2-1-91

Environmental
Consulting Services

[redacted]

DRAFT REPORT
SOIL SAMPLING AND TESTING
LOT NOS. 6, 7, 10, 13, 17
STUDEBAKER CORRIDOR
SOUTH BEND, INDIANA
ATEC PROJECT NUMBER 21-07459

MR. K.C. POCIUS
DEPARTMENT OF ECONOMIC DEVELOPMENT
COUNTY CITY BUILDING
SOUTH BEND, IN 46601

ATEC Environmental Consultants
Division of ATEC Associates, Inc.
5150 East 65th Street
Indianapolis, Indiana 46220-4871
[317] 849-4990, FAX # [317] 849-4278

February 1, 1991

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

Re: Draft Report
Soil Sampling and Testing
Lot Nos. 6, 7, 10, 13, 17
Studebaker Corridor
South Bend, Indiana
ATEC Project Number 21-07459

Dear Mr. Pocius:

ATEC Environmental Consultants (ATEC) has conducted a hand auger soil sampling and testing program of selected lots throughout the Studebaker Corridor.

The purpose of soil sample collection and analysis was to determine if contamination may be present in the shallow subsurface soils at these locations.

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

Matthew C. Stokes, C.H.M.M.
Project Manager/Environmental Scientist

MCS/ca

TABLE OF CONTENTS

DRAFT REPORT
SOIL SAMPLING AND TESTING

Studebaker Corridor
South Bend, Indiana
ATEC Project Number 21-07459

1.0 INTRODUCTION

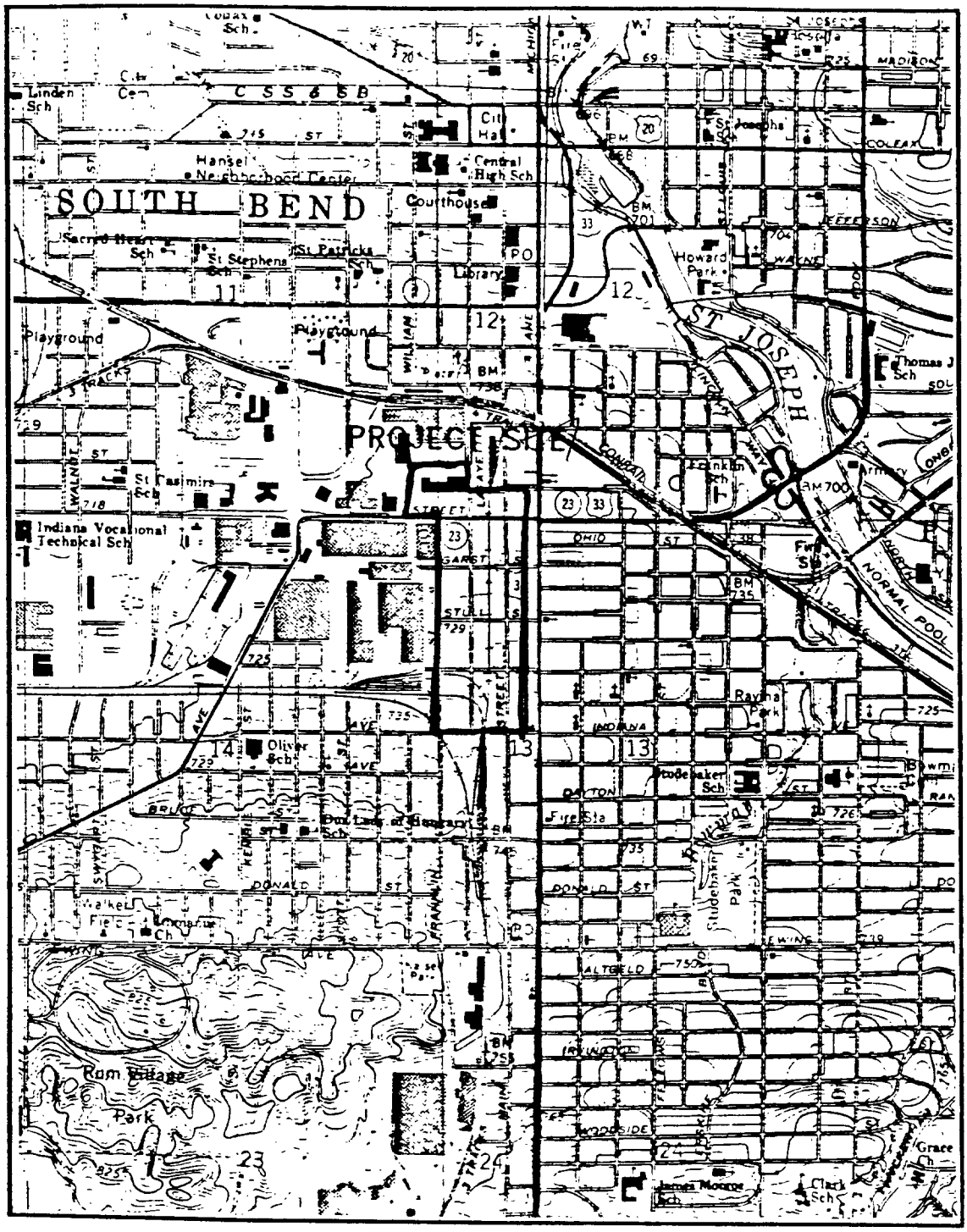
ATEC Environmental Consultants (ATEC) has conducted a hand auger soil sampling and testing program at the Studebaker Corridor in South Bend, Indiana as shown in Figure 1. This investigation consisted of collecting twenty-eight (28) soil samples at five (5) lots. All soil samples collected were preserved and transported to the ATEC laboratory in Indianapolis, Indiana for analytical testing. It should be noted that based on the client's request, the number of soil borings analyzed during this study was limited to the minimum number of samples necessary to provide essential information concerning possible contamination at these sites.

2.0 SITE DESCRIPTION

The project area included five (5) lots in the Studebaker Corridor project area. The lots included numbers Six, Seven, Ten, Thirteen, and Seventeen. These lots were selected based on their potential for contamination of shallow subsurface soils due to historical use and past operations at these locations. Specific sample locations were chosen based on visual inspection. Locations judged as likely to be contaminated included stained areas or areas in which hazardous materials usage may have occurred. Hand auger soil boring samples were collected at exterior locations with respect to structures located on these lots. Interior inspection of these structures was conducted and is discussed in ATEC Report Number 21-07460.

3.0 WORK PERFORMED

On December 11 through 13, 1990, ATEC personnel performed an investigation consisting of a total of twenty-eight (28) hand auger soil borings. Borings were advanced in areas of potential environmental concern (i.e., drum storage areas, surface stained areas). On the larger lots (i.e, Six and Ten), sample locations were spread out over the lot to fully represent the lot. Figures 2 through 6 showing sample boring locations for each lot are provided in Appendix A.



VICINITY MAP
STUDEBAKER CORRIDOR
SOUTH BEND, INDIANA

PROJECT NO.	21-07262
SCALE	1" = 2000'
FIGURE NO.	1

ATEC

From each site, samples were either analyzed for Total Petroleum Hydrocarbons (TPH) or Volatile Organic Compounds (VOCs). Soil samples were also tested for PCBs and total heavy metals. Test parameters were chosen at each location based on possible contaminants present with at least two (2) tests performed on each sample. The lot number, boring identification numbers, and parameters analyzed at each hand auger boring is provided in Table 1.

Table 1
Soil Sample Testing Scheme Summary

Lot #	Sample I.D. #	THM	VOCs	PCBs	TPH
17	B-1		X	X	
	B-2	X	X		
	B-3		X	X	
	B-4	X	X		
	B-5			X	X
	B-6	X			X
	B-7			X	X
	B-8	X			X
6	B-9	X	X		
	B-10	X	X		
	B-11		X	X	
	B-12	X	X		
	B-13		X	X	
	B-14		X	X	
	B-15		X	X	
	B-16	X	X		
7	B-17			X	X
	B-18	X			X
	B-19	X			X
	B-20			X	X

Table 1 (continued)
Soil Sample Testing Scheme Summary

Lot #	Sample I.D. #	THM	VOCs	PCBs	TPH
13	B-21		X	X	
	B-22	X	X		
	B-23		X	X	
	B-24	X	X		
10	B-25	X	X		
	B-26		X	X	
	B-27	X	X		
	B-28		X	X	

THM = Total Heavy Metals VOC = Volatile Organic Compounds
PCB = Polychlorinated Biphenyls TPH = Total Petroleum Hydrocarbons

All soil samples were collected using a stainless steel hand auger equipped with a 3 in. O.D. sample bucket. ATEC utilized a hand operated power auger drill to penetrate subsurface media to the desired sample depth at locations which hand auger refusal was encountered. Throughout each sample depth interval, the stainless steel hand auger was used to collect samples.

Prior to drilling each boring, the stainless steel hand auger and power drill auger flights were washed with on-site tap water containing concentrated detergent. The equipment was then rinsed with tap water followed by a distilled water final rinse. Prior to collecting soil samples for PCBs, the equipment was rinsed with hexane prior to the distilled water rinse.

Borings were advanced to a maximum depth of approximately 6.0 ft. Soil samples were composited through each 1.5 ft interval and placed in a zip-lock bag. Each sample was classified using the Unified Soil Classification System (USCS) and inspected for signs of contamination. The soil samples were field screened for Total Flame-ionizable Vapors (TFVs) using a Porta FID II. The Porta FID detected TFVs emitted from the soil in parts per million (ppm). Porta FID operating procedures are provided in Appendix B.

The soil sample exhibiting the greatest potential for contamination based on visual observations and TFV readings was selected from each boring location. All samples were collected in appropriate sample containers for each analysis and placed on ice. Sample depths from which soil samples were collected is shown in Table 2. All samples were collected, preserved, and transported to ATEC's laboratory in Indianapolis, Indiana for analysis following all proper chain-of-custody procedures. Boring logs showing soil classifications and field observations for each sample location are provided in Appendix C.

Table 2
Soil Sample Depth Summary

Sample I.D. #	Sample Depth (ft)	Sample I.D. #	Sample Depth (ft)
B-1	0.0 - 1.5	B-15	0.0 - 1.5
B-2	0.0 - 1.5	B-16	0.0 - 1.5
B-3	0.0 - 1.5	B-17	0.0 - 1.0
B-4	0.0 - 1.5	B-18	0.0 - 1.5
B-5	0.0 - 1.5	B-19	0.0 - 1.5
B-6	0.0 - 1.5	B-20	0.0 - 1.0
B-7	0.0 - 1.5	B-21	0.0 - 1.5
B-8	0.0 - 1.5	B-22	0.0 - 1.5
B-9	0.0 - 1.5	B-23	0.0 - 1.5
B-10	0.0 - 1.5	B-24	0.0 - 1.5
B-11	0.0 - 1.5	B-25	0.0 - 1.5
B-12	1.5 - 3.0	B-26	0.0 - 1.0
B-13	0.0 - 1.0	B-27	0.0 - 1.5
B-14	0.0 - 1.5	B-28	0.0 - 0.5

4.0 ANALYTICAL FINDINGS

A total of twenty-eight (28) soil samples were collected at five (5) lots throughout the project site. Specific test parameters were assigned to soil samples as described in Table 1. Of the twenty-eight (28) samples tested, fourteen (14) were analyzed for total heavy metals (THM), twenty (20) samples were analyzed for Volatile Organic Compounds (VOCs), fourteen (14) samples were analyzed for PCBs, and eight (8) samples were tested for TPH.

THM analysis includes testing for total arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. Analysis for VOCs includes testing for a total of thirty-five (35) various organic compounds including certain petroleum constituents and several chlorinated hydrocarbons. PCB analysis consists of seven (7) different types of polychlorinated aroclors, which are specific types of PCBs found on the Environmental Protection Agency (EPA) priority pollutants list. TPH analysis tests for a total concentration of petroleum based hydrocarbons in each sample.

Metals samples were analyzed on a Perkin-Elmer 5100 Atomic Absorption Spectrophotometer according to the 7000 Series of the methods outlined in SW 846 and a Thermo Jarrell Ash ICAP-61 according to SW 846 Method 6010. The soil volatile samples were analyzed on a Finnigan 1020 OWA GC/MS/DS System, complete with Superincos Software, via SW 846 Method 8240 for Purgeable Organic Compounds. PCB analyses were performed on a Varian 3400 Gas Chromatograph using Electron Capture Detection via SW 846 Method 8080 and the TPH analyses were performed on a Varian 3700 Gas Chromatograph using Flame Ionization Detection via SW 846 Method 8015 California Modified. Complete documentation of laboratory analytical reports is provided in Appendix D.

The following discussion presents the analytical data from each lot and sample location. A summary of the analytical results is shown in Table 3 for each lot location and sample. Analytical results are shown in the table for those constituents detected above the quantitation limits.

The client should note that methylene chloride and acetone is reported as being detected in many samples. Methylene chloride as well as acetone and toluene are used as laboratory extraction solvents 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 recognizes limited concentrations of these contaminants above the quantitation limit as laboratory artifacts. Results for this series of test reveal methylene chloride at concentrations above 25 ppm throughout different sites. Based on this consistency, ATEC believes these concentrations are a result of laboratory artifacts and not due to on-site activities. Also, please note that with regard to toluene concentrations, no other petroleum based constituents were detected therefore these concentrations were also believed to be laboratory artifacts. A discussion of this summary follows Table 3.

Table 3
Analytical Data Summary

Lot #	Sample I.D.	Arsenic (ppm)	Barium (ppm)	Chromium (ppm)	Lead (ppm)	PCB (ppb)
17	B-2	7.3	60	17	130	
	B-4	ND	120	7.7	180	
	B-6	2.6	170	25	310	
	B-8	ND	48	8.6	57	
6	B-9	2.9	190	27	330	
	B-10	ND	42	11	13	
	B-12	6.1	51	21	33	
	B-14	NA	NA	NA	NA	210*
	B-15	NA	NA	NA	NA	180*
	B-16	2.2	57	8.6	36	
7	B-18	3.6	88	20	140	
	B-19	2.9	100	13	60	
13	B-22	ND	250	10	20	
	B-24	2.6	85	8.8	26	
10	B-25	5.1	97	16	150	
	B-27	ND	68	15	120	
	B-28	NA	NA	NA	NA	13,000+

ppm = Parts per million ppb = Parts per billion
ND = Not detected above quantitation limits
NA = Not analyzed
* = PCB 1248
+ = PCB 1254

Upon review of the analytical data, only metals and PCBs revealed test results at concentrations which require documentation, shown in Table 3 above. Analytical results for TPH did not reveal concentrations above quantitation limits for any samples submitted. Also analytical results show that no VOCs were detected above quantitation limits with the exception of constituents of known laboratory artifact. As previously noted, toluene

concentrations in four (4) soil samples appear to be laboratory artifact. As reaffirmation of this, no other petroleum constituents such as benzene, ethylbenzene, or xylene showed up in these four (4) samples. Therefore, evidence of on-site activities generating these low parts per billion concentrations is lacking. ATEC believes VOCs detected above quantitation are laboratory artifacts.

As shown, total metals is the parameter which was detected above quantitation and are believed to be a result of on-site activities for certain constituents. Discussion of these concentrations with regard to action levels is found in the following section of this report.

5.0 EVALUATION CRITERIA

The objective of this section is to determine the acceptable action levels or clean-up levels which are to be used to compare the test results obtained during this study. Concerning total metals concentrations, it must be considered that all soil samples were shallow and were collected in a heavily urbanized area. As a result, background soil metals concentrations in this urbanized area may be elevated due to normal activities consistent throughout the project site. However, EPA has proposed guidelines for corrective actions at waste sites to include certain total metals. ATEC compared actual sample concentrations obtained during this study for total metals in soils to these proposed guidelines. Test results did not show concentrations above the action levels for arsenic, barium, and chromium.

Proposed action levels provided for these total metals are shown in Table 4.

Table 4
Proposed Action Levels for Soil Test Results
(in parts per million)

Constituent	Proposed Action Level*
Arsenic	800
Barium	4000
Chromium	40

*Federal Register, Volume 55, No. 145 Friday July 27, 1990, pg. 30865,6,7.

Based on comparison of test data to proposed action levels for arsenic, barium, and chromium, no further recommendations concerning these parameters are made.

It should be noted here that no proposed action level for lead is provided in the above referenced Federal Register. Known background concentrations of total lead in soils range from 2.0 to 200.0 ppm in the United States[1]. Considering actual sample concentrations for total lead as shown in Table 3, sample locations B-6 and B-9 are substantially above all other sample tests for lead and the background of total lead in Indiana soils. As a result further sampling and testing is recommended at these locations as discussed in the conclusions and recommendations section of this report.

With regard to PCB concentrations, the Code of Federal Regulations (CFR) soil concentrations of 10 ppm PCBs is considered as a clean-up level[2]. Sample locations B-14 and B-15 of Lot Six, and B-28 of Lot Ten each revealed concentrations of PCBs. All three (3) sample locations are on property of the former South Bend Foundry. Specific sample locations can be found in figures provided in Appendix A. At each sample location in which PCB results were revealed, ATEC believes a determination of the possible extent of contamination must be made to verify concentrations do not exceed the clean-up level. It should be noted that sample B-28 revealed a PCB concentration above the established clean-up level. Therefore, further sampling is recommended in the conclusions and recommendations section of this report.

6.0 CONCLUSIONS AND RECOMMENDATIONS

With regard to total lead concentrations, several locations revealed total lead levels above quantitation limits. Total lead concentrations at sample location B-6 on Lot Seventeen and sample location B-9 on Lot Six showed total lead levels at substantially elevated concentrations. ATEC believes these concentrations may be attributable to specific occurrences at these properties. Potential concern with lead arises primarily if leachable

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[1] James Drugan, "The Soil Chemistry of Hazardous Materials", Hazardous Materials Control Institute, Silver Spring, Maryland.

