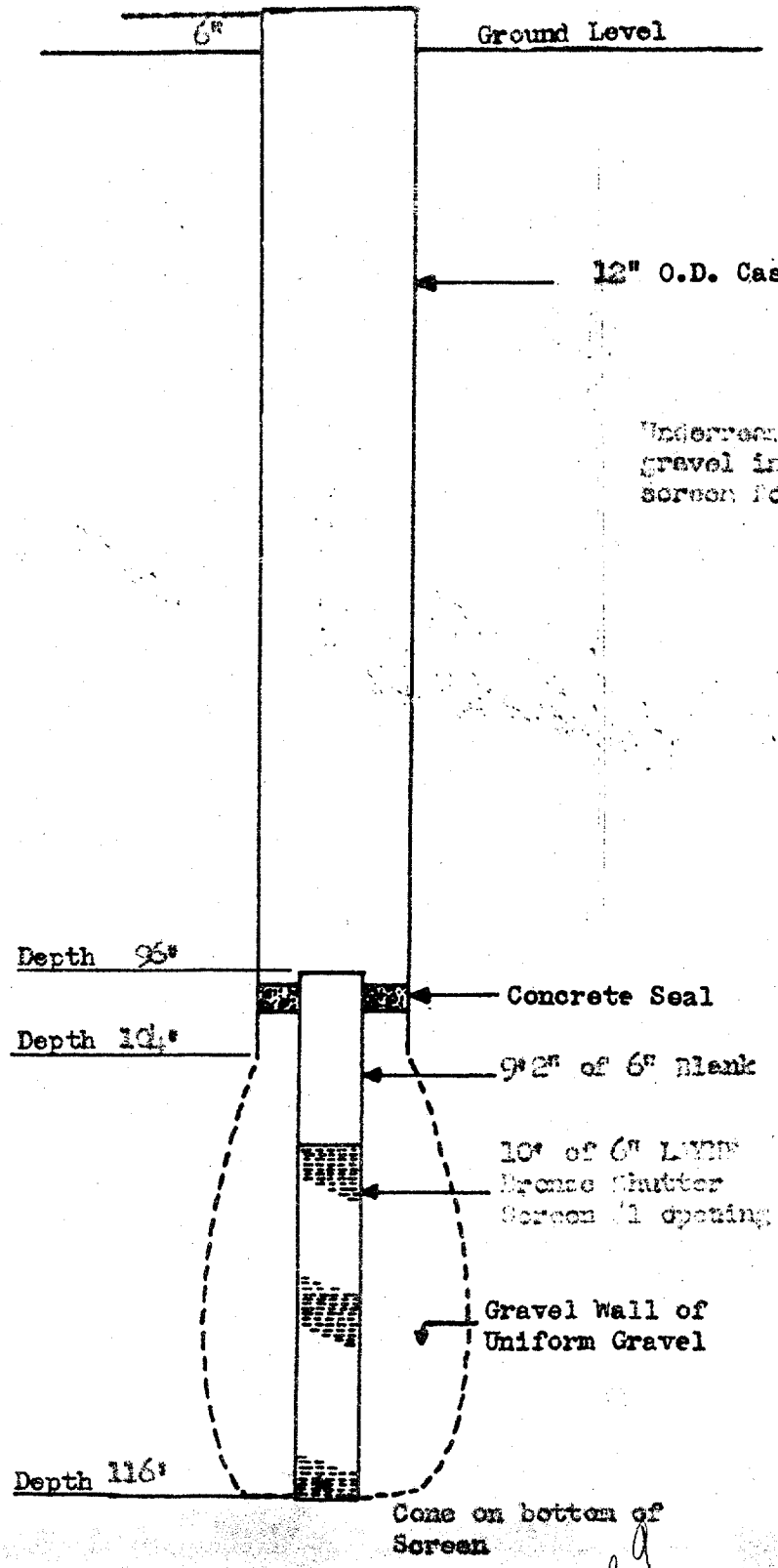


16N 3E
Sec 31
NW, SE, SE
725

Marion Co.
Wayne Twp.

Spcg

Driller JAMES HESS & C. E. POOLE
Date Finished 11-7-40

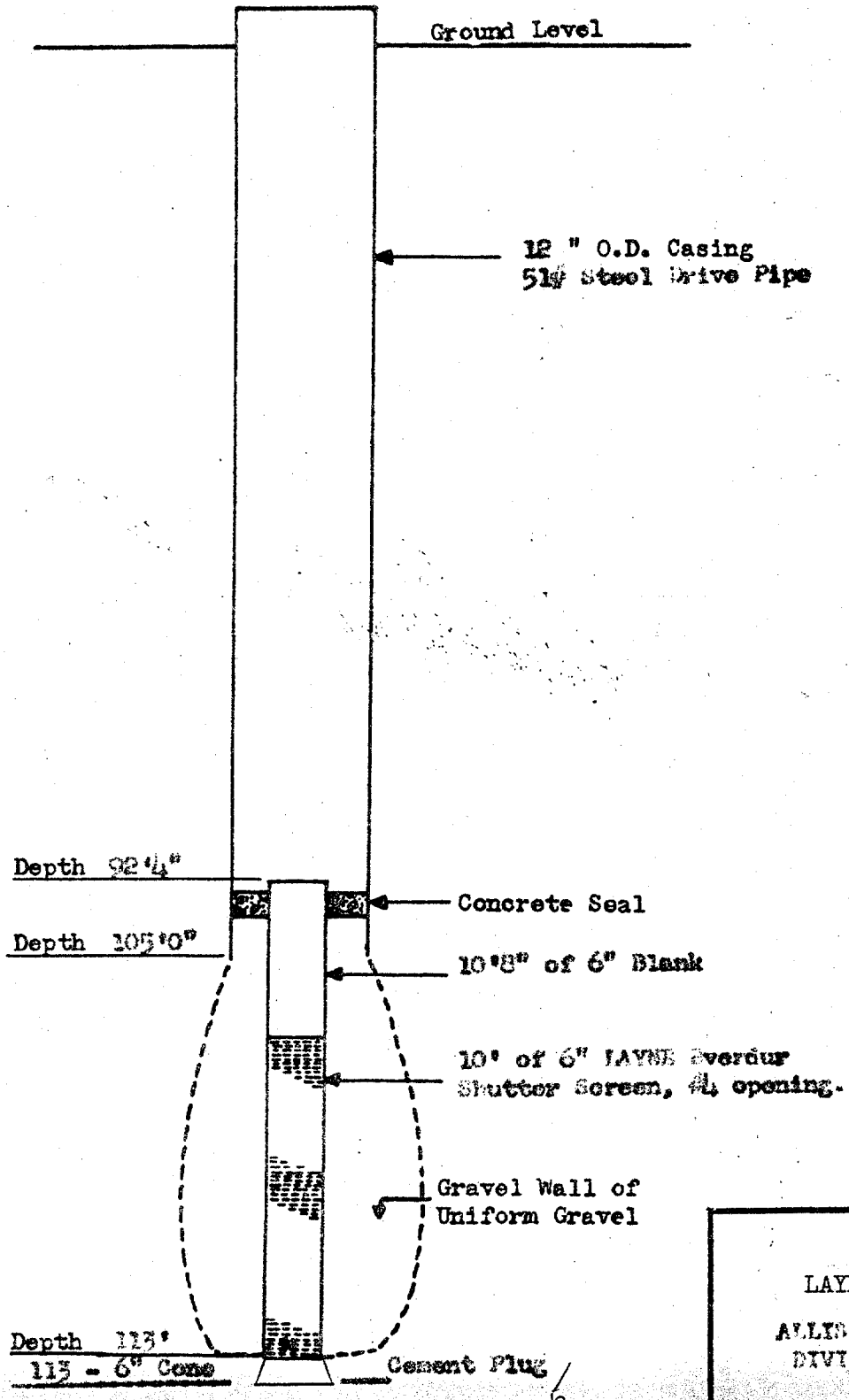
Not drawn to Scale
All depths measured from ground level

Static Level 26'
Pumped 400 GPM
at 69' Pumping Level

4500 W. Gilman
#1 Single Cased
LAYNE GRAVEL WALL WELL
for
ALLISON ENGINEERING DIVISION
GENERAL MOTORS CORP.
SPEEDWAY CITY, INDIANA
Located: PLANT #2 - N.E. Corner of Property along 12th Street

LAYNE NORTHERN CO. INC.
MISHAWAKA, INDIANA

DRAWN BY APPROVED BY DATE 11-12-40	DRAWING NO. 412



16N3E
Sec 31
NW, SE, SE,
725

Marion Co.
Wayne Twp.

Single Cased
LAYNE GRAVEL WALL WELL #2
for
ALLISON ENGINEERING COMPANY
DIVI ION GEN. MOTORS CORP.
SPEEDWAY, INDIANA
Plant No. 2

Spec 6

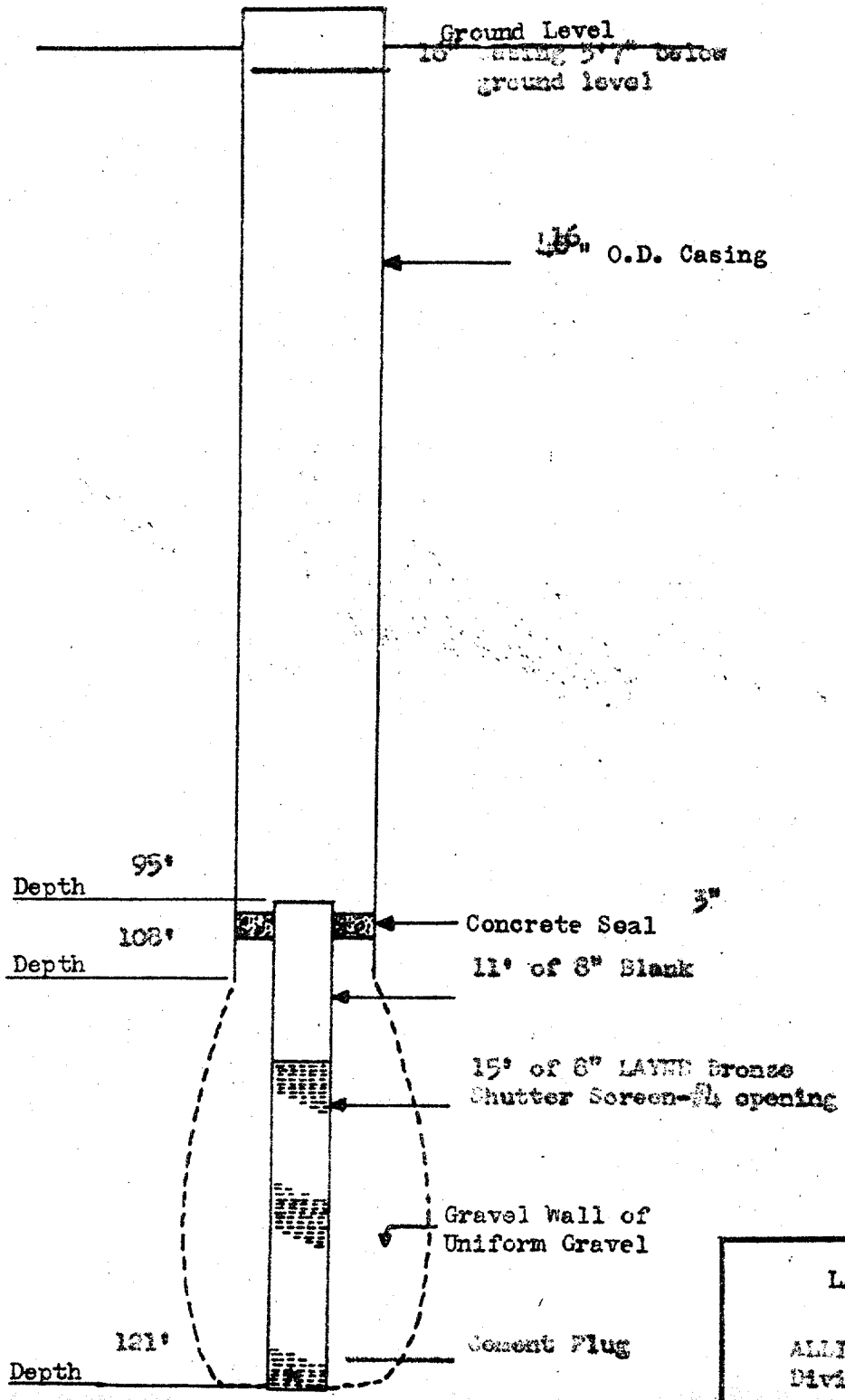
Driller WILLIAM WAGNER
Date Finished 1-6-41

Not drawn to Scale
All depths measured
from ground level

Static Level 28'
Pumped 270 GPM
at 62' Pumping Level

LAYNE NORTHERN CO. INC.
MISHAWAKA, INDIANA

DRAWN BY	DRAWING NO.
APPROVED BY	751
DATE 1-27-41	



16N 3E
Sec 31
NW, SE, SE
725
Marion Co.
Wayne Twp.

Chang

#3
LAYNE GRAVEL WALL WELL
Single Cased
For
ALLISON ENGINEERING COMPANY
Division General Motors Corp.
Speedway, Indiana
Plant No. 2

C. E. POOLE
Driller
2-12-41
Date Finished

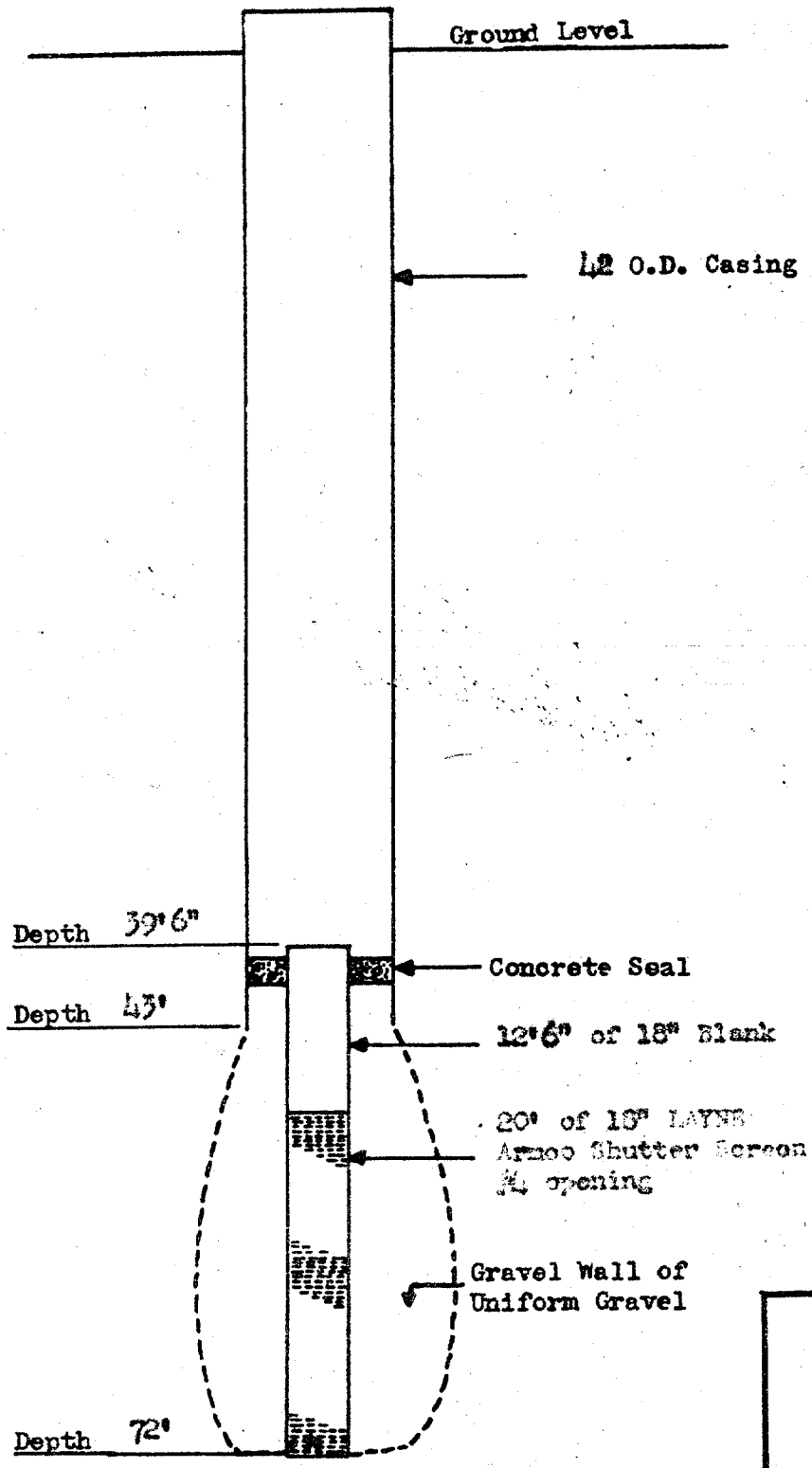
Spec 11

Not drawn to Scale
All depths measured from ground level

Static Level 32'
Pumped 64' GPM
at _____ Pumping Level

LAYNE NORTHERN CO. INC.
MISHAWAKA, INDIANA

DRAWN BY	DRAWING NO.
APPROVED 2-3-41	752
DATE	



15N3E
Sec 6
NE, NE
Elev. 720

Marion Co.
Wayne Twp.

