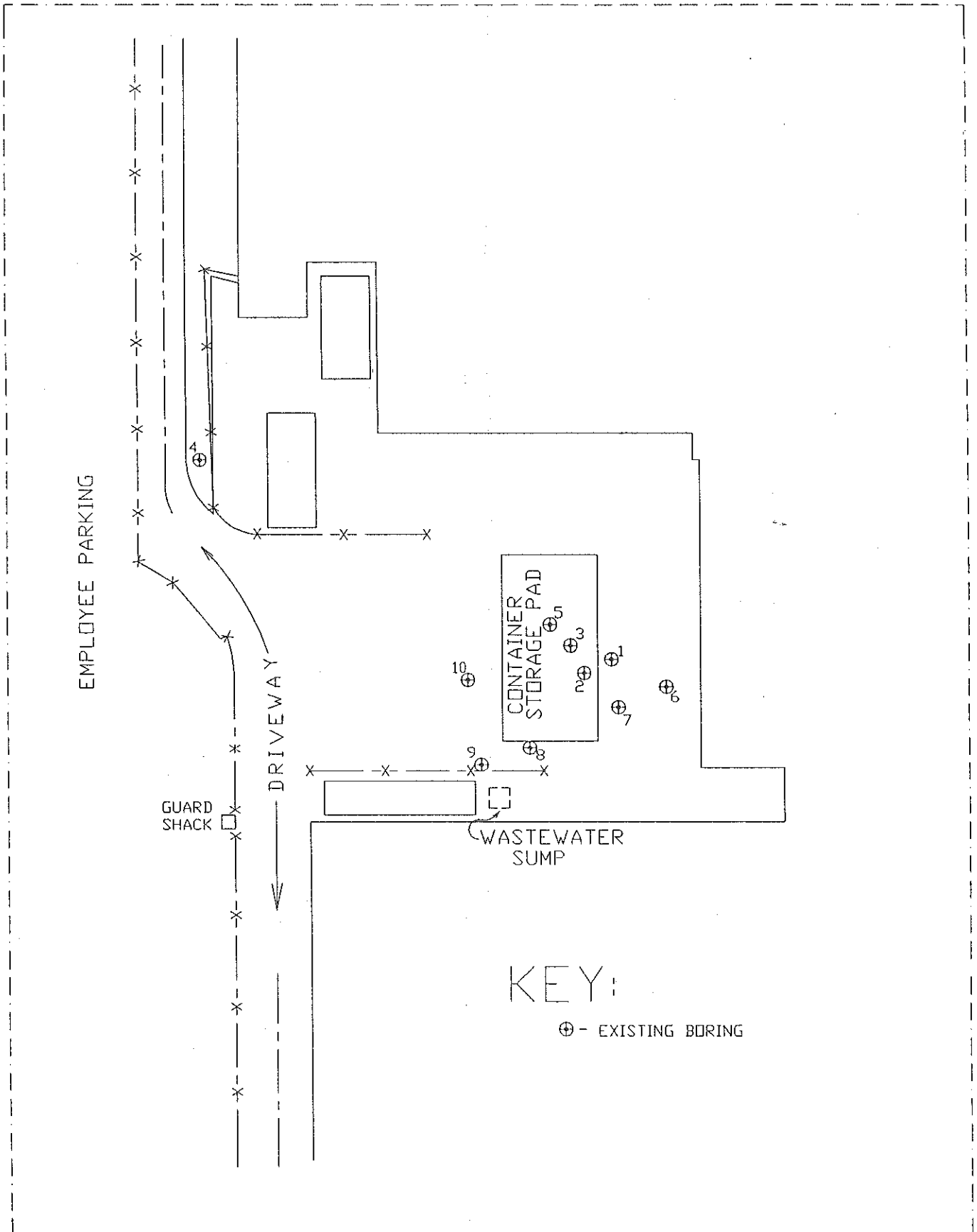


TECHNA CORPORATION

JOB NO. 207-8001

DATE: DEC 12, 1988 | REV. 1

PLANT 6 EXISTING BORING LOCATIONS

SCALE: 1" = 100'-0"

AC ROCHESTER DIVISION
GENERAL MOTORS CORP
AVERILL AVENUE COMPLEX
MID980568745
4143 DAVISON ROAD FLINT, MI 48556

FIGURE 3

ROBERT J. IRWIN, P.E., P.C.
CONSTRUCTION TESTING ENGINEERS
P. O. BOX 7657 FLINT, MICHIGAN 48507
PHONE 1-313-238-4952

JOB NO. 2044-K LOG OF SOIL BORING NO. 1
PROJECT A.C. Spark Plug
LOCATION Plant #8 Thinner Tank
DATE 9/16/86 SURFACE ELEV. Existing Pavement

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows For 6"	Moisture %	Natural Wt. P.C.F.	Unc. Comp. Strength PSF.	Str. %
			Concrete 9"					
	1		Crushed Limestone 10"					
	2		Clay-Stiff, Moist, Discolored					
	3				PROFILE ONLY			
	4		Clay-Stiff, Moist, Variegated					
	5							
	6							
	7		Sand-Compact, Wet, Discolored(Paint Thinner Odor)					
	8							
	9		Clay-Stiff,Moist, Silty Blue					
	10		End of Boring					
			Boring plugged with natural soil.					
			North of Plant #8 60'N of Fire Department Door South of Excavation					

TYPE OF SAMPLE
D. -DISTURBED
U.L.-UNDIST. LINER
S.T. -SHELBY TUBE
S.S. -SPLIT SPOON
R.C.-ROCK CORE
OTHER-

Standard Penetration Test – Driving 2" OD Sampler 1' With 140# Hammer Falling 30"; Count Made At 6" Intervals

GROUND WATER OBSERVATIONS
G.W. ENCOUNTERED AT 5 FT. 5 INS.
G.W. ENCOUNTERED AT FT. INS.
G.W. AFTER COMPLETION FT. INS.
G.W. AFTER HRS. FT. INS.
G.W. VOLUMES HEAVY

CONSTRUCTION TESTING ENGINEERS
P. O. BOX 7657 FLINT, MICHIGAN 48507
PHONE 1-313-238-4952

JOB NO. 2044-K LOG OF SOIL BORING NO. 2
PROJECT A.C. Spark Plug
LOCATION Plant #8 Thinner Tank
DATE 9/16/86 SURFACE ELEV. Existing Pavement

Sample Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows For 6"	Moisture %	Natural Wt. P.C.F.	Unc. Comp. Strength PSF.	Str. %
			Concrete					
	1		10"					
			Crushed Limestone					
	2		8"					
	3		Clay-Stiff, Moist, Variegated (Slight Paint Thinner Odor)					
	4							
					PROFILE ONLY			
	5							
	6							
	7		Sand-Compact, Wet, Brown (Paint Thinner Odor)					
	8		Sand-Compact, Wet Discolored (Paint Thinner Odor)					
	9		Clay-Stiff, Moist, Silty Grey					
	10		End of Boring					
			Boring plugged with natural soil.					
			West of Excavation					

TYPE OF SAMPLE
D. -DISTURBED
U.L.-UNDIST. LINER
S.T.-SHELBY TUBE
S.S. -SPLIT SPOON
R.C.-ROCK CORE
OTHER-

Standard Penetration Test – Driving 2" OD Sampler 1' With 140# Hammer Falling 30"; Count Made At 6" Intervals

GROUND WATER OBSERVATIONS

G.W. ENCOUNTERED AT	6	FT.	0	INS.
G.W. ENCOUNTERED AT		FT.		INS.
G.W. AFTER COMPLETION		FT.		INS.
G.W. AFTER	HRS.	FT.		INS.
G.W. VOLUMES	HEAVY			

CONSTRUCTION TESTING ENGINEERS
P. O. BOX 7657 FLINT, MICHIGAN 48507
PHONE 1-313-238-4952

JOB NO. 2044-A LOG OF SOIL BORING NO. 3

PROJECT A.C. Spark Plug

LOCATION Plant #8 Thinner Tank

DATE 9/16/86 SURFACE ELEV. Existing Pavement

Sample Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows For 6"	Moisture %	Natural Wt. P.C.F.	Unc. Comp. Strength PSF.	Str. %
			Concrete					
	1		9"					
	2		Fill-Sand, Compact, Moist Brown					
	3							
	4							
	5				PROFILE ONLY			
	6							
	7		Fill-Sand, Wet, Discolored (Petroleum Odor)					
	8							
	9							
	10							
			End of Boring					
			Boring plugged with natural soil.					
			Northeast of Excavation					

TYPE OF SAMPLE
D. -DISTURBED
U.L.-UNDIST. LINER
S.T.-SHELBY TUBE
S.S. -SPLIT SPOON
R.C.-ROCK CORE
OTHER-

Standard Penetration Test – Driving 2" OD Sampler 1' With 140# Hammer Falling 30"; Count Made At 6" Intervals

GROUND WATER OBSERVATIONS

G.W. ENCOUNTERED AT	6	FT.	0	INS.
G.W. ENCOUNTERED AT		FT.		INS.
G.W. AFTER COMPLETION		FT.		INS.
G.W. AFTER HRS.		FT.		INS.
G.W. VOLUMES	HEAVY			

ROBERT J. IRWIN, P.E., P.C.
CONSTRUCTION TESTING ENGINEERS
P. O. BOX 7657 FLINT, MICHIGAN 48507
PHONE 1-313-238-4952

JOB NO. 2044-K LOG OF SOIL BORING NO. 4

PROJECT A.C. Spark Plug

LOCATION Plant #8 Thinner Tank

DATE 9-16-86 SURFACE ELEV. Existing Lawn Area

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows For 6"	Moisture %	Natural Wt. P.C.F.	Unc. Comp. Strength PSF.	Str. %
			4" Topsoil-Moist, Black					
	1							
	2		Clay-Stiff, Moist, Variegated					
	3							
	4				PROFILE ONLY			
	5							
	6							
	7		Clay-Stiff, Moist, Brown W/Pebbles					
	8							
	9							
	10							
	11							
	12							
	13		Sand-Compact, Wet, Fine Brown					
	14							
	15							
			End of Boring					
			Control Hole					
			Boring plugged with natural soil.					