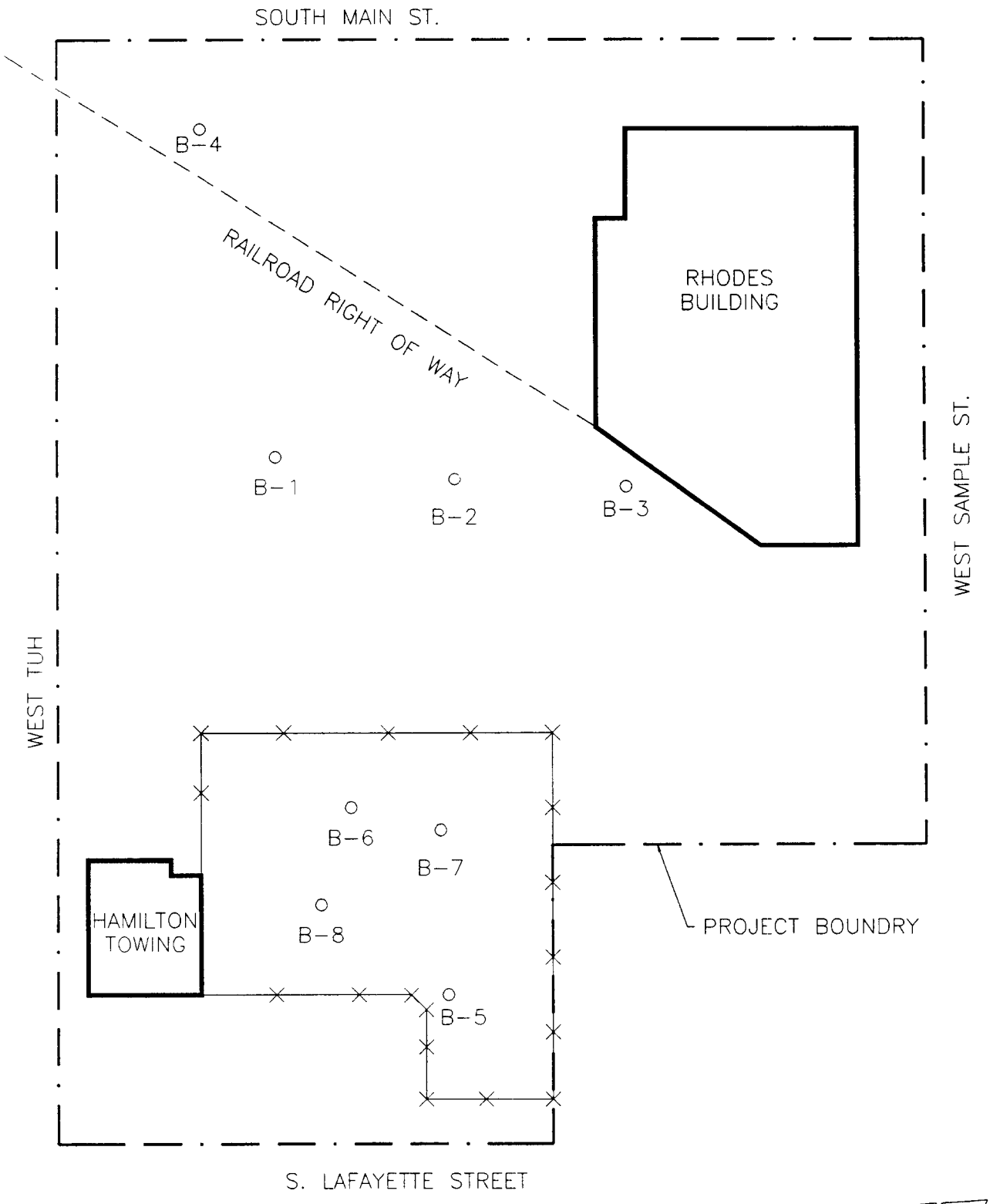
[2] 40 CFR Part 761.125, requirements for PCB spill clean-up.

concentrations are present which may allow lead to enter groundwater supplies. The analytical method to determine if leachable lead is present is the Toxicity Characteristic Leaching Procedure (TCLP). ATEC recommends that soil samples B-6 and B-9 be analyzed for TCLP lead. Original sample remaining from the initial soil tests on these boring samples can be used by ATEC to analyzed using TCLP for lead. Information obtained from the TCLP tests is important to determine if lead concentrations in soils at these locations has potential of affecting groundwater supplies.

The PCB test results showed concentrations detected at sample locations B-14 and B-15 on Lot Six and sample location B-28 on Lot Ten. Based on these concentrations, ATEC recommends collecting two (2) additional samples at each location to determine the possible extent of contamination. These samples will be analyzed for PCBs at a sample location within proximity of the original boring locations. These additional test results will provide information to evaluate the possible extent of PCB affected soil away from each of the original boring locations. Soils determined to have concentrations above the clean-up level of 10 ppm will be recommended to be removed and properly disposed of off-site.

APPENDIX A

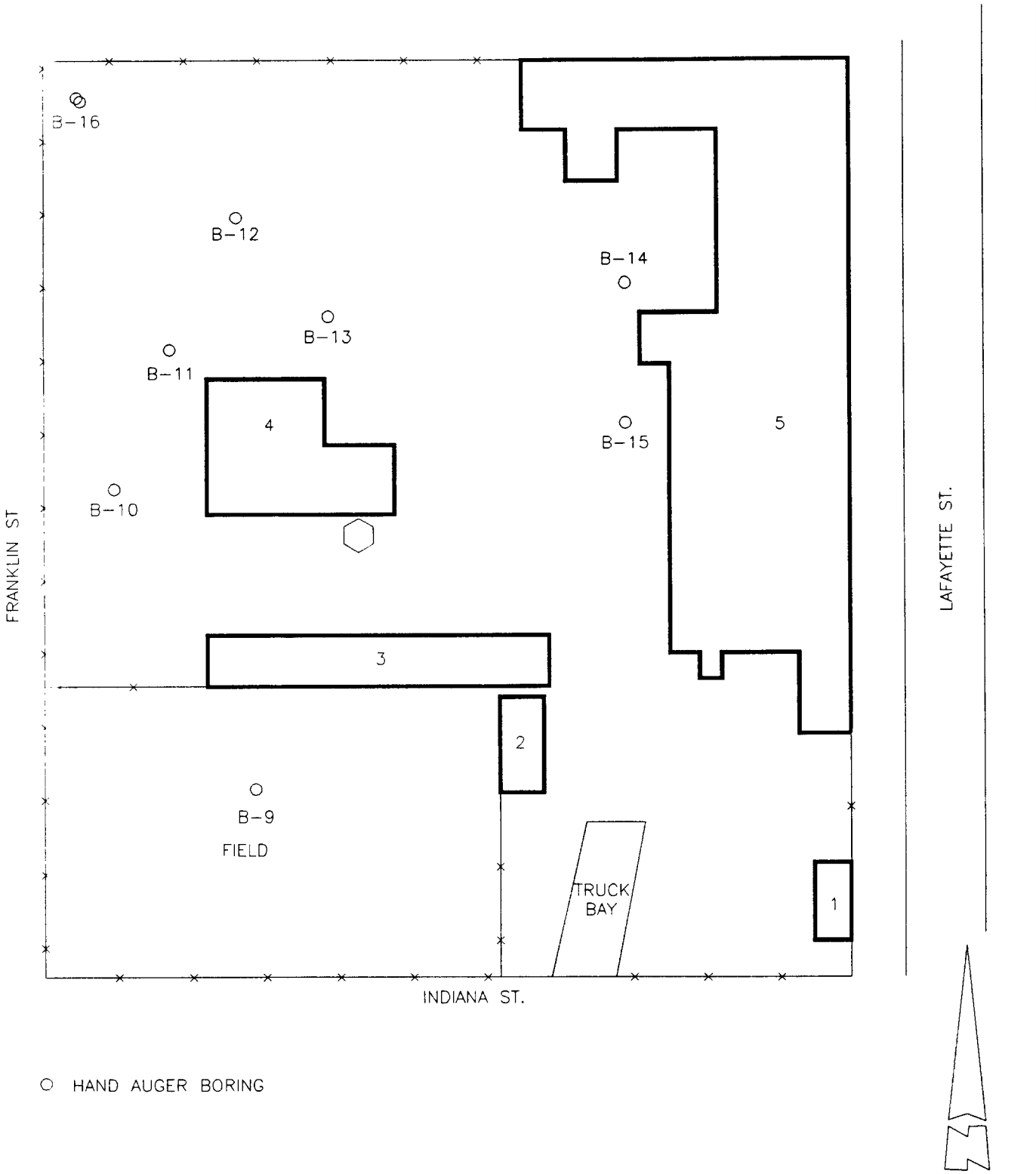
FIGURES



SITE PLAN
STUDEBAKER CORRIDOR PROJECT
LOT 17
SOUTH BEND, IN

PROJECT NO.	21-07459
SCALE	NONE
FIGURE NO.	2

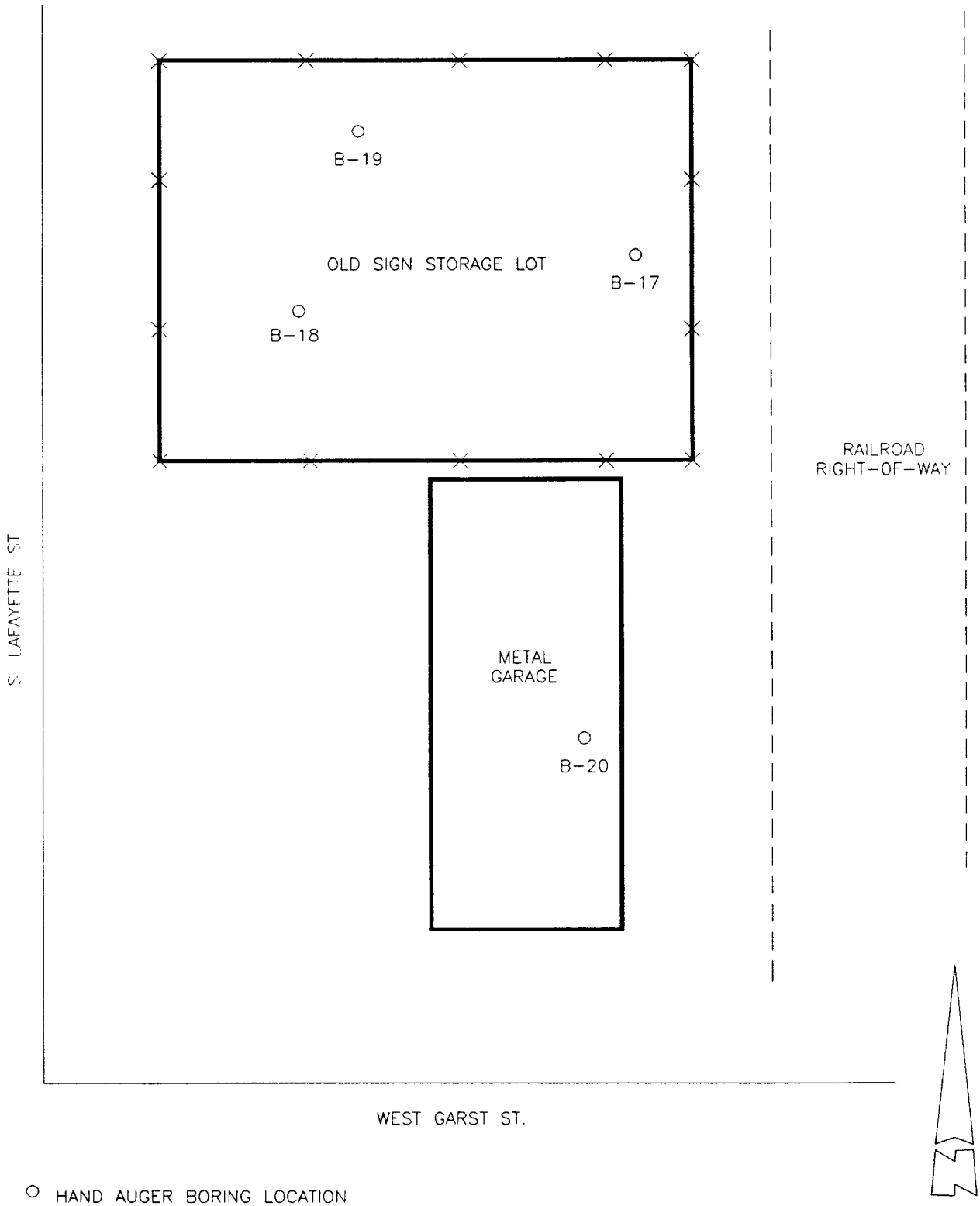
ATEC



SITE PLAN
STUDEBAKER CORRIDOR PROJECT
SOUTH BEND FOUNDRY – LOT 6
SOUTH BEND, IN

PROJECT NO	21-07459
SCALE	1" ~ 60'
FIGURE NO.	3

ATEC

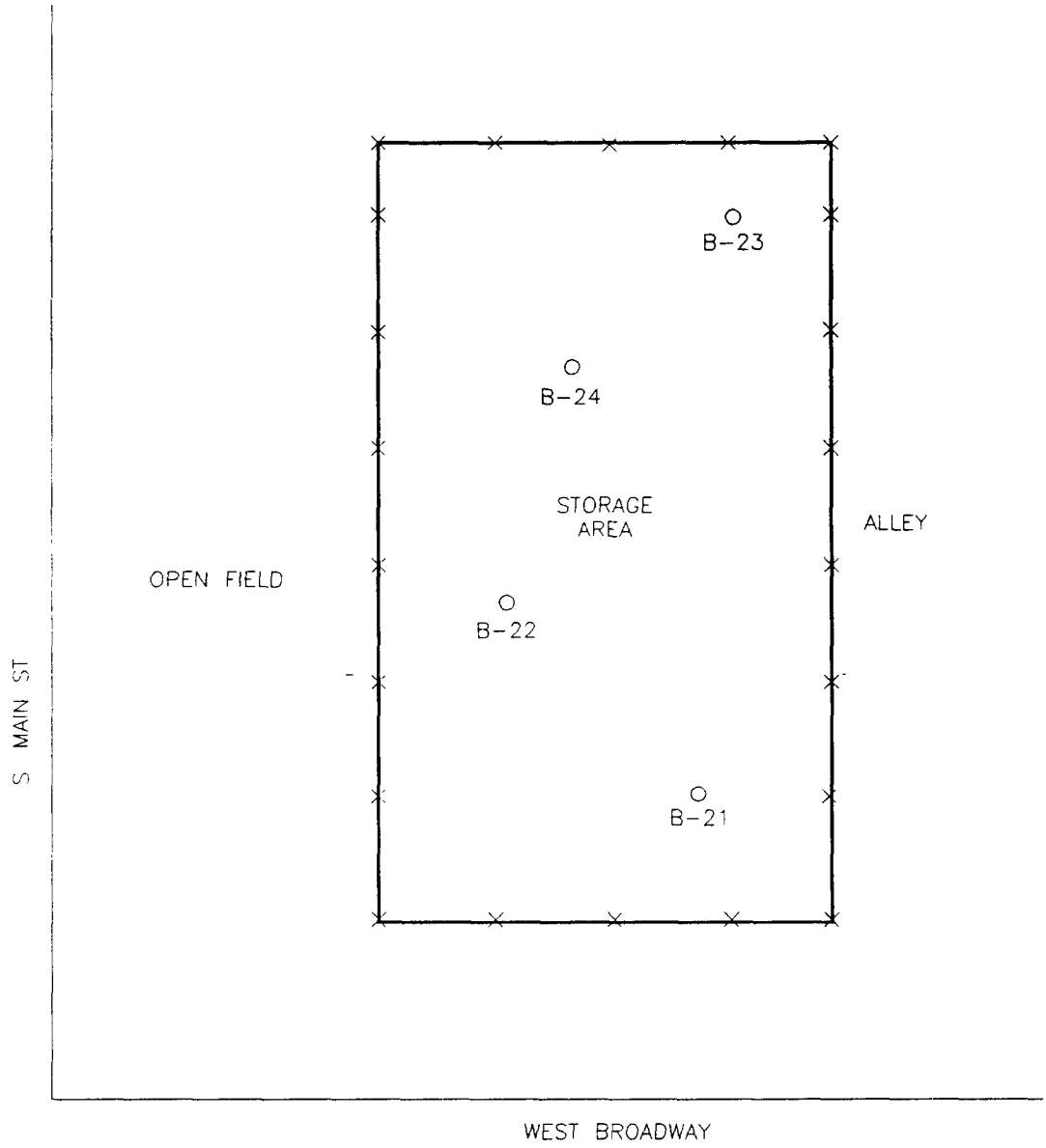


HAND AUGER BORING LOCATIONS
STUDEBAKER CORRIDOR PROJECT
LOT 7 (WEST)
SOUTH BEND, IN

PROJECT NO.	21-07459
SCALE	1" = 30'
FIGURE NO.	4

ATEC

1A



X- FENCE

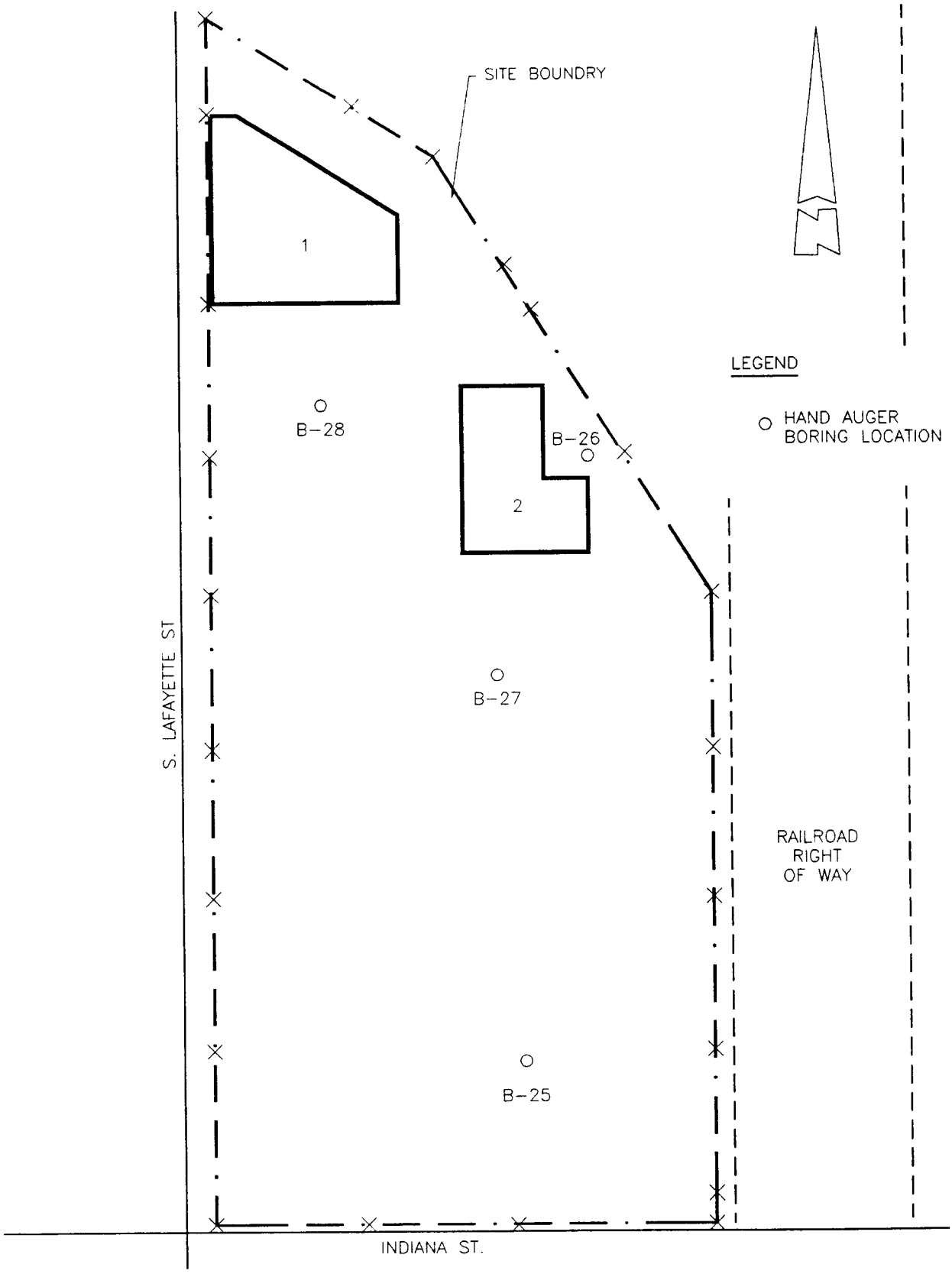
O- HAND AUGER BORING LOCATION

HAND AUGER BORING LOCATIONS
STUDEBAKER CORRIDOR PROJECT
LOT 13
SOUTH BEND, IN

PROJECT NO.	21-07459
SCALE	1" = 20'
FIGURE NO.	5

ATEC

07458 1A



SITE PLAN
STUDEBAKER CORRIDOR PROJECT
SOUTH BEND FOUNDRY – LOT 10
SOUTH BEND, IN

PROJECT NO	21-07459
SCALE	NONE
FIGURE NO.	6

ATEC

APPENDIX B

FIELD INSTRUMENTATION

VAPOR SCREENING EQUIPMENT

The Porta-FID utilizes the principle of hydrogen flame ionization for detection and measurement of total flame-ionizable vapors (TFVs). The instrument measures organic vapor concentration by producing a response to an unknown sample, which can be related to a gas of known composition to which the instrument has previously been calibrated. During normal survey mode operation, a continuous sample is drawn into the probe and transmitted to the detector chamber by an internal pumping system.