#1 4700 W. 10 St.
Single Cased
LAYNE GRAVEL WALL WELL
for
ALLISON ENGINEERING DIVISION
GENERAL MOTORS CORPORATION
SPEEDWAY CITY, INDIANA
PLANT NO. 3

Spec 30

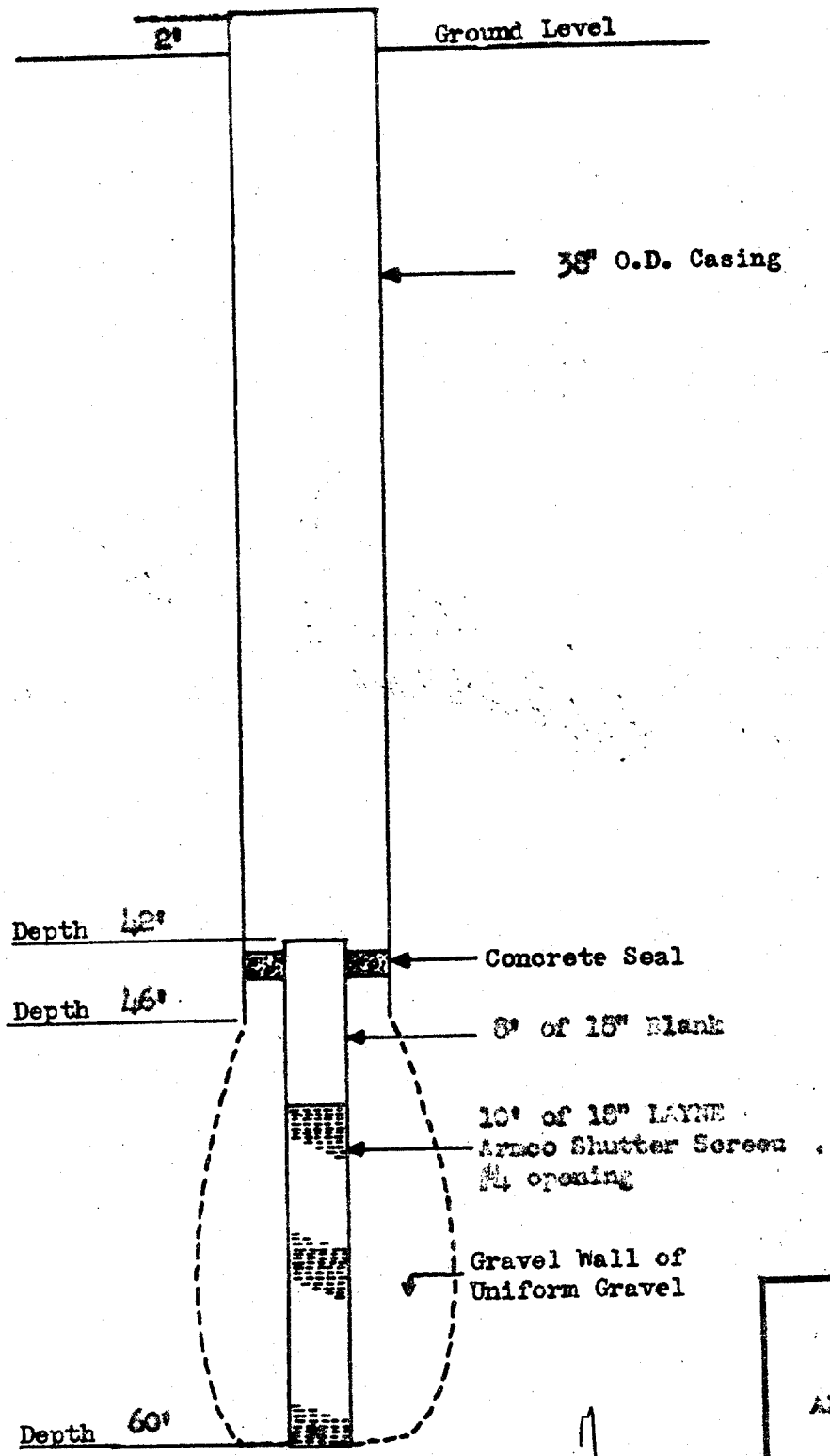
Driller JAMES YOUNG
Date Finished 7-11-59

Not drawn to Scale
All depths measured
from ground level

Static Level 10'
Pumped 950 GPM
at 42' Pumping Level

LAYNE NORTHERN CO. INC.
MISHAWAKA, INDIANA

DRAWN BY APPROVED BY DATE 7-18-59	DRAWING NO. 353



15N3E
Sec 6
NE, NE
Elev. 720

Marion Co.
Wayne Twp.

Spec 7

#2 Single Cased
LAYNE GRAVEL WALL WELL
for
ALLISON ENGINEERING DIVISION
GENERAL MOTORS CORPORATION
SPEEDWAY CITY, INDIANA

PLANT NO. 3 at #12 Test Well Site

Driller James young
Date Finished 8-2-39

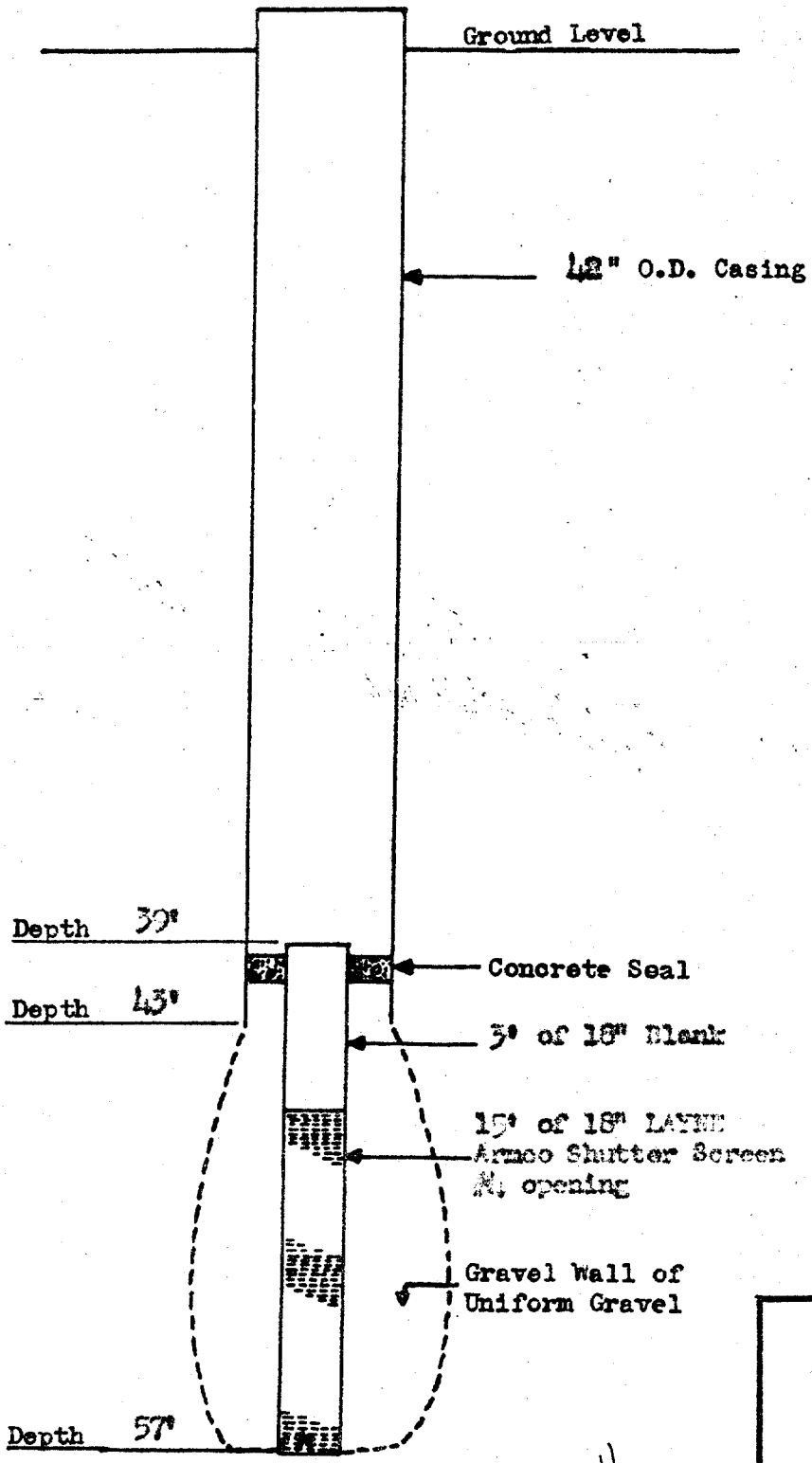
Not drawn to Scale
All depths measured
from ground level

Static Level 14'
Pumped 260 GPM
at 53' Pumping Level

LAYNE NORTHERN CO. INC.
MISHAWAKA, INDIANA

DRAWN BY
APPROVED BY
DATE 8-19-39

DRAWING NO. 356



15N3E
Sec6
NE, NE
720

Marion Co.
Wayne Twp.

#3 Single Cased
LAYNE GRAVEL WALL WELL
for
ALLISON ENGINEERING DIVISION
GENERAL MOTORS CORP.
SPEEDWAY CITY, INDIANA

PLANT NO. 3

Spc 11

Driller James Ross
Date Finished 9-12-39

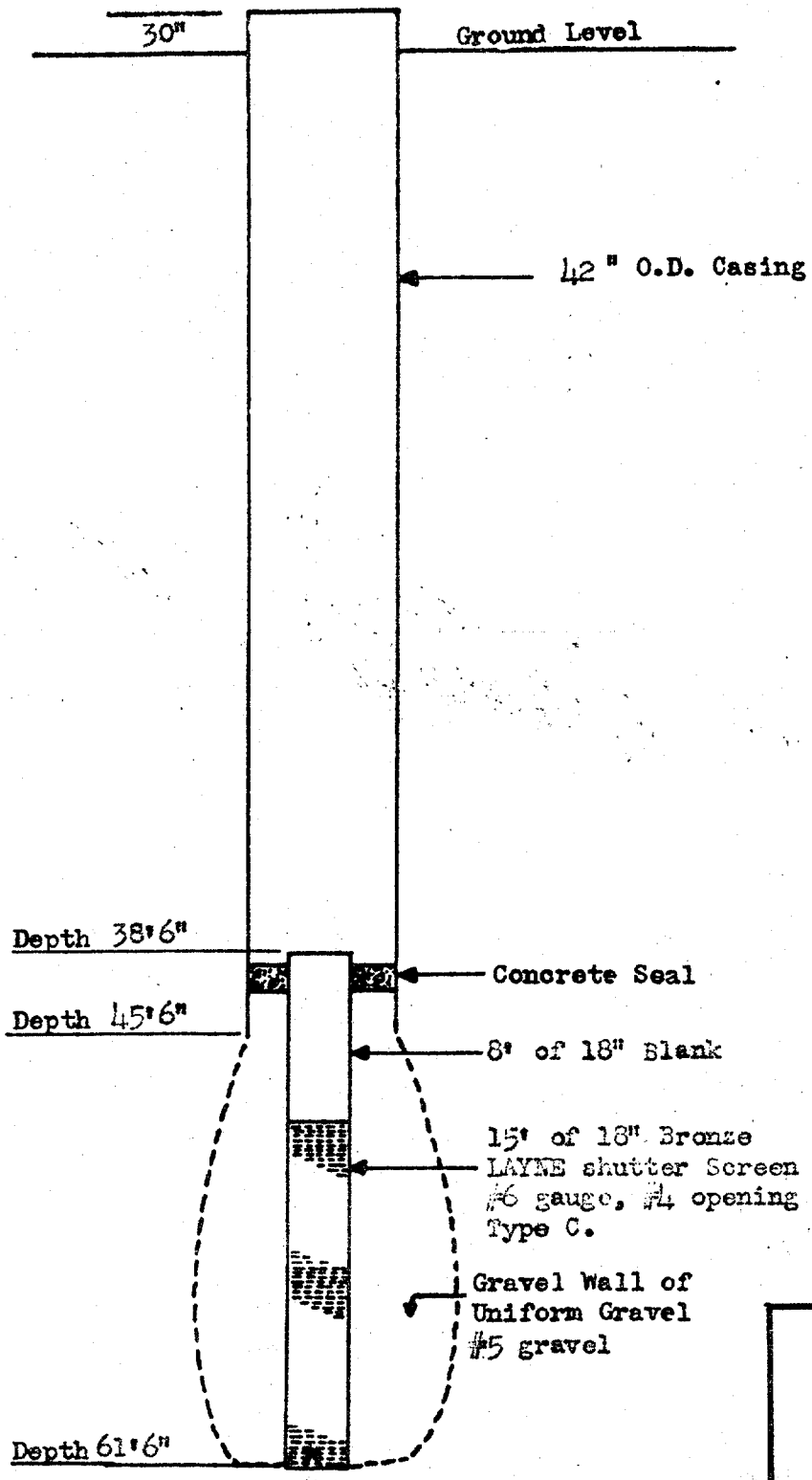
Not drawn to Scale
All depths measured
from ground level

Static Level 12
Pumped 280 GPM
at 38' Pumping Level

LAYNE NORTHERN CO. INC.
MISHAWAKA, INDIANA

DRAWN BY
APPROVED BY
DATE 10-3-39

DRAWING NO.
362



15N3E
Sec 6
NE NE
720

Marion Co.
Wayne Twp.