TYPE OF SAMPLE
D. -DISTURBED
U.L.-UNDIST. LINER
S.T. -SHELBY TUBE
S.S. -SPLIT SPOON
R.C.-ROCK CORE
OTHER-

Standard Penetration Test – Driving 2" OD Sampler 1' With 140# Hammer Falling 30"; Count Made At 6" Intervals

GROUND WATER OBSERVATIONS

G.W. ENCOUNTERED AT	12	FT.	0	INS.
G.W. ENCOUNTERED AT		FT.		INS.
G.W. AFTER COMPLETION		FT.		INS.
G.W. AFTER HRS.		FT.		INS.
G.W. VOLUMES	HEAVY			

ROBERT J. IRWIN, P.E., P.C.
CONSTRUCTION TESTING ENGINEERS
P. O. BOX 7657 FLINT, MICHIGAN 48507
PHONE 1-313-238-4952

JOB NO. 2044-K LOG OF SOIL BORING NO. 5

PROJECT A.C. Spark Plug

LOCATION Plant #8 Thinner Tank

DATE 10/1/86 SURFACE ELEV. Existing Pavement

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows For 6"	Moisture %	Natural Wt. P.C.F.	Unc. Comp. Strength PSF.	Str. %
			Concrete					
	1		9"					
			8" Crushed Limestone					
	2							
			Clay-Stiff, Moist, Brown					
	3							
	4				PROFILE ONLY			
	5							
	6							
	7		Sand-Compact, Wet, Black (Slight Petroleum Odor)					
			End of Boring					
			Boring plugged with natural soil.					

TYPE OF SAMPLE
D. -DISTURBED
U.L.-UNDIST. LINER
S.T. -SHELBY TUBE
S.S. -SPLIT SPOON
R.C.-ROCK CORE
OTHER-

Standard Penetration Test – Driving 2" OD Sampler 1' With 140# Hammer Falling 30"; Count Made At 6" Intervals

GROUND WATER OBSERVATIONS

G.W. ENCOUNTERED AT	6	FT.	0	INS.
G.W. ENCOUNTERED AT		FT.		INS.
G.W. AFTER COMPLETION		FT.		INS.
G.W. AFTER HRS.		FT.		INS.
G.W. VOLUMES	HEAVY			

CONSTRUCTION TESTING ENGINEERS
P. O. BOX 7657 FLINT, MICHIGAN 48507
PHONE 1-313-238-4952

JOB NO. 2044-K LOG OF SOIL BORING NO. 6

PROJECT A.C. Spark Plug

LOCATION Plant #8 Thinner Tank

DATE 10/1/86 SURFACE ELEV. Existing Pavement

Sample Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows For 6"	Moisture %	Natural Wt. P.C.F.	Unc. Comp. Strength PSF.	Str. %
			2" Asphalt					
	1		4" Concrete					
			6" Crushed Limestone					
	2		Clay-Stiff, Moist, Brown					
	3							
	4				PROFILE ONLY			
	5							
	6							
	7		Sand-Compact, Wet, Fine Brown					
	8							
	9		Sand-Compact, Wet, Fine Silty Grey					
	10							
			End of Boring					
			Boring plugged with natural soil.					

TYPE OF SAMPLE
D. -DISTURBED
U.L.-UNDIST. LINER
S.T. -SHELBY TUBE
S.S. -SPLIT SPOON
R.C.-ROCK CORE
OTHER-

Standard Penetration Test – Driving 2" OD Sampler 1' With 140# Hammer Falling 30"; Count Made At 6" Intervals

GROUND WATER OBSERVATIONS

G.W. ENCOUNTERED AT	6	FT.	0	INS.
G.W. ENCOUNTERED AT		FT.		INS.
G.W. AFTER COMPLETION		FT.		INS.
G.W. AFTER	HRS.	FT.		INS.
G.W. VOLUMES	HEAVY			

ROBERT J. IRWIN, P.E., P.C.
CONSTRUCTION TESTING ENGINEERS
P. O. BOX 7657 FLINT, MICHIGAN 48507
PHONE 1-313-238-4952

JOB NO. 2044-K LOG OF SOIL BORING NO. 7

PROJECT A.C. Spark Plug

LOCATION Plant #8 Thinner Tank

DATE 10/1/86 SURFACE ELEV. Existing Pavement

Sample Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows For 6"	Moisture %	Natural Wt. P.C.F.	Unc. Comp. Strength PSF.	Str. %
	1		Concrete 11"					
	2		4" Crushed Limestone					
	3		Clay-Stiff, Moist, Brown					
	4				PROFILE ONLY			
	5							
	6							
	7		Sand-Compact, Wet, Black (Paint Thinner Odor)					
	8							
	9		Sand-Compact, Wet, Fine Silty Grey					
	10							
			End of Boring					
			Boring plugged with natural soil.					

TYPE OF SAMPLE
J. -DISTURBED
U.L.-UNDIST. LINER
S.T. -SHELBY TUBE
S.S. -SPLIT SPOON
R.C.-ROCK CORE
OTHER-

Standard Penetration Test – Driving 2" OD Sampler 1' With 140# Hammer Falling 30"; Count Made At 6" Intervals

GROUND WATER OBSERVATIONS

G.W. ENCOUNTERED AT	6	FT.	0	INS.
G.W. ENCOUNTERED AT		FT.		INS.
G.W. AFTER COMPLETION		FT.		INS.
G.W. AFTER HRS.		FT.		INS.
G.W. VOLUMES	HEAVY			

CONSTRUCTION TESTING ENGINEERS
P. O. BOX 7657 FLINT, MICHIGAN 48507
PHONE 1-313-238-4952

PROJECT A.C. Spark Plug
LOCATION Plant #8 Thinner Tank

DATE 10/1/86 SURFACE ELEV. Existing Pavement

Sample Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows For 6"	Moisture %	Natural Wt. P.C.F.	Unc. Comp. Strength PSF.	Str. %
			Concrete					
	1		10"					
			Clay-Stiff, Moist, Brown					
	2							
	3							
	4				PROFILE ONLY			
	5							
	6							
	7		Sand-Compact, Wet, Fine Brown					
	8							
	9		Sand-Compact, Wet Fine Silty Grey					
	10							
			End of Boring					
			Boring plugged with natural soil.					

TYPE OF SAMPLE
D. -DISTURBED
U.L.-UNDIST. LINER
S.T. -SHELBY TUBE
S.S. -SPLIT SPOON
R.C.-ROCK CORE
OTHER-

Standard Penetration Test - Driving 2" OD Sampler 1' With 140# Hammer Falling 30"; Count Made At 6" Intervals

GROUND WATER OBSERVATIONS

G.W. ENCOUNTERED AT	6	FT.	6	INS.
G.W. ENCOUNTERED AT		FT.		INS.
G.W. AFTER COMPLETION		FT.		INS.
G.W. AFTER HRS.		FT.		INS.
G.W. VOLUMES	HEAVY			

CONSTRUCTION TESTING ENGINEERS
P. O. BOX 7657 FLINT, MICHIGAN 48507
PHONE 1-313-238-4952

JOB NO. 2044-K LOG OF SOIL BORING NO. 9

PROJECT A.C. Spark Plug

LOCATION Plant #8 Thinner Tank

DATE 10/1/86 SURFACE ELEV. Existing Pavement

Sample Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows For 6"	Moisture %	Natural Wt. P.C.F.	Unc. Comp. Strength PSF.	Str. %
	1		10" Concrete					
			6" Crushed Limestone					
	2							
	3		Clay-Stiff, Moist, Brown					
	4				PROFILE ONLY			
	5							
	6							
	7		Sand-Compact, Wet, Fine Brown					
	8							
	9		Sand-Compact, Wet, Fine Silty Grey					
	10							
			End of Boring					
			Boring plugged with natural soil.					