The sample stream is metered and passed through particle filters before reaching the detector chamber. Inside the detector chamber, the sample is exposed to a hydrogen flame which ionizes the organic vapors. When most organic vapors burn, they leave positively charged carbon-containing ions. An electric field drives the ions to a collecting electrode. As the positive ions are collected, a current corresponding to the collection rate is generated. This current is measured with a linear electrometer preamplifier which has an output signal proportional to the ionization current. A signal conditioning amplifier is used to amplify the signal from the preamp and to condition it for subsequent meter or external recorder display. The display is an integral part of the Probe/Readout Assembly and has 270° scale deflection.

In general, the hydrogen flame ionization detector is more sensitive for hydrocarbons than any other class of organic compounds. The response of the Porta-FID varies from compound to compound, but gives repeatable results with all types of hydrocarbons; i.e., saturated hydrocarbons (alkanes), unsaturated hydrocarbons (alkenes and alkynes) and aromatic hydrocarbons.

APPENDIX C

BORING LOGS

LOG OF BORING NO. B-1

CLIENT Department of Economic Development
PROJECT NAME Studebaker Corridor Project
PROJECT LOCATION South Bend, Indiana
BORING LOCATION Lot #17; Railroad Right-of-Way; North
FOREMAN
INSPECTOR C. Cashman

JOB NO. 21-07459
START DATE 12/11/90
BORING METHOD HA
ROCK CORE DIA. IN.
SHELBY TUBE DIA IN.

SOIL/ROCK DESCRIPTION Surface Elevation	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	REC %	TPV ppm (**)	REMARKS
Sand and Gravel fill							
	1.25	1	1*		100	ND	
Black medium SILTY fine to coarse SAND (SM-SW)							
		2					
Brown below 2.5'			2		100	ND	
		3					
		4	3		100	ND	
		5	4		100	ND	
		6					*Soil sample obtained for VOC and PCB analysis
Bottom of test boring @ 6.0'							

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-2

CLIENT	Department of Economic Development	JOB NO.	21-07459
PROJECT NAME	Studebaker Corridor Project	START DATE	12/11/90
PROJECT LOCATION	South Bend, Indiana	BORING METHOD	HA
BORING LOCATION	Lot #17; Railroad Right-of-Way; Center	ROCK CORE DIA.	IN.
FOREMAN		SHELBY TUBE DIA	IN.
INSPECTOR	C. Cashman		

SOIL/ROCK DESCRIPTION Surface Elevation	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	TPV REC %	TPV ppm (**)	REMARKS
Black Sand and Gravel fill							
	1.0	1	1*		100	ND	
Black moist SILTY fine to coarse SAND (SM-SW) with trace fine to medium Gravel							
Brown below 2.0'		2	2		100	ND	
		3					
		4	3		100	ND	
		5	4		100	ND	
		6					*Soil sample obtained for VOC and Total Heavy Metals analysis
Bottom of test boring @ 6.0'							

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-3

CLIENT Department of Economic Development
PROJECT NAME Studebaker Corridor Project
PROJECT LOCATION South Bend, Indiana
BORING LOCATION Lot #17; Railroad Right-of-Way; Southern
FOREMAN
INSPECTOR C. Cashman

JOB NO. 21-07459
START DATE 12/11/90
BORING METHOD HA
ROCK CORE DIA. IN.
SHELBY TUBE DIA IN.

SOIL/ROCK DESCRIPTION Surface Elevation	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	TPV REC %	TPV ppm (**)	REMARKS
Sand and Gravel fill							
		1	1*		100	ND	
	1.5						
Brown moist SILTY fine to coarse SAND (SM-SW) with trace Gravel		2	2		100	ND	
		3					
		4	3		100	ND	
		5	4		100	ND	
		6					*Soil sample obtained for VOC and PCB analysis
Bottom of test boring @ 6.0'							

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-4

CLIENT Department of Economic Development
PROJECT NAME Studebaker Corridor Project
PROJECT LOCATION South Bend, Indiana
BORING LOCATION Lot #17; in field on NE corner of property
FOREMAN
INSPECTOR D. Ben Chandler, Jr.

JOB NO. 21-07459
START DATE 12/11/90
BORING METHOD HA
ROCK CORE DIA. IN.
SHELBY TUBE DIA IN.

SOIL/ROCK DESCRIPTION Surface Elevation	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	TPV REC %	TPV ppm (**)	REMARKS
Black moist SANDY CLAY (CL) with trace Gravel Brown below 1.0'		1	1*		100	ND	
		2	2		100	ND	
	3.5	3					
Brown moist SILTY fine to coarse SAND (SM-SW) with trace fine to medium Gravel		4	3		100	ND	
		5	4		100	ND	*Soil sample obtained for VOC and Total Heavy Metals analysis
		6					
Bottom of test boring @ 6.0'							

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-5

CLIENT Department of Economic Development
PROJECT NAME Studebaker Corridor Project
PROJECT LOCATION South Bend, Indiana
BORING LOCATION Lot #17; Fenced area; south of gate, west side
FOREMAN
INSPECTOR D. Ben Chandler, Jr.

JOB NO. 21-07459
START DATE 12/11/90
BORING METHOD HA
ROCK CORE DIA. IN.
SHELBY TUBE DIA IN.

SOIL/ROCK DESCRIPTION Surface Elevation	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	TPV REC %	TPV ppm (**)	REMARKS
Black moist Sand and Gravel (fill)							
	1.0	1	1*		100	ND	
Brown moist SILTY CLAYEY fine to coarse SAND (SM) with trace Gravel		2	2		100	ND	
	3.25	3					
Brown moist SILTY fine to coarse SAND (SM-SW) with trace Gravel			3		100	ND	
		4					
Bottom of test boring @ 4.0'		5					*Soil sample obtained for TPH and PCB analysis

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-6

CLIENT Department of Economic Development
PROJECT NAME Studebaker Corridor Project
PROJECT LOCATION South Bend, Indiana
BORING LOCATION Lot #17; Fenced area - eastern most; hand auger location
FOREMAN
INSPECTOR C. Cashman

JOB NO. 21-07459
START DATE 12/11/90
BORING METHOD HA
ROCK CORE DIA. IN.
SHELBY TUBE DIA IN.

SOIL/ROCK DESCRIPTION Surface Elevation	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	TPV REC %	TPV ppm (**)	REMARKS
Black moist Sand and Gravel fill							
	0.5						
Black moist SILTY SANDY CLAY (CL)		1	1*		100	ND	
Brown below 2.0'		2	2		100	ND	
	3.0	3					
Brown moist SILTY fine to coarse SAND (SM-SW)			3		100	ND	
		4					
Bottom of test boring @ 4.5'		5					*Soil sample obtained for TPH and Total Heavy Metals analysis

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-7

CLIENT Department of Economic Development
PROJECT NAME Studebaker Corridor Project
PROJECT LOCATION South Bend, Indiana
BORING LOCATION Lot #17; Fenced area - middle of area, southern half
FOREMAN
INSPECTOR D. Ben Chandler, Jr.

JOB NO. 21-07459
START DATE 12/11/90
BORING METHOD HA
ROCK CORE DIA. IN.
SHELBY TUBE DIA IN.

SOIL/ROCK DESCRIPTION Surface Elevation	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	TPV REC %	TPV ppm (**)	REMARKS
Black moist Sand and Gravel (fill)							
	1.0	1	1*		100	ND	
Brown moist SILTY CLAYEY fine to coarse SAND (SM) with trace Gravel		2	2		100	ND	
	3.5	3	3		100	ND	
Brown moist SILTY fine to coarse SAND (SM-SW) with trace Gravel		4					
Bottom of test boring @ 4.0'		5					*Soil sample obtained for TPH and PCB analysis

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-8

CLIENT Department of Economic Development
PROJECT NAME Studebaker Corridor Project
PROJECT LOCATION South Bend, Indiana
BORING LOCATION Lot #17; Fenced area - middle of area - northern half
FOREMAN
INSPECTOR C. Cashman

JOB NO. 21-07459
START DATE 12/11/90
BORING METHOD HA
ROCK CORE DIA. IN.
SHELBY TUBE DIA IN.

SOIL/ROCK DESCRIPTION Surface Elevation	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	TPV REC %	TPV ppm (**)	REMARKS
0.5' Pea Gravel							
	0.5						
Black moist SILTY SANDY CLAY (CL) with trace Gravel		1	1*		100	ND	
		2	2		100	ND	
Brown below 3.0'		3					
	3.5						
Brown moist SILTY fine to coarse SAND (SM-SW)			3		100	ND	
		4					
Bottom of test boring @ 4.5'		5					*Soil sample obtained for TPH and Total Heavy Metals analysis

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-9

CLIENT	Department of Economic Development	JOB NO.	21-07459
PROJECT NAME	Studebaker Corridor Project	START DATE	12/12/90
PROJECT LOCATION	South Bend, Indiana	BORING METHOD	HA
BORING LOCATION	Lot #6; Southwest grassy field	ROCK CORE DIA.	IN.
FOREMAN		SHELBY TUBE DIA	IN.
INSPECTOR	C. Cashman		

SOIL/ROCK DESCRIPTION Surface Elevation	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	TPV REC %	TPV ppm (**)	REMARKS
Black moist SILTY fine to coarse SAND (SM-SW) with trace fine to medium Gravel		1	1*		100	0.8	
Brown below 2.0'		2	2		100	ND	
		3	3		100	ND	
Bottom of test boring @ 4.5'		4 5					*Soil sample obtained for VOC and Total Heavy Metals analysis

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-10

CLIENT	Department of Economic Development	JOB NO.	21-07459
PROJECT NAME	Studebaker Corridor Project	START DATE	12/12/90
PROJECT LOCATION	South Bend, Indiana	BORING METHOD	HA
BORING LOCATION	Lot #6; West central	ROCK CORE DIA.	IN.
FOREMAN		SHELBY TUBE DIA	IN.
INSPECTOR	D. Ben Chandler, Jr.		

SOIL/ROCK DESCRIPTION Surface Elevation	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	REC %	TPV ppm (**)	REMARKS
Black moist SILTY fine to coarse SAND and Gravel (SM) Brown below 0.5'; decreasing Gravel		1	1*		100	ND	
		2	2		100	ND	
Bottom of test boring @ 3.0'		3					
		4					*Soil sample obtained for VOC and Total Heavy Metals analysis

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-11

CLIENT Department of Economic Development
PROJECT NAME Studebaker Corridor Project
PROJECT LOCATION South Bend, Indiana
BORING LOCATION Lot #6; Just NW of Cupola Building
FOREMAN
INSPECTOR D. Ben Chandler, Jr.

JOB NO. 21-07459
START DATE 12/12/90
BORING METHOD HA
ROCK CORE DIA. IN.
SHELBY TUBE DIA IN.

SOIL/ROCK DESCRIPTION Surface Elevation	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	TPV REC %	TPV ppm (**)	REMARKS
Black moist fine to coarse Sand and Gravel (fill) with little Silt		1	1*		100	3.5	
	1..75						
Brown moist SILTY fine to coarse SAND (SM) with little Gravel		2	2		100	0.8	
		3					
Bottom of test boring @ 3.0'		4					*Soil sample obtained for VOC and PCB analysis

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-12

CLIENT Department of Economic Development
PROJECT NAME Studebaker Corridor Project
PROJECT LOCATION South Bend, Indiana
BORING LOCATION Lot #6; North central of Cupola Building
FOREMAN
INSPECTOR C. Cashman

JOB NO. 21-07459
START DATE 12/12/90
BORING METHOD HA
ROCK CORE DIA. IN.
SHELBY TUBE DIA IN.

SOIL/ROCK DESCRIPTION	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	TPV REC %	TPV ppm (**)	REMARKS
Surface Elevation							
Black moist Sand and Gravel with some Silt (fill)		1	1		100	3.0	
	2.0	2					
Dark brown SILTY fine to coarse SAND (SM-SW) with trace fine Gravel Brown below 2.5'			2*		100	18.0	
		3					
			3		100	ND	
		4					
Bottom of test boring @ 4.0'							
		5					*Soil sample obtained for VOC and Total Heavy Metals analysis

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-13

CLIENT	Department of Economic Development	JOB NO.	21-07459
PROJECT NAME	Studebaker Corridor Project	START DATE	12/12/90
PROJECT LOCATION	South Bend, Indiana	BORING METHOD	HA
BORING LOCATION	Lot #6; Northeast of Cupola Building	ROCK CORE DIA.	IN.
FOREMAN		SHELBY TUBE DIA	IN.
INSPECTOR	C. Cashman		

SOIL/ROCK DESCRIPTION Surface Elevation	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	REC %	TPV ppm (**)	REMARKS
Black Sand and Gravel fill			1*		100	ND	Black oil stained
		1					
Auger refusal @ 1.0'		2					*Soil sample obtained for VOC and PCB analysis

WATER LEVEL OBSERVATIONS
NOTED ON RODS _____ FT
AT COMPLETION _____ FT
AFTER _____ HRS. _____ FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-14

CLIENT	Department of Economic Development	JOB NO.	21-07459
PROJECT NAME	Studebaker Corridor Project	START DATE	12/12/90
PROJECT LOCATION	South Bend, Indiana	BORING METHOD	HA
BORING LOCATION	Lot #6; West of Trailer Repair Entrance	ROCK CORE DIA.	IN.
FOREMAN		SHELBY TUBE DIA	IN.
INSPECTOR	C. Cashman		

SOIL/ROCK DESCRIPTION Surface Elevation	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	REC %	TPV ppm (**)	REMARKS
Black moist SILTY fine to coarse SAND (SM) with trace Gravel							
Dark brown below 1.0'		1	1*		100	ND	
Brown below 2.5'		2	2		100	ND	
Bottom of test boring @ 3.0'		3					
		4					*Soil sample obtained for VOC and PCB analysis

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-15

CLIENT Department of Economic Development
PROJECT NAME Studebaker Corridor Project
PROJECT LOCATION South Bend, Indiana
BORING LOCATION Lot #6; west side of foundry
FOREMAN
INSPECTOR C. Cashman

JOB NO. 21-07459
START DATE 12/12/90
BORING METHOD HA
ROCK CORE DIA. IN.
SHELBY TUBE DIA IN.

SOIL/ROCK DESCRIPTION Surface Elevation	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	TPV REC %	TPV ppm (**)	REMARKS
Black moist SILTY fine to coarse SAND (SM) with trace fine Gravel		1	1*		100	1.0	
Brown below 2.0'		2	2		100	ND	
		3	3		100	ND	
Bottom of test boring @ 4.0'		4					
		5					*Soil sample obtained for VOC and PCB analysis

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-16

CLIENT Department of Economic Development
PROJECT NAME Studebaker Corridor Project
PROJECT LOCATION South Bend, Indiana
BORING LOCATION Lot #6; Northwest corner of property
FOREMAN
INSPECTOR D. Ben Chandler, Jr.

JOB NO. 21-07459
START DATE 12/12/90
BORING METHOD HA
ROCK CORE DIA. IN.
SHELBY TUBE DIA IN.

SOIL/ROCK DESCRIPTION	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	TPV REC %	TPV ppm (**)	REMARKS
Surface Elevation							
Dark brown moist SILTY fine to coarse SAND (SM) with trace Gravel							
Brown below 1.0'		1	1*		100	ND	
		2	2		100	ND	
Bottom of test boring @ 3.0'		3					
		4					*Soil sample obtained for VOC and Total Heavy Metals analysis

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-17

CLIENT Department of Economic Development
PROJECT NAME Studebaker Corridor Project
PROJECT LOCATION South Bend, Indiana
BORING LOCATION Lot #7; East side near gate
FOREMAN
INSPECTOR C. Cashman

JOB NO. 21-07459
START DATE 12/12/90
BORING METHOD HA
ROCK CORE DIA. IN.
SHELBY TUBE DIA IN.