Spec 16

Driller James Ness
Date Finished 5-16-40

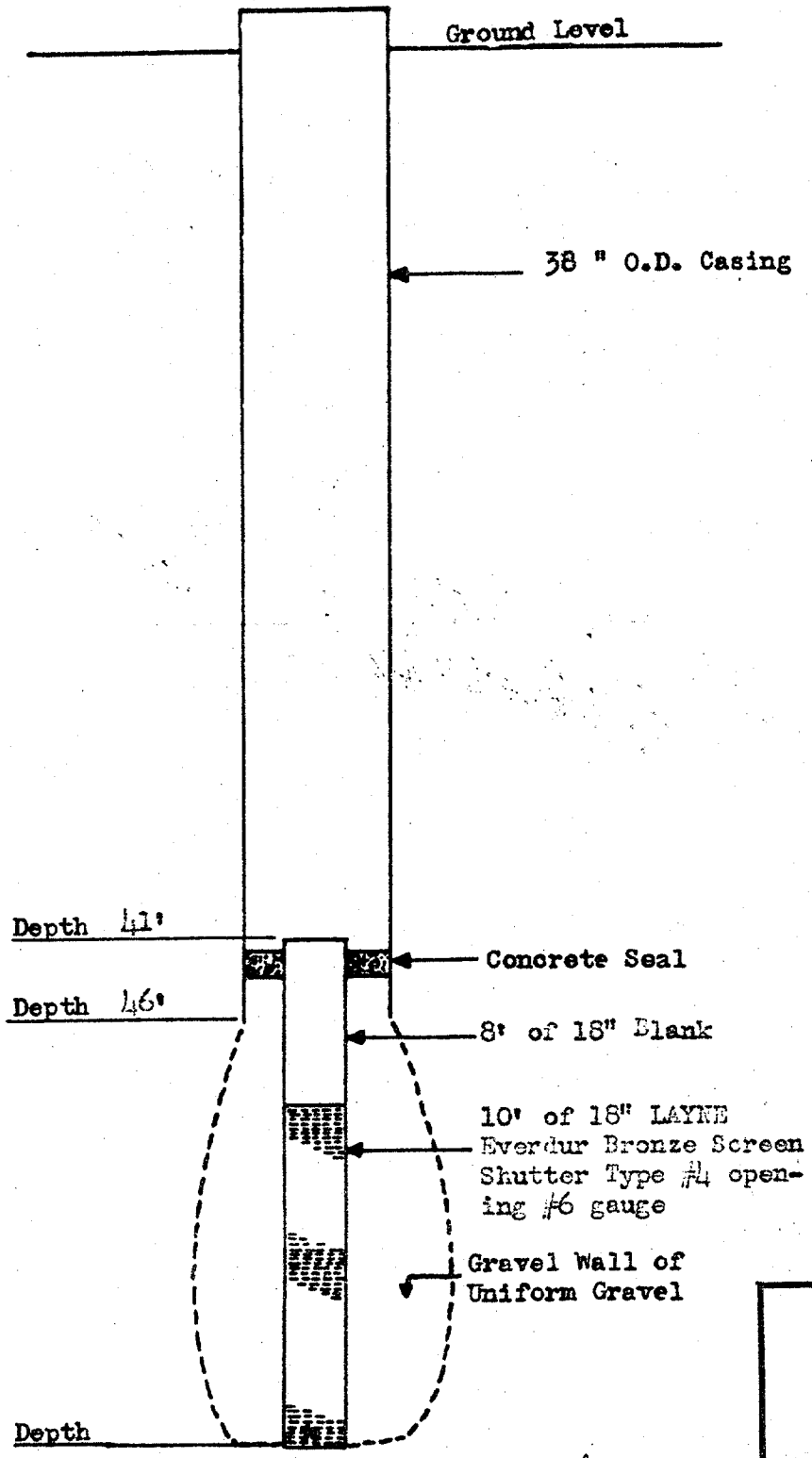
Not drawn to Scale
All depths measured
from ground level

Static Level 20'
Pumped 400 GPM
at 45' Pumping Level

#4 Single Cased
LAYNE GRAVEL WALL WELL
for
ALLISON ENGINEERING DIVISION
GENERAL MOTORS CORP.
SPEEDWAY CITY, INDIANA
PLANT NO. 3

LAYNE NORTHERN CO. INC.
MISHAWAKA, INDIANA

DRAWN BY	DRAWING NO.
APPROVED BY	389
DATE 5-29-40	



15N3E
Sec 6
NE NE
720

Marion Co
Wayne Twp.

Spc 13

#5 Single Cased
LAYNE GRAVEL WALL WELL
for
ALLISON ENGINEERING DIVISION
GENERAL MOTORS CORP.
SPEEDWAY CITY, INDIANA
PLANT NO. 3

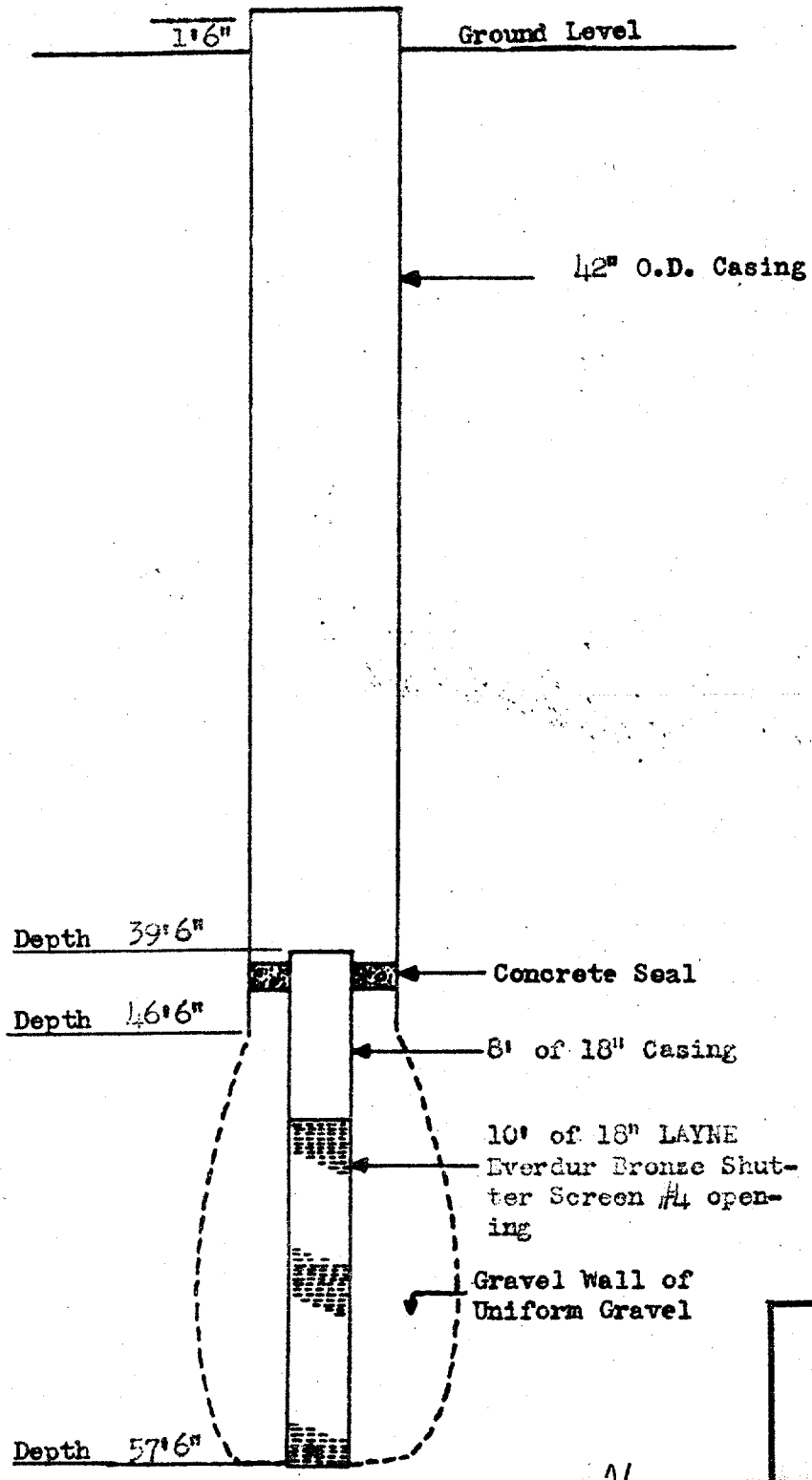
Driller C. E. Poole
Date Finished 8-1-40

Not drawn to Scale
All depths measured
from ground level

Static Level 20'
Pumped 300 GPM
at 44' Pumping Level

LAYNE NORTHERN CO. INC.
MISHAWAKA, INDIANA

DRAWN BY	DRAWING NO.
APPROVED BY	404
DATE 9-13-40	



15 N3E
Sec 6
NE, NE
>20
Marion Co.
Wayne Twp.

Sp 1V

#6 Single Cased
LAYNE GRAVEL WALL WELL
for
ALLISON ENGINEERING DIVISION
GENERAL MOTORS CORP.
SPEEDWAY CITY, INDIANA
PLANT NO. 3

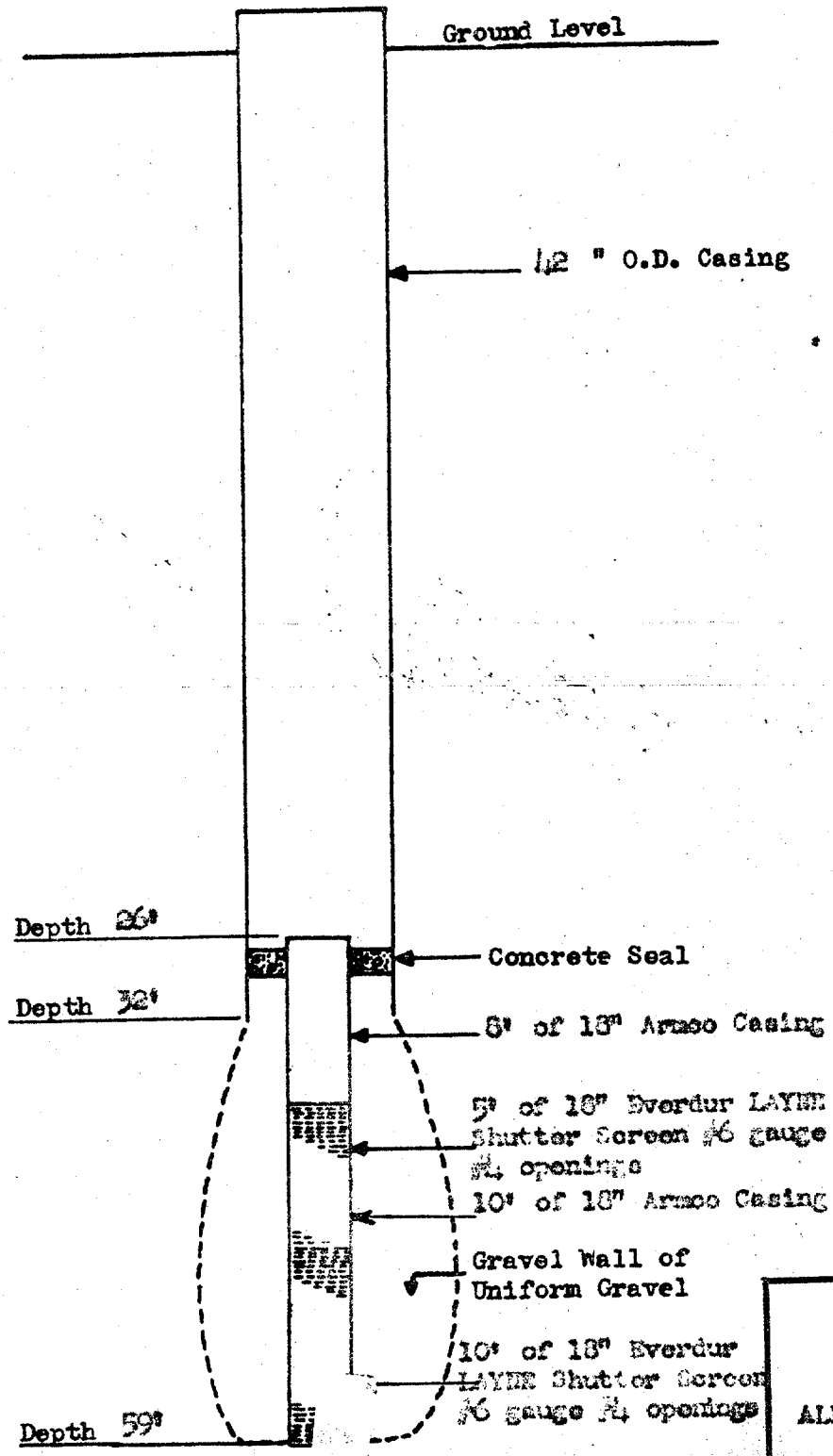
Driller James Young
Date Finished 8-24-40

Not drawn to Scale
All depths measured
from ground level

Static Level 19'
Pumped 335 GPM
at 47'6" Pumping Level

LAYNE NORTHERN CO. INC.
MISHAWAKA, INDIANA

DRAWN BY	DRAWING NO.
APPROVED BY	405
DATE 8-27-40	



15N3E
Sec 6
NE, NE
D20

Marion Co.
Wayne Twp.

#7 Single Cased
LAYNE GRAVEL WALL WELL
for
ALLISON ENGINEERING COMPANY
General Motors Corp.
Speedway, Indiana

Location: 600' S. of #6 well at Plant #3

Driller James Young
Date Finished 8-29-40

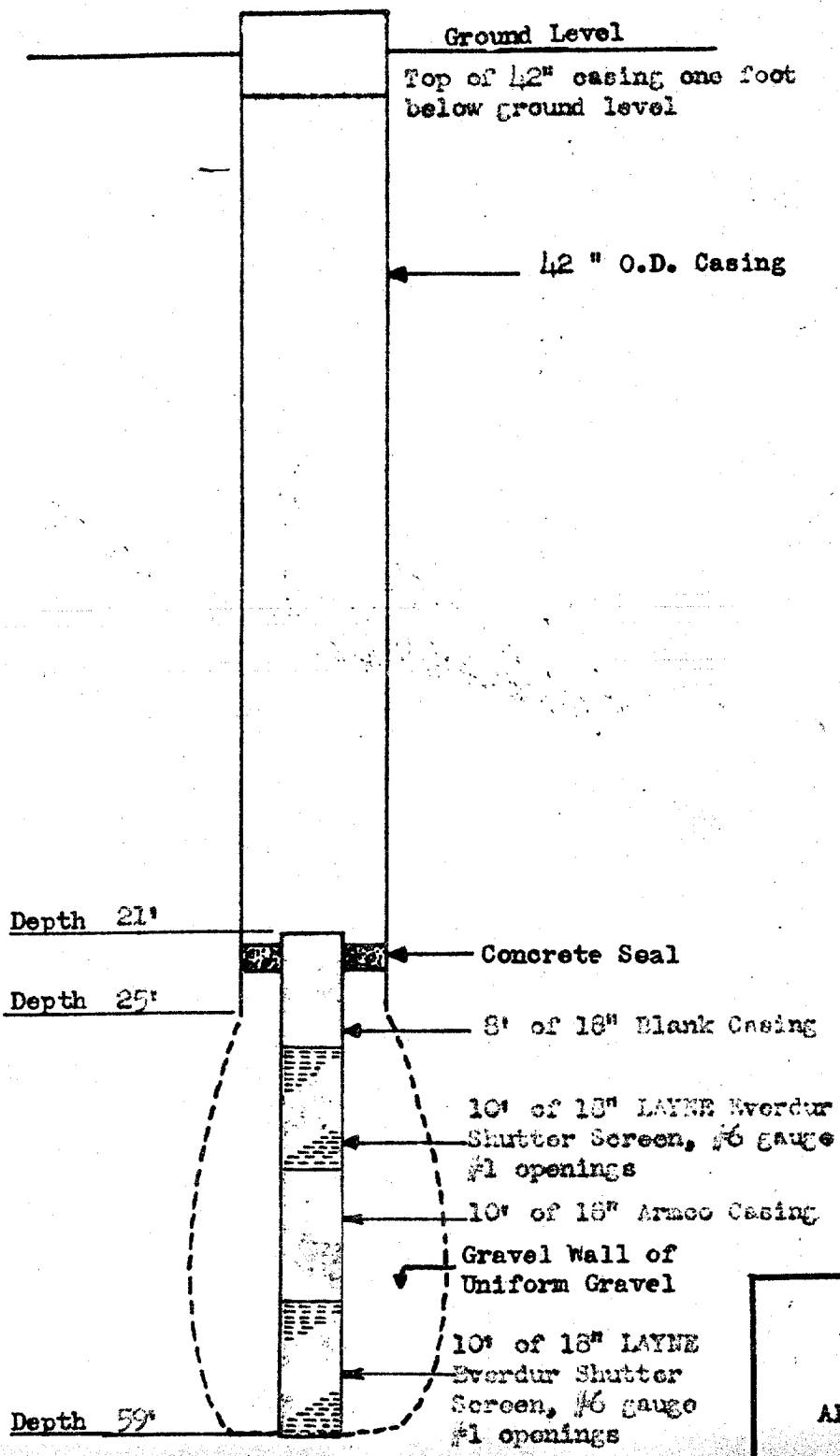
Not drawn to Scale
All depths measured
from ground level

Spc 15

Static Level 16'
Pumped 600 GPM
at 24' Pumping Level

LAYNE NORTHERN CO. INC.
MISHAWAKA, INDIANA

DRAWN BY	DRAWING NO.
APPROVED BY	410
DATE 10-31-40	



15N3E
Sec, 6
NE, NE
720
Marion Co
Wayne Twp.