TYPE OF SAMPLE
D. -DISTURBED
U.L.-UNDIST. LINER
S.T. -SHELBY TUBE
S.S. -SPLIT SPOON
R.C.-ROCK CORE
OTHER-

Standard Penetration Test – Driving 2" OD Sampler 1' With 140# Hammer Falling 30"; Count Made At 6" Intervals

GROUND WATER OBSERVATIONS

G.W. ENCOUNTERED AT	6	FT.	0	INS.
G.W. ENCOUNTERED AT		FT.		INS.
G.W. AFTER COMPLETION		FT.		INS.
G.W. AFTER HRS.		FT.		INS.
G.W. VOLUMES	HEAVY			

ROBERT J. IRWIN, P.E., P.C.
CONSTRUCTION TESTING ENGINEERS
P. O. BOX 7657 FLINT, MICHIGAN 48507
PHONE 1-313-238-4952

JOB NO. 2044-K LOG OF SOIL BORING NO. 10

PROJECT A.C. Spark Plug

LOCATION Plant #8 Thinner Tank

DATE 10/1/86 SURFACE ELEV. Existing Pavement

Sample Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows For 6"	Moisture %	Natural Wt. P.C.F.	Unc. Comp. Strength PSF.	Str. %
			Concrete 9"					
	1		4" Crushed Limestone					
	2		Clay-Stiff, Moist, Brown					
	3							
	4				PROFILE ONLY			
	5		Sand-Compact, Wet, Fine Brown					
	6							
	7							
	8							
	9		Clay-Stiff, Moist, Silty Blue W/Pebbles					
	10		End of Boring					
			Boring plugged with natural soil.					

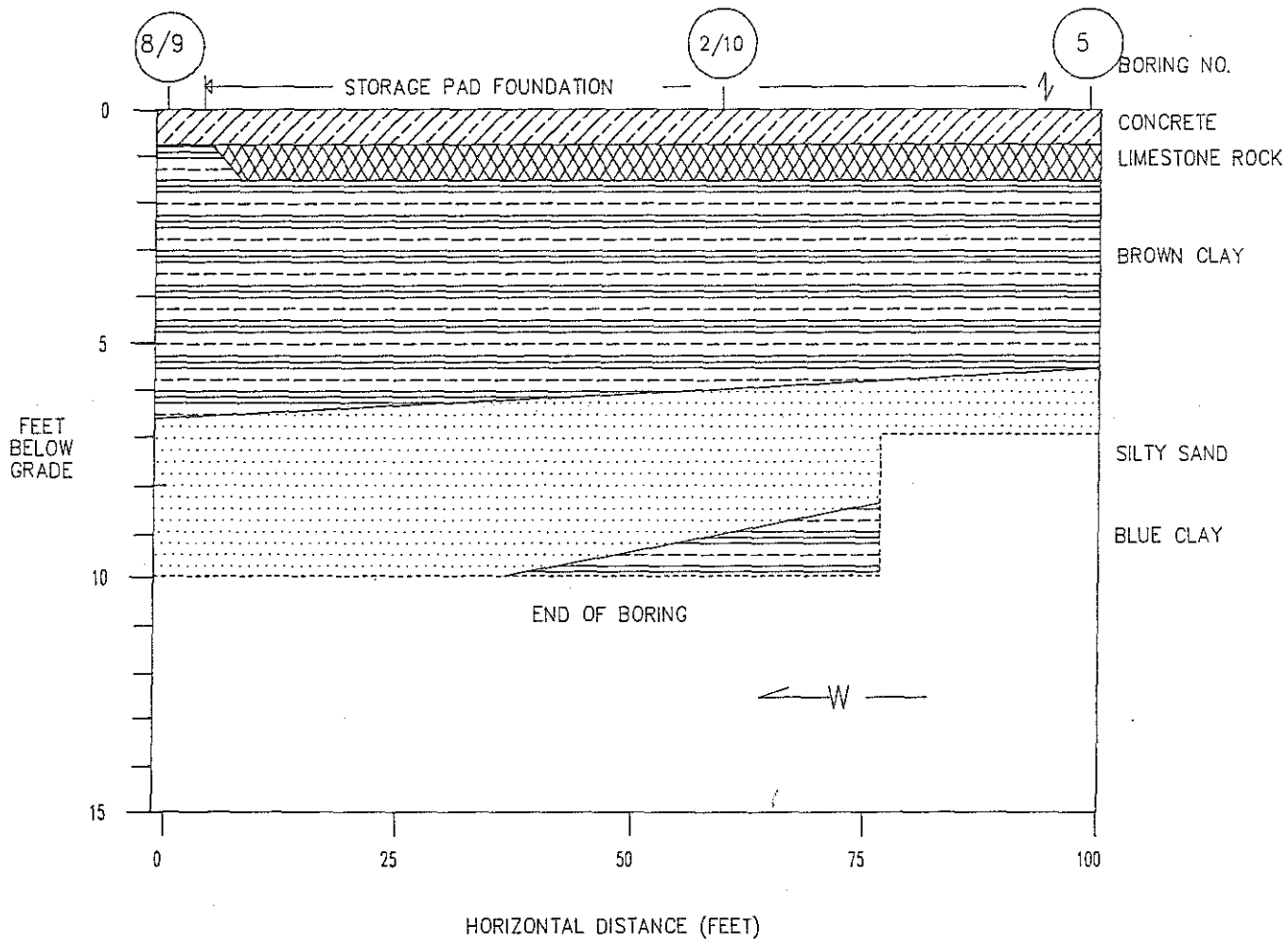
TYPE OF SAMPLE
D. -DISTURBED
U.L.-UNDIST. LINER
S.T.-SHELBY TUBE
S.S. -SPLIT SPOON
R.C.-ROCK CORE
OTHER-

Standard Penetration Test – Driving 2" OD Sampler 1' With 140# Hammer Falling 30"; Count Made At 6" Intervals

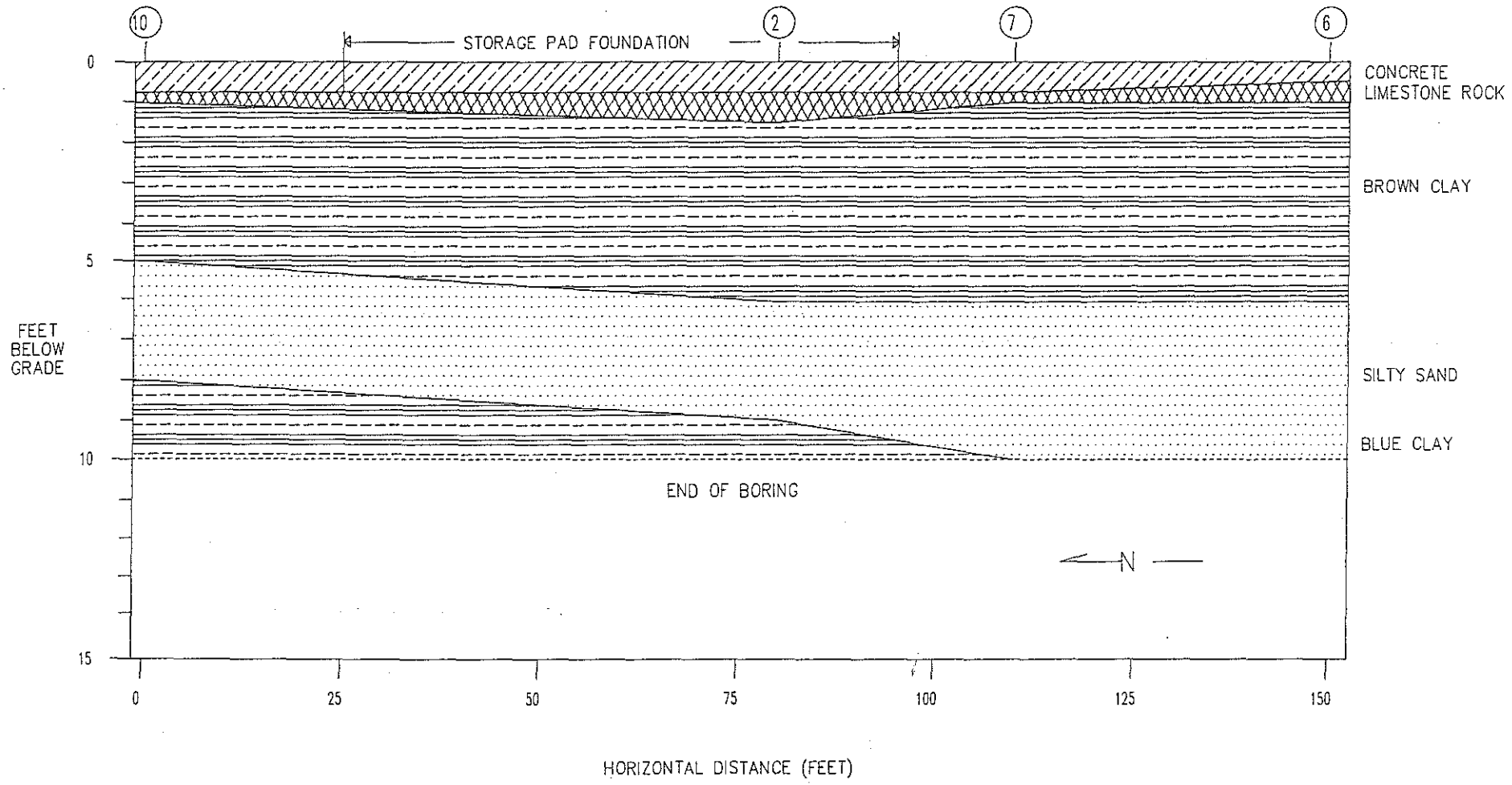
GROUND WATER OBSERVATIONS

G.W. ENCOUNTERED AT		5 FT.	0 INS.
G.W. ENCOUNTERED AT		FT.	INS.
G.W. AFTER COMPLETION		FT.	INS.
G.W. AFTER	HRS.	FT.	INS.
G.W. VOLUMES	HEAVY		