SOIL/ROCK DESCRIPTION Surface Elevation	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	TPV REC %	TPV ppm (**)	REMARKS
Black Sand and Gravel fill			1*		100	ND	Black surface stain
		1					
Brick; auger refusal @ 1.0'							
		2					
							*Soil sample obtained for TPH and PCB analysis

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-18

CLIENT Department of Economic Development
PROJECT NAME Studebaker Corridor Project
PROJECT LOCATION South Bend, Indiana
BORING LOCATION Lot #7; Southwest corner of fenced area
FOREMAN
INSPECTOR D. Ben Chandler, Jr.

JOB NO. 21-07459
START DATE 12/12/90
BORING METHOD HA
ROCK CORE DIA. IN.
SHELBY TUBE DIA IN.

SOIL/ROCK DESCRIPTION Surface Elevation	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	REC %	TPV ppm (**)	REMARKS
Dark brown moist SILTY fine to coarse SAND (SM) and Gravel Brown below 1.5'		1	1*		100	ND	
		2	2		100	ND	
Bottom of test boring @ 3.0'		3					
		4					*Soil sample obtained for TPH and Total Heavy Metals analysis

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-19

CLIENT Department of Economic Development
PROJECT NAME Studebaker Corridor Project
PROJECT LOCATION South Bend, Indiana
BORING LOCATION Lot #7; North central part of fenced area
FOREMAN
INSPECTOR D. Ben Chandler, Jr.

JOB NO. 21-07459
START DATE 12/12/90
BORING METHOD HA
ROCK CORE DIA. IN.
SHELBY TUBE DIA IN.

SOIL/ROCK DESCRIPTION Surface Elevation	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	TPV REC %	TPV ppm (**)	REMARKS
Black moist Silty fine to coarse Sand (fill)							
	1.0	1	1*		100	ND	
Brown moist SILTY fine to coarse SAND (SM) and Gravel		2	2		100	ND	
		3					
Bottom of test boring @ 3.0'		4					*Soil sample obtained for TPH and Total Heavy Metals analysis

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-20

CLIENT Department of Economic Development
PROJECT NAME Studebaker Corridor Project
PROJECT LOCATION South Bend, Indiana
BORING LOCATION Lot #7; Inside garage
FOREMAN
INSPECTOR C. Cashman

JOB NO. 21-07459
START DATE 12/12/90
BORING METHOD HA
ROCK CORE DIA. IN.
SHELBY TUBE DIA IN.

SOIL/ROCK DESCRIPTION Surface Elevation	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	REC %	TPV ppm (**)	REMARKS
Black Sand and Gravel fill			1*		100	ND	Black surface stain
Auger refusal @ 1.0'		1					
		2					*Soil sample obtained for TPH and PCB analysis

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-21

CLIENT Department of Economic Development
PROJECT NAME Studebaker Corridor Project
PROJECT LOCATION South Bend, Indiana
BORING LOCATION Lot #13; Southeast corner of fenced area
FOREMAN
INSPECTOR D. Ben Chandler, Jr.

JOB NO. 21-07459
START DATE 12/13/90
BORING METHOD HA
ROCK CORE DIA. IN.
SHELBY TUBE DIA IN.

SOIL/ROCK DESCRIPTION Surface Elevation	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	REC %	TPV ppm (**)	REMARKS
Gray dry Sand and Gravel (fill)	0.5						
Brown moist SILTY fine to coarse SAND (SM) with trace Gravel		1	1*		100	ND	
		2	2		100	ND	
Bottom of test boring @ 3.0'		3					
		4					*Soil sample obtained for VOC and PCB analysis

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-22

CLIENT Department of Economic Development
PROJECT NAME Studebaker Corridor Project
PROJECT LOCATION South Bend, Indiana
BORING LOCATION Lot #13; Southwest corner of fenced area
FOREMAN
INSPECTOR C. Cashman

JOB NO. 21-07459
START DATE 12/13/90
BORING METHOD HA
ROCK CORE DIA. IN.
SHELBY TUBE DIA IN.

SOIL/ROCK DESCRIPTION Surface Elevation	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	REC %	TPV ppm (**)	REMARKS
Brown Silty Sand fill Black below 0.5'							
	1.0	1	1*		100	ND	
Black moist SILTY fine to coarse SAND (SM) with trace fine Gravel Brown below 1.5'		2	2		100	ND	
		3	3		100	ND	
		4					
Bottom of test boring @ 4.5'		5					*Soil sample obtained for VOC and Total Heavy Metals analysis

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-23

CLIENT Department of Economic Development
PROJECT NAME Studebaker Corridor Project
PROJECT LOCATION South Bend, Indiana
BORING LOCATION Lot #13; Northeast corner of fenced area
FOREMAN
INSPECTOR D. Ben Chandler, Jr.

JOB NO. 21-07459
START DATE 12/13/90
BORING METHOD HA
ROCK CORE DIA. IN.
SHELBY TUBE DIA IN.

SOIL/ROCK DESCRIPTION Surface Elevation	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	REC %	TPV ppm (**)	REMARKS
Dark brown moist SILTY fine to coarse SAND (SM)							
Brown below 1.0'		1	1*		100	40	
		2	2		100	ND	
Bottom of test boring @ 3.0'		3					
		4					*Soil sample obtained for VOC and PCB analysis

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-24

CLIENT	Department of Economic Development	JOB NO.	21-07459
PROJECT NAME	Studebaker Corridor Project	START DATE	12/13/90
PROJECT LOCATION	South Bend, Indiana	BORING METHOD	HA
BORING LOCATION	Lot #13; Northwest corner of fenced area	ROCK CORE DIA.	IN.
FOREMAN		SHELBY TUBE DIA	IN.
INSPECTOR	C. Cashman		

SOIL/ROCK DESCRIPTION Surface Elevation	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	REC %	TPV ppm (**)	REMARKS
Dark brown moist SILTY fine to coarse SAND (SM) with littel Gravel		1	1*		100	ND	
Brown below 1.5'		2	2		100	ND	
Bottom of test boring @ 3.0'		3					
		4					*Soil sample obtained for VOC and Total Heavy Metals analysis

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-25

CLIENT Department of Economic Development
PROJECT NAME Studebaker Corridor Project
PROJECT LOCATION South Bend, Indiana
BORING LOCATION Lot #10; Southeast corner of property
FOREMAN
INSPECTOR C. Cashman

JOB NO. 21-07459
START DATE 12/13/90
BORING METHOD HA
ROCK CORE DIA. IN.
SHELBY TUBE DIA IN.

SOIL/ROCK DESCRIPTION	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	TPV REC %	TPV ppm (**)	REMARKS
Surface Elevation							
Black moist SILTY fine to coarse SAND (SM) with trace fine Gravel							Black surface stain
Dark brown below 1.0'		1	1*		100	ND	
		2	2		100	ND	
Brown below 3.0'		3	3		100	ND	
		4					
Bottom of test boring @ 4.5'		5					*Soil sample obtained for VOC and Total Heavy Metals analysis

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-26

CLIENT Department of Economic Development
PROJECT NAME Studebaker Corridor Project
PROJECT LOCATION South Bend, Indiana
BORING LOCATION Lot #10; Middle east drum storage area
FOREMAN
INSPECTOR D. Ben Chandler, Jr.

JOB NO. 21-07459
START DATE 12/13/90
BORING METHOD HA
ROCK CORE DIA. IN.
SHELBY TUBE DIA IN.

SOIL/ROCK DESCRIPTION Surface Elevation	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	REC %	TPV ppm (**)	REMARKS
Black dry Sandy Silt (fill) with Gravel			1*		100	ND	
		1					
Auger refusal @ 1.0'							
		2					
							*Soil sample obtained for VOC and PCB analysis

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-27

CLIENT Department of Economic Development
PROJECT NAME Studebaker Corridor Project
PROJECT LOCATION South Bend, Indiana
BORING LOCATION Lot #10; South of eastern building
FOREMAN
INSPECTOR C. Cashman

JOB NO. 21-07459
START DATE 12/13/90
BORING METHOD HA
ROCK CORE DIA. IN.
SHELBY TUBE DIA IN.

SOIL/ROCK DESCRIPTION	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	REC %	TPV ppm (**)	REMARKS
Surface Elevation							
Black moist SILTY fine to coarse SAND (SM) with little fine Gravel		1	1*		100	ND	
		2	2		100	ND	
Auger refusal @ 2.0'		3					*Soil sample obtained for VOC and Total Heavy Metals analysis

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES: (*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

LOG OF BORING NO. B-28

CLIENT	Department of Economic Development	JOB NO.	21-07459
PROJECT NAME	Studebaker Corridor Project	START DATE	12/13/90
PROJECT LOCATION	South Bend, Indiana	BORING METHOD	HA
BORING LOCATION	Lot #10; South of northeast building	ROCK CORE DIA.	IN.
FOREMAN		SHELBY TUBE DIA	IN.
INSPECTOR	D. Ben Chandler, Jr.		

SOIL/ROCK DESCRIPTION Surface Elevation	STRATUM DEPTH ft.	DEPTH ft.	SAMPLE NO.	SPT (*)	REC %	TPV ppm (**)	REMARKS
Black dry Sandy Silt (fill)			1*		100	ND	Black stained surface Auger refusal @ 0.5'
Asphalt; auger refusal @ 0.5'		1					
		2					
							*Soil sample obtained for VOC and PCB analysis

WATER LEVEL OBSERVATIONS
NOTED ON RODS FT
AT COMPLETION FT
AFTER HRS. FT

BORING METHODS
HSA-HOLLOW STEM AUGERS
CFA-CONT.FLIGHT AUGERS
HA-HAND AUGER

NOTES:(*)BLOWS/6 in., In Three 6 in. Increments
REC %: Sample Recovery, %
(**)TPV-Total Photoionizable Vapors ppm (parts per million)

APPENDIX D

ANALYTICAL DATA

ATEC Environmental Consultants
Division of ATEC Associates, Inc.
5150 East 65th Street
Indianapolis, Indiana 46220-4871
[317] 849-4990, FAX # [317] 849-4278

January 7, 1991

Mr. Matthew Stokes
ATEC Environmental Consultants
5150 E. 65th Street
Indianapolis, IN 46220

Re: Eight Soil TPH
Fourteen Soil PCB, RCRA Metals
Twenty Soil VOA
SW 846 Methods 8240, 8080, 8015 California Modified, 7000 Series, 6010
South Bend Department Economic Development
Studebaker Corridor Project
ATEC Project Number 21-07459

Dear Mr. Stokes:

Enclosed are the results of the Chemical Analyses for the twenty-eight soil samples which were submitted to the ATEC Environmental/Analytical Testing Division on December 14, 1990, on behalf of South Bend Department Economic Development. The volatile samples were analyzed on Finnigan Incos 50 and 1020 OWA GC/MS/DS systems, complete with Superincos Software, via SW 846 Method 8240 for Purgeable Organic Compounds. Prior to analysis the system was tuned against Bromofluorobenzene and calibrated with the appropriate standard. The PCB analyses were performed on a Varian 3400 Gas Chromatograph using Electron Capture Detection via SW 846 Method 8080. Total Petroleum Hydrocarbon analyses were performed on a Varian 3700 Gas Chromatograph using Flame Ionization Detection via SW 846 Method 8015 California Modified. Metals were analyzed on a Perkin-Elmer 5100 Atomic Absorption Spectrophotometer according to the 7000 Series of the methods outlined in SW 846 and a Thermo Jarrell Ash ICAP-61 according to SW 846 Method 6010.

All associated Quality Control information will be maintained in the Testing Division files, a copy of which can be forwarded to you upon request. After a thirty-day period, a fee will be assessed for this additional information.

It has been a pleasure serving you and, as always, if there are any questions concerning these results or the ATEC Policies, please feel free to contact me.

Respectfully submitted,
ATEC Associates, Inc.

Keith S. Kline

Keith S. Kline
Environmental/Analytical
Testing Division

KSK/feb

REPORT OF TEST RESULTS

ATEC Project Number 21-07459

Date: December 31, 1990

Client: Studebaker
1200 County City Building
South Bend, IN 46601

Sample Matrix: Soil
Sample Taken By: ATEC (CC, BC)
Date Sampled: December 12 and 13, 1990
Date Received: December 14, 1990
Date Analyzed: December 15 to 27, 1990
Analyst: KEB, EVS, MAV
Verified By: JDD
ATEC Lab Number: 9012162

Parameter (units in mg/kg unless noted)	Sample I.D. Number B2	B4	B6	B8	Quantitation Limit (mg/kg)	SW 846 Analytical Method No.
Total Metals						
Arsenic	7.3	<2.0	2.6	<2.0	2.0	7060
Barium	60	120	170	48	2.0	6010
Cadmium	<2.0	<2.0	<2.0	<2.0	2.0	6010
Chromium	17	7.7	25	8.6	2.0	6010
Lead	130	180	310	57	2.0	6010
Mercury	<1.0	<1.0	<1.0	<1.0	1.0	7470
Selenium	<2.0	<2.0	<2.0	<2.0	2.0	7740
Silver	<2.0	<2.0	<2.0	<2.0	2.0	6010

REPORT OF TEST RESULTS

ATEC Project Number 21-07459

Date: December 31, 1990

Client: Studebaker
1200 County City Building
South Bend, IN 46601

Sample Matrix: Soil
Sample Taken By: ATEC (CC, BC)
Date Sampled: December 12 and 13, 1990
Date Received: December 14, 1990
Date Analyzed: December 15 to 27, 1990
Analyst: KEB, EVS, MAV
Verified By: JDD
ATEC Lab Number: 9012162

Parameter (units in mg/kg unless noted)	Sample I.D. Number B9	B10	B12	B16	Quantitation Limit (mg/kg)	SW 846 Analytical Method No.
Total Metals						
Arsenic	2.9	<2.0	6.1	2.2	2.0	7060
Barium	190	42	51	57	2.0	6010
Cadmium	<2.0	<2.0	<2.0	<2.0	2.0	6010
Chromium	27	11	21	8.6	2.0	6010
Lead	330	13	33	36	2.0	6010
Mercury	<1.0	<1.0	<1.0	<1.0	1.0	7470
Selenium	<2.0	<2.0	<2.0	<2.0	2.0	7740
Silver	<2.0	<2.0	<2.0	<2.0	2.0	6010

REPORT OF TEST RESULTS

ATEC Project Number 21-07459

Date: December 31, 1990

Client: Studebaker
1200 County City Building
South Bend, IN 46601

Sample Matrix: Soil
Sample Taken By: ATEC (CC, BC)
Date Sampled: December 12 and 13, 1990
Date Received: December 14, 1990
Date Analyzed: December 15 to 27, 1990
Analyst: KEB, EVS, MAV
Verified By: JDD
ATEC Lab Number: 9012162

Parameter (units in mg/kg unless noted)	Sample I.D. Number B18	B19	B22	B24	Quantitation Limit (mg/kg)	SW 846 Analytical Method No.
Total Metals						
Arsenic	3.6	2.9	<2.0	2.6	2.0	7060
Barium	88	100	250	85	2.0	6010
Cadmium	<2.0	<2.0	<2.0	<2.0	2.0	6010
Chromium	20	13	10	8.8	2.0	6010
Lead	140	60	20	26	2.0	6010
Mercury	<1.0	<1.0	<1.0	<1.0	1.0	7470
Selenium	<2.0	<2.0	<2.0	<2.0	2.0	7740
Silver	<2.0	<2.0	<2.0	<2.0	2.0	6010

REPORT OF TEST RESULTS

ATEC Project Number 21-07459

Date: December 31, 1990

Client: Studebaker
1200 County City Building
South Bend, IN 46601

Sample Matrix: Soil
Sample Taken By: ATEC (CC, BC)
Date Sampled: December 12 and 13, 1990
Date Received: December 14, 1990
Date Analyzed: December 15 to 27, 1990
Analyst: KEB, EVS, MAV
Verified By: JDD
ATEC Lab Number: 9012162

Parameter (units in mg/kg unless noted)	Sample I.D. Number B25	Sample I.D. Number B27	Quantitation Limit (mg/kg)	SW 846 Analytical Method No.
Total Metals				
Arsenic	5.1	<2.0	2.0	7060
Barium	97	68	2.0	6010
Cadmium	<2.0	<2.0	2.0	6010
Chromium	16	15	2.0	6010
Lead	150	120	2.0	6010
Mercury	<1.0	<1.0	1.0	7470
Selenium	<2.0	<2.0	2.0	7740
Silver	<2.0	<2.0	2.0	6010

Respectfully submitted,
ATEC Associates, Inc.

Environmental/Analytical Testing Divison

REPORT OF TEST RESULTS

ATEC Project Number 21-07459

Date: January 7, 1991

Client: South Bend Department Economic Development
1200 County City Building
South Bend, IN 46601

Analysis Information: Studebaker Corridor
Total Petroleum Hydrocarbon Analysis
SW 846 Method 8015 California Modified

Sample Taken By: ATEC (CC, BC)
Sample Matrix: Soil
Date Sampled: December 11, 12 and 13, 1990
Date Received: December 14, 1990
Date Analyzed: December 18, 1990
Analyst: JMD
Verified By: DSS
ATEC Lab Number: 9012162

Sample Identification	Total Petroleum Hydrocarbon	Quantitation Limit
B-5 (0-1.5)	<1.0 ppm	1.0 ppm
B-6 (0-1.5)	<1.0 ppm	1.0 ppm
B-7 (0-1.5)	<1.0 ppm	1.0 ppm
B-8 (0-1.5)	<1.0 ppm	1.0 ppm
B-17 (0-1.0)	<1.0 ppm	1.0 ppm
B-18 (0-1.5)	<1.0 ppm	1.0 ppm
B-19 (0-1.5)	<1.0 ppm	1.0 ppm
B-20 (0-1.0)	<1.0 ppm	1.0 ppm

Respectfully submitted,
ATEC Associates, Inc.