#8 Single Cased
LAYNE GRAVEL WALL WELL
for
ALLISON ENGINEERING COMPANY
General Motors Corp.
Speedway, Indiana

Location: Plant #3

Driller JAMES YOUNG
Date Finished 10-2-40

Not drawn to Scale
All depths measured from ground level

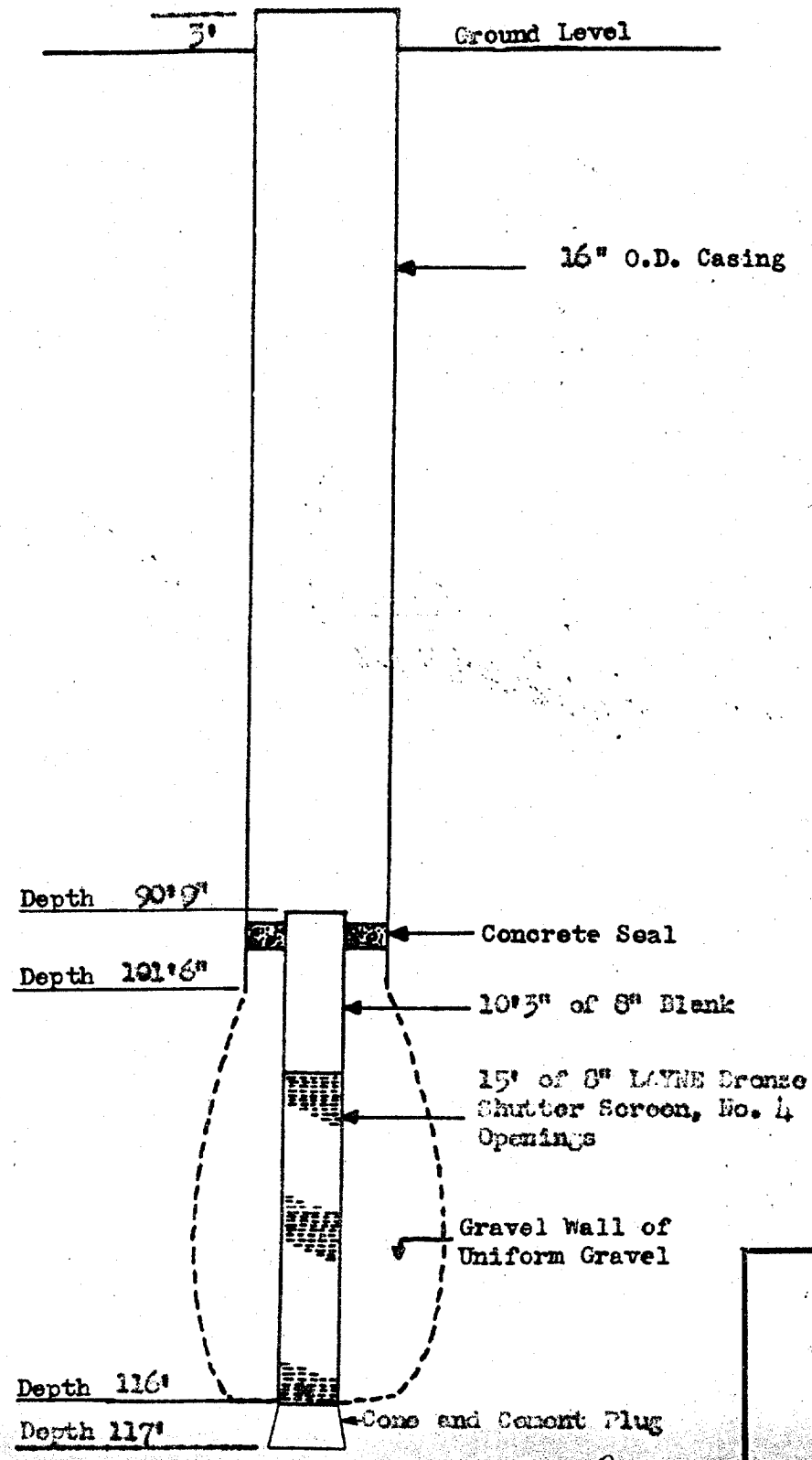
Spc 75

Static Level 18'
Pumped 500 GPM
at 30' Pumping Level

LAYNE NORTHERN CO. INC.
MISHAWAKA, INDIANA

DRAWN BY
APPROVED BY
DATE 10-25-40

DRAWING NO. 409



15N3E
Sec 6
NE, NE
720
Marion Co.
Wayne Twp

#9 Single Cased
LAYNE GRAVEL WALL WELL
for
ALLISON ENGINEERING DIVISION
GENERAL MOTORS CORPORATION
SPEEDWAY, INDIANA

PLANT NO. 3

Driller CHARLES E. POOLE
Date Finished Dec. 14, 1940

Spec 9

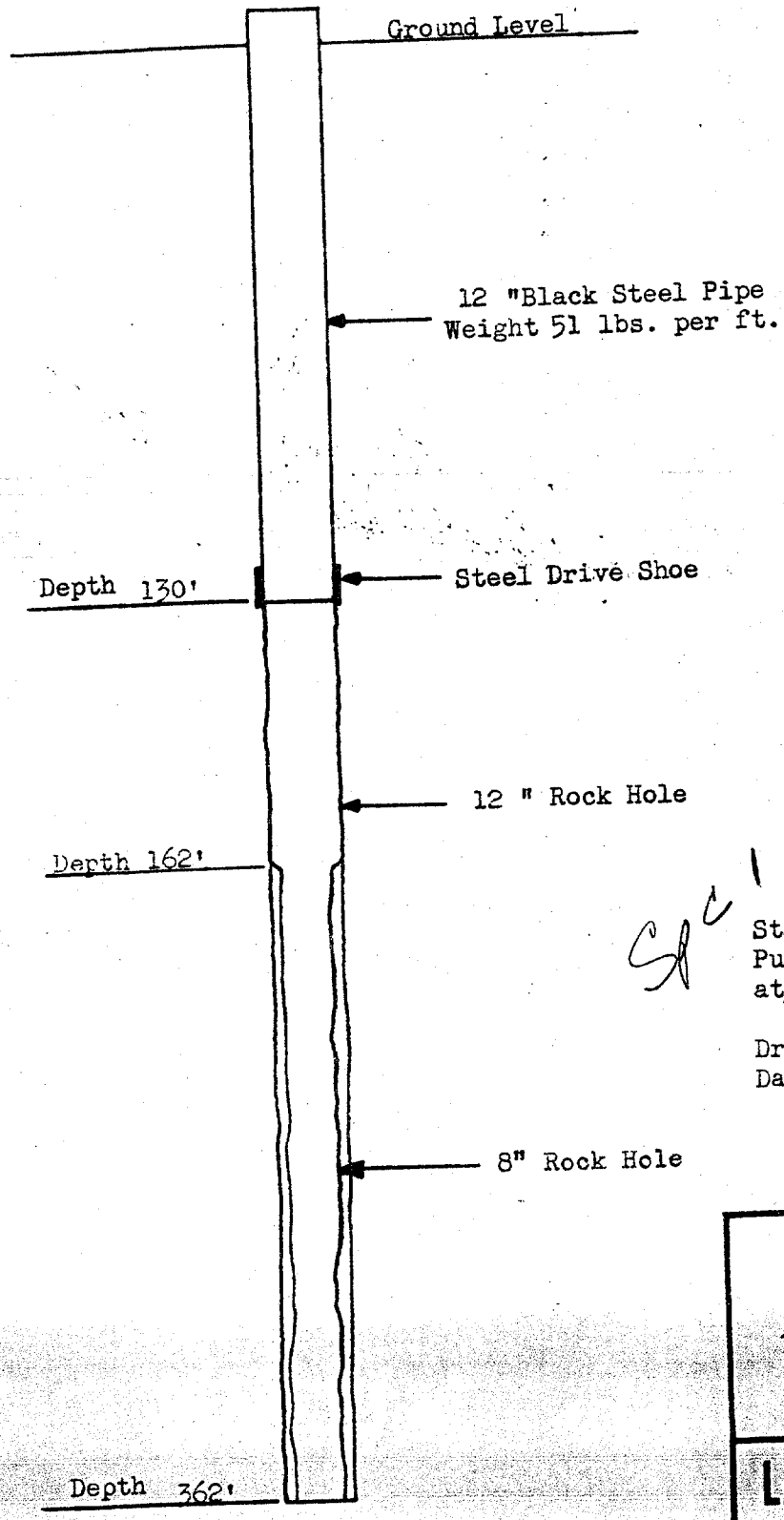
Not drawn to Scale
All depths measured
from ground level

Static Level 27'
Pumped 285 GPM
at 64' Pumping Level

LAYNE NORTHERN CO. INC.
MISHAWAKA, INDIANA

DRAWN BY
APPROVED BY
DATE 1-10-41

DRAWING No. 112



15 N3E
Sec 6
NENE
Marion Co.
Wayne Twp.
520

Sd'

Static Level 69'
Pumped 30 GPM
at 99' pumping Level

Driller WM. WAGNER & C. E. POOLE
Date Finished 1-12-41

Not drawn to scale
All depths measured from Ground Level

#10 ROCK WELL
For
ALLISON ENGINEERING COMPANY
Division General Motors Corp.
Speedway, Indiana
Plant No. 3

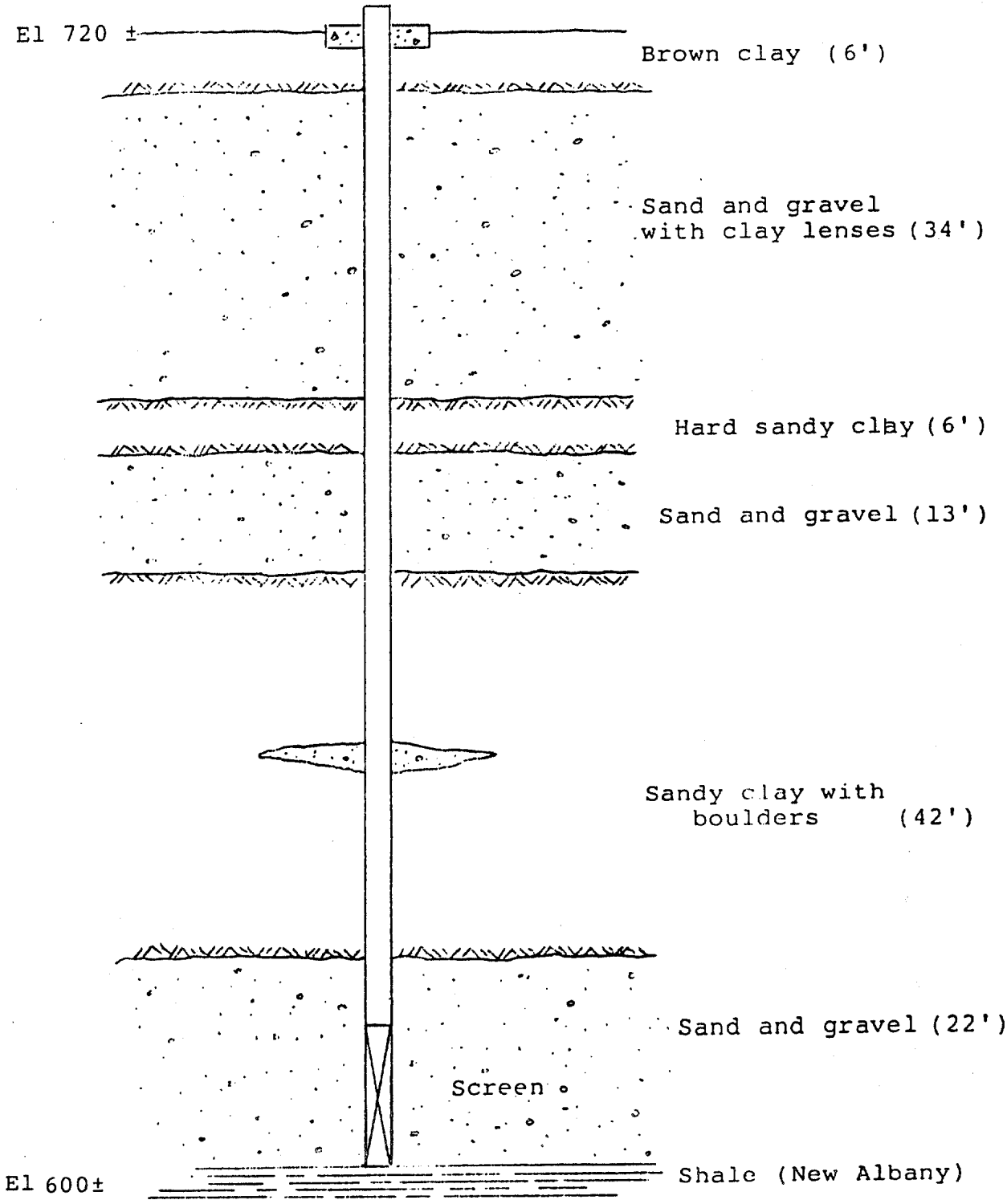
LAYNE NORTHERN CO. INC.
MISHAWAKA, INDIANA

DRAWN BY	DRAWING No.
APPROVED BY	121
DATE 2-13-41	

FIGURE 4

DETROIT DIESEL ALLISON - Plant #3

Well #11



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Soil and Foundation Engineering
Subsurface Exploration
Engineering Geology
Materials Testing

Form 7

RECORD OF SOIL EXPLORATION

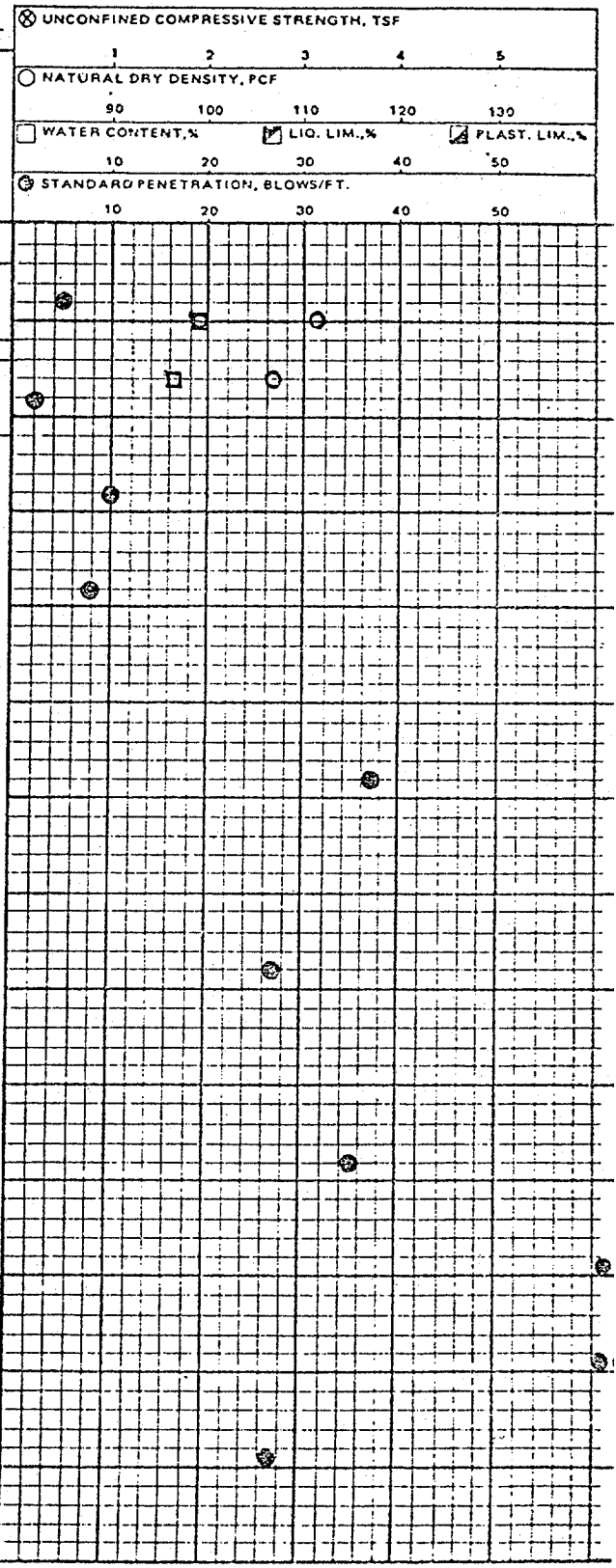
District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

y To:

CLIENT: Detroit Diesel Allison
BORING NO.: 1E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203 DATE: 9-11-74
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison INSPECTOR:
BORING METHOD: HSA RC DIA. in.
SHELBY TUBE O.D.: 3.0 in.