PLANT 6 BARREL YARD
SOIL PROFILE
EAST–WEST SECTION



PLANT 6 BARREL YARD
SOIL PROFILE
NORTH-SOUTH SECTION



Chemical Analysis Data

Emergency Closure Assessment, UST #6003

The following information is included in this section of Appendix A:

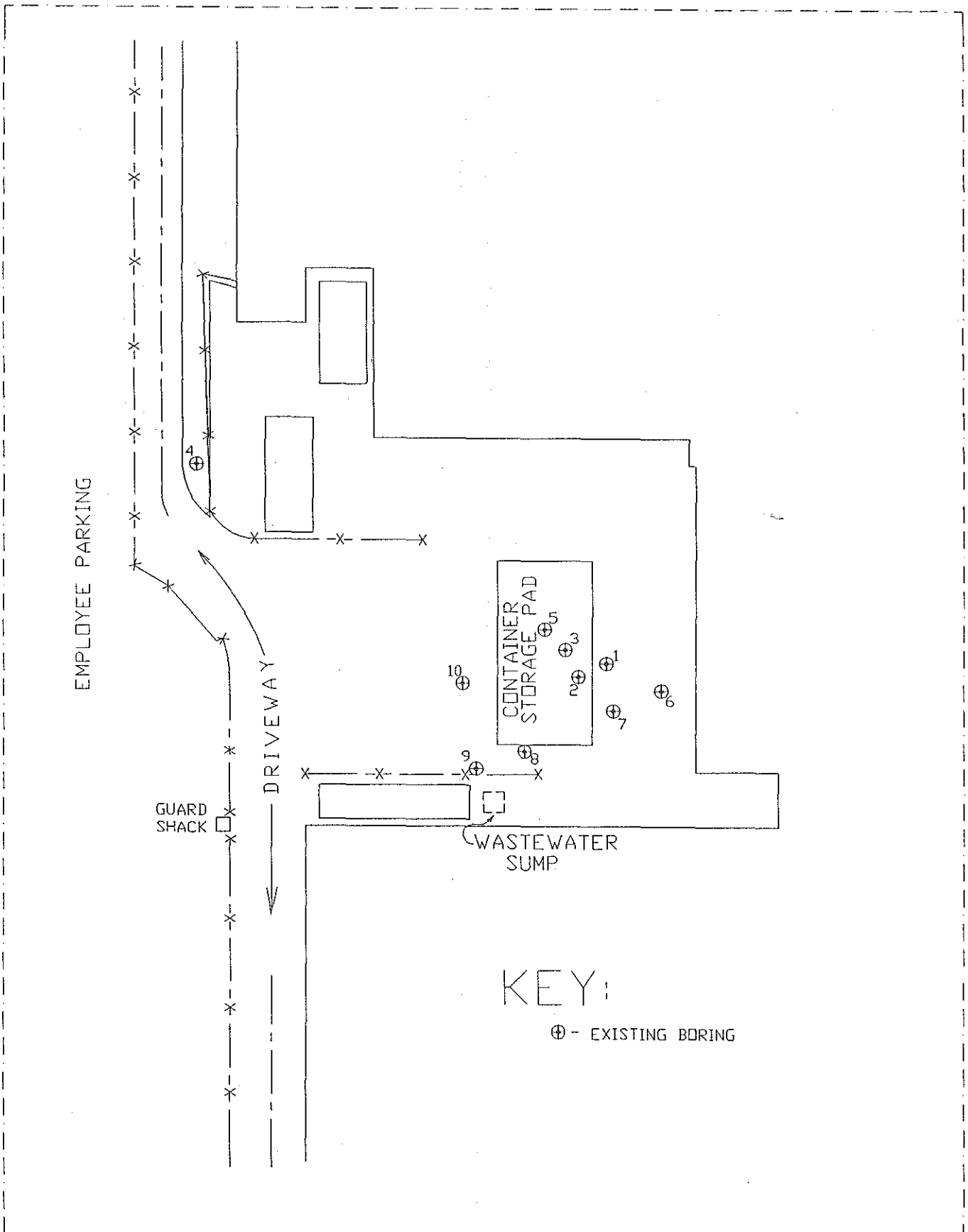
- Site diagram showing the approximate locations of borings 1 - 10;
- Chemical analysis results (September 30, 1986) for samples from borings 1 - 4,

  South = boring #1,

  East = boring #3,

  West = boring #2, and

  Background = boring #4;
- Chemical analysis results (October 20, 1986) for borings 5 - 10.



TECHNA CORPORATION

JOB NO. 207-8001

DATE: DEC 12, 1988 | REV. 1

PLANT 6 EXISTING BORING LOCATIONS

SCALE: 1" = 100'-0"

AC ROCHESTER DIVISION
GENERAL MOTORS CORP
AVERILL AVENUE COMPLEX
MID980568745
4143 DAVISON ROAD FLINT, MI 48556

FIGURE 3

Burmah

Burmah Technical Services, Inc.
Analytical Laboratories Division

408 Auburn Avenue
Pontiac, MI 48058
313/334-4747

General Motors Corporation
AC Spark Plug Division
1300 N. Dort Hwy.
Flint, MI 48556
Attn: C.P. Wendel, Dept. 53-01

September 30, 1986

P.O. Number: N532405

Release Number: 305669

Sample Received: 9-19-86

Samples Collected: 9-16-86

Sample Number	Client I.D.	Oil & Grease, mg/kg
13273	South-2'	790
13274	South-6'	240
13275	South-9'	410
13276	South-10'	250
13277	Sample Background-2'	410
13278	Sample Background-5'	4800
13279	Sample Background-7'	5900
13280	Sample Background-10'	6500
13281	Sample Background-12'	2300
13282	East-2'	3500
13283	East-5'	15,000
13284	East-7'	570
13285	East-10'	17,000
13286	West-2'	17,000
13287	West-5'	630
13288	West-6'	9000
13289	West-7'	5200
13290	West-8 1/2'	8300

cc: Sue Kelsey
Gene Burke

Susan K Scott
Laboratory Supervisor

VOA/lrg

Burmah

Burmah Technical Services, Inc.
Analytical Laboratories Division

408 Auburn Avenue
Pontiac, MI 48058
313/334-4747

GMC/AC Spark Plug Division
Attn: C.R. Wendel, Dept. 58-01

September 30, 1986

VOLATILE ORGANIC ANALYSIS BY GAS CHROMATOGRAPHY

Sample Received: 9-16-86
Sample Number: 13273
Client I.D.: South-2'

Multiple responses were observed. A tentative identification and an estimation of concentration are as follows:

Halogenated	mg/kg
Bromodichloromethane	
Bromoform	
Bromomethane	
Carbon tetrachloride	
Chlorobenzene	
Chloroethane	
2-Chloroethylvinyl ether	
Chloroform	0.1-0.2
Chloromethane	
Dibromochloromethane	
1,2-Dichlorobenzene	
1,3-Dichlorobenzene	
1,4-Dichlorobenzene	
Dichlorodifluoromethane	
1,1-Dichloroethane	
1,2-Dichloroethane	
1,1-Dichloroethene	
trans-1,2-Dichloroethene	
1,2-Dichloropropane	
1,3-Dichloropropene	
trans-1,3-Dichloropropene	
Methylene Chloride	0.3-0.4
1,1,2,2-Tetrachloroethane	
Tetrachloroethene	
1,1,1-Trichloroethane	
1,1,2-Trichloroethane	
Trichloroethene	
Trichlorofluoromethane	
Vinyl Chloride	

Aromatic	mg/kg
Benzene	
Ethyl Benzene	0.2-0.3
Toluene	0.05-0.1
Xylenes	0.7-0.9
Styrene	
Others:	
Ketones	
Acetone	
MEK	
MIBK	
Petroleum-Distillates	2.5-3

Miscellaneous:

Petroleum distillates number includes those aromatic compounds as reported.

No other halogenated responses were observed, therefore all remaining volatile constituents listed are less than 0.05 mg/kg.

VOA/2r%

Burmah

Burmah Technical Services, Inc.
Analytical Laboratories Division

408 Auburn Avenue
Pontiac, MI 48058
313/334-4747

GMC/AC Spark Plug Division
Attn: C.R. Wendel, Dept. 58-01

September 30, 1986

VOLATILE ORGANIC ANALYSIS BY GAS CHROMATOGRAPHY

Sample Received: 9-16-86
Sample Number: 13274
Client I.D.: South-6'

Approximately 3 responses were observed. A tentative identification and an estimation of concentration are as follows:

Halogenated	mg/kg	Aromatic	mg/kg
Bromodichloromethane		Benzene	
Bromoform		Ethyl Benzene	500-550
Bromomethane		Toluene	5-10
Carbon tetrachloride		Xylenes	1700-1800
Chlorobenzene		Styrene	
Chloroethane			
2-Chloroethylvinyl ether		Others:	
Chloroform		Ketones	
Chloromethane		Acetone	
Dibromochloromethane		MEK	
1,2-Dichlorobenzene		MIBK	
1,3-Dichlorobenzene		Petroleum-Distillates	
1,4-Dichlorobenzene			
Dichlorodifluoromethane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethene			
trans-1,2-Dichloroethene			
1,2-Dichloropropane			
1,3-Dichloropropene			
trans-1,3-Dichloropropene			
Methylene Chloride			
1,1,2,2-Tetrachloroetnane			
Tetrachloroethene			
1,1,1-Trichloroethene			
1,1,2-Trichloroethane			
Trichloroethene			
Trichlorofluoromethane			
Vinyl Chloride			

No other discernible responses were observed, therefore all remaining volatile constituents listed are less than 5 mg/kg.