Keith S Kline

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07495
Client Sample Identification: Method Blank
Sample Matrix: Soil
Date Sample Analyzed: December 18, 1990
Analytical Equipment: Incos BV

VOLATILE COMPOUNDS
ANALYTICAL RESULTS

ATEC Lab No. BLANK1218

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Chloromethane	74-87-3	<10	10
Bromomethane	74-83-9	<10	10
Vinyl Chloride	75-01-4	<10	10
Chloroethane	75-00-3	<10	10
Methylene Chloride	75-09-2	< 5	5
Acetone	67-64-1	<10	10
Carbon Disulfide	75-15-0	< 5	5
1,1-Dichloroethene	75-35-4	< 5	5
1,1-Dichloroethane	75-35-3	< 5	5
Trans-1,2-Dichloroethene	156-60-5	< 5	5
Chloroform	67-66-3	< 5	5
1,2-Dichloroethane	107-06-2	< 5	5
2-Butanone	78-93-3	<10	10
1,1,1-Trichloroethane	71-55-6	< 5	5
Carbon Tetrachloride	56-23-5	< 5	5
Vinyl Acetate	108-05-4	<10	10
Bromodichloromethane	75-27-4	< 5	5
1,2-Dichloropropane	78-87-5	< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

ANALYTICAL RESULTS

ATEC Lab No. BLANK1218

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Trans-1, 3-Dichloropropene	10061-02-6	< 5	5
Trichloroethene	79-01-6	< 5	5
Dibromochloromethane	124-48-1	< 5	5
1,1,2-Trichloroethane	79-00-5	< 5	5
Benzene	71-43-2	< 5	5
cis-1,3-Dichloropropene	10061-01-5	< 5	5
2-Chloroethylvinylether	110-75-8	<10	10
Bromoform	75-25-2	< 5	5
4-Methyl-2-Pentanone	108-10-1	<10	10
2-Hexanone	591-78-6	<10	10
Tetrachloroethene	127-18-4	< 5	5
1,1,2,2-Tetrachloroethane	79-34-5	< 5	5
Toluene	108-88-3	< 5	5
Chlorobenzene	108-90-7	< 5	5
Ethylbenzene	100-41-4	< 5	5
Styrene	100-42-5	< 5	5
Total Xylenes		< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

Analytical Method: SW 846 Method 8240

Analyst: T. Harrison
Verified: M. McGill
Date Reported: December 24, 1990

Respectfully submitted,

Keach S Klein

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07495
Client Sample Identification: Method Blank
Sample Matrix: Soil
Date Sample Analyzed: December 18, 1990
Analytical Equipment: 1020B

VOLATILE COMPOUNDS
ANALYTICAL RESULTS

ATEC Lab No. BLANK121890

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Chloromethane	74-87-3	<10	10
Bromomethane	74-83-9	<10	10
Vinyl Chloride	75-01-4	<10	10
Chloroethane	75-00-3	<10	10
Methylene Chloride	75-09-2	6	5
Acetone	67-64-1	<10*	10
Carbon Disulfide	75-15-0	< 5	5
1,1-Dichloroethene	75-35-4	< 5	5
1,1-Dichloroethane	75-35-3	< 5	5
Trans-1,2-Dichloroethene	156-60-5	< 5	5
Chloroform	67-66-3	< 5	5
1,2-Dichloroethane	107-06-2	< 5	5
2-Butanone	78-93-3	<10	10
1,1,1-Trichloroethane	71-55-6	< 5	5
Carbon Tetrachloride	56-23-5	< 5	5
Vinyl Acetate	108-05-4	<10	10
Bromodichloromethane	75-27-4	< 5	5
1,2-Dichloropropane	78-87-5	< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

ANALYTICAL RESULTS

ATEC Lab No. BLANK121890

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Trans-1, 3-Dichloropropene	10061-02-6	< 5	5
Trichloroethene	79-01-6	< 5	5
Dibromochloromethane	124-48-1	< 5	5
1,1,2-Trichloroethane	79-00-5	< 5	5
Benzene	71-43-2	< 5	5
cis-1,3-Dichloropropene	10061-01-5	< 5	5
2-Chloroethylvinylether	110-75-8	<10	10
Bromoform	75-25-2	< 5	5
4-Methyl-2-Pentanone	108-10-1	<10	10
2-Hexanone	591-78-6	<10	10
Tetrachloroethene	127-18-4	< 5	5
1,1,2,2-Tetrachloroethane	79-34-5	< 5	5
Toluene	108-88-3	< 5	5
Chlorobenzene	108-90-7	< 5	5
Ethylbenzene	100-41-4	< 5	5
Styrene	100-42-5	< 5	5
Total Xylenes		< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

Analytical Method: SW 846 Method 8240

Analyst: J. Rigdon
Verified: M. McGill
Date Reported: December 21, 1990

Respectfully submitted,

Keith S. Klunie

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07495
Client Sample Identification: Method Blank
Sample Matrix: Soil
Date Sample Analyzed: December 19, 1990
Analytical Equipment: Incos BV

VOLATILE COMPOUNDS
ANALYTICAL RESULTS

ATEC Lab No. BLANK121990

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Chloromethane	74-87-3	<10	10
Bromomethane	74-83-9	<10	10
Vinyl Chloride	75-01-4	<10	10
Chloroethane	75-00-3	<10	10
Methylene Chloride	75-09-2	9	5
Acetone	67-64-1	<10	10
Carbon Disulfide	75-15-0	< 5	5
1,1-Dichloroethene	75-35-4	< 5	5
1,1-Dichloroethane	75-35-3	< 5	5
Trans-1,2-Dichloroethene	156-60-5	< 5	5
Chloroform	67-66-3	< 5	5
1,2-Dichloroethane	107-06-2	< 5	5
2-Butanone	78-93-3	<10	10
1,1,1-Trichloroethane	71-55-6	< 5	5
Carbon Tetrachloride	56-23-5	< 5	5
Vinyl Acetate	108-05-4	<10	10
Bromodichloromethane	75-27-4	< 5	5
1,2-Dichloropropane	78-87-5	< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

ANALYTICAL RESULTS

ATEC Lab No. BLANK121990

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Trans-1, 3-Dichloropropene	10061-02-6	< 5	5
Trichloroethene	79-01-6	< 5	5
Dibromochloromethane	124-48-1	< 5	5
1,1,2-Trichloroethane	79-00-5	< 5	5
Benzene	71-43-2	< 5	5
cis-1,3-Dichloropropene	10061-01-5	< 5	5
2-Chloroethylvinylether	110-75-8	<10	10
Bromoform	75-25-2	< 5	5
4-Methyl-2-Pentanone	108-10-1	<10	10
2-Hexanone	591-78-6	<10	10
Tetrachloroethene	127-18-4	< 5	5
1,1,2,2-Tetrachloroethane	79-34-5	< 5	5
Toluene	108-88-3	< 5	5
Chlorobenzene	108-90-7	< 5	5
Ethylbenzene	100-41-4	< 5	5
Styrene	100-42-5	< 5	5
Total Xylenes		< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

Analytical Method: SW 846 Method 8240

Analyst: T. Harrison
Verified: M. McGill
Date Reported: December 24, 1990

Respectfully submitted,

Keith S. Kline

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07495
Client Sample Identification: Method Blank
Sample Matrix: Soil
Date Sample Analyzed: December 20, 1990
Analytical Equipment: Incos BV

VOLATILE COMPOUNDS
ANALYTICAL RESULTS

ATEC Lab No. BLANK122090

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Chloromethane	74-87-3	<10	10
Bromomethane	74-83-9	<10	10
Vinyl Chloride	75-01-4	<10	10
Chloroethane	75-00-3	<10	10
Methylene Chloride	75-09-2	< 5*	5
Acetone	67-64-1	<10	10
Carbon Disulfide	75-15-0	< 5	5
1,1-Dichloroethene	75-35-4	< 5	5
1,1-Dichloroethane	75-35-3	< 5	5
Trans-1,2-Dichloroethene	156-60-5	< 5	5
Chloroform	67-66-3	< 5	5
1,2-Dichloroethane	107-06-2	< 5	5
2-Butanone	78-93-3	<10	10
1,1,1-Trichloroethane	71-55-6	< 5	5
Carbon Tetrachloride	56-23-5	< 5	5
Vinyl Acetate	108-05-4	<10	10
Bromodichloromethane	75-27-4	< 5	5
1,2-Dichloropropane	78-87-5	< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

ANALYTICAL RESULTS

ATEC Lab No. BLANK122090

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Trans-1, 3-Dichloropropene	10061-02-6	< 5	5
Trichloroethene	79-01-6	< 5	5
Dibromochloromethane	124-48-1	< 5	5
1,1,2-Trichloroethane	79-00-5	< 5	5
Benzene	71-43-2	< 5	5
cis-1,3-Dichloropropene	10061-01-5	< 5	5
2-Chloroethylvinylether	110-75-8	<10	10
Bromoform	75-25-2	< 5	5
4-Methyl-2-Pentanone	108-10-1	<10	10
2-Hexanone	591-78-6	<10	10
Tetrachloroethene	127-18-4	< 5	5
1,1,2,2-Tetrachloroethane	79-34-5	< 5	5
Toluene	108-88-3	< 5	5
Chlorobenzene	108-90-7	< 5	5
Ethylbenzene	100-41-4	< 5	5
Styrene	100-42-5	< 5	5
Total Xylenes		< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

Analytical Method: SW 846 Method 8240

Analyst: T. Harrison
Verified: M. McGill
Date Reported: December 24, 1990

Respectfully submitted,

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07495
Client Sample Identification: B-1 (0-1.5)
Sample Matrix: Soil
Date Sample Collected: December 11, 1990
Date Sample Received: December 14, 1990
Date Sample Analyzed: December 18, 1990
Analytical Equipment: 1020B

VOLATILE COMPOUNDS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-1

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Chloromethane	74-87-3	<10	10
Bromomethane	74-83-9	<10	10
Vinyl Chloride	75-01-4	<10	10
Chloroethane	75-00-3	<10	10
Methylene Chloride	75-09-2	24	5
Acetone	67-64-1	14	10
Carbon Disulfide	75-15-0	< 5	5
1,1-Dichloroethene	75-35-4	< 5	5
1,1-Dichloroethane	75-35-3	< 5	5
Trans-1,2-Dichloroethene	156-60-5	< 5	5
Chloroform	67-66-3	< 5	5
1,2-Dichloroethane	107-06-2	< 5	5
2-Butanone	78-93-3	<10	10
1,1,1-Trichloroethane	71-55-6	< 5	5
Carbon Tetrachloride	56-23-5	< 5	5
Vinyl Acetate	108-05-4	<10	10
Bromodichloromethane	75-27-4	< 5	5
1,2-Dichloropropane	78-87-5	< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

ANALYTICAL RESULTS

ATEC Lab No. 9012162-1

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Trans-1, 3-Dichloropropene	10061-02-6	< 5	5
Trichloroethene	79-01-6	< 5	5
Dibromochloromethane	124-48-1	< 5	5
1,1,2-Trichloroethane	79-00-5	< 5	5
Benzene	71-43-2	< 5	5
cis-1,3-Dichloropropene	10061-01-5	< 5	5
2-Chloroethylvinylether	110-75-8	<10	10
Bromoform	75-25-2	< 5	5
4-Methyl-2-Pentanone	108-10-1	<10*	10
2-Hexanone	591-78-6	<10*	10
Tetrachloroethene	127-18-4	< 5	5
1,1,2,2-Tetrachloroethane	79-34-5	< 5	5
Toluene	108-88-3	< 5	5
Chlorobenzene	108-90-7	< 5	5
Ethylbenzene	100-41-4	< 5	5
Styrene	100-42-5	< 5	5
Total Xylenes		< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

Analytical Method: SW 846 Method 8240

Analyst: J. Rigdon
Verified: M. McGill
Date Reported: December 21, 1990

Respectfully submitted,

Keith S Kline

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07459
Client Sample Identification: B-1 (0-1.5)
Sample Matrix: Soil
Date Sample Collected: December 11, 1990
Date Sample Received: December 14, 1990
Date Sample Extracted: December 18, 1990
Date Sample Analyzed: December 21, 1990
Analytical Equipment: Varian 3400

PRIORITY POLLUTANTS
PCBS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-1

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
PCB-1242	53469-21-9	< 80	80
PCB-1254	11097-69-1	<160	160
PCB-1221	11104-28-2	< 80	80
PCB-1232	11141-16-5	< 80	80
PCB-1248	12672-29-6	< 80	80
PCB-1260	11096-82-5	<160	160
PCB-1016	12674-11-2	< 80	80

Analytical Method: SW 846 Method 8080

Analyst: L. Scott, C. Blackard
Verified: D. Spyker
Date Reported: December 31, 1990

Respectfully submitted,

Keith S. Kline

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07495
Client Sample Identification: B-2 (0-1.5)
Sample Matrix: Soil
Date Sample Collected: December 11, 1990
Date Sample Received: December 14, 1990
Date Sample Analyzed: December 18, 1990
Analytical Equipment: 1020B

VOLATILE COMPOUNDS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-2D

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Chloromethane	74-87-3	<10	10
Bromomethane	74-83-9	<10	10
Vinyl Chloride	75-01-4	<10	10
Chloroethane	75-00-3	<10	10
Methylene Chloride	75-09-2	21	5
Acetone	67-64-1	<10	10
Carbon Disulfide	75-15-0	< 5	5
1,1-Dichloroethene	75-35-4	< 5	5
1,1-Dichloroethane	75-35-3	< 5	5
Trans-1,2-Dichloroethene	156-60-5	< 5	5
Chloroform	67-66-3	< 5	5
1,2-Dichloroethane	107-06-2	< 5	5
2-Butanone	78-93-3	<10	10
1,1,1-Trichloroethane	71-55-6	< 5	5
Carbon Tetrachloride	56-23-5	< 5	5
Vinyl Acetate	108-05-4	<10	10
Bromodichloromethane	75-27-4	< 5	5
1,2-Dichloropropane	78-87-5	< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

ANALYTICAL RESULTS

ATEC Lab No. 9012162-2D

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Trans-1, 3-Dichloropropene	10061-02-6	< 5	5
Trichloroethene	79-01-6	< 5	5
Dibromochloromethane	124-48-1	< 5	5
1,1,2-Trichloroethane	79-00-5	< 5	5
Benzene	71-43-2	< 5	5
cis-1,3-Dichloropropene	10061-01-5	< 5	5
2-Chloroethylvinylether	110-75-8	<10	10
Bromoform	75-25-2	< 5	5
4-Methyl-2-Pentanone	108-10-1	<10	10
2-Hexanone	591-78-6	<10	10
Tetrachloroethene	127-18-4	< 5	5
1,1,2,2-Tetrachloroethane	79-34-5	< 5	5
Toluene	108-88-3	< 5	5
Chlorobenzene	108-90-7	< 5	5
Ethylbenzene	100-41-4	< 5	5
Styrene	100-42-5	< 5	5
Total Xylenes		< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

Analytical Method: SW 846 Method 8240

Analyst: J. Rigdon
Verified: M. McGill
Date Reported: December 21, 1990

Respectfully submitted,

Keith S. Kline

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07495
Client Sample Identification: B-3 (0-1.5)
Sample Matrix: Soil
Date Sample Collected: December 11, 1990
Date Sample Received: December 14, 1990
Date Sample Analyzed: December 19, 1990
Analytical Equipment: Incos BV

VOLATILE COMPOUNDS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-3R

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Chloromethane	74-87-3	<10	10
Bromomethane	74-83-9	<10	10
Vinyl Chloride	75-01-4	<10	10
Chloroethane	75-00-3	<10	10
Methylene Chloride	75-09-2	47	5
Acetone	67-64-1	<10	10
Carbon Disulfide	75-15-0	< 5	5
1,1-Dichloroethene	75-35-4	< 5	5
1,1-Dichloroethane	75-35-3	< 5	5
Trans-1,2-Dichloroethene	156-60-5	< 5	5
Chloroform	67-66-3	< 5	5
1,2-Dichloroethane	107-06-2	< 5	5
2-Butanone	78-93-3	<10	10
1,1,1-Trichloroethane	71-55-6	< 5	5
Carbon Tetrachloride	56-23-5	< 5	5
Vinyl Acetate	108-05-4	<10	10
Bromodichloromethane	75-27-4	< 5	5
1,2-Dichloropropane	78-87-5	< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

ANALYTICAL RESULTS

ATEC Lab No. 9012162-3R

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Trans-1, 3-Dichloropropene	10061-02-6	< 5	5
Trichloroethene	79-01-6	< 5	5
Dibromochloromethane	124-48-1	< 5	5
1,1,2-Trichloroethane	79-00-5	< 5	5
Benzene	71-43-2	< 5	5
cis-1,3-Dichloropropene	10061-01-5	< 5	5
2-Chloroethylvinylether	110-75-8	<10	10
Bromoform	75-25-2	< 5	5
4-Methyl-2-Pentanone	108-10-1	<10	10
2-Hexanone	591-78-6	<10	10
Tetrachloroethene	127-18-4	< 5	5
1,1,2,2-Tetrachloroethane	79-34-5	< 5	5
Toluene	108-88-3	70	5
Chlorobenzene	108-90-7	< 5	5
Ethylbenzene	100-41-4	< 5	5
Styrene	100-42-5	< 5	5
Total Xylenes		< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

Analytical Method: SW 846 Method 8240

Analyst: T. Harrison
Verified: M. McGill
Date Reported: December 24, 1990

Respectfully submitted,

Keith S Klein

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07459
Client Sample Identification: B-3 (0-1.5)
Sample Matrix: Soil
Date Sample Collected: December 11, 1990
Date Sample Received: December 14, 1990
Date Sample Extracted: December 18, 1990
Date Sample Analyzed: December 26, 1990
Analytical Equipment: Varian 3400

PRIORITY POLLUTANTS
PCBS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-3

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
PCB-1242	53469-21-9	< 80	80
PCB-1254	11097-69-1	<160	160
PCB-1221	11104-28-2	< 80	80
PCB-1232	11141-16-5	< 80	80
PCB-1248	12672-29-6	< 80	80
PCB-1260	11096-82-5	<160	160
PCB-1016	12674-11-2	< 80	80

Analytical Method: SW 846 Method 8080

Analyst: L. Scott, C. Blackard
Verified: D. Spyker
Date Reported: December 31, 1990

Respectfully submitted,

Kevin S. Kline
Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07495
Client Sample Identification: B-4 (0-1.5)
Sample Matrix: Soil
Date Sample Collected: December 11, 1990
Date Sample Received: December 14, 1990
Date Sample Analyzed: December 18, 1990
Analytical Equipment: 1020B

VOLATILE COMPOUNDS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-4

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Chloromethane	74-87-3	<10	10
Bromomethane	74-83-9	<10	10
Vinyl Chloride	75-01-4	<10	10
Chloroethane	75-00-3	<10	10
Methylene Chloride	75-09-2	23	5
Acetone	67-64-1	<10*	10
Carbon Disulfide	75-15-0	< 5	5
1,1-Dichloroethene	75-35-4	< 5	5
1,1-Dichloroethane	75-35-3	< 5	5
Trans-1,2-Dichloroethene	156-60-5	< 5	5
Chloroform	67-66-3	< 5	5
1,2-Dichloroethane	107-06-2	< 5	5
2-Butanone	78-93-3	<10	10
1,1,1-Trichloroethane	71-55-6	< 5	5
Carbon Tetrachloride	56-23-5	< 5	5
Vinyl Acetate	108-05-4	<10	10
Bromodichloromethane	75-27-4	< 5	5
1,2-Dichloropropane	78-87-5	< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