SURFACE ELEVATION: 721

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3-6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Brown moist soft to medium stiff SANDY CLAY(CL) w/ tr. Gravel	3.5			1	2 2/3		1
Brown moist very loose CLAYEY SAND (SC)	6.0		5	2	2 1/1		2
Brown moist loose medium to coarse SAND (SW) with trace Gravel				3	2 3/7		
			10	4	3 3/5		
Gray moist hard SANDY CLAYEY SILT (ML) with little Gravel	12.5	▽	15	5	20 19/18		
			20	6	13 13/14		
			25	7	8 14/21		
			30	8	18 28/42		
			35	9	12 21/40		
Brown wet med.dense medium to coarse SAND & fine Gravel (SW)	36.0		40	10	10 8/19		
Bottom of test boring 40'	40.0						



BORING METHOD
HSA - HOLLOW STEM AUGER
CFA - CONTINUOUS FLIGHT AUGER

GROUND WATER
▽ NOTED ON RODS 13.0 FT.
▼ AT COMPLETION

SHELBY TUBE SAMPLES OBTAINED IN BORING 1E-a DRILLED A FEW

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A subsidiary of American Testing and Engineering Corporation

Soil and Foundation Engineering
Subsurface Exploration
Engineering Geology
Materials Testing

Form 7

RECORD OF SOIL EXPLORATION

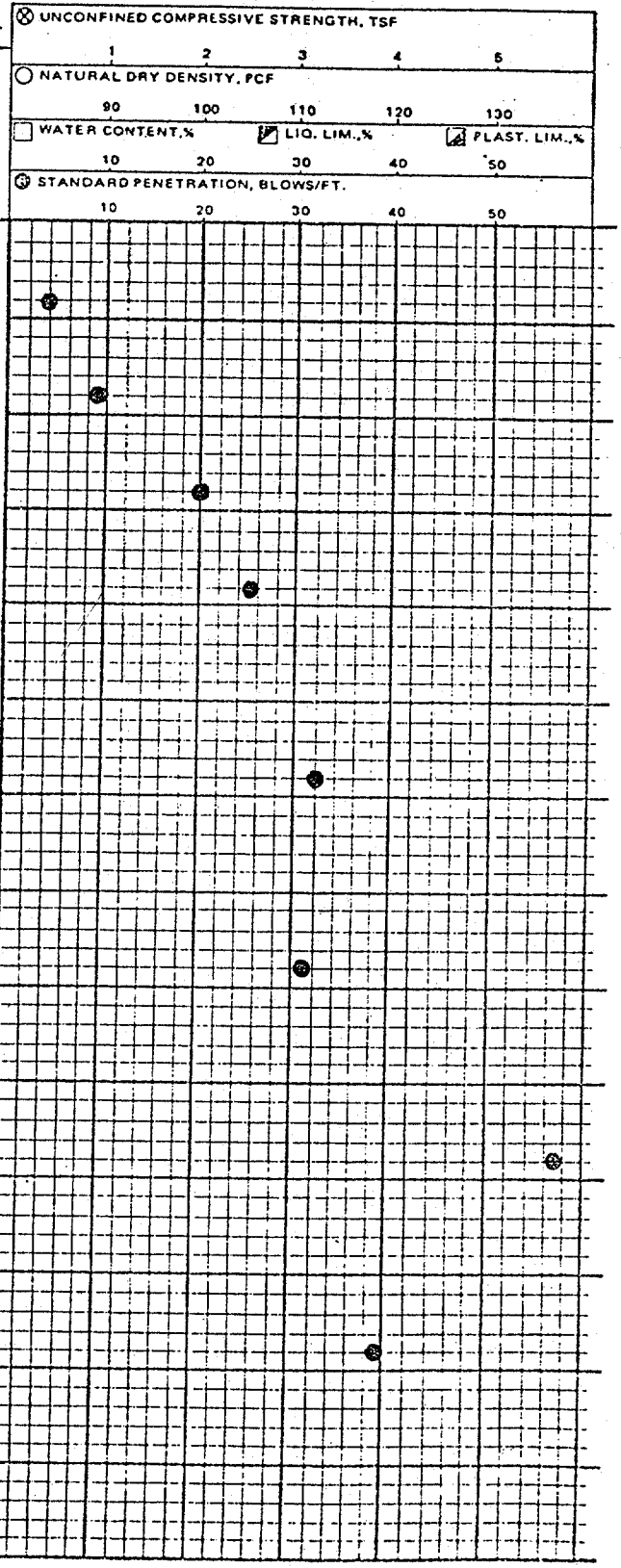
Reply To:

District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

CLIENT: Detroit Diesel Allison
BORING NO.: 2E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203 DATE: 9-11-74
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison INSPECTOR:
BORING METHOD: HSA RC DIA. in.
SHELBY TUBE O.D. in.

SURFACE ELEVATION: 721

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3-6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Brown moist soft SANDY CLAY (CL)	3.0			1	4 2/2	75	
Brown moist loose CLAYEY SAND (SC)	6.0		5	2	3 3/6	75	
Brown moist medium dense fine to coarse SAND (SW) w/tr. Gravel	8.5			3	6 8/12	100	
Brown and Gray moist medium dense medium SAND (SP)	12.5		10	4	7 10/15	100	
Gray moist hard SANDY CLAYEY SILT (ML)			15	5	14 15/17	100	
-sand and gravel seam 18.5-19 ft			20	6	10 14/17	100	
			25	7	10 17/40	100	
Brown and Gray wet dense CLAYEY SAND & GVL (SC)	28.0 / 30.0		30	8	8 17/22	40	
Bottom of test boring 30'							



BORING METHOD
HSA - HOLLOW STEM AUGER
CFA - CONTINUOUS FLIGHT AUGER
DC - DRIVEN CASING

GROUND WATER
NOTED ON RODS 18.5 FT.
AT COMPLETION 19.0 FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING _____ DRILLED A FEW

Atec Associates.
Geotechnical and Materials Engineers
A subsidiary of American Testing and Engineering Corporation

Soil and Foundation Engineering
Subsurface Exploration
Engineering Geology
Materials Testing

ATEC

Form

RECORD OF SOIL EXPLORATION

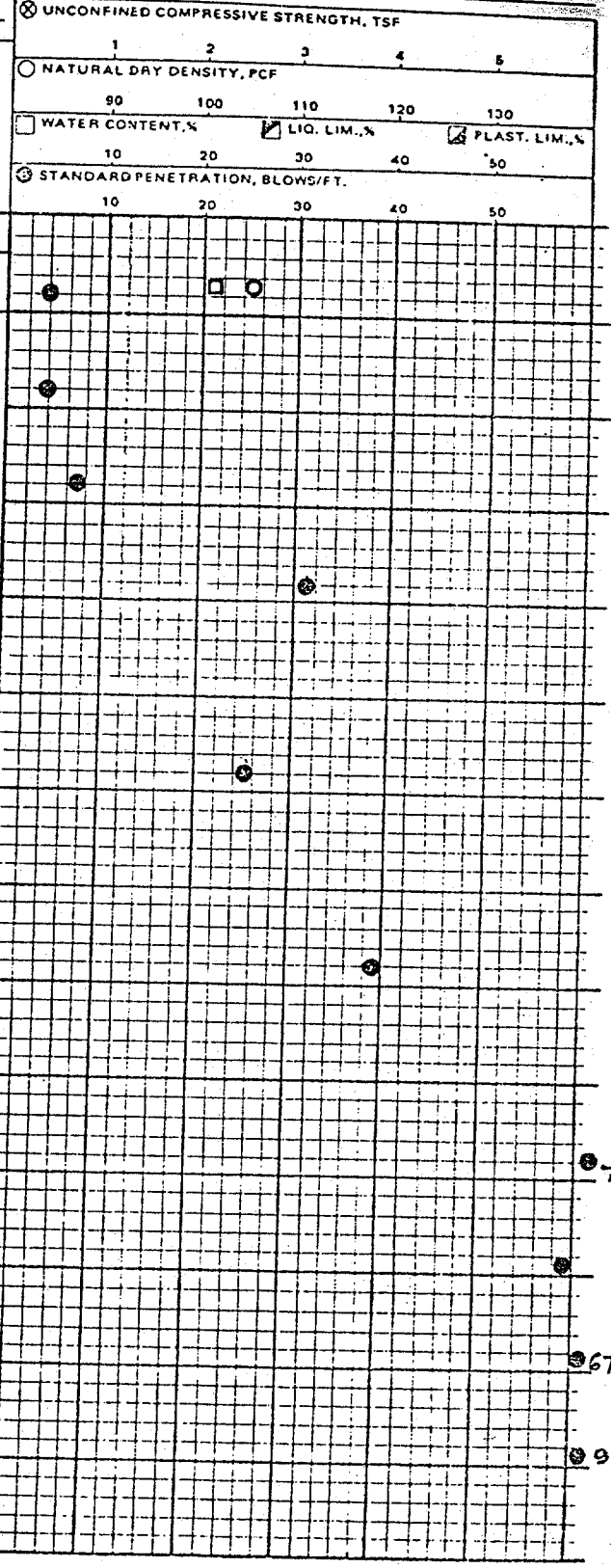
District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

Reply To:

CLIENT: Detroit Diesel Allison
BORING NO.: 3E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
DATE: 9-11-74
FOREMAN: L. Garrison
INSPECTOR:
BORING METHOD: HSA
RC DIA. in.
SHELBY TUBE O.D.: 3.0 in.

SOIL CLASSIFICATION
SURFACE ELEVATION — 721

Soil Classification	Stratum Depth, Ft.	Ground Water	Depth Scale, Ft.	Sample No.	SPT* Blows/6in. 3-6 in. Increments	Recovery, %	Shelby Tube No.
Topsoil	1.0						
Brown moist soft SANDY CLAYEY SILT (ML)	3.0			1	4 2/2	60	1
Dark Brown moist medium stiff SANDY CLAY (CL-SC) with trace Gravel	7.5		5	2	3 2/2	60	
				3	4 4/3	75	
Brown and Gray damp medium dense fine to coarse SAND with some Gravel (SW)	12.5		10	4	15 14/17	100	
Gray moist stiff CLAYEY SANDY SILT (ML) with trace Gravel		▽	15	5	5 10/15	100	
-with some gravel below 23'			20	6	11 18/21	100	
			25	7	20 39/39	100	
Brown and Gray very wet very dense fine to coarse SAND with little Gravel (SW)	27.0		30	8	18 28/30	100	
			35	9	17 29/38	100	
Bottom of test boring 40'	40.0		40	10	21 44/50	100	



BORING METHOD
HSA — HOLLOW STEM AUGER
CFA — CONTINUOUS FLIGHT AUGER
DC — DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS 18.5 FT.
▼ AT COMPLETION ____ FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING 3E-a DRILLED A FEW

Atec Associates.
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Subsurface Exploration
Engineering Geology
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Form

RECORD OF SOIL EXPLORATION

Reply To:

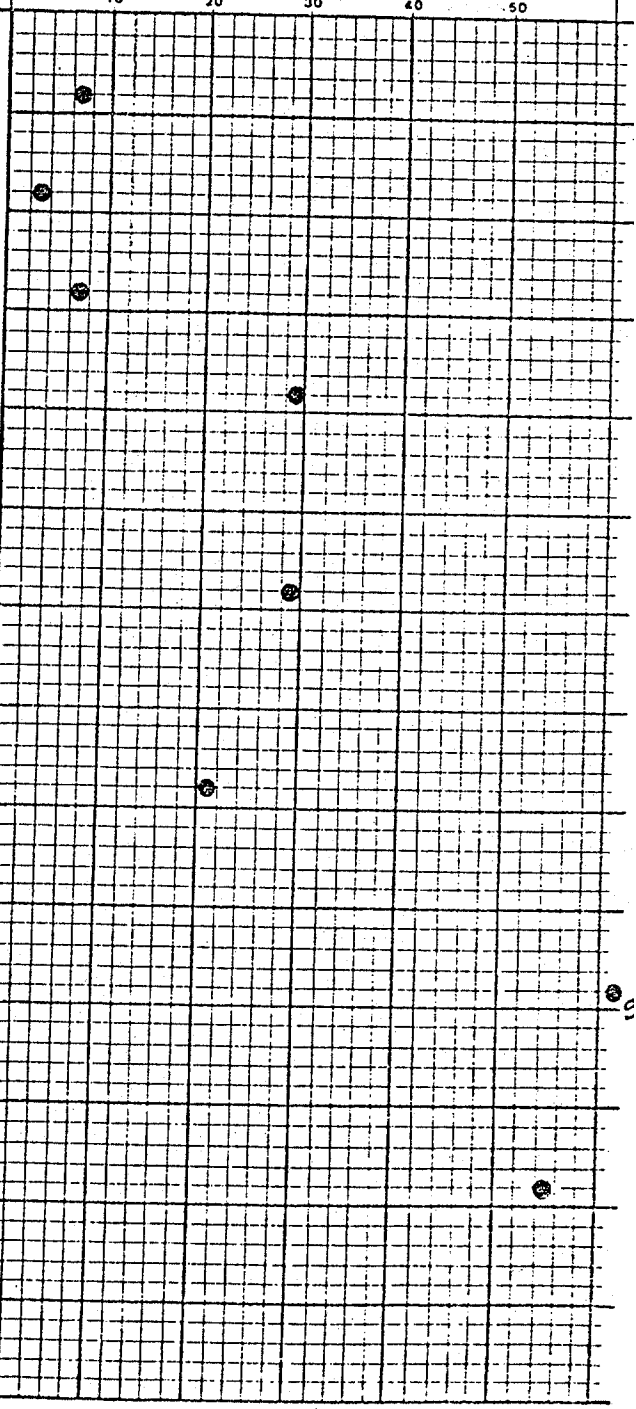
District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

CLIENT: Detroit Diesel Allison
BORING NO.: 4E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203 DATE: 9-11-74
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison INSPECTOR:
BORING METHOD: HSA RC DIA. in.
SHELBY TUBE O.D. in.