VOA/3r%

Burmah

Burmah Technical Services, Inc.
Analytical Laboratories Division

408 Auburn Avenue
Pontiac, MI 48058
313/334-4747

GMC/AC Spark Plug Division
Attn: C.R. Wengel, Dept. 56-01

September 30, 1986

VOLATILE ORGANIC ANALYSIS BY GAS CHROMATOGRAPHY

Sample Received: 9-16-86
Sample Number: 13275
Client I.D.: South-9'

Approximately 2 responses were observed. A tentative identification and an estimation of concentration are as follows:

Halogenated	mg/kg	Aromatic	mg/kg
Bromodichloromethane		Benzene	
Bromoform		Ethyl Benzene	25-30
Bromomethane		Toluene	
Carbon tetrachloride		Xylenes	85-100
Chlorobenzene		Styrene	
Chloroethane			
2-Chloroethylvinyl ether		Others:	
Chloroform		Ketones	
Chloromethane		Acetone	
Dibromochloromethane		MEK	
1,2-Dichlorobenzene		MIBK	
1,3-Dichlorobenzene		Petroleum-Distillates	
1,4-Dichlorobenzene			
Dichlorodifluoromethane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethene			
trans-1,2-Dichloroethene			
1,2-Dichloropropane			
1,3-Dichloropropene			
trans-1,3-Dichloropropene			
Methylene Chloride			
1,1,2,2-Tetrachloroethane			
Tetrachloroethene			
1,1,1-Trichloroethane			
1,1,2-Trichloroethane			
Trichloroethene			
Trichlorofluoromethane			
Vinyl Chloride			

No other discernible responses were observed, therefore all remaining volatile constituents listed are less than 1 mg/kg.

VOA/4r%

Burmah

Burmah Technical Services, Inc.
Analytical Laboratories Division

408 Auburn Avenue
Pontiac, MI 48058
313/334-4747

GMC/AC Spark Plug Division
Attn: C.R. Wendel, Dept. 58-01

September 30, 1986

VOLATILE ORGANIC ANALYSIS BY GAS CHROMATOGRAPHY

Sample Received: 9-16-86
Sample Number: 13276
Client I.D.: South-10'

Approximately 4 responses were observed. A tentative identification and an estimation of concentration are as follows:

Halogenated	mg/kg	Aromatic	mg/kg
Bromodichloromethane		Benzene	0.2-0.3
Bromoform		Ethyl Benzene	5-7
Bromomethane		Toluene	0.1-0.2
Carbon tetrachloride		Xylenes	20-25
Chlorobenzene		Styrene	
Chloroethane			
2-Chloroethylvinyl ether		Others:	
Chloroform		Ketones	
Chloromethane		Acetone	
Dibromochloromethane		MEK	
1,2-Dichlorobenzene		MIBK	
1,3-Dichlorobenzene		Petroleum-Distillates	
1,4-Dichlorobenzene			
Dichlorodifluoromethane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethene			
trans-1,2-Dichloroethene			
1,2-Dichloropropane			
1,3-Dichloropropene			
trans-1,3-Dichloropropene			
Methylene Chloride			
1,1,2,2-Tetrachloroethane			
Tetrachloroethene			
1,1,1-Trichloroethane			
1,1,2-Trichloroethane			
Trichloroethene			
Trichlorofluoromethane			
Vinyl Chloride			

No other halogenated responses were observed, therefore all remaining volatile constituents listed are less than 0.1 mg/kg.

VOA/5r%

Burmah

Burmah Technical Services, Inc.
Analytical Laboratories Division

408 Auburn Avenue
Pontiac, MI 48058
313/334-4747

GMC/AC Spark Plug Division
Attn: C.R. Wendel, Dept. 58-01

September 30, 1986

VOLATILE ORGANIC ANALYSIS BY GAS CHROMATOGRAPHY

Sample Received: 9-16-86
Sample Number: 13277
Client I.D.: Sample Background-2'

No discernible responses were observed, therefore all volatile constituents listed below are less than 0.1 mg/kg.

Halogenated

Bromodichloromethane
Bromoform
Bromomethane
Carbon tetrachloride
Chlorobenzene
Chloroethane
2-Chloroethylvinyl ether
Chloroform
Chloromethane
Dibromochloromethane
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
Dichlorodifluoromethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethene
trans-1,2-Dichloroethene
1,2-Dichloropropane
1,3-Dichloropropene
trans-1,3-Dichloropropene
Methylene Chloride
1,1,2,2-Tetrachloroethane
Tetrachloroethene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethene
Trichlorofluoromethane
Vinyl Chloride

Aromatic

Benzene
Ethyl Benzene
Toluene
Xylenes
Styrene

Others:
Ketones
Acetone
MEK
MIBK
Petroleum-
Distillates

VOA/6r%

Burmah

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GMC/AC Spark Plug Division
Attn: C.R. Wendel, Dept. 55-01

September 30, 1986

VOLATILE ORGANIC ANALYSIS BY GAS CHROMATOGRAPHY

Sample Received: 9-16-86
Sample Number: 13278
Client I.D.: Sample Background-5'

No discernible responses were observed, therefore all volatile constituents listed below are less than 0.1 mg/kg.

Halogenated

Bromodichloromethane
Bromoform
Bromomethane
Carbon tetrachloride
Chlorobenzene
Chloroethane
2-Chloroethylvinyl ether
Chloroform
Chloromethane
Dibromochloromethane
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
Dichlorodifluoromethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethene
trans-1,2-Dichloroethene
1,2-Dichloropropane
1,3-Dichloropropene
trans-1,3-Dichloropropene
Methylene Chloride
1,1,2,2-Tetrachloroethane
Tetrachloroethene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethene
Trichlorofluoromethane
Vinyl Chloride

Aromatic

Benzene
Ethyl Benzene
Toluene
Xylenes
Styrene

Others:
Ketones
Acetone
MEK
MIBK
Petroleum-
Distillates

VOA/7r%

Burmah

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GMC/AC Spark Plug Division
Attn: C.R. Wendel, Dept. 58-01

September 30, 1986

VOLATILE ORGANIC ANALYSIS BY GAS CHROMATOGRAPHY

Sample Received: 9-16-86
Sample Number: 13279
Client I.D.: Sample Background-7'

No discernible responses were observed, therefore all volatile constituents listed below are less than 0.1 mg/kg.

Halogenated

Bromodichloromethane
Bromoform
Bromomethane
Carbon tetrachloride
Chlorobenzene
Chloroethane
2-Chloroethylvinyl ether
Chloroform
Chloromethane
Dibromochloromethane
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
Dichlorodifluoromethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethene
trans-1,2-Dichloroethene
1,2-Dichloropropane
1,3-Dichloropropene
trans-1,3-Dichloropropene
Methylene Chloride
1,1,2,2-Tetrachloroethane
Tetrachloroethene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethene
Trichlorofluoromethane
Vinyl Chloride

Aromatic

Benzene
Ethyl Benzene
Toluene
Xylenes
Styrene

Others:
Ketones
Acetone
MEK
MIBK
Petroleum-
distillates

VOA/3r%

Burmah

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Analytical Laboratories Division

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313/334-4747

GMC/AC Spark Plug Division
Attn: C.R. Wendel, Dept. 56-01

September 30, 1986

VOLATILE ORGANIC ANALYSIS BY GAS CHROMATOGRAPHY

Sample Received: 9-16-86
Sample Number: 13280
Client I.D.: Sample Background-10'

No discernible responses were observed, therefore all volatile constituents listed below are less than 0.1 mg/kg.

Halogenated

Bromodichloromethane
Bromoform
Bromomethane
Carbon tetrachloride
Chlorobenzene
Chloroethane
2-Chloroethylvinyl ether
Chloroform
Chloromethane
Dibromochloromethane
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
Dichlorodifluoromethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethene
trans-1,2-Dichloroethene
1,2-Dichloropropane
1,3-Dichloropropene
trans-1,3-Dichloropropene
Methylene Chloride
1,1,2,2-Tetrachloroethane
Tetrachloroethene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethene
Trichlorofluoromethane
Vinyl Chloride

Aromatic

Benzene
Ethyl Benzene
Toluene
Xylenes
Styrene

Others:
Ketones
Acetone
MEK
MIBK
Petroleum-
Distillates

VOA/9r%

Burmah

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Analytical Laboratories Division

408 Auburn Avenue
Pontiac, MI 48058
313/334-4747

GMC/AC Spark Plug Division
Attn: C.R. Wendel, Dept. 56-01

September 30, 1986

VOLATILE ORGANIC ANALYSIS BY GAS CHROMATOGRAPHY

Sample Received: 9-16-86
Sample Number: 13281
Client I.D.: Sample Background-12'

No discernible responses were observed, therefore all volatile constituents listed below are less than 0.1 mg/kg.