ANALYTICAL RESULTS

ATEC Lab No. 9012162-4

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Trans-1, 3-Dichloropropene	10061-02-6	< 5	5
Trichloroethene	79-01-6	< 5	5
Dibromochloromethane	124-48-1	< 5	5
1,1,2-Trichloroethane	79-00-5	< 5	5
Benzene	71-43-2	< 5	5
cis-1,3-Dichloropropene	10061-01-5	< 5	5
2-Chloroethylvinylether	110-75-8	<10	10
Bromoform	75-25-2	< 5	5
4-Methyl-2-Pentanone	108-10-1	<10	10
2-Hexanone	591-78-6	<10	10
Tetrachloroethene	127-18-4	< 5	5
1,1,2,2-Tetrachloroethane	79-34-5	< 5	5
Toluene	108-88-3	< 5	5
Chlorobenzene	108-90-7	< 5	5
Ethylbenzene	100-41-4	< 5	5
Styrene	100-42-5	< 5	5
Total Xylenes		< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

Analytical Method: SW 846 Method 8240

Analyst: J. Rigdon
Verified: M. McGill
Date Reported: December 21, 1990

Respectfully submitted,

Keith S. Klein

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07459
Client Sample Identification: B-5 (0-1.5)
Sample Matrix: Soil
Date Sample Collected: December 11, 1990
Date Sample Received: December 14, 1990
Date Sample Extracted: December 18, 1990
Date Sample Analyzed: December 21, 1990
Analytical Equipment: Varian 3400

PRIORITY POLLUTANTS
PCBS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-5

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
PCB-1242	53469-21-9	< 80	80
PCB-1254	11097-69-1	<160	160
PCB-1221	11104-28-2	< 80	80
PCB-1232	11141-16-5	< 80	80
PCB-1248	12672-29-6	< 80	80
PCB-1260	11096-82-5	<160	160
PCB-1016	12674-11-2	< 80	80

Analytical Method: SW 846 Method 8080

Analyst: L. Scott, C. Blackard
Verified: D. Spyker
Date Reported: December 31, 1990

Respectfully submitted,

Keith S Kline

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07459
Client Sample Identification: B-7 (0-1.5)
Sample Matrix: Soil
Date Sample Collected: December 11, 1990
Date Sample Received: December 14, 1990
Date Sample Extracted: December 18, 1990
Date Sample Analyzed: December 26, 1990
Analytical Equipment: Varian 3400

PRIORITY POLLUTANTS
PCBS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-7

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
PCB-1242	53469-21-9	< 80	80
PCB-1254	11097-69-1	<160	160
PCB-1221	11104-28-2	< 80	80
PCB-1232	11141-16-5	< 80	80
PCB-1248	12672-29-6	< 80	80
PCB-1260	11096-82-5	<160	160
PCB-1016	12674-11-2	< 80	80

Analytical Method: SW 846 Method 8080

Analyst: L. Scott, C. Blackard
Verified: D. Spyker
Date Reported: December 31, 1990

Respectfully submitted,

Keith S Klein
Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07495
Client Sample Identification: B-9 (0-1.5)
Sample Matrix: Soil
Date Sample Collected: December 12, 1990
Date Sample Received: December 14, 1990
Date Sample Analyzed: December 18, 1990
Analytical Equipment: 1020B

VOLATILE COMPOUNDS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-9

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Chloromethane	74-87-3	<10	10
Bromomethane	74-83-9	<10	10
Vinyl Chloride	75-01-4	<10	10
Chloroethane	75-00-3	<10	10
Methylene Chloride	75-09-2	12	5
Acetone	67-64-1	<10*	10
Carbon Disulfide	75-15-0	< 5	5
1,1-Dichloroethene	75-35-4	< 5	5
1,1-Dichloroethane	75-35-3	< 5	5
Trans-1,2-Dichloroethene	156-60-5	< 5	5
Chloroform	67-66-3	< 5	5
1,2-Dichloroethane	107-06-2	< 5	5
2-Butanone	78-93-3	<10	10
1,1,1-Trichloroethane	71-55-6	< 5	5
Carbon Tetrachloride	56-23-5	< 5	5
Vinyl Acetate	108-05-4	<10	10
Bromodichloromethane	75-27-4	< 5	5
1,2-Dichloropropane	78-87-5	< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

ANALYTICAL RESULTS

ATEC Lab No. 9012162-9

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Trans-1, 3-Dichloropropene	10061-02-6	< 5	5
Trichloroethene	79-01-6	< 5	5
Dibromochloromethane	124-48-1	< 5	5
1,1,2-Trichloroethane	79-00-5	< 5	5
Benzene	71-43-2	< 5	5
cis-1,3-Dichloropropene	10061-01-5	< 5	5
2-Chloroethylvinylether	110-75-8	<10	10
Bromoform	75-25-2	< 5	5
4-Methyl-2-Pentanone	108-10-1	<10	10
2-Hexanone	591-78-6	<10	10
Tetrachloroethene	127-18-4	< 5	5
1,1,2,2-Tetrachloroethane	79-34-5	< 5	5
Toluene	108-88-3	< 5*	5
Chlorobenzene	108-90-7	< 5	5
Ethylbenzene	100-41-4	< 5	5
Styrene	100-42-5	< 5	5
Total Xylenes		< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

Analytical Method: SW 846 Method 8240

Analyst: J. Rigdon
Verified: M. McGill
Date Reported: December 21, 1990

Respectfully submitted,

Keith S. Kline

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07495
Client Sample Identification: B-10 (0-1.5)
Sample Matrix: Soil
Date Sample Collected: December 12, 1990
Date Sample Received: December 14, 1990
Date Sample Analyzed: December 18, 1990
Analytical Equipment: 1020B

VOLATILE COMPOUNDS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-10

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Chloromethane	74-87-3	<10	10
Bromomethane	74-83-9	<10	10
Vinyl Chloride	75-01-4	<10	10
Chloroethane	75-00-3	<10	10
Methylene Chloride	75-09-2	18	5
Acetone	67-64-1	<10	10
Carbon Disulfide	75-15-0	< 5	5
1,1-Dichloroethene	75-35-4	< 5	5
1,1-Dichloroethane	75-35-3	< 5	5
Trans-1,2-Dichloroethene	156-60-5	< 5	5
Chloroform	67-66-3	< 5	5
1,2-Dichloroethane	107-06-2	< 5	5
2-Butanone	78-93-3	<10	10
1,1,1-Trichloroethane	71-55-6	< 5	5
Carbon Tetrachloride	56-23-5	< 5	5
Vinyl Acetate	108-05-4	<10	10
Bromodichloromethane	75-27-4	< 5	5
1,2-Dichloropropane	78-87-5	< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

ANALYTICAL RESULTS

ATEC Lab No. 9012162-10

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Trans-1, 3-Dichloropropene	10061-02-6	< 5	5
Trichloroethene	79-01-6	< 5	5
Dibromochloromethane	124-48-1	< 5	5
1,1,2-Trichloroethane	79-00-5	< 5	5
Benzene	71-43-2	< 5	5
cis-1,3-Dichloropropene	10061-01-5	< 5	5
2-Chloroethylvinylether	110-75-8	<10	10
Bromoform	75-25-2	< 5	5
4-Methyl-2-Pentanone	108-10-1	<10	10
2-Hexanone	591-78-6	<10	10
Tetrachloroethene	127-18-4	< 5	5
1,1,2,2-Tetrachloroethane	79-34-5	< 5	5
Toluene	108-88-3	< 5	5
Chlorobenzene	108-90-7	< 5	5
Ethylbenzene	100-41-4	< 5	5
Styrene	100-42-5	< 5	5
Total Xylenes		< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

Analytical Method: SW 846 Method 8240

Analyst: J. Rigdon
Verified: M. McGill
Date Reported: December 21, 1990

Respectfully submitted,

Keith S. Kline

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07495
Client Sample Identification: B-11 (0-1.5)
Sample Matrix: Soil
Date Sample Collected: December 12, 1990
Date Sample Received: December 14, 1990
Date Sample Analyzed: December 18, 1990
Analytical Equipment: 1020B

VOLATILE COMPOUNDS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-11

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Chloromethane	74-87-3	<10	10
Bromomethane	74-83-9	<10	10
Vinyl Chloride	75-01-4	<10	10
Chloroethane	75-00-3	<10	10
Methylene Chloride	75-09-2	24	5
Acetone	67-64-1	<10*	10
Carbon Disulfide	75-15-0	< 5	5
1,1-Dichloroethene	75-35-4	< 5	5
1,1-Dichloroethane	75-35-3	< 5	5
Trans-1,2-Dichloroethene	156-60-5	< 5	5
Chloroform	67-66-3	< 5	5
1,2-Dichloroethane	107-06-2	< 5	5
2-Butanone	78-93-3	<10	10
1,1,1-Trichloroethane	71-55-6	< 5	5
Carbon Tetrachloride	56-23-5	< 5	5
Vinyl Acetate	108-05-4	<10	10
Bromodichloromethane	75-27-4	< 5	5
1,2-Dichloropropane	78-87-5	< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

ANALYTICAL RESULTS

ATEC Lab No. 9012162-11

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Trans-1, 3-Dichloropropene	10061-02-6	< 5	5
Trichloroethene	79-01-6	< 5	5
Dibromochloromethane	124-48-1	< 5	5
1,1,2-Trichloroethane	79-00-5	< 5	5
Benzene	71-43-2	< 5	5
cis-1,3-Dichloropropene	10061-01-5	< 5	5
2-Chloroethylvinylether	110-75-8	<10	10
Bromoform	75-25-2	< 5	5
4-Methyl-2-Pentanone	108-10-1	<10	10
2-Hexanone	591-78-6	<10	10
Tetrachloroethene	127-18-4	< 5	5
1,1,2,2-Tetrachloroethane	79-34-5	< 5	5
Toluene	108-88-3	< 5*	5
Chlorobenzene	108-90-7	< 5	5
Ethylbenzene	100-41-4	< 5	5
Styrene	100-42-5	< 5	5
Total Xylenes		< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

Analytical Method: SW 846 Method 8240

Analyst: J. Rigdon
Verified: M. McGill
Date Reported: December 21, 1990

Respectfully submitted,

Keith S. Klein

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07459
Client Sample Identification: B-11 (0-1.5)
Sample Matrix: Soil
Date Sample Collected: December 12, 1990
Date Sample Received: December 14, 1990
Date Sample Extracted: December 18, 1990
Date Sample Analyzed: December 26, 1990
Analytical Equipment: Varian 3400

PRIORITY POLLUTANTS
PCBS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-11

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
PCB-1242	53469-21-9	< 80	80
PCB-1254	11097-69-1	<160	160
PCB-1221	11104-28-2	< 80	80
PCB-1232	11141-16-5	< 80	80
PCB-1248	12672-29-6	< 80	80
PCB-1260	11096-82-5	<160	160
PCB-1016	12674-11-2	< 80	80

Analytical Method: SW 846 Method 8080

Analyst: L. Scott, C. Blackard
Verified: D. Spyker
Date Reported: December 31, 1990

Respectfully submitted,

Keith S Kline

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07495
Client Sample Identification: B-12 (1.5-3.0)
Sample Matrix: Soil
Date Sample Collected: December 11, 1990
Date Sample Received: December 14, 1990
Date Sample Analyzed: December 18, 1990
Analytical Equipment: 1020B

VOLATILE COMPOUNDS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-12

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Chloromethane	74-87-3	<10	10
Bromomethane	74-83-9	<10	10
Vinyl Chloride	75-01-4	<10	10
Chloroethane	75-00-3	<10	10
Methylene Chloride	75-09-2	28	5
Acetone	67-64-1	<10*	10
Carbon Disulfide	75-15-0	< 5	5
1,1-Dichloroethene	75-35-4	< 5	5
1,1-Dichloroethane	75-35-3	< 5	5
Trans-1,2-Dichloroethene	156-60-5	< 5	5
Chloroform	67-66-3	< 5	5
1,2-Dichloroethane	107-06-2	< 5	5
2-Butanone	78-93-3	<10	10
1,1,1-Trichloroethane	71-55-6	< 5	5
Carbon Tetrachloride	56-23-5	< 5	5
Vinyl Acetate	108-05-4	<10	10
Bromodichloromethane	75-27-4	< 5	5
1,2-Dichloropropane	78-87-5	< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

ANALYTICAL RESULTS

ATEC Lab No. 9012162-12

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Trans-1, 3-Dichloropropene	10061-02-6	< 5	5
Trichloroethene	79-01-6	< 5	5
Dibromochloromethane	124-48-1	< 5	5
1,1,2-Trichloroethane	79-00-5	< 5	5
Benzene	71-43-2	< 5	5
cis-1,3-Dichloropropene	10061-01-5	< 5	5
2-Chloroethylvinylether	110-75-8	<10	10
Bromoform	75-25-2	< 5	5
4-Methyl-2-Pentanone	108-10-1	<10	10
2-Hexanone	591-78-6	<10	10
Tetrachloroethene	127-18-4	< 5	5
1,1,2,2-Tetrachloroethane	79-34-5	< 5	5
Toluene	108-88-3	< 5	5
Chlorobenzene	108-90-7	< 5	5
Ethylbenzene	100-41-4	< 5	5
Styrene	100-42-5	< 5	5
Total Xylenes		< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

Analytical Method: SW 846 Method 8240

Analyst: J. Rigdon
Verified: M. McGill
Date Reported: December 21, 1990

Respectfully submitted,

Keith S Kline

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07495
Client Sample Identification: B-13 (0-1.0)
Sample Matrix: Soil
Date Sample Collected: December 12, 1990
Date Sample Received: December 14, 1990
Date Sample Analyzed: December 18, 1990
Analytical Equipment: 1020B

VOLATILE COMPOUNDS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-13

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Chloromethane	74-87-3	<10	10
Bromomethane	74-83-9	<10	10
Vinyl Chloride	75-01-4	<10	10
Chloroethane	75-00-3	<10	10
Methylene Chloride	75-09-2	35	5
Acetone	67-64-1	<10*	10
Carbon Disulfide	75-15-0	< 5	5
1,1-Dichloroethene	75-35-4	< 5	5
1,1-Dichloroethane	75-35-3	< 5	5
Trans-1,2-Dichloroethene	156-60-5	< 5	5
Chloroform	67-66-3	< 5	5
1,2-Dichloroethane	107-06-2	< 5	5
2-Butanone	78-93-3	<10	10
1,1,1-Trichloroethane	71-55-6	< 5	5
Carbon Tetrachloride	56-23-5	< 5	5
Vinyl Acetate	108-05-4	<10	10
Bromodichloromethane	75-27-4	< 5	5
1,2-Dichloropropane	78-87-5	< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

ANALYTICAL RESULTS

ATEC Lab No. 9012162-13

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Trans-1, 3-Dichloropropene	10061-02-6	< 5	5
Trichloroethene	79-01-6	< 5	5
Dibromochloromethane	124-48-1	< 5	5
1,1,2-Trichloroethane	79-00-5	< 5	5
Benzene	71-43-2	< 5	5
cis-1,3-Dichloropropene	10061-01-5	< 5	5
2-Chloroethylvinylether	110-75-8	<10	10
Bromoform	75-25-2	< 5	5
4-Methyl-2-Pentanone	108-10-1	<10	10
2-Hexanone	591-78-6	<10	10
Tetrachloroethene	127-18-4	< 5	5
1,1,2,2-Tetrachloroethane	79-34-5	< 5	5
Toluene	108-88-3	< 5	5
Chlorobenzene	108-90-7	< 5	5
Ethylbenzene	100-41-4	< 5	5
Styrene	100-42-5	< 5	5
Total Xylenes		< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

Analytical Method: SW 846 Method 8240

Analyst: J. Rigdon
Verified: M. McGill
Date Reported: December 21, 1990

Respectfully submitted,

Keith S Klein

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07459
Client Sample Identification: B-13 (0-1.0)
Sample Matrix: Soil
Date Sample Collected: December 12, 1990
Date Sample Received: December 14, 1990
Date Sample Extracted: December 18, 1990
Date Sample Analyzed: December 26, 1990
Analytical Equipment: Varian 3400

PRIORITY POLLUTANTS
PCBS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-13

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
PCB-1242	53469-21-9	< 800	800
PCB-1254	11097-69-1	<1,600	1,600
PCB-1221	11104-28-2	< 800	800
PCB-1232	11141-16-5	< 800	800
PCB-1248	12672-29-6	< 800	800
PCB-1260	11096-82-5	<1,600	1,600
PCB-1016	12674-11-2	< 800	800

Analytical Method: SW 846 Method 8080

Analyst: L. Scott, C. Blackard
Verified: D. Spyker
Date Reported: December 31, 1990

Respectfully submitted,

Keith S Kline
Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07495
Client Sample Identification: B-14 (0-1.5)
Sample Matrix: Soil
Date Sample Collected: December 12, 1990
Date Sample Received: December 14, 1990
Date Sample Analyzed: December 19, 1990
Analytical Equipment: Incos BV

VOLATILE COMPOUNDS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-14

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Chloromethane	74-87-3	<10	10
Bromomethane	74-83-9	<10	10
Vinyl Chloride	75-01-4	<10	10
Chloroethane	75-00-3	<10	10
Methylene Chloride	75-09-2	6	5
Acetone	67-64-1	<10	10
Carbon Disulfide	75-15-0	< 5	5
1,1-Dichloroethene	75-35-4	< 5	5
1,1-Dichloroethane	75-35-3	< 5	5
Trans-1,2-Dichloroethene	156-60-5	< 5	5
Chloroform	67-66-3	< 5	5
1,2-Dichloroethane	107-06-2	< 5	5
2-Butanone	78-93-3	<10	10
1,1,1-Trichloroethane	71-55-6	< 5	5
Carbon Tetrachloride	56-23-5	< 5	5
Vinyl Acetate	108-05-4	<10	10
Bromodichloromethane	75-27-4	< 5	5
1,2-Dichloropropane	78-87-5	< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