SURFACE ELEVATION — 720

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3-6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Dark Brown moist medium stiff SILTY CLAY (CL)	3.0			1	3 3/4	75	
Dark Brown moist loose CLAYEY SAND (SC)	8.0		5	2	3 2/1	60	
				3	3 4/3	75	
Brown damp medium dense fine to coarse SAND (SW)	12.5		10	4	11 15/14	100	
Gray moist very stiff to hard SANDY CLAYEY SILT (ML)		▽	15	5	12 12/17	100	
			20	6	7 9/12	100	
			25	7	33 40/50	100	
	30.0		30	8	16 20/35	100	
Bottom of test boring 30'							

⊗ UNCONFINED COMPRESSIVE STRENGTH, TSF (1, 2, 3, 4, 5)
○ NATURAL DRY DENSITY, PCF (90, 100, 110, 120, 130)
□ WATER CONTENT,% ▨ LIQ. LIM.,% ▨ PLAST. LIM.,%
⊙ STANDARD PENETRATION, BLOWS/FT. (10, 20, 30, 40, 50)



BORING METHOD
HSA — HOLLOW STEM AUGER
CFA — CONTINUOUS FLIGHT AUGER
DC — DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS 18.0 FT.
▼ AT COMPLETION FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING _____ DRILLED A FEW

Atec Associates.
Geotechnical and Materials Engineers
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Soil and Foundation Engineering
Subsurface Exploration
Engineering Geology
Materials Testing

Form 7

RECORD OF SOIL EXPLORATION

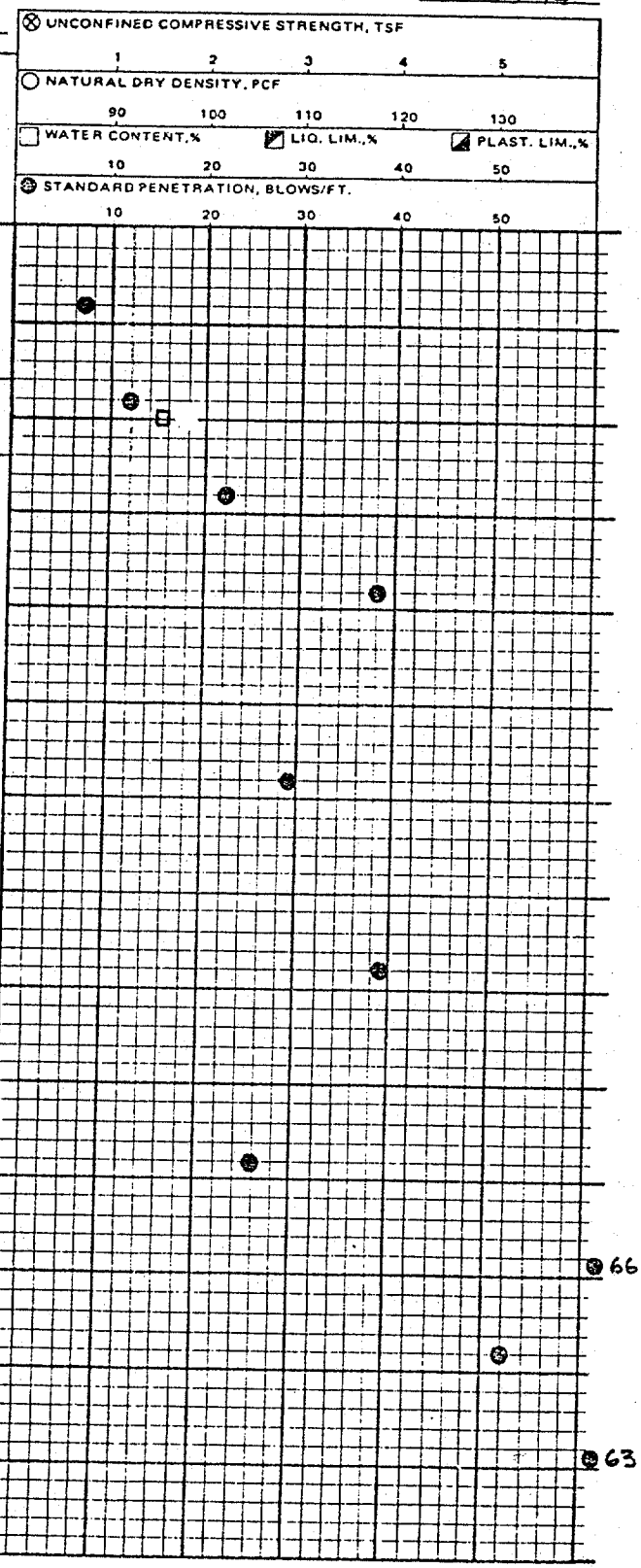
District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

Reply To:

CLIENT: Detroit Diesel Allison
BORING NO.: 5E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203 DATE: 9-13-74
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison INSPECTOR:
BORING METHOD: HSA RC DIA. in.
SHELBY TUBE O.D.: 3.0 in.

SURFACE ELEVATION — 716

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3–6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Dark Brown moist medium stiff SANDY CLAY (CL) with trace Gravel and trace Vegetation	5.5		5	1	2 2/5		
				2	3 3/9		1
Yellowish Brown damp medium dense fine to coarse SAND (SW) with trace Gravel	13.0	▽	10	3	12 12/10		
				4	6 17/21		
Gray moist very stiff SANDY SILT (ML) with trace Gravel -with trace clay below 17'	22.5		15	5	11 16/13		
			20	6	8 20/19		
Gray moist very stiff SANDY CLAYEY SILT (ML) with trace Gravel -hard below 28' with sand and gravel seams below 32 ft	40.0		25	7	6 10/16		
			30	8	11 30/36		
			35	9	8 20/32		
Bottom of test boring 40'			40	10	20 27/36		



BORING METHOD
HSA – HOLLOW STEM AUGER
CFA – CONTINUOUS FLIGHT AUGER
DC – DRIVEN CASING
MD – MUD DRILLING

GROUND WATER
▽ NOTED ON RODS 13.5 FT.
▼ AT COMPLETION ____ FT.
▼ AFTER ____ HRS. ____ FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING 5E-a DRILLED A FEW FEET FROM BORING 5E

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RECORD OF SOIL EXPLORATION

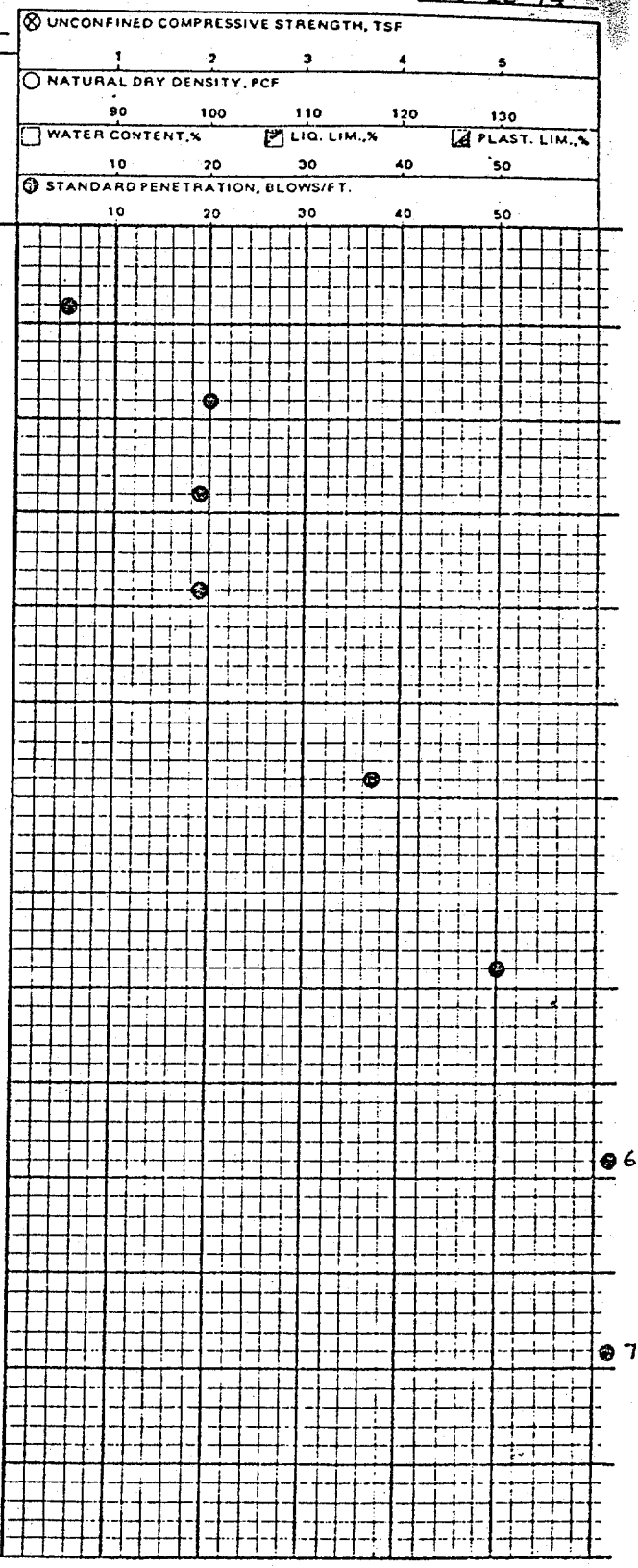
Reply To:

District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

CLIENT: Detroit Diesel Allison
BORING NO.: 6E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203
DATE: 9-12-74
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison
INSPECTOR:
BORING METHOD: HSA
RC DIA. ___ in.
SHELBY TUBE O.D. ___ in.

SURFACE ELEVATION — 712

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3-6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Dark Brown moist soft SANDY CLAY (CL) w/tr. Gvl	3.0			1	3 3/2	100	
Gray moist very stiff SANDY CLAYEY SILT (ML) w/ little Gravel	6.0		5	2	6 9/11	100	
Brown moist medium dense medium to coarse SAND (SW) with trace Gravel		▽		3	6 8/11	75	
-wet below 8.5'		▽	10	4	6 8/11	75	
	17.5		15	5	8 16/21	100	
Gray moist very hard SANDY CLAYEY SILT (ML) with trace Gravel			20	6	8 19/31	0	
	27.5		25	7	16 25/38	100	
Brown and Gray wet very dense coarse SAND & fine to med. Gvl (SW-GW)	30.0		30	8	16 35/44	100	
Bottom of test boring 30'							



BORING METHOD
HSA — HOLLOW STEM AUGER
CFA — CONTINUOUS FLIGHT AUGER
DC — DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS 8.5 FT.
▼ AT COMPLETION 8.0 FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING ___ DRILLED A FEW FEET FROM BORING ___

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Form 7

RECORD OF SOIL EXPLORATION

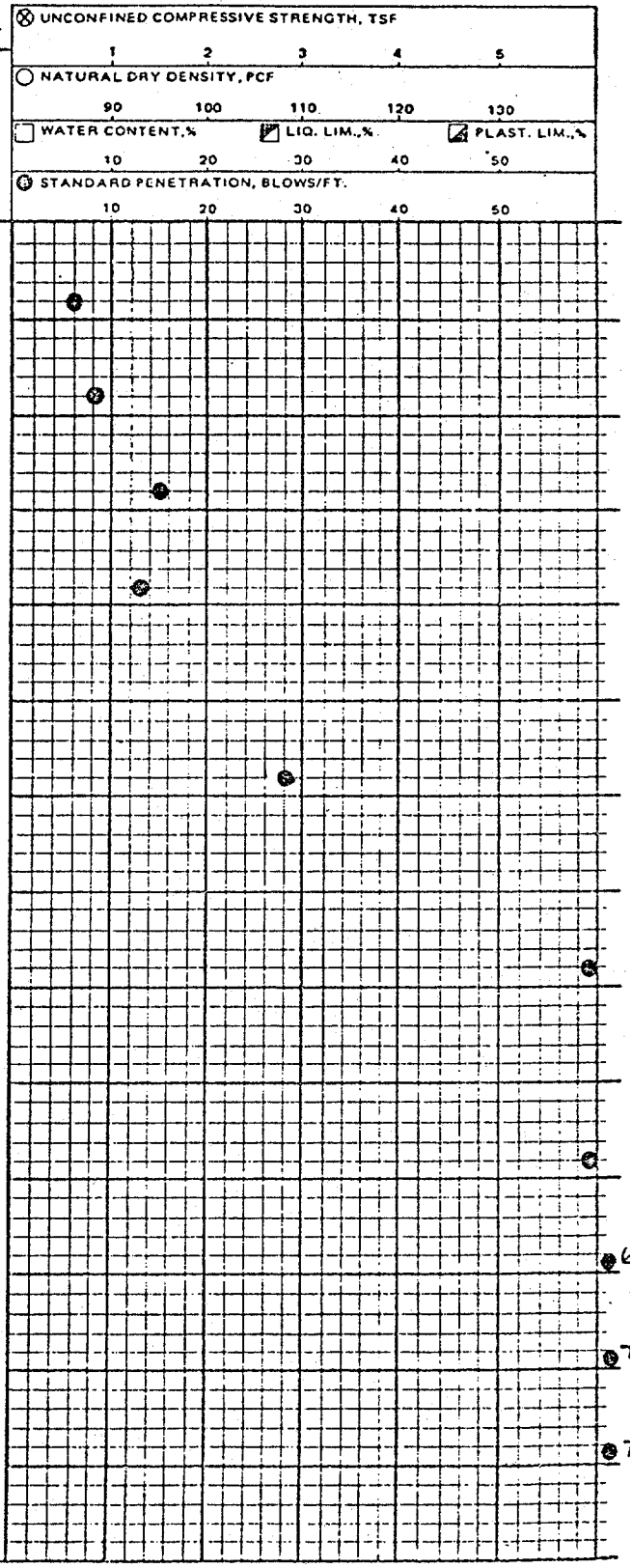
Reply To:

District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

CLIENT: Detroit Diesel Allison
BORING NO.: 7E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203
DATE: 9-13-74
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison
INSPECTOR:
BORING METHOD: HSA
RC DIA. ___ in.
SHELBY TUBE O.D. ___ in.

SURFACE ELEVATION — 712

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3→6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Brown moist medium stiff SANDY CLAY (CL)	3.0			1	2 2/4	50	
Brown moist fine to coarse SAND (SW) with little fine to medium Gravel			5	2	3 3/5	75	
-loose 3 to 5 ft				3	6 6/9	100	
-medium dense 5 to 15 ft		▽					
-dense 15 to 22.5'		▽	10	4	9 6/7	100	
			15	5	9 12/16	100	
			20	6	15 27/32	100	
	22.5						
Gray moist hard SANDY CLAYEY SILT (ML) with Sand and Gravel seams			25	7	17 27/32	75	
			30	8	20 27/41	60	
			35	9	20 37/41	60	
	40.0		40	10	20 31/42		
Bottom of test boring 40'							



BORING METHOD
HSA – HOLLOW STEM AUGER
CFA – CONTINUOUS FLIGHT AUGER
DC – DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS 8.5 FT.
▼ AT COMPLETION 8.5 FT.
AFTER 24 HRS. 8.5 FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING ___ DRILLED A FEW FEET FROM BORING ___

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RECORD OF SOIL EXPLORATION

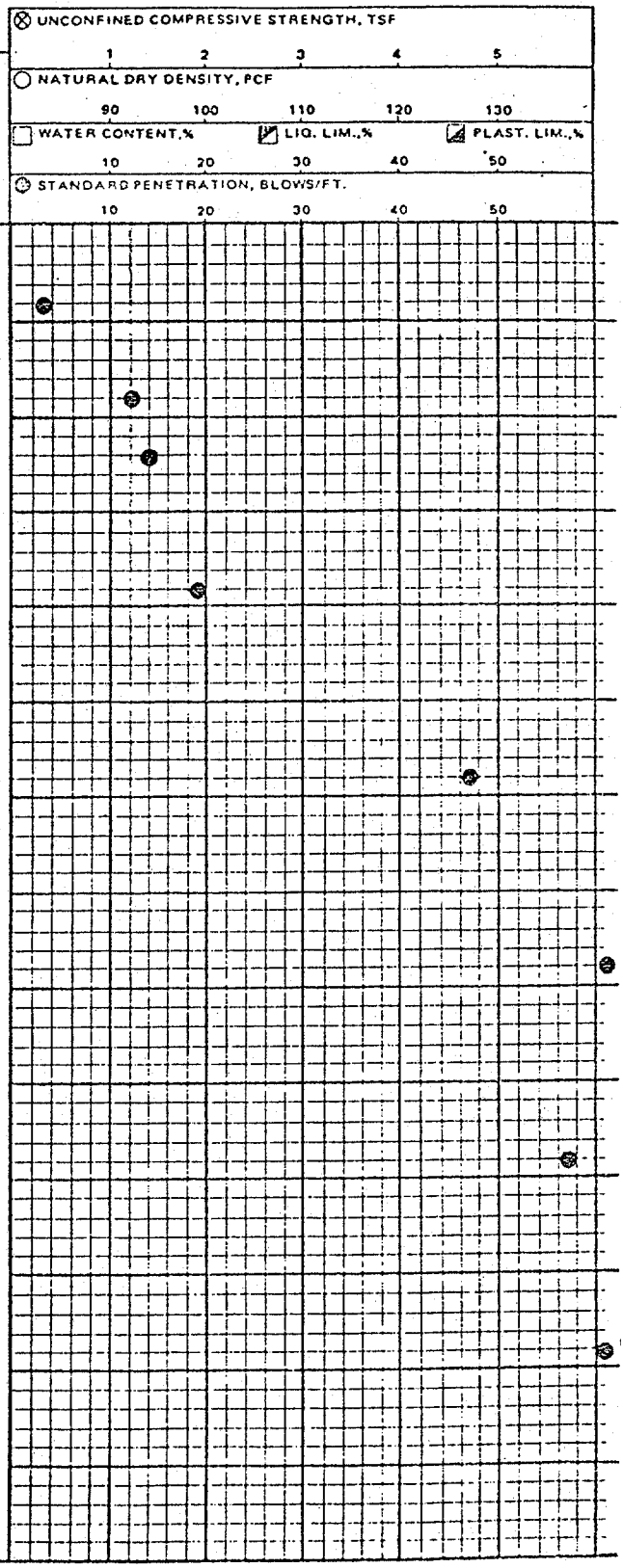
District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

To:

CLIENT: Detroit Diesel Allison
BORING NO.: 8E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203 DATE: 9-17-74
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison INSPECTOR:
BORING METHOD: HSA RC DIA. in.
SHELBY TUBE O.D. in.