Halogenated

Bromodichloromethane
Bromoform
Bromomethane
Carbon tetrachloride
Chlorobenzene
Chloroethane
2-Chloroethylvinyl ether
Chloroform
Chloromethane
Dibromochloromethane
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
Dichlorodifluoromethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethene
trans-1,2-Dichloroethene
1,2-Dichloropropane
1,3-Dichloropropene
trans-1,3-Dichloropropene
Methylene Chloride
1,1,2,2-Tetrachloroethane
Tetrachloroethene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethene
Trichlorofluoromethane
Vinyl Chloride

Aromatic

Benzene
Ethyl Benzene
Toluene
Xylenes
Styrene

Others:
Ketones
Acetone
MEK
MIBK
Petroleum-
Distillates

VOA/10r%

Burmah

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Analytical Laboratories Division

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GMC/AC Spark Plug Division
Attn: C.R. Wendel, Dept. 58-01

September 30, 1986

VOLATILE ORGANIC ANALYSIS BY GAS CHROMATOGRAPHY

Sample Received: 9-16-86
Sample Number: 13282
Client I.D.: East-2'

No discernible responses were observed, therefore all volatile constituents listed below are less than 0.1 mg/kg.

Halogenated

Bromodichloromethane
Bromoform
Bromomethane
Carbon tetrachloride
Chlorobenzene
Chloroethane
2-Chloroethylvinyl ether
Chloroform
Chloromethane
Dibromochloromethane
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
Dichlorodifluoromethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethene
trans-1,2-Dichloroethene
1,2-Dichloropropane
1,3-Dichloropropene
trans-1,3-Dichloropropene
Methylene Chloride
1,1,2,2-Tetrachloroethane
Tetrachloroethene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethene
Trichlorofluoromethane
Vinyl Chloride

Aromatic

Benzene
Ethyl Benzene
Toluene
Xylenes
Styrene

Others:
Ketones
Acetone
MEK
MIBK
Petroleum-
Distillates

VOA/11r%

Burmah

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GMC/AC Spark Plug Division
Attn: C.R. Wendel, Dept. 58-01

September 30, 1986

VOLATILE ORGANIC ANALYSIS BY GAS CHROMATOGRAPHY

Sample Received: 9-16-86
Sample Number: 13283
Client I.D.: East-5'

Approximately 4 responses were observed. A tentative identification and an estimation of concentration are as follows.

Halogenated	mg/kg	Aromatic	mg/kg
Bromodichloromethane		Benzene	
Bromoform		Ethyl Benzene	0.3-0.5
Bromomethane		Toluene	0.1-0.3
Carbon tetrachloride		Xylenes	1-3
Chlorobenzene		Styrene	
Chloroethane			
2-Chloroethylvinyl ether		Others:	
Chloroform	10-15	Ketones	
Chloromethane		Acetone	
Dibromochloromethane		MEK	
1,2-Dichlorobenzene		MIBK	
1,3-Dichlorobenzene		Petroleum-Distillates	
1,4-Dichlorobenzene			
Dichlorodifluoromethane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethene			
trans-1,2-Dichloroethene			
1,2-Dichloropropane			
1,3-Dichloropropene			
trans-1,3-Dichloropropene			
Methylene Chloride			
1,1,2,2-Tetrachloroethane			
Tetrachloroethene			
1,1,1-Trichloroethane			
1,1,2-Trichloroethane			
Trichloroethene			
Trichlorofluoromethane			
Vinyl Chloride			

No other discernible responses were observed, therefore, all remaining volatile constituents listed are less than 0.1 mg/kg.

VOA/12r%

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September 30, 1986

VOLATILE ORGANIC ANALYSIS BY GAS CHROMATOGRAPHY

Sample Received: 9-16-86
Sample Number: 13284
Client I.D.: East-7'

Approximately 3 responses were observed. A tentative identification and an estimation of concentration are as follows.

Halogenated	mg/kg	Aromatic	mg/kg
Bromodichloromethane		Benzene	0.1-0.2
Bromoform		Ethyl Benzene	
Bromomethane		Toluene	
Carbon tetrachloride		Xylenes	0.3-0.5
Chlorobenzene		Styrene	
Chloroethane			
2-Chloroethylvinyl ether		Others:	
Chloroform	10-15	Ketones	
Chloromethane		Acetone	
Dibromochloromethane		MEK	
1,2-Dichlorobenzene		MIBK	
1,3-Dichlorobenzene		Petroleum-Distillates	
1,4-Dichlorobenzene			
Dichlorodifluoromethane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethene			
trans-1,2-Dichloroethene			
1,2-Dichloropropane			
1,3-Dichloropropene			
trans-1,3-Dichloropropene			
Methylene Chloride			
1,1,2,2-Tetrachloroethane			
Tetrachloroethene			
1,1,1-Trichloroethane			
1,1,2-Trichloroethane			
Trichloroethene			
Trichlorofluoromethane			
Vinyl Chloride			

No other discernible responses were observed, therefore, all remaining volatile constituents listed are less than 0.1 mg/kg.

VOA/13r%

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September 30, 1986

VOLATILE ORGANIC ANALYSIS BY GAS CHROMATOGRAPHY

Sample Received: 9-16-86
Sample Number: 13285
Client I.D.: East-10'

No descernible responses were observed, therefore all volatile constituents listed below are less than 0.1 mg/kg.

Halogenated	Aromatic
Bromodichloromethane	Benzene
Bromoform	Ethyl Benzene
Bromomethane	Toluene
Carbon tetrachloride	Xylenes
Chlorobenzene	Styrene
Chloroethane	
2-Chloroethylvinyl ether	Others:
Chloroform	Ketones
Chloromethane	Acetone
Dibromochloromethane	MEK
1,2-Dichlorobenzene	MIBK
1,3-Dichlorobenzene	Petroleum-
1,4-Dichlorobenzene	Distillates
Dichlorodifluoromethane	
1,1-Dichloroethane	
1,2-Dichloroethane	
1,1-Dichloroethene	
trans-1,2-Dichloroethene	
1,2-Dichloropropane	
1,3-Dichloropropene	
trans-1,3-Dichloropropene	
Methylene Chloride	
1,1,2,2-Tetrachloroethane	
Tetrachloroethene	
1,1,1-Trichloroethane	
1,1,2-Trichloroethane	
Trichloroethene	
Trichlorofluoromethane	
Vinyl Chloride	

VOA/14r%

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GMC/AC Spark Plug Division
Attn: C.R. Wendel, Dept. 58-01

September 30, 1986

VOLATILE ORGANIC ANALYSIS BY GAS CHROMATOGRAPHY

Sample Received: 9-16-86
Sample Number: 13288
Client I.D.: West-6'

Approximately 3 responses were observed. A tentative identification and an estimation of concentration is as follows:

Halogenated	mg/kg	Aromatic	mg/kg
Bromodichloromethane		Benzene	
Bromoform		Ethyl Benzene	1000-1500
Bromomethane		Toluene	25-30
Carbon tetrachloride		Xylenes	4500-5000
Chlorobenzene		Styrene	
Chloroethane			
2-Chloroethylvinyl ether		Others:	
Chloroform		Ketones	
Chloromethane		Acetone	
Dibromochloromethane		MEK	
1,2-Dichlorobenzene		MIBK	
1,3-Dichlorobenzene		Petroleum-Distillates	
1,4-Dichlorobenzene			
Dichlorodifluoromethane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethene			
trans-1,2-Dichloroethene			
1,2-Dichloropropane			
1,3-Dichloropropene			
trans-1,3-Dichloropropene			
Methylene Chloride			
1,1,2,2-Tetrachloroethane			
Tetrachloroethene			
1,1,1-Trichloroethane			
1,1,2-Trichloroethane			
Trichloroethene			
Trichlorofluoromethane			
Vinyl Chloride			

No other halogenated responses were observed, therefore all remaining volatile constituents listed are less than 1 mg/kg.

VOA/17r%

Burmah

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313/334-4747

GMC/AC Spark Plug Division
Attn: C.R. Wendel, Dept. 58-01

September 30, 1986

VOLATILE ORGANIC ANALYSIS BY GAS CHROMATOGRAPHY

Sample Received: 9-16-86
Sample Number: 13286
Client I.D.: West-2'

Approximately 1 response was observed. A tentative identification and an estimation of concentration are as follows:

Halogenated	mg/kg	Aromatic	mg/kg
Bromodichloromethane		Benzene	
Bromoform		Ethyl Benzene	
Bromomethane		Toluene	
Carbon tetrachloride		Xylenes	1-3
Chlorobenzene		Styrene	
Chloroethane			
2-Chloroethylvinyl ether		Others:	
Chloroform		Ketones	
Chloromethane		Acetone	
Dibromochloromethane		MEK	
1,2-Dichlorobenzene		MIBK	
1,3-Dichlorobenzene		Petroleum-Distillates	
1,4-Dichlorobenzene			
Dichlorodifluoromethane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethene			
trans-1,2-Dichloroethene			
1,2-Dichloropropane			
1,3-Dichloropropene			
trans-1,3-Dichloropropene			
Methylene Chloride			
1,1,2,2-Tetrachloroethane			
Tetrachloroethene			
1,1,1-Trichloroethane			
1,1,2-Trichloroethane			
Trichloroethene			
Trichlorofluoromethane			
Vinyl Chlorice			

No other halogenated responses were observed, therefore all remaining volatile constituents listed are less than 0.1 mg/kg.