ANALYTICAL RESULTS

ATEC Lab No. 9012162-14

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Trans-1, 3-Dichloropropene	10061-02-6	< 5	5
Trichloroethene	79-01-6	< 5	5
Dibromochloromethane	124-48-1	< 5	5
1,1,2-Trichloroethane	79-00-5	< 5	5
Benzene	71-43-2	< 5	5
cis-1,3-Dichloropropene	10061-01-5	< 5	5
2-Chloroethylvinylether	110-75-8	<10	10
Bromoform	75-25-2	< 5	5
4-Methyl-2-Pentanone	108-10-1	<10	10
2-Hexanone	591-78-6	<10	10
Tetrachloroethene	127-18-4	< 5	5
1,1,2,2-Tetrachloroethane	79-34-5	< 5	5
Toluene	108-88-3	< 5	5
Chlorobenzene	108-90-7	< 5	5
Ethylbenzene	100-41-4	< 5	5
Styrene	100-42-5	< 5	5
Total Xylenes		< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

Analytical Method: SW 846 Method 8240

Analyst: T. Harrison
Verified: M. McGill
Date Reported: December 24, 1990

Respectfully submitted,

Keith S Kline

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07459
Client Sample Identification: B-14 (0-1.5)
Sample Matrix: Soil
Date Sample Collected: December 12, 1990
Date Sample Received: December 14, 1990
Date Sample Extracted: December 18, 1990
Date Sample Analyzed: December 26, 1990
Analytical Equipment: Varian 3400

PRIORITY POLLUTANTS
PCBS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-14

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
PCB-1242	53469-21-9	< 80	80
PCB-1254	11097-69-1	<160	160
PCB-1221	11104-28-2	< 80	80
PCB-1232	11141-16-5	< 80	80
PCB-1248	12672-29-6	210	80
PCB-1260	11096-82-5	<160	160
PCB-1016	12674-11-2	< 80	80

Analytical Method: SW 846 Method 8080

Analyst: L. Scott, C. Blackard
Verified: D. Spyker
Date Reported: December 31, 1990

Respectfully submitted,

Keith S Kline
Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07495
Client Sample Identification: B-15 (0-1.5)
Sample Matrix: Soil
Date Sample Collected: December 12, 1990
Date Sample Received: December 14, 1990
Date Sample Analyzed: December 19, 1990
Analytical Equipment: Incos BV

VOLATILE COMPOUNDS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-15D

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Chloromethane	74-87-3	<10	10
Bromomethane	74-83-9	<10	10
Vinyl Chloride	75-01-4	<10	10
Chloroethane	75-00-3	<10	10
Methylene Chloride	75-09-2	8	5
Acetone	67-64-1	<10	10
Carbon Disulfide	75-15-0	< 5	5
1,1-Dichloroethene	75-35-4	< 5	5
1,1-Dichloroethane	75-35-3	< 5	5
Trans-1,2-Dichloroethene	156-60-5	< 5	5
Chloroform	67-66-3	< 5	5
1,2-Dichloroethane	107-06-2	< 5	5
2-Butanone	78-93-3	<10	10
1,1,1-Trichloroethane	71-55-6	< 5	5
Carbon Tetrachloride	56-23-5	< 5	5
Vinyl Acetate	108-05-4	<10	10
Bromodichloromethane	75-27-4	< 5	5
1,2-Dichloropropane	78-87-5	< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

ANALYTICAL RESULTS

ATEC Lab No. 9012162-15D

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Trans-1, 3-Dichloropropene	10061-02-6	< 5	5
Trichloroethene	79-01-6	< 5	5
Dibromochloromethane	124-48-1	< 5	5
1,1,2-Trichloroethane	79-00-5	< 5	5
Benzene	71-43-2	< 5	5
cis-1,3-Dichloropropene	10061-01-5	< 5	5
2-Chloroethylvinylether	110-75-8	<10	10
Bromoform	75-25-2	< 5	5
4-Methyl-2-Pentanone	108-10-1	<10	10
2-Hexanone	591-78-6	<10	10
Tetrachloroethene	127-18-4	< 5	5
1,1,2,2-Tetrachloroethane	79-34-5	< 5	5
Toluene	108-88-3	12	5
Chlorobenzene	108-90-7	< 5	5
Ethylbenzene	100-41-4	< 5	5
Styrene	100-42-5	< 5	5
Total Xylenes		< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

Analytical Method: SW 846 Method 8240

Analyst: T. Harrison
Verified: M. McGill
Date Reported: December 24, 1990

Respectfully submitted,

Keith S Kline

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07459
Client Sample Identification: B-15 (0-1.5)
Sample Matrix: Soil
Date Sample Collected: December 12, 1990
Date Sample Received: December 14, 1990
Date Sample Extracted: December 18, 1990
Date Sample Analyzed: December 26, 1990
Analytical Equipment: Varian 3400

PRIORITY POLLUTANTS
PCBS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-15

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
PCB-1242	53469-21-9	< 80	80
PCB-1254	11097-69-1	<160	160
PCB-1221	11104-28-2	< 80	80
PCB-1232	11141-16-5	< 80	80
PCB-1248	12672-29-6	180	80
PCB-1260	11096-82-5	<160	160
PCB-1016	12674-11-2	< 80	80

Analytical Method: SW 846 Method 8080

Analyst: L. Scott, C. Blackard
Verified: D. Spyker
Date Reported: December 31, 1990

Respectfully submitted,

Keith S. Kline
Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07495
Client Sample Identification: B-16 (0-1.5)
Sample Matrix: Soil
Date Sample Collected: December 12, 1990
Date Sample Received: December 14, 1990
Date Sample Analyzed: December 19, 1990
Analytical Equipment: Incos BV

VOLATILE COMPOUNDS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-16

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Chloromethane	74-87-3	<10	10
Bromomethane	74-83-9	<10	10
Vinyl Chloride	75-01-4	<10	10
Chloroethane	75-00-3	<10	10
Methylene Chloride	75-09-2	11	5
Acetone	67-64-1	<10	10
Carbon Disulfide	75-15-0	< 5	5
1,1-Dichloroethene	75-35-4	< 5	5
1,1-Dichloroethane	75-35-3	< 5	5
Trans-1,2-Dichloroethene	156-60-5	< 5	5
Chloroform	67-66-3	< 5	5
1,2-Dichloroethane	107-06-2	< 5	5
2-Butanone	78-93-3	<10	10
1,1,1-Trichloroethane	71-55-6	< 5	5
Carbon Tetrachloride	56-23-5	< 5	5
Vinyl Acetate	108-05-4	<10	10
Bromodichloromethane	75-27-4	< 5	5
1,2-Dichloropropane	78-87-5	< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

ANALYTICAL RESULTS

ATEC Lab No. 9012162-16

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Trans-1, 3-Dichloropropene	10061-02-6	< 5	5
Trichloroethene	79-01-6	< 5	5
Dibromochloromethane	124-48-1	< 5	5
1,1,2-Trichloroethane	79-00-5	< 5	5
Benzene	71-43-2	< 5	5
cis-1,3-Dichloropropene	10061-01-5	< 5	5
2-Chloroethylvinylether	110-75-8	<10	10
Bromoform	75-25-2	< 5	5
4-Methyl-2-Pentanone	108-10-1	<10	10
2-Hexanone	591-78-6	<10	10
Tetrachloroethene	127-18-4	< 5	5
1,1,2,2-Tetrachloroethane	79-34-5	< 5	5
Toluene	108-88-3	< 5*	5
Chlorobenzene	108-90-7	< 5	5
Ethylbenzene	100-41-4	< 5	5
Styrene	100-42-5	< 5	5
Total Xylenes		< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

Analytical Method: SW 846 Method 8240

Analyst: T. Harrison
Verified: M. McGill
Date Reported: December 24, 1990

Respectfully submitted,

Keith S Kline

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07459
Client Sample Identification: B-17 (0-1.0)
Sample Matrix: Soil
Date Sample Collected: December 12, 1990
Date Sample Received: December 14, 1990
Date Sample Extracted: December 18, 1990
Date Sample Analyzed: December 26, 1990
Analytical Equipment: Varian 3400

PRIORITY POLLUTANTS
PCBS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-17

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
PCB-1242	53469-21-9	< 80	80
PCB-1254	11097-69-1	<160	160
PCB-1221	11104-28-2	< 80	80
PCB-1232	11141-16-5	< 80	80
PCB-1248	12672-29-6	< 80	80
PCB-1260	11096-82-5	<160	160
PCB-1016	12674-11-2	< 80	80

Analytical Method: SW 846 Method 8080

Analyst: L. Scott, C. Blackard
Verified: D. Spyker
Date Reported: December 31, 1990

Respectfully submitted,

Keith S Kline
Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07459
Client Sample Identification: B-20 (0-1.0)
Sample Matrix: Soil
Date Sample Collected: December 12, 1990
Date Sample Received: December 14, 1990
Date Sample Extracted: December 18, 1990
Date Sample Analyzed: December 26, 1990
Analytical Equipment: Varian 3400

PRIORITY POLLUTANTS
PCBS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-20

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
PCB-1242	53469-21-9	< 80	80
PCB-1254	11097-69-1	<160	160
PCB-1221	11104-28-2	< 80	80
PCB-1232	11141-16-5	< 80	80
PCB-1248	12672-29-6	< 80	80
PCB-1260	11096-82-5	<160	160
PCB-1016	12674-11-2	< 80	80

Analytical Method: SW 846 Method 8080

Analyst: L. Scott, C. Blackard
Verified: D. Spyker
Date Reported: December 31, 1990

Respectfully submitted,

Keith S. Kline
Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07495
Client Sample Identification: B-21 (0-1.5)
Sample Matrix: Soil
Date Sample Collected: December 13, 1990
Date Sample Received: December 14, 1990
Date Sample Analyzed: December 19, 1990
Analytical Equipment: Incos BV

VOLATILE COMPOUNDS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-21

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Chloromethane	74-87-3	<10	10
Bromomethane	74-83-9	<10	10
Vinyl Chloride	75-01-4	<10	10
Chloroethane	75-00-3	<10	10
Methylene Chloride	75-09-2	29	5
Acetone	67-64-1	<10	10
Carbon Disulfide	75-15-0	< 5	5
1,1-Dichloroethene	75-35-4	< 5	5
1,1-Dichloroethane	75-35-3	< 5	5
Trans-1,2-Dichloroethene	156-60-5	< 5	5
Chloroform	67-66-3	< 5	5
1,2-Dichloroethane	107-06-2	< 5	5
2-Butanone	78-93-3	<10	10
1,1,1-Trichloroethane	71-55-6	< 5	5
Carbon Tetrachloride	56-23-5	< 5	5
Vinyl Acetate	108-05-4	<10	10
Bromodichloromethane	75-27-4	< 5	5
1,2-Dichloropropane	78-87-5	< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

ANALYTICAL RESULTS

ATEC Lab No. 9012162-21

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Trans-1, 3-Dichloropropene	10061-02-6	< 5	5
Trichloroethene	79-01-6	< 5	5
Dibromochloromethane	124-48-1	< 5	5
1,1,2-Trichloroethane	79-00-5	< 5	5
Benzene	71-43-2	< 5	5
cis-1,3-Dichloropropene	10061-01-5	< 5	5
2-Chloroethylvinylether	110-75-8	<10	10
Bromoform	75-25-2	< 5	5
4-Methyl-2-Pentanone	108-10-1	<10	10
2-Hexanone	591-78-6	<10	10
Tetrachloroethene	127-18-4	< 5	5
1,1,2,2-Tetrachloroethane	79-34-5	< 5	5
Toluene	108-88-3	< 5	5
Chlorobenzene	108-90-7	< 5	5
Ethylbenzene	100-41-4	< 5	5
Styrene	100-42-5	< 5	5
Total Xylenes		< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

Analytical Method: SW 846 Method 8240

Analyst: T. Harrison
Verified: M. McGill
Date Reported: December 24, 1990

Respectfully submitted,

Keith S Kline

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07459
Client Sample Identification: B-21 (0-1.5)
Sample Matrix: Soil
Date Sample Collected: December 13, 1990
Date Sample Received: December 14, 1990
Date Sample Extracted: December 18, 1990
Date Sample Analyzed: December 26, 1990
Analytical Equipment: Varian 3400

PRIORITY POLLUTANTS
PCBS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-21

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
PCB-1242	53469-21-9	< 80	80
PCB-1254	11097-69-1	<160	160
PCB-1221	11104-28-2	< 80	80
PCB-1232	11141-16-5	< 80	80
PCB-1248	12672-29-6	< 80	80
PCB-1260	11096-82-5	<160	160
PCB-1016	12674-11-2	< 80	80

Analytical Method: SW 846 Method 8080

Analyst: L. Scott, C. Blackard
Verified: D. Spyker
Date Reported: December 31, 1990

Respectfully submitted,

Keith S. Kline

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07495
Client Sample Identification: B-22 (0-1.5)
Sample Matrix: Soil
Date Sample Collected: December 13, 1990
Date Sample Received: December 14, 1990
Date Sample Analyzed: December 19, 1990
Analytical Equipment: Incos BV

VOLATILE COMPOUNDS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-22

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Chloromethane	74-87-3	<10	10
Bromomethane	74-83-9	<10	10
Vinyl Chloride	75-01-4	<10	10
Chloroethane	75-00-3	<10	10
Methylene Chloride	75-09-2	19	5
Acetone	67-64-1	<10	10
Carbon Disulfide	75-15-0	< 5	5
1,1-Dichloroethene	75-35-4	< 5	5
1,1-Dichloroethane	75-35-3	< 5	5
Trans-1,2-Dichloroethene	156-60-5	< 5	5
Chloroform	67-66-3	< 5	5
1,2-Dichloroethane	107-06-2	< 5	5
2-Butanone	78-93-3	<10	10
1,1,1-Trichloroethane	71-55-6	< 5	5
Carbon Tetrachloride	56-23-5	< 5	5
Vinyl Acetate	108-05-4	<10	10
Bromodichloromethane	75-27-4	< 5	5
1,2-Dichloropropane	78-87-5	< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

ANALYTICAL RESULTS

ATEC Lab No. 9012162-22

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Trans-1, 3-Dichloropropene	10061-02-6	< 5	5
Trichloroethene	79-01-6	< 5	5
Dibromochloromethane	124-48-1	< 5	5
1,1,2-Trichloroethane	79-00-5	< 5	5
Benzene	71-43-2	< 5	5
cis-1,3-Dichloropropene	10061-01-5	< 5	5
2-Chloroethylvinylether	110-75-8	<10	10
Bromoform	75-25-2	< 5	5
4-Methyl-2-Pentanone	108-10-1	<10	10
2-Hexanone	591-78-6	<10	10
Tetrachloroethene	127-18-4	< 5	5
1,1,2,2-Tetrachloroethane	79-34-5	< 5	5
Toluene	108-88-3	< 5	5
Chlorobenzene	108-90-7	< 5	5
Ethylbenzene	100-41-4	< 5	5
Styrene	100-42-5	< 5	5
Total Xylenes		< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

Analytical Method: SW 846 Method 8240

Analyst: T. Harrison
Verified: M. McGill
Date Reported: December 24, 1990

Respectfully submitted,

Keith E Kline

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07495
Client Sample Identification: B-23 (0-1.5)
Sample Matrix: Soil
Date Sample Collected: December 13, 1990
Date Sample Received: December 14, 1990
Date Sample Analyzed: December 20, 1990
Analytical Equipment: Incos BV

VOLATILE COMPOUNDS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-23

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Chloromethane	74-87-3	<10	10
Bromomethane	74-83-9	<10	10
Vinyl Chloride	75-01-4	<10	10
Chloroethane	75-00-3	<10	10
Methylene Chloride	75-09-2	< 5*	5
Acetone	67-64-1	<10	10
Carbon Disulfide	75-15-0	< 5	5
1,1-Dichloroethene	75-35-4	< 5	5
1,1-Dichloroethane	75-35-3	< 5	5
Trans-1,2-Dichloroethene	156-60-5	< 5	5
Chloroform	67-66-3	< 5	5
1,2-Dichloroethane	107-06-2	< 5	5
2-Butanone	78-93-3	<10	10
1,1,1-Trichloroethane	71-55-6	< 5	5
Carbon Tetrachloride	56-23-5	< 5	5
Vinyl Acetate	108-05-4	<10	10
Bromodichloromethane	75-27-4	< 5	5
1,2-Dichloropropane	78-87-5	< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

ANALYTICAL RESULTS

ATEC Lab No. 9012162-23

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Trans-1, 3-Dichloropropene	10061-02-6	< 5	5
Trichloroethene	79-01-6	< 5	5
Dibromochloromethane	124-48-1	< 5	5
1,1,2-Trichloroethane	79-00-5	< 5	5
Benzene	71-43-2	< 5	5
cis-1,3-Dichloropropene	10061-01-5	< 5	5
2-Chloroethylvinylether	110-75-8	<10	10
Bromoform	75-25-2	< 5	5
4-Methyl-2-Pentanone	108-10-1	<10	10
2-Hexanone	591-78-6	<10	10
Tetrachloroethene	127-18-4	< 5	5
1,1,2,2-Tetrachloroethane	79-34-5	< 5	5
Toluene	108-88-3	< 5	5
Chlorobenzene	108-90-7	< 5	5
Ethylbenzene	100-41-4	< 5	5
Styrene	100-42-5	< 5	5
Total Xylenes		< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

Analytical Method: SW 846 Method 8240

Analyst: T. Harrison
Verified: M. McGill
Date Reported: December 24, 1990

Respectfully submitted,

Keith S Klein

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07459
Client Sample Identification: B-23 (0-1.5)
Sample Matrix: Soil
Date Sample Collected: December 13, 1990
Date Sample Received: December 14, 1990
Date Sample Extracted: December 18, 1990
Date Sample Analyzed: December 26, 1990
Analytical Equipment: Varian 3400

PRIORITY POLLUTANTS
PCBS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-23

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
PCB-1242	53469-21-9	< 80	80
PCB-1254	11097-69-1	<160	160
PCB-1221	11104-28-2	< 80	80
PCB-1232	11141-16-5	< 80	80
PCB-1248	12672-29-6	< 80	80
PCB-1260	11096-82-5	<160	160
PCB-1016	12674-11-2	< 80	80

Analytical Method: SW 846 Method 8080

Analyst: L. Scott, C. Blackard
Verified: D. Spyker
Date Reported: December 31, 1990

Respectfully submitted,

Keith S. Kline
Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07495
Client Sample Identification: B-24 (0-1.5)
Sample Matrix: Soil
Date Sample Collected: December 13, 1990
Date Sample Received: December 14, 1990
Date Sample Analyzed: December 19, 1990
Analytical Equipment: Incos BV