SURFACE ELEVATION — 720

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3–6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Dark Brown moist SANDY CLAYEY SILT (ML) with trace Vegetation and trace Gravel	3.5			1	2 1/2	60	
Dark Brown moist medium dense CLAYEY SAND (SC)	5.5		5	2	3 5/7	100	
Dark Brown moist stiff SANDY CLAY (CL) with trace Gravel	7.5			3	6 6/8	100	
Brown moist medium to coarse SAND (SW) with trace Gravel	13.0		10	4	19 10/9	100	
Gray moist hard SANDY CLAYEY SILT (ML) with trace Gravel			15	5	23 27/20	75	
-with sand and gravel layers 17 to 22 ft.		▼	20	6	29 31/39	100	
		▼▽	25	7	19 29/28	100	
	30.0		30	8	19 28/36	60	
Bottom of test boring 30'							



BORING METHOD
HSA – HOLLOW STEM AUGER
CFA – CONTINUOUS FLIGHT AUGER
DC – DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS 23.5 FT.
▼ AT COMPLETION 23.0 FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING _____ DRILLED A FEW FEET FROM BORING _____

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RECORD OF SOIL EXPLORATION

Reply To:

District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

CLIENT: Detroit Diesel Allison
BORING NO.: 9E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
DATE: 10-2-74
FOREMAN: L. Bacon
INSPECTOR:
BORING METHOD: HSA
RC DIA. in.
SHELBY TUBE O.D. in.

SURFACE ELEVATION — 720

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3-6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Dark Brown moist medium stiff SANDY CLAY (CL) with trace Gravel -very stiff 5 to 8 ft	8.0		5	1	6 6/6	20	
				2	6 7/8	80	
				3	13 16/12	20	
Brown moist dense fine to medium SAND (SP) with some Gravel	11.0		10	4	14 24/50/3"	10	
Gray moist hard SANDY CLAYEY SILT (ML) with trace Gravel			15	5	19 33/36	20	
			20	6	33 50/6"	20	
			25	7	19 23/38	100	
			30	8	24 44/50 5"	80	
			35	9	15 27/39	100	
	41.0		40	10	23 19/47	90	
Gray moist dense fine to coarse SAND (SW) with little Gravel and trace Silt			45	11	8 33/50/4"	70	
			50	12	10 19/27	30	
	55.0		55	13	50/5"	0	
Bottom of test boring 55'							

⊗ UNCONFINED COMPRESSIVE STRENGTH, TSF (1, 2, 3, 4, 5)
○ NATURAL DRY DENSITY, PCF (90, 100, 110, 120, 130)
□ WATER CONTENT, % ☑ LIQ. LIM., % ☑ PLAST. LIM., %
⊙ STANDARD PENETRATION, BLOWS/FT. (10, 20, 30, 40, 50)

BORING METHOD
A – HOLLOW STEM AUGER
A – CONTINUOUS FLIGHT AUGER
– DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS _____ FT.
▼ AT COMPLETION _____ FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING _____ DRILLED A FEW

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RECORD OF SOIL EXPLORATION

Reply To:

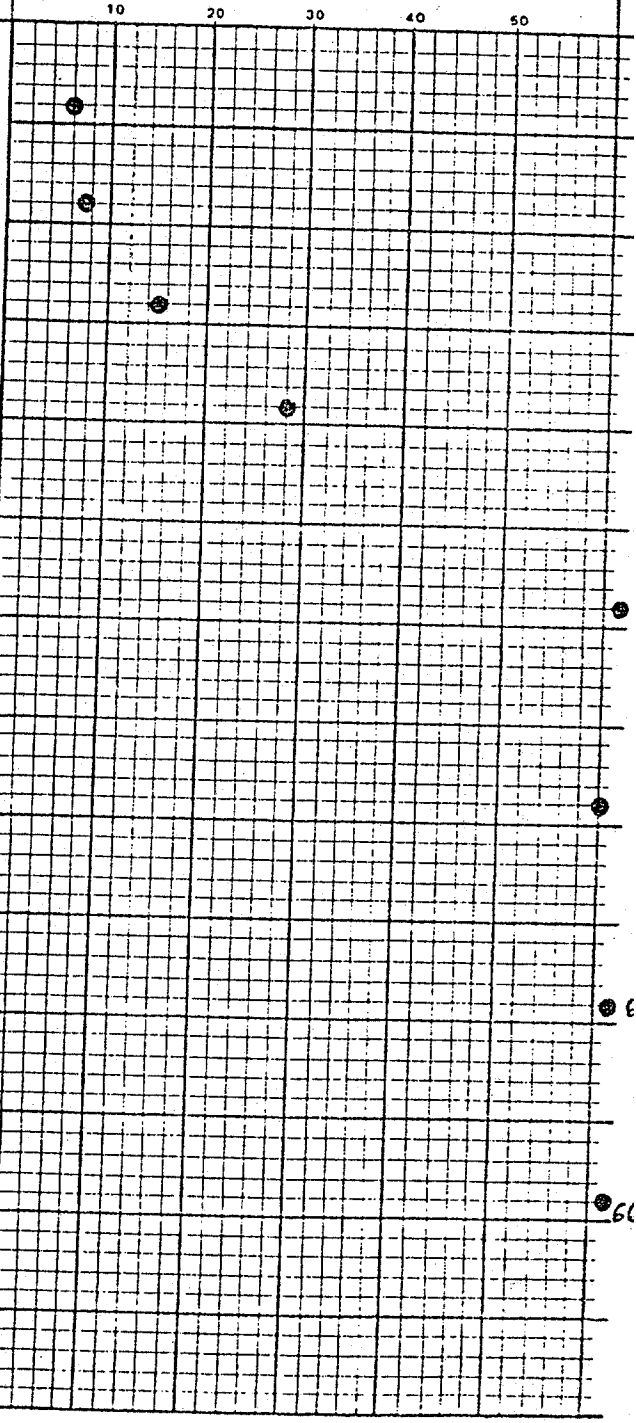
District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

CLIENT: Detroit Diesel Allison
BORING NO.: 10E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203 DATE: 9-16-74
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison INSPECTOR:
BORING METHOD: HSA RC DIA. in.
SHELBY TUBE O.D. in.

SURFACE ELEVATION — 720

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3-6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Brown moist medium stiff SANDY CLAY (CL) (CL-SC) 3 to 4.5'	4.5			1	2 3/3	100	
Brown moist medium dense medium to coarse SAND (SW) with trace Gravel	7.5		5	2	3 3/4	75	
Brown moist very stiff SANDY CLAYEY SILT (ML) with trace Gravel		▽		3	5 6/9	100	
-sand and gravel layers from 13 to 16 ft -hard below 13 ft		▼	10	4	9 11/17	90	
			15	5	26 37/44	100	
			20	6	17 22/38	100	
Brown wet very dense medium to coarse SAND (SW) with little fine to medium Gravel	22.5		25	7	38 30/35	75	
	30.0		30	8	12 30/36	100	
Bottom of test boring 30'							

⊗ UNCONFINED COMPRESSIVE STRENGTH, TSF (1, 2, 3, 4, 5)
○ NATURAL DRY DENSITY, PCF (90, 100, 110, 120, 130)
□ WATER CONTENT, % ▨ LIQ. LIM., % ◪ PLAST. LIM., %
⊖ STANDARD PENETRATION, BLOWS/FT. (10, 20, 30, 40, 50)



BORING METHOD
HSA – HOLLOW STEM AUGER
CFA – CONTINUOUS FLIGHT AUGER
DC – DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS 8.5 FT.
▼ AT COMPLETION 12.0 FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING _____ DRILLED A FEW

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RECORD OF SOIL EXPLORATION

Reply To:

District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

CLIENT: Detroit Diesel Allison
BORING NO.: 11E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203 DATE: 9-16-74
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison INSPECTOR:
BORING METHOD: HSA RC DIA. in.
SHELBY TUBE O.D. in.

SOIL CLASSIFICATION
SURFACE ELEVATION — 718

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3—6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Dark Brown moist soft to medium stiff SANDY CLAY (CL) with little fine Gravel	5.0		5	1	2 1/1	60	
				2	2 2/5	75	
Brown moist medium dense fine to coarse SAND (SW) with trace Gravel	8.0	▽		3	4 6/8	100	
Gray moist hard SANDY CLAYEY SILT (ML) with trace Gravel		▼	10	4	12 22/19	100	
			15	5	31 43/48	100	
			20	6	21 29/50	100	
	22.5						
Gray wet very dense medium to coarse SAND & fine to medium Gravel (SW)			25	7	23 29/34	100	
			30	8	39 50/4"	100	
Bottom of test boring 35'	35.0		35	9	33 29/35	35	

⊗ UNCONFINED COMPRESSIVE STRENGTH, TSF (1, 2, 3, 4, 5)
○ NATURAL DRY DENSITY, PCF (90, 100, 110, 120, 130)
☐ WATER CONTENT, % ☑ LIQ. LIM., % ☑ PLAST. LIM., % (10, 20, 30, 40, 50)
⊙ STANDARD PENETRATION, BLOWS/FT. (10, 20, 30, 40, 50)

BORING METHOD
HSA — HOLLOW STEM AUGER
CFA — CONTINUOUS FLIGHT AUGER
DC — DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS 8.5 FT.
▼ AT COMPLETION 12.5 FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING _____ DRILLED A FEW FEET FROM BORING

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RECORD OF SOIL EXPLORATION

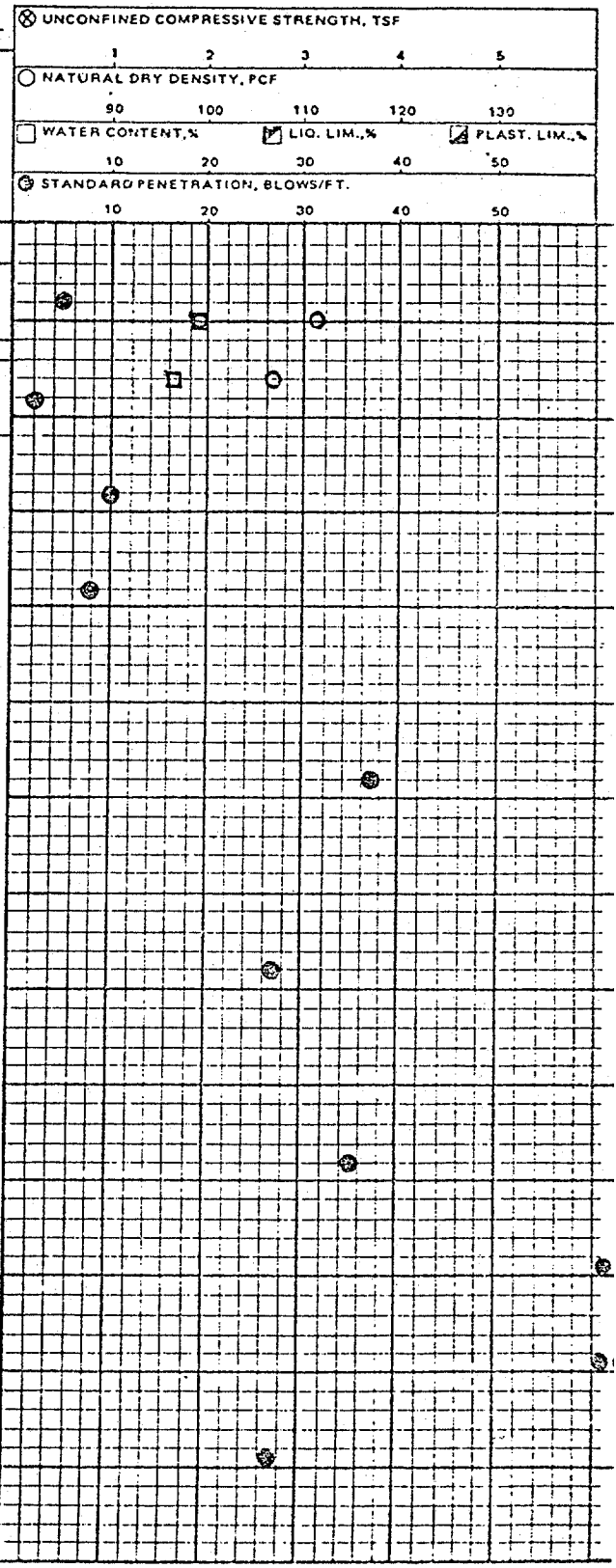
District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

y To:

CLIENT: Detroit Diesel Allison
BORING NO.: 1E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203 DATE: 9-11-74
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison INSPECTOR:
BORING METHOD: HSA RC DIA. in.
SHELBY TUBE O.D.: 3.0 in.

SURFACE ELEVATION: 721

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3-6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Brown moist soft to medium stiff SANDY CLAY(CL) w/ tr. Gravel	3.5			1	2 2/3		1
Brown moist very loose CLAYEY SAND (SC)	6.0		5	2	2 1/1		2
Brown moist loose medium to coarse SAND (SW) with trace Gravel				3	2 3/7		
			10	4	3 3/5		
Gray moist hard SANDY CLAYEY SILT (ML) with little Gravel	12.5	▽	15	5	20 19/18		
			20	6	13 13/14		
			25	7	8 14/21		
			30	8	18 28/42		
			35	9	12 21/40		
Brown wet med.dense medium to coarse SAND & fine Gravel (SW)	36.0		40	10	10 8/19		
Bottom of test boring 40'	40.0						



BORING METHOD
HSA - HOLLOW STEM AUGER
CFA - CONTINUOUS FLIGHT AUGER

GROUND WATER
▽ NOTED ON RODS 13.0 FT.
▼ AT COMPLETION

SHELBY TUBE SAMPLES OBTAINED IN BORING 1E-a DRILLED A FEW

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RECORD OF SOIL EXPLORATION

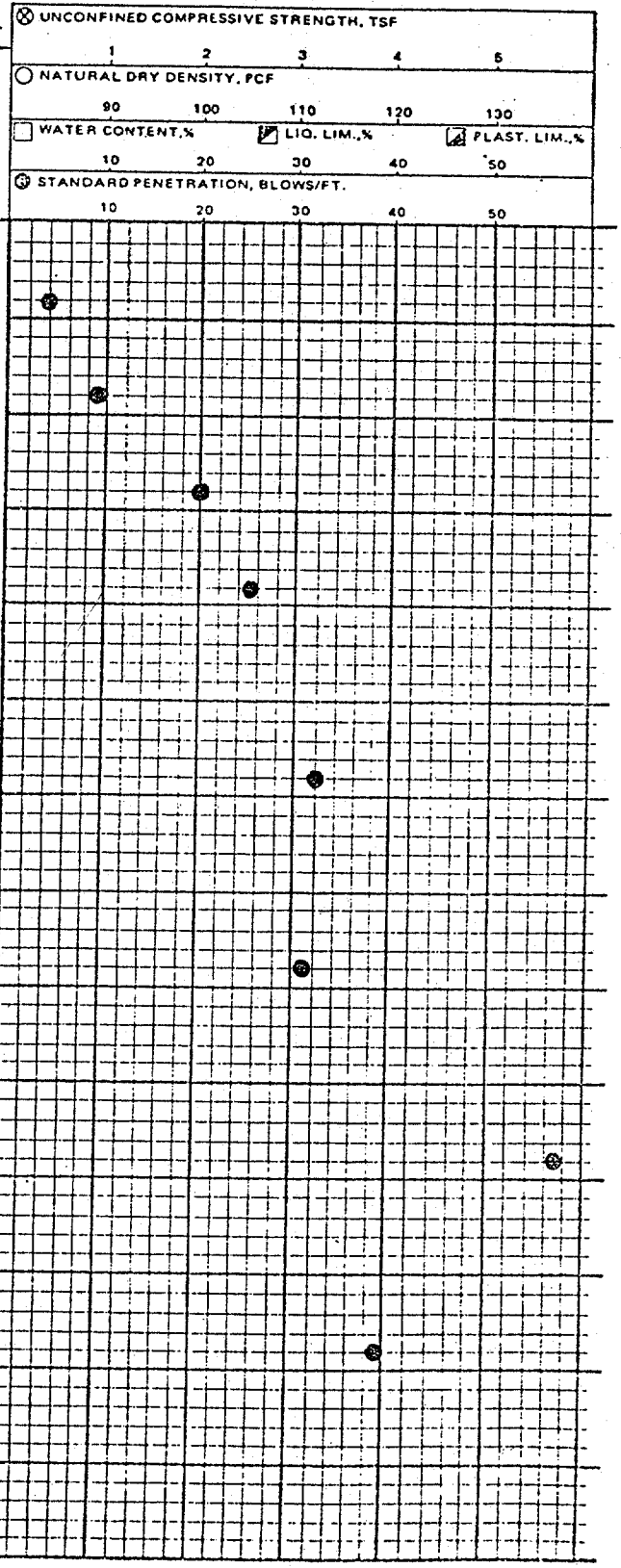
Reply To:

District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

CLIENT: Detroit Diesel Allison
BORING NO.: 2E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203 DATE: 9-11-74
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison INSPECTOR:
BORING METHOD: HSA RC DIA. in.
SHELBY TUBE O.D. in.