VOA/15r%

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313/334-4747

GMC/AC Spark Plug Division
Attn: C.R. Wendel, Dept. 58-01

September 30, 1986

VOLATILE ORGANIC ANALYSIS BY GAS CHROMATOGRAPHY

Sample Received: 9-16-86
Sample Number: 13287
Client I.D.: West-5'

Approximately 3 responses were observed. A tentative identification and an estimation of concentration is as follows:

Halogenated	mg/kg	Aromatic	mg/kg
Bromodichloromethane		Benzene	
Bromoform		Ethyl benzene	40-45
Bromomethane		Toluene	0.5-0.7
Carbon tetrachloride		Xylenes	170-190
Chlorobenzene		Styrene	
Chloroethane			
2-Chloroethylvinyl ether		Others:	
Chloroform		Ketones	
Chloromethane		Acetone	
Dibromochloromethane		MEK	
1,2-Dichlorobenzene		MIBK	
1,3-Dichlorobenzene		Petroleum-Distillates	
1,4-Dichlorobenzene			
Dichlorodifluoromethane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethene			
trans-1,2-Dichloroethene			
1,2-Dichloropropane			
1,3-Dichloropropene			
trans-1,3-Dichloropropene			
Methylene Chloride			
1,1,2,2-Tetrachloroethane			
Tetrachloroethene			
1,1,1-Trichloroethane			
1,1,2-Trichloroethane			
Trichloroethene			
Trichlorofluoromethane			
Vinyl Chloride			

No other halogenated responses were observed, therefore all remaining volatile constituents listed are less than 0.1 mg/kg.

VOA/16r%

Burmah

Burmah Technical Services, Inc.
Analytical Laboratories Division

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313/334-4747

GMC/AC Spark Plug Division
Attn: C.R. Wendel, Dept. 58-01

September 30, 1986

VOLATILE ORGANIC ANALYSIS BY GAS CHROMATOGRAPHY

Sample Received: 9-16-86
Sample Number: 13289
Client I.D.: West-7'

Approximately 3 responses were observed. A tentative identification and an estimation of concentration is as follows:

Halogenated	mg/kg	Aromatic	mg/kg
Bromodichloromethane		Benzene	
Bromoform		Ethyl Benzene	80-90
Bromomethane		Toluene	1-3
Carbon tetrachloride		Xylenes	300-350
Chlorobenzene		Styrene	
Chloroethane			
2-Chloroethylvinyl ether		Others:	
Chloroform		Ketones	
Chloromethane		Acetone	
Dibromochloromethane		MEK	
1,2-Dichlorobenzene		MIBK	
1,3-Dichlorobenzene		Petroleum-Distillates	
1,4-Dichlorobenzene			
Dichlorodifluoromethane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethene			
trans-1,2-Dichloroethene			
1,2-Dichloropropane			
1,3-Dichloropropene			
trans-1,3-Dichloropropene			
Methylene Chloride			
1,1,2,2-Tetrachloroethane			
Tetrachloroethene			
1,1,1-Trichloroethane			
1,1,2-Trichloroethane			
Trichloroethene			
Trichlorofluoromethane			
Vinyl Chloride			

No other halogenated responses were observed, therefore all remaining volatile constituents listed are less than 0.1 mg/kg.

VOA/18r%

Burmah

Burmah Technical Services, Inc.
Analytical Laboratories Division

408 Auburn Avenue
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313/334-4747

GMC/AC Spark Plug Division
Attn: C.R. Wendel, Dept. 58-01

September 30, 1986

VOLATILE ORGANIC ANALYSIS BY GAS CHROMATOGRAPHY

Sample Received: 9-16-86
Sample Number: 13290
Client I.D.: West-8 1/2'

Approximately 3 responses were observed. A tentative identification and an estimation of concentration is as follows:

Halogenated	mg/kg	Aromatic	mg/kg
Bromodichloromethane		Benzene	
Bromoform		Ethyl Benzene	30-35
Bromomethane		Toluene	0.9-1.5
Carbon tetrachloride		Xylenes	130-140
Chlorobenzene		Styrene	
Chloroethane			
2-Chloroethylvinyl ether		Others:	
Chloroform		Ketones	
Chloromethane		Acetone	
Dibromochloromethane		MEK	
1,2-Dichlorobenzene		MIBK	
1,3-Dichlorobenzene		Petroleum-Distillates	
1,4-Dichlorobenzene			
Dichlorodifluoromethane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethene			
trans-1,2-Dichloroethene			
1,2-Dichloropropane			
1,3-Dichloropropene			
trans-1,3-Dichloropropene			
Methylene Chloride			
1,1,2,2-Tetrachloroethane			
Tetrachloroethene			
1,1,1-Trichloroethane			
1,1,2-Trichloroethane			
Trichloroethene			
Trichlorofluoromethane			
Vinyl Chloride			

No other halogenated responses were observed, therefore all remaining volatile constituents listed are less than 0.5 mg/kg.

VOA/19r%

Burmah

Burmah Technical Services, Inc.
Analytical Laboratories Division

408 Auburn Avenue
Pontiac, Michigan 48058

313-334-4747

General Motors Corporation
AC Spark Plug Division
1300 N. Dort Hwy.
Flint, MI 48556
Attn: C.R. Wendel, Dept. 58-01

October 20, 1986

PROGRAM: SOIL SAMPLES PLT.6 BARREL YARD 10-1-86

P.O. Number: N532405
Release Number: 305679

Sample Received: 10-3-86

Sample Number	Client I.D.	Oil & Grease, mg/kg
13771	Sample #5 at 5' Plt.6 Barrel Yard 10-1-86	<100
13772	Sample #5 at 7' Plt. 6 Barrel Yard 10-1-86	<100
13773	Sample #6 at 5' Plt. 6 Barrel Yard 10-1-86	<100
13774	Sample #6 at 10' Plt. 6 Barrel Yard 10-1-86	<100
13775	Sample #7 at 5' Plt. 6 Barrel Yard 10-1-86	<100
13776	Sample #7 at 7' Plt. 6 Barrel Yard 10-1-86	280

cc: Sue Kelsey
VOA/lc

Burmah

Burmah Technical Services, Inc.
Analytical Laboratories Division

408 Auburn Avenue
Pontiac, Michigan 48058

313-334-4747

General Motors Corporation
AC Spark Plug Division
Flint, MI 48556
Attn: C.R. Wendel, Dept. 58-01

October 20, 1986

PROGRAM: SOIL SAMPLES PLT.6 BARREL YARD 10-1-86

P.O. Number: N532405
Release Number: 305679

Sample Received: 10-3-86

Sample Number	Client I.D.	Oil & Grease, mg/kg
13777	Sample #7 at 9' Plt.6 Barrel Yard 10-1-86	220
13778	Sample #8 at 5' Plt. 6 Barrel Yard 10-1-86	<100
13779	Sample #8 at 7' Plt. 6 Barrel Yard 10-1-86	<100
13780	Sample #8 at 9' Plt. 6 Barrel Yard 10-1-86	250
13781	Sample #9 at 5' Plt. 6 Barrel Yard 10-1-86	100
13782	Sample #9 at 7' Plt. 6 Barrel Yard 10-1-86	<100

cc: Sue Kelsey
VOA/2c

Burmah

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Attn: C.R. Wendel, Dept. 58-01

October 20, 1986

PROGRAM: SOIL SAMPLES PLT.6 BARREL YARD 10-1-86

P.O. Number: N532405
Release Number: 305679

Sample Received: 10-3-86

Sample Number	Client I.D.	Oil & Grease, mg/kg
13783	Sample #9 at 9' Plt.6 Barrel Yard 10-1-86	<100
13784	Sample #10 at 5' Plt. 6 Barrel Yard 10-1-86	100
13785	Sample #10 at 7' Plt. 6 Barrel Yard 10-1-86	<100
13876	Sample #10 at 10' Plt. 6 Barrel Yard 10-1-86	270

cc: Sue Kelsey

VOA/3c

Burmah

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Analytical Laboratories Division

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General Motors Division
AC Spark Plug Division
Flint, MI 48556
Attn: C.R. Wendel, Dept. 58-01

October 20, 1986

VOLATILE ORGANIC ANALYSIS BY GAS CHROMATOGRAPHY

Sample Received: 10-3-86
Sample Number: 13771
Client I.D.: Sample #5 at 5' Pit. 6 Barrel Yard, 10-1-86

No discernible responses were observed, therefore all volatile constituents listed below are less than 10 mg/kg.

