. The contaminated material was surrounded by hay bales to prevent erosion and to capture free petroleum products to prevent transport of the contaminants. The soil was tilled on a regular basis and a minimum moisture content was maintained.

As can be seen from the analytical report, the TPH concentration of the first sample collected at the beginning of the project was extremely high and there was an immediate reduction of several thousand ppm. There was then a steady decline in the concentration throughout the remainder of the project until the most recent samples when the TPH concentration was found to be below 100 ppm - the regulatory agency action level for TPH. Below this level the soil may be replaced in the excavation or spread in low areas on the site or on other property owned by the tank owner.

This project shows the feasibility of the use of cultured bacterial products such as "Oil Gator" in bioremediation of petroleum contaminated soils. Please feel free to contact me should you have comments or require further information. Thank you.

Sincerely,

Environmental Testing & Engineering  
(A Division of Engineering Plus, Inc.)

  
John K. Haddock, P.E.  
Alabama Reg. No. 12998  
President

LABORATORY REPORT FORM

CLIENT: Precision Tank

SAMPLE DATE: SEE BELOW

PROJECT:

SAMPLED BY: Client

REMARKS: Soil

REPORT DATE: 12/09/93

ANALYTICAL PARAMETERS

SAMPLE DESIGNATION	TPH NO./I	ANALYTICAL DATE	AVG. TPH
07/27/93 - #1	1160	07/28/93	
07/27/93 - #2	71968	07/28/93	36564
09/02/93 - #1	1250	09/04/93	
09/02/93 - #2	1194	09/04/93	1222
09/13/93 - NORTH	556	09/14/93	
09/13/93 - SOUTH	674	09/14/93	715
09/30/93 - SOUTH	656	10/01/93	
09/30/93 - NORTH	1228	10/01/93	942
10/06/93 - #1	979	10/07/93	
10/24/93 - NORTH	516	10/27/93	
10/24/93 - SOUTH	1262	10/27/93	669
11/15/93 - NORTH	374	11/18/93	
11/15/93 - MIDDLE	600	11/18/93	
11/15/93 - SOUTH	342	11/18/93	505
12/07/93 - NORTH	384	12/08/93	
12/07/93 - CENTER	376	12/08/93	
12/07/93 - SOUTH	178	12/08/93	313
ANALYTICAL METHOD	503 A		
TECHNICIAN	JE		

TEST REFERENCE: Standard Methods for the Examination of Water and Wastewater, 16th Edition, 1985.

FORM E7

  
 LABORATORY MANAGER