SURFACE ELEVATION: 721

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3-6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Brown moist soft SANDY CLAY (CL)	3.0			1	4 2/2	75	
Brown moist loose CLAYEY SAND (SC)	6.0		5	2	3 3/6	75	
Brown moist medium dense fine to coarse SAND (SW) w/tr. Gravel	8.5			3	6 8/12	100	
Brown and Gray moist medium dense medium SAND (SP)	12.5		10	4	7 10/15	100	
Gray moist hard SANDY CLAYEY SILT (ML)			15	5	14 15/17	100	
-sand and gravel seam 18.5-19 ft			20	6	10 14/17	100	
			25	7	10 17/40	100	
Brown and Gray wet dense CLAYEY SAND & GVL (SC)	28.0 / 30.0		30	8	8 17/22	40	
Bottom of test boring 30'							



BORING METHOD
HSA - HOLLOW STEM AUGER
CFA - CONTINUOUS FLIGHT AUGER
DC - DRIVEN CASING

GROUND WATER
NOTED ON RODS 18.5 FT.
AT COMPLETION 19.0 FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING _____ DRILLED A FEW

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RECORD OF SOIL EXPLORATION

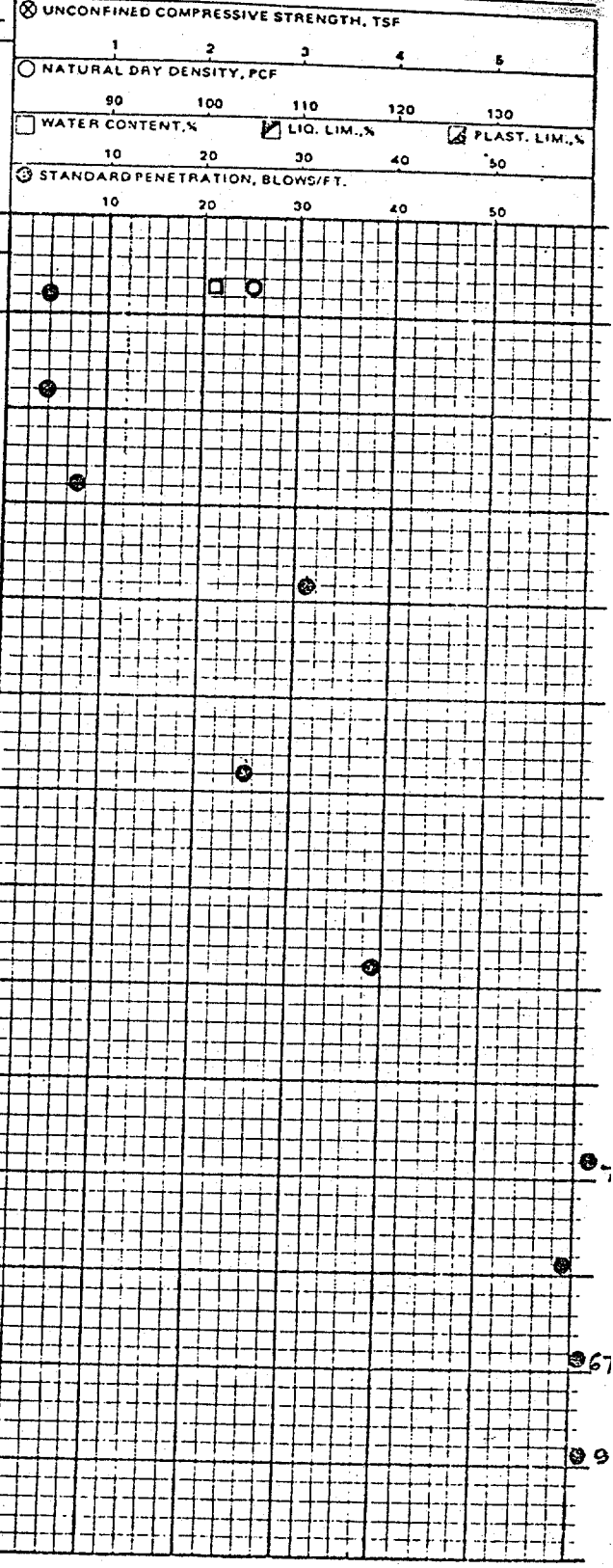
District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

Reply To:

CLIENT: Detroit Diesel Allison
BORING NO.: 3E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
DATE: 9-11-74
FOREMAN: L. Garrison
INSPECTOR:
BORING METHOD: HSA
RC DIA. in.
SHELBY TUBE O.D.: 3.0 in.

SOIL CLASSIFICATION
SURFACE ELEVATION — 721

Soil Classification	Stratum Depth, Ft.	Ground Water	Depth Scale, Ft.	Sample No.	SPT* Blows/6in. 3-6 in. Increments	Recovery, %	Shelby Tube No.
Topsoil	1.0						
Brown moist soft SANDY CLAYEY SILT (ML)	3.0			1	4 2/2	60	1
Dark Brown moist medium stiff SANDY CLAY (CL-SC) with trace Gravel	7.5		5	2	3 2/2	60	
				3	4 4/3	75	
Brown and Gray damp medium dense fine to coarse SAND with some Gravel (SW)	12.5		10	4	15 14/17	100	
Gray moist stiff CLAYEY SANDY SILT (ML) with trace Gravel		▽	15	5	5 10/15	100	
-with some gravel below 23'			20	6	11 18/21	100	
			25	7	20 39/39	100	
Brown and Gray very wet very dense fine to coarse SAND with little Gravel (SW)	27.0		30	8	18 28/30	100	
			35	9	17 29/38	100	
Bottom of test boring 40'	40.0		40	10	21 44/50	100	



BORING METHOD
HSA — HOLLOW STEM AUGER
CFA — CONTINUOUS FLIGHT AUGER
DC — DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS 18.5 FT.
▼ AT COMPLETION ____ FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING 3E-a DRILLED A FEW

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RECORD OF SOIL EXPLORATION

Reply To:

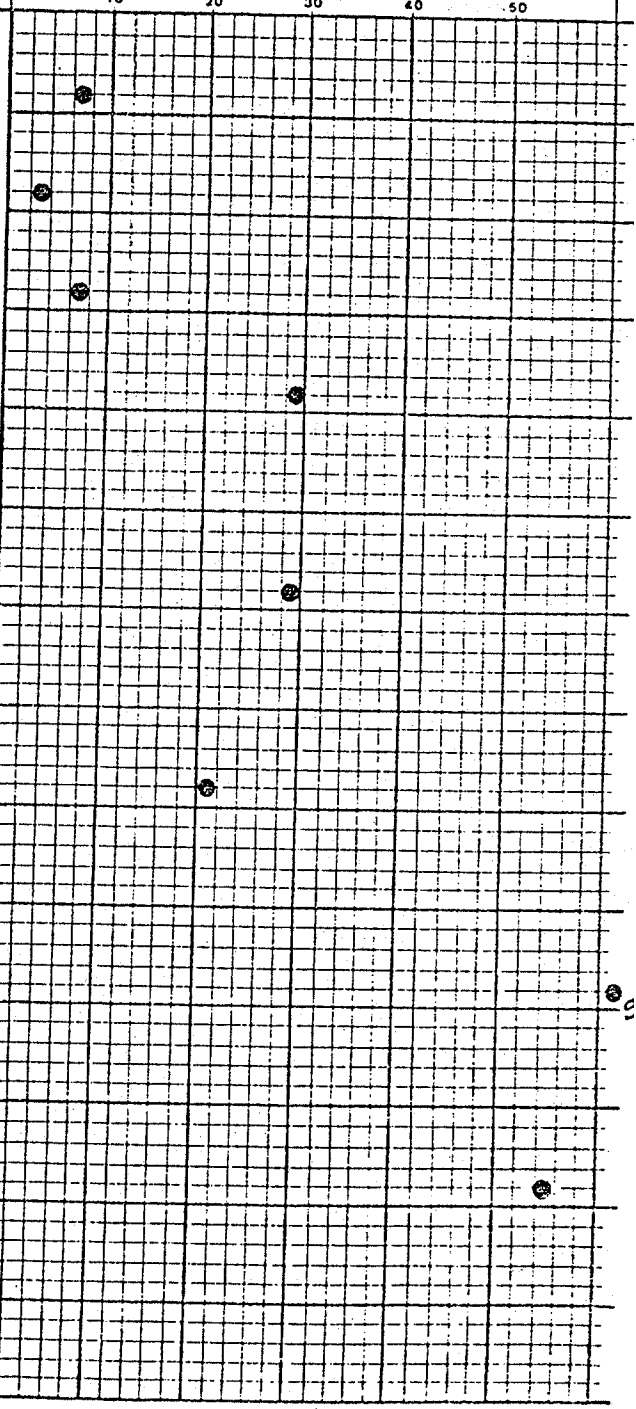
District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

CLIENT: Detroit Diesel Allison
BORING NO.: 4E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203 DATE: 9-11-74
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison INSPECTOR:
BORING METHOD: HSA RC DIA. in.
SHELBY TUBE O.D. in.

SURFACE ELEVATION — 720

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3-6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Dark Brown moist medium stiff SILTY CLAY (CL)	3.0			1	3 3/4	75	
Dark Brown moist loose CLAYEY SAND (SC)	8.0		5	2	3 2/1	60	
				3	3 4/3	75	
Brown damp medium dense fine to coarse SAND (SW)	12.5		10	4	11 15/14	100	
Gray moist very stiff to hard SANDY CLAYEY SILT (ML)		▽	15	5	12 12/17	100	
			20	6	7 9/12	100	
			25	7	33 40/50	100	
	30.0		30	8	16 20/35	100	
Bottom of test boring 30'							

⊗ UNCONFINED COMPRESSIVE STRENGTH, TSF (1, 2, 3, 4, 5)
○ NATURAL DRY DENSITY, PCF (90, 100, 110, 120, 130)
□ WATER CONTENT,% ▨ LIQ. LIM.,% ▨ PLAST. LIM.,%
⊙ STANDARD PENETRATION, BLOWS/FT. (10, 20, 30, 40, 50)



BORING METHOD
HSA — HOLLOW STEM AUGER
CFA — CONTINUOUS FLIGHT AUGER
DC — DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS 18.0 FT.
▼ AT COMPLETION FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING _____ DRILLED A FEW

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Subsurface Exploration
Engineering Geology
Materials Testing

Form 7

RECORD OF SOIL EXPLORATION

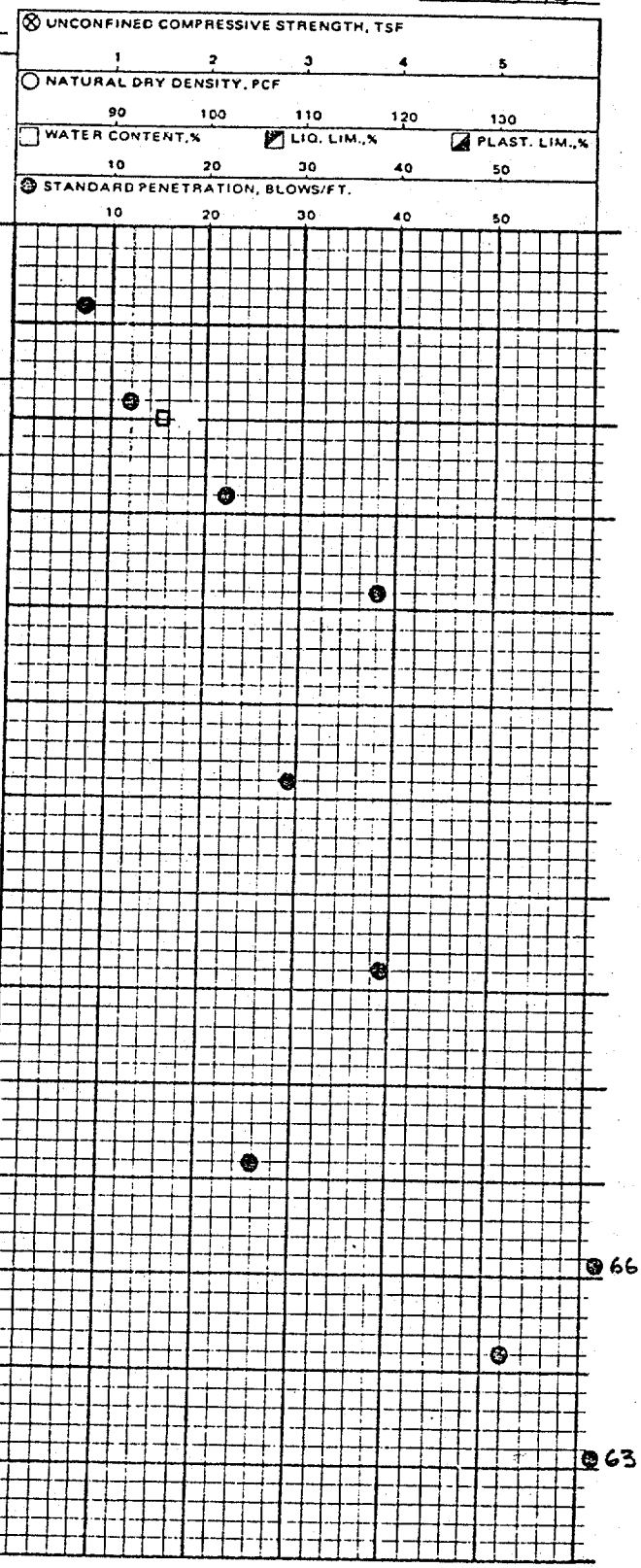
District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

Reply To:

CLIENT: Detroit Diesel Allison
BORING NO.: 5E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203 DATE: 9-13-74
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison INSPECTOR:
BORING METHOD: HSA RC DIA. in.
SHELBY TUBE O.D.: 3.0 in.

SURFACE ELEVATION — 716

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3–6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Dark Brown moist medium stiff SANDY CLAY (CL) with trace Gravel and trace Vegetation	5.5		5	1	2 2/5		
				2	3 3/9		1
Yellowish Brown damp medium dense fine to coarse SAND (SW) with trace Gravel	13.0	▽	10	3	12 12/10		
				4	6 17/21		
Gray moist very stiff SANDY SILT (ML) with trace Gravel -with trace clay below 17'	22.5		15	5	11 16/13		
			20	6	8 20/19		
Gray moist very stiff SANDY CLAYEY SILT (ML) with trace Gravel -hard below 28' with sand and gravel seams below 32 ft	40.0		25	7	6 10/16		
			30	8	11 30/36		
			35	9	8 20/32		
Bottom of test boring 40'			40	10	20 27/36		



BORING METHOD
HSA – HOLLOW STEM AUGER
CFA – CONTINUOUS FLIGHT AUGER
DC – DRIVEN CASING
MD – MUD DRILLING

GROUND WATER
▽ NOTED ON RODS 13.5 FT.
▼ AT COMPLETION ____ FT.
▼ AFTER ____ HRS. ____ FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING 5E-a DRILLED A FEW FEET FROM BORING 5E

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RECORD OF SOIL EXPLORATION