<u>Halogenated</u>

Bromodichloromethane
Bromoform
Bromomethane
Carbon tetrachloride
Chlorobenzene
Chloroethane
2-Chloroethylvinyl ether
Chloroform
Chloromethane
Dibromochloromethane
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
Dichlorodifluoromethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethene
trans-1,2-Dichloroethene
1,2-Dichloropropane
1,3-Dichloropropene
trans-1,3-Dichloropropene
Methylene Chloride
1,1,2,2-Tetrachloroethane
Tetrachloroethene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethene
Trichlorofluoromethane
Vinyl Chloride

<u>Aromatic</u>

Benzene
Ethyl Benzene
Toluene
Xylenes
Styrene

<u>Others</u>:
Ketones
Acetone
MEK
MIBK
Petroleum-
Distillates

VOA/4c

Burmah

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Analytical Laboratories Division

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General Motors Division
AC Spark Plug Division
Flint, MI 48556
Attn: C.R. Wendel, Dept. 58-01

October 20, 1986

VOLATILE ORGANIC ANALYSIS BY GAS CHROMATOGRAPHY

Sample Received: 10-3-86
Sample Number: 13772
Client I.D.: Sample #5 at 7' Plt. 6 Barrel Yard, 10-1-86

No discernible responses were observed, therefore all volatile constituents listed below are less than 10 mg/kg.

Halogenated

Bromodichloromethane
Bromoform
Bromomethane
Carbon tetrachloride
Chlorobenzene
Chloroethane
2-Chloroethylvinyl ether
Chloroform
Chloromethane
Dibromochloromethane
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
Dichlorodifluoromethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethene
trans-1,2-Dichloroethene
1,2-Dichloropropane
1,3-Dichloropropene
trans-1,3-Dichloropropene
Methylene Chloride
1,1,2,2-Tetrachloroethane
Tetrachloroethene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethene
Trichlorofluoromethane
Vinyl Chloride

Aromatic

Benzene
Ethyl Benzene
Toluene
Xylenes
Styrene

Others:
Ketones
Acetone
MEK
MIBK
Petroleum-
Distillates

VOA/5c

Burmah

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AC Spark Plug Division
Flint, MI 48556
Attn: C.R. Wendel, Dept. 58-01

October 20, 1986

VOLATILE ORGANIC ANALYSIS BY GAS CHROMATOGRAPHY

Sample Received: 10-3-86
Sample Number: 13773
Client I.D.: Sample #6 at 5' Pit. 6 Barrel Yard, 10-1-86

No discernible responses were observed, therefore all volatile constituents listed below are less than 10 mg/kg.

Halogenated

Bromodichloromethane
Bromoform
Bromomethane
Carbon tetrachloride
Chlorobenzene
Chloroethane
2-Chloroethylvinyl ether
Chloroform
Chloromethane
Dibromochloromethane
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
Dichlorodifluoromethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethene
trans-1,2-Dichloroethene
1,2-Dichloropropane
1,3-Dichloropropene
trans-1,3-Dichloropropene
Methylene Chloride
1,1,2,2-Tetrachloroethane
Tetrachloroethene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethene
Trichlorofluoromethane
Vinyl Chloride

Aromatic

Benzene
Ethyl Benzene
Toluene
Xylenes
Styrene

Others:
Ketones
Acetone
MEK
MIBK
Petroleum-
Distillates

VOA/6c

Burmah

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October 20, 1986

VOLATILE ORGANIC ANALYSIS BY GAS CHROMATOGRAPHY

Sample Received: 10-3-86
Sample Number: 13774
Client I.D.: Sample #6 at 10' Pit. 6 Barrel Yard, 10-1-86

No discernible responses were observed, therefore all volatile constituents listed below are less than 10 mg/kg.

Halogenated

Bromodichloromethane
Bromoform
Bromomethane
Carbon tetrachloride
Chlorobenzene
Chloroethane
2-Chloroethylvinyl ether
Chloroform
Chloromethane
Dibromochloromethane
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
Dichlorodifluoromethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethene
trans-1,2-Dichloroethene
1,2-Dichloropropane
1,3-Dichloropropene
trans-1,3-Dichloropropene
Methylene Chloride
1,1,2,2-Tetrachloroethane
Tetrachloroethene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethene
Trichlorofluoromethane
Vinyl Chloride

Aromatic

Benzene
Ethyl Benzene
Toluene
Xylenes
Styrene

Others:
Ketones
Acetone
MEK
MIBK
Petroleum-
Distillates

VOA/7c

Burmah

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October 20, 1986

VOLATILE ORGANIC ANALYSIS BY GAS CHROMATOGRAPHY

Sample Received: 10-3-86
Sample Number: 13775
Client I.D.: Sample #7 at 5' Pit. 6 Barrel Yard, 10-1-86

No discernible responses were observed, therefore all volatile constituents listed below are less than 10 mg/kg.

Halogenated

Bromodichloromethane
Bromoform
Bromomethane
Carbon tetrachloride
Chlorobenzene
Chloroethane
2-Chloroethylvinyl ether
Chloroform
Chloromethane
Dibromochloromethane
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
Dichlorodifluoromethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethene
trans-1,2-Dichloroethene
1,2-Dichloropropane
1,3-Dichloropropene
trans-1,3-Dichloropropene
Methylene Chloride
1,1,2,2-Tetrachloroethane
Tetrachloroethene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethene
Trichlorofluoromethane
Vinyl Chloride

Aromatic

Benzene
Ethyl Benzene
Toluene
Xylenes
Styrene

Others:
Ketones
Acetone
MEK
MIBK
Petroleum-
Distillates

VOA/8c

Burmah

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October 20, 1986

VOLATILE ORGANIC ANALYSIS BY GAS CHROMATOGRAPHY

Sample Received: 10-3-86
Sample Number: 13776
Client I.D.: Sample #7 at 7' Pit. 6 Barrel Yard, 10-1-86

Approximately two responses were observed. A tentative identification and an estimation of concentration are as follows:

Halogenated	mg/kg	Aromatic	mg/kg
Bromodichloromethane		Benzene	
Bromoform		Ethyl Benzene	1-5
Bromomethane		Toluene	
Carbon tetrachloride		Xylenes	10-15
Chlorobenzene		Styrene	
Chloroethane			
2-Chloroethylvinyl ether		Others:	
Chloroform		Ketones	
Chloromethane		Acetone	
Dibromochloromethane		MEK	
1,2-Dichlorobenzene		MIBK	
1,3-Dichlorobenzene		Petroleum-Distillates	
1,4-Dichlorobenzene			
Dichlorodifluoromethane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethene			
trans-1,2-Dichloroethene			
1,2-Dichloropropane			
1,3-Dichloropropene			
trans-1,3-Dichloropropene			
Methylene Chloride			
1,1,2,2-Tetrachloroethane			
Tetrachloroethene			
1,1,1-Trichloroethane			
1,1,2-Trichloroethane			
Trichloroethene			
Trichlorofluoromethane			
Vinyl Chloride			

Comments:

No other discernible responses were observed, therefore all remaining volatile constituents listed are less than 10 mg/kg.

VOA/9c

Burmah

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October 20, 1986

VOLATILE ORGANIC ANALYSIS BY GAS CHROMATOGRAPHY

Sample Received: 10-3-86
Sample Number: 13777
Client I.D.: Sample #7 at 9' Plt. 6 Barrel Yard, 10-1-86

No discernible responses were observed, therefore all volatile constituents listed below are less than 10 mg/kg.

Halogenated

Bromodichloromethane
Bromoform
Bromomethane
Carbon tetrachloride
Chlorobenzene
Chloroethane
2-Chloroethylvinyl ether
Chloroform
Chloromethane
Dibromochloromethane
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
Dichlorodifluoromethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethene
trans-1,2-Dichloroethene
1,2-Dichloropropane
1,3-Dichloropropene
trans-1,3-Dichloropropene
Methylene Chloride
1,1,2,2-Tetrachloroethane
Tetrachloroethene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethene
Trichlorofluoromethane
Vinyl Chloride

Aromatic

Benzene
Ethyl Benzene
Toluene
Xylenes
Styrene

Others:
Ketones
Acetone
MEK
MIBK
Petroleum-
Distillates

VOA/10c

Burmah

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October 20, 1986

VOLATILE ORGANIC ANALYSIS BY GAS CHROMATOGRAPHY

Sample Received: 10-3-86
Sample Number: 13778
Client I.D.: Sample #8 at 5' Pit. 6 Barrel Yard, 10-1-86

No discernible responses were observed, therefore all volatile constituents listed below are less than 10 mg/kg.

Halogenated

Bromodichloromethane
Bromoform
Bromomethane
Carbon tetrachloride
Chlorobenzene
Chloroethane
2-Chloroethylvinyl ether
Chloroform
Chloromethane
Dibromochloromethane
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
Dichlorodifluoromethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethene
trans-1,2-Dichloroethene
1,2-Dichloropropane
1,3-Dichloropropene
trans-1,3-Dichloropropene
Methylene Chloride
1,1,2,2-Tetrachloroethane
Tetrachloroethene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethene
Trichlorofluoromethane
Vinyl Chloride

Aromatic

Benzene
Ethyl Benzene
Toluene
Xylenes
Styrene

Others:
Ketones
Acetone
MEK
MIBK
Petroleum-
Distillates

VOA/11c