VOLATILE COMPOUNDS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-24

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Chloromethane	74-87-3	<10	10
Bromomethane	74-83-9	<10	10
Vinyl Chloride	75-01-4	<10	10
Chloroethane	75-00-3	<10	10
Methylene Chloride	75-09-2	13	5
Acetone	67-64-1	<10	10
Carbon Disulfide	75-15-0	< 5	5
1,1-Dichloroethene	75-35-4	< 5	5
1,1-Dichloroethane	75-35-3	< 5	5
Trans-1,2-Dichloroethene	156-60-5	< 5	5
Chloroform	67-66-3	< 5	5
1,2-Dichloroethane	107-06-2	< 5	5
2-Butanone	78-93-3	<10	10
1,1,1-Trichloroethane	71-55-6	< 5	5
Carbon Tetrachloride	56-23-5	< 5	5
Vinyl Acetate	108-05-4	<10	10
Bromodichloromethane	75-27-4	< 5	5
1,2-Dichloropropane	78-87-5	< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

ANALYTICAL RESULTS

ATEC Lab No. 9012162-24

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Trans-1, 3-Dichloropropene	10061-02-6	< 5	5
Trichloroethene	79-01-6	< 5	5
Dibromochloromethane	124-48-1	< 5	5
1,1,2-Trichloroethane	79-00-5	< 5	5
Benzene	71-43-2	< 5	5
cis-1,3-Dichloropropene	10061-01-5	< 5	5
2-Chloroethylvinylether	110-75-8	<10	10
Bromoform	75-25-2	< 5	5
4-Methyl-2-Pentanone	108-10-1	<10	10
2-Hexanone	591-78-6	<10	10
Tetrachloroethene	127-18-4	< 5	5
1,1,2,2-Tetrachloroethane	79-34-5	< 5	5
Toluene	108-88-3	< 5*	5
Chlorobenzene	108-90-7	< 5	5
Ethylbenzene	100-41-4	< 5	5
Styrene	100-42-5	< 5	5
Total Xylenes		< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

Analytical Method: SW 846 Method 8240

Analyst: T. Harrison
Verified: M. McGill
Date Reported: December 24, 1990

Respectfully submitted,

Keith S Klein

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07495
Client Sample Identification: B-25 (0-1.5)
Sample Matrix: Soil
Date Sample Collected: December 13, 1990
Date Sample Received: December 14, 1990
Date Sample Analyzed: December 19, 1990
Analytical Equipment: Incos BV

VOLATILE COMPOUNDS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-25

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Chloromethane	74-87-3	<10	10
Bromomethane	74-83-9	<10	10
Vinyl Chloride	75-01-4	<10	10
Chloroethane	75-00-3	<10	10
Methylene Chloride	75-09-2	12	5
Acetone	67-64-1	<10	10
Carbon Disulfide	75-15-0	< 5	5
1,1-Dichloroethene	75-35-4	< 5	5
1,1-Dichloroethane	75-35-3	< 5	5
Trans-1,2-Dichloroethene	156-60-5	< 5	5
Chloroform	67-66-3	< 5	5
1,2-Dichloroethane	107-06-2	< 5	5
2-Butanone	78-93-3	<10	10
1,1,1-Trichloroethane	71-55-6	< 5	5
Carbon Tetrachloride	56-23-5	< 5	5
Vinyl Acetate	108-05-4	<10	10
Bromodichloromethane	75-27-4	< 5	5
1,2-Dichloropropane	78-87-5	< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

ANALYTICAL RESULTS

ATEC Lab No. 9012162-25

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Trans-1, 3-Dichloropropene	10061-02-6	< 5	5
Trichloroethene	79-01-6	< 5	5
Dibromochloromethane	124-48-1	< 5	5
1,1,2-Trichloroethane	79-00-5	< 5	5
Benzene	71-43-2	< 5	5
cis-1,3-Dichloropropene	10061-01-5	< 5	5
2-Chloroethylvinylether	110-75-8	<10	10
Bromoform	75-25-2	< 5	5
4-Methyl-2-Pentanone	108-10-1	<10	10
2-Hexanone	591-78-6	<10	10
Tetrachloroethene	127-18-4	< 5	5
1,1,2,2-Tetrachloroethane	79-34-5	< 5	5
Toluene	108-88-3	< 5	5
Chlorobenzene	108-90-7	< 5	5
Ethylbenzene	100-41-4	< 5	5
Styrene	100-42-5	< 5	5
Total Xylenes		< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

Analytical Method: SW 846 Method 8240

Analyst: T. Harrison
Verified: M. McGill
Date Reported: December 24, 1990

Respectfully submitted,

Keith S Kline

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07495
Client Sample Identification: B-26 (0-1.0)
Sample Matrix: Soil
Date Sample Collected: December 13, 1990
Date Sample Received: December 14, 1990
Date Sample Analyzed: December 20, 1990
Analytical Equipment: Incos BV

VOLATILE COMPOUNDS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-26R

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Chloromethane	74-87-3	<10	10
Bromomethane	74-83-9	<10	10
Vinyl Chloride	75-01-4	<10	10
Chloroethane	75-00-3	<10	10
Methylene Chloride	75-09-2	< 5*	5
Acetone	67-64-1	<10	10
Carbon Disulfide	75-15-0	< 5	5
1,1-Dichloroethene	75-35-4	< 5	5
1,1-Dichloroethane	75-35-3	< 5	5
Trans-1,2-Dichloroethene	156-60-5	< 5	5
Chloroform	67-66-3	< 5	5
1,2-Dichloroethane	107-06-2	< 5	5
2-Butanone	78-93-3	<10	10
1,1,1-Trichloroethane	71-55-6	< 5	5
Carbon Tetrachloride	56-23-5	< 5	5
Vinyl Acetate	108-05-4	<10	10
Bromodichloromethane	75-27-4	< 5	5
1,2-Dichloropropane	78-87-5	< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

ANALYTICAL RESULTS

ATEC Lab No. 9012162-26R

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Trans-1, 3-Dichloropropene	10061-02-6	< 5	5
Trichloroethene	79-01-6	< 5	5
Dibromochloromethane	124-48-1	< 5	5
1,1,2-Trichloroethane	79-00-5	< 5	5
Benzene	71-43-2	< 5	5
cis-1,3-Dichloropropene	10061-01-5	< 5	5
2-Chloroethylvinylether	110-75-8	<10	10
Bromoform	75-25-2	< 5	5
4-Methyl-2-Pentanone	108-10-1	<10	10
2-Hexanone	591-78-6	<10	10
Tetrachloroethene	127-18-4	< 5	5
1,1,2,2-Tetrachloroethane	79-34-5	< 5	5
Toluene	108-88-3	< 5	5
Chlorobenzene	108-90-7	< 5	5
Ethylbenzene	100-41-4	< 5	5
Styrene	100-42-5	< 5	5
Total Xylenes		< 5*	5

* Analyte detected but amount present is less than the Quantitation Limit.

Analytical Method: SW 846 Method 8240

Analyst: T. Harrison
Verified: M. McGill
Date Reported: December 24, 1990

Respectfully submitted,

Keith S Kline

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07459
Client Sample Identification: B-26 (0-1.0)
Sample Matrix: Soil
Date Sample Collected: December 13, 1990
Date Sample Received: December 14, 1990
Date Sample Extracted: December 18, 1990
Date Sample Analyzed: December 26, 1990
Analytical Equipment: Varian 3400

PRIORITY POLLUTANTS
PCBS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-26

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
PCB-1242	53469-21-9	< 80	80
PCB-1254	11097-69-1	<160	160
PCB-1221	11104-28-2	< 80	80
PCB-1232	11141-16-5	< 80	80
PCB-1248	12672-29-6	< 80	80
PCB-1260	11096-82-5	<160	160
PCB-1016	12674-11-2	< 80	80

Analytical Method: SW 846 Method 8080

Analyst: L. Scott, C. Blackard
Verified: D. Spyker
Date Reported: December 31, 1990

Respectfully submitted,

Keith S Kline
Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07495
Client Sample Identification: B-27 (0-1.5)
Sample Matrix: Soil
Date Sample Collected: December 13, 1990
Date Sample Received: December 14, 1990
Date Sample Analyzed: December 18, 1990
Analytical Equipment: Incos BV

VOLATILE COMPOUNDS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-27

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Chloromethane	74-87-3	<10	10
Bromomethane	74-83-9	<10	10
Vinyl Chloride	75-01-4	<10	10
Chloroethane	75-00-3	<10	10
Methylene Chloride	75-09-2	20	5
Acetone	67-64-1	<10	10
Carbon Disulfide	75-15-0	< 5	5
1,1-Dichloroethene	75-35-4	< 5	5
1,1-Dichloroethane	75-35-3	< 5	5
Trans-1,2-Dichloroethene	156-60-5	< 5	5
Chloroform	67-66-3	< 5	5
1,2-Dichloroethane	107-06-2	< 5	5
2-Butanone	78-93-3	<10	10
1,1,1-Trichloroethane	71-55-6	< 5	5
Carbon Tetrachloride	56-23-5	< 5	5
Vinyl Acetate	108-05-4	<10	10
Bromodichloromethane	75-27-4	< 5	5
1,2-Dichloropropane	78-87-5	< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

ANALYTICAL RESULTS

ATEC Lab No. 9012162-27

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Trans-1, 3-Dichloropropene	10061-02-6	< 5	5
Trichloroethene	79-01-6	< 5	5
Dibromochloromethane	124-48-1	< 5	5
1,1,2-Trichloroethane	79-00-5	< 5	5
Benzene	71-43-2	< 5	5
cis-1,3-Dichloropropene	10061-01-5	< 5	5
2-Chloroethylvinylether	110-75-8	<10	10
Bromoform	75-25-2	< 5	5
4-Methyl-2-Pentanone	108-10-1	<10	10
2-Hexanone	591-78-6	<10	10
Tetrachloroethene	127-18-4	< 5	5
1,1,2,2-Tetrachloroethane	79-34-5	< 5	5
Toluene	108-88-3	43	5
Chlorobenzene	108-90-7	< 5	5
Ethylbenzene	100-41-4	< 5	5
Styrene	100-42-5	< 5	5
Total Xylenes		< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

Analytical Method: SW 846 Method 8240

Analyst: T. Harrison
Verified: M. McGill
Date Reported: December 24, 1990

Respectfully submitted,

Keith S Klein

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07495
Client Sample Identification: B-28 (0-0.5)
Sample Matrix: Soil
Date Sample Collected: December 13, 1990
Date Sample Received: December 14, 1990
Date Sample Analyzed: December 18, 1990
Analytical Equipment: Incos BV

VOLATILE COMPOUNDS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-28

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Chloromethane	74-87-3	<10	10
Bromomethane	74-83-9	<10	10
Vinyl Chloride	75-01-4	<10	10
Chloroethane	75-00-3	<10	10
Methylene Chloride	75-09-2	28	5
Acetone	67-64-1	<10	10
Carbon Disulfide	75-15-0	< 5	5
1,1-Dichloroethene	75-35-4	< 5	5
1,1-Dichloroethane	75-35-3	< 5	5
Trans-1,2-Dichloroethene	156-60-5	< 5	5
Chloroform	67-66-3	< 5	5
1,2-Dichloroethane	107-06-2	< 5	5
2-Butanone	78-93-3	<10	10
1,1,1-Trichloroethane	71-55-6	< 5	5
Carbon Tetrachloride	56-23-5	< 5	5
Vinyl Acetate	108-05-4	<10	10
Bromodichloromethane	75-27-4	< 5	5
1,2-Dichloropropane	78-87-5	< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

ANALYTICAL RESULTS

ATEC Lab No. 9012162-28

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
Trans-1, 3-Dichloropropene	10061-02-6	< 5	5
Trichloroethene	79-01-6	< 5	5
Dibromochloromethane	124-48-1	< 5	5
1,1,2-Trichloroethane	79-00-5	< 5	5
Benzene	71-43-2	< 5	5
cis-1,3-Dichloropropene	10061-01-5	< 5	5
2-Chloroethylvinylether	110-75-8	<10	10
Bromoform	75-25-2	< 5	5
4-Methyl-2-Pentanone	108-10-1	<10	10
2-Hexanone	591-78-6	<10	10
Tetrachloroethene	127-18-4	< 5	5
1,1,2,2-Tetrachloroethane	79-34-5	< 5	5
Toluene	108-88-3	40	5
Chlorobenzene	108-90-7	< 5	5
Ethylbenzene	100-41-4	< 5	5
Styrene	100-42-5	< 5	5
Total Xylenes		< 5	5

* Analyte detected but amount present is less than the Quantitation Limit.

Analytical Method: SW 846 Method 8240

Analyst: T. Harrison
Verified: M. McGill
Date Reported: December 24, 1990

Respectfully submitted,

Keith S Kline

Environmental/Analytical Testing Division

Client: South Bend Department Economic Development
Client Address: 1200 County City Building
South Bend, IN 46601

Client Project Number: 21-07459
Client Sample Identification: B-28 (0-0.5)
Sample Matrix: Soil
Date Sample Collected: December 13, 1990
Date Sample Received: December 14, 1990
Date Sample Extracted: December 18, 1990
Date Sample Analyzed: December 27, 1990
Analytical Equipment: Varian 3400

PRIORITY POLLUTANTS
PCBS
ANALYTICAL RESULTS

ATEC Lab No. 9012162-28

Analyte	CAS Number	Concentration (ug/kg)	Quantitation Limit (ug/kg)
PCB-1242	53469-21-9	< 800	800
PCB-1254	11097-69-1	13,000	1,600
PCB-1221	11104-28-2	< 800	800
PCB-1232	11141-16-5	< 800	800
PCB-1248	12672-29-6	< 800	800
PCB-1260	11096-82-5	<1,600	1,600
PCB-1016	12674-11-2	< 800	800

Analytical Method: SW 846 Method 8080

Analyst: L. Scott, C. Blackard
Verified: D. Spyker
Date Reported: December 31, 1990

Respectfully submitted,

Keith S Kline
Environmental/Analytical Testing Division

CHAIN OF CUSTODY RECORD

PROJ. NO. 21-07459

PROJECT NAME STUDEBAKER CORRIDOR PROJECT

CLIENT CITY OF SOUTH BEND

LAB PROJ. NO. 9012162

SAMPLERS: (Signature) Charles D. Cashman D. Ben Chandler, III.

SAMPLING METHOD: STAINLESS STEEL HAND AUGER

LABORATORY ANALYSIS

SAMPLE I.D. NO.	DATE	TIME	COMPOSITE	GRAB	WATER	SOIL		FILTERED	ACIDIFIED	ICED		NUMBER OF CONTAINERS	LAB I.D. NUMBER	VOLATILE ORGANICS	BTX & E	TOTAL HYDROCARBONS	PCB's	E.P. TOXIC METALS	TOTAL METALS (8)	IGNITABILITY		SAMPLE LOCATION / REMARKS
B-1 (0-1.5')	12-11-90	2:00pm	X			X				X		2	-1	X			X					
B-2 (0-1.5')	12-11-90	2:15pm	X			X				X		2	-2	X					X			
B-3 (0-1.5')	12-11-90	2:45pm	X			X				X		2	-3	XX			X					
B-4 (0-1.5')	12-11-90	2:50pm	X			X				X		2	-4	X					X			
B-5 (0-1.5')	12-11-90	4:15pm	X			X				X		2	-5		X		X					
B-6 (0-1.5')	12-11-90	4:20pm	X			X				X		2	-6		X		X, DUP		X			
B-7 (0-1.5')	12-11-90	4:45pm	X			X				X		2	-7		X		X					
B-8 (0-1.5')	12-11-90	5:00pm	X			X				X		2	-8		X				X			
B-9 (0-1.5')	12-12-90	11:00am	X			X				X		2	-9	X					X			
B-10 (0-1.5')	12-12-90	11:05am	X			X				X		2	-10	X					X			
B-11 (0-1.5')	12-12-90	11:20am	X			X				X		2	-11	X			X					
B-12 (1.5-3.0')	12-12-90	11:15am	X			X				X		2	-12	X					X			
B-13 (0-1.0')	12-12-90	11:35am	X			X				X		2	-13	X			X					
B-14 (0-1.5')	12-12-90	11:30am	X			X				X		2	-14	X			X					
B-15 (0-1.5')	12-12-90	11:50am	X			X				X		2	-15	XX			X					
B-16 (0-1.5')	12-12-90	11:45am	X			X				X		2	-16	X					X			
B-17 (0-1.0')	12-12-90	3:30pm	X			X				X		2	-17			X	X					

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)

Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Project Manager / Phone #:
Charles D. Cashman	12-14-90 9:25am	B. Hudson	12/14/90 9:30	Matt Stoltes x1720

ATEC Environmental Services
Division of ATEC Associates, Inc.
5150 East 65th Street
Indianapolis, Indiana 46220-4871
(317) 849-4990, FAX # (317) 849-4278

CHAIN OF CUSTODY RECORD

PROJ. NO. 21-07459

PROJECT NAME SOUTH RACKER CORRIDOR PROJECT

CLIENT CITY OF SOUTH BEND

LAB PROJ. NO. 9012162

SAMPLERS: (Signature) Charles D. Cashman - D. Ben Chandler, Jr.

SAMPLING METHOD STAINLESS STEEL HAND AUGER

LABORATORY ANALYSIS

SAMPLE I.D. NO.	DATE	TIME	COMPOSITE	GRAB	WATER	SOIL		FILTERED	ACIDIFIED	ICED		NUMBER OF CONTAINERS	LAB I.D. NUMBER	VOLATILE ORGANICS	BTX & E	TOTAL HYDROCARBONS	PCB'S	E.P. TOXIC METALS	TOTAL METALS (8)	IGNITABILITY		SAMPLE LOCATION / REMARKS
B-18 (0-1.5')	12.12.90		X			X				X		2	-18			X		X				
B-19 (0-1.5')	12.12.90		X			X				X		2	-19			X		X				
B-20 (0-1.0')	12.12.90		X			X				X		2	-20			X	X					
B-21 (0-1.5')	12.13.90	8:00am	X			X				X		2	-21	X			X					
B-22 (0-1.5')	12.13.90	8:10am	X			X				X		2	-22	X				X				
B-23 (0-1.5')	12.13.90	8:30am	X			X				X		2	-23	X			X					
B-24 (0-1.5')	12.13.90	9:40am	X			X				X		2	-24	X				X				
B-25 (0-1.5')	12.13.90	9:45am	X			X				X		2	-25	X				X				
B-26 (0-1.0')	12.13.90	10:00am	X			X				X		2	-26	X			X					
B-27 (0-1.5')	12.13.90	10:15am	X			X				X		2	-27	X				X				
B-28 (0-0.5')	12.13.90	10:30am	X			X				X		2	-28	X			X					

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)

Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Project Manager / Phone #:
Charles D. Cashman	12.14.90 9.25am	B. Hudson	12/14/90 9:30	Matt Stokes x1720

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