ATEC Environmental Consultants
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August 13, 1991

Mr. K.C. Pocius
Department of Economic Development
Suite 1200
County City Building
South Bend, IN 46601

Re: Summary Report
Soils Sampling and Testing
Lot 5 - Murdock's
Studebaker Corridor
South Bend, Indiana
ATEC Project Number 21-17237

Dear Mr. Pocius:

ATEC Environmental Consultants (ATEC) has completed a hand auger soil sampling program at the above-referenced property. The purpose of the soil sample collection and analysis was to determine if contamination may be present in the subsurface soils at this site due to a drum storage area and one (1) underground storage tank (UT). The objective was accomplished by advancing a total of seven (7) hand auger borings. This summary report provides a description of the work performed and makes recommendations based on the analytical findings.

Work Performed

Four (4) borings were advanced at locations surrounding the drum storage area which are designated are HA-1, HA-2, HA-3 and HA-4. These samples were located adjacent to the drum storage areas. Sample depth intervals for each sample were 6 to 12 inches. These soil samples were submitted for VOCs testing in the laboratory.

Three (3) borings were advanced near the UST. Soil samples were collected from each boring at a depth between 10 and 11 ft. This sample depth interval allowed samples to be

collected below the bottom depth of the UST. As reported to ATEC by Mr. Calvin Murdock, the dimensions of the UST are 9 ft in length and 5 ft in diameter comprising a 1,000 gallon tank. Soil samples were submitted for Total Petroleum Hydrocarbons (TPH) testing in the laboratory.

All samples were collected, preserved and transported to ATEC's laboratory in Indianapolis, Indiana for analysis following all proper chain-of-custody procedures. A total of seven (7) soil samples were collected at specific locations at the project site. Four (4) samples were tested for VOCs and three (3) samples were tested for TPH. Test results for samples HA-1,HA-2, HA-3 and HA-4 showed concentrations of carbon disulfide. Samples HA-2 and HA-4 showed concentrations of petroleum constituents present. Sample HA-4 showed 1,1,1-Trichloroethane (TCA) detected however below quantitation limits. The table below provides a summary of the analytical results for samples collected at this project site. A complete copy of the analytical report is attached to this report.

Soil Sample Test Results
Volatile Organic Compounds
Lot 5 - Murdock's
Studebaker Corridor

Parameters	HA-1	HA-2	HA-3	HA-4	HA-5	HA-6	HA-7
Carbon disulfide	<5*	10	180	8	NT	NT	NT
1,1,1-TCA	ND	ND	<5*	ND	NT	NT	NT
Benzene	ND	<5*	<5*	ND	NT	NT	NT
Toluene	ND	10	14	<5*	NT	NT	NT
Ethylbenzene	ND	<5*	<5*	ND	NT	NT	NT
Total Xylenes	ND	9	6	ND	NT	NT	NT
TPH	NT	NT	NT	NT	ND	ND	ND

All reported values in parts per billion (ppb)
1,1,1-TCA = 1,1,1-Trichloroethane
TPH = Total Petroleum Hydrocarbons
ND = Not detected
NT = Not tested

The client should note that methylene chloride were reported as being detected in samples. Methylene chloride is used as laboratory extraction solvent for various organic analyses. Although the extraction and preparation processes are all performed by trained personnel in separate rooms under a vented fumehood, some vapors escape and are released into the laboratory atmosphere. The release of these vapors into the laboratory atmosphere is basically a random process dependent upon daily usage and the care and diligence of laboratory personnel involved in handling the solvents. Once these compounds are released into the atmosphere they can contaminate any sample once it is removed from the sample container and exposed to the atmosphere. Given the extreme sensitivity of the analytical instrumentation, these compounds are often detected in low levels in environmental samples. The U.S. EPA[1] recognizes concentrations of these contaminants up to five (5) times the quantitation limit as laboratory artifacts.

Upon review of the analytical data there were no UST borings with TPH results reported above quantitation limits. However, several VOC parameters were detected in boring locations near the drum storage areas.

Conclusions and Recommendations

Based on these soil test results there was no obvious evidence found to show the UST has caused gross contamination as a result of past use. However, soil samples near the drum storage area show low concentrations of certain volatile organics. Concerning this matter ATEC recommends that a second round of soil samples be collected and tested for VOCs. The purpose of the second round of samples is to determine the possible extent of the VOC constituents in the soils surrounding these areas.

ATEC recommends that this UST be properly closed to include removal according to Indiana Department of Environmental Management (IDEM) protocol.

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[1] Verbal statement made by the U.S. EPA to ATEC at a pre-bid conference, September, 1988.

Our professional services have been performed, our findings obtained and our recommendations prepared in accordance with customary principles and practices in the fields of environmental science and engineering. This warranty is in lieu of all other warranties either express or implied. This company is not responsible for the independent conclusions, opinions or recommendations made by others based on the field exploration and laboratory test data presented in this report.

We trust this submittal is responsive to your needs. If you have any questions or comments regarding this report, or if we can be of any further service to you in the future, please do not hesitate to contact us.

Very truly yours,

ATEC Associates, Inc.,

Kurtis H. Gilliam
Staff Environmental Scientist II

Matthew C. Stokes, C.H.M.M.
Senior Project Manager

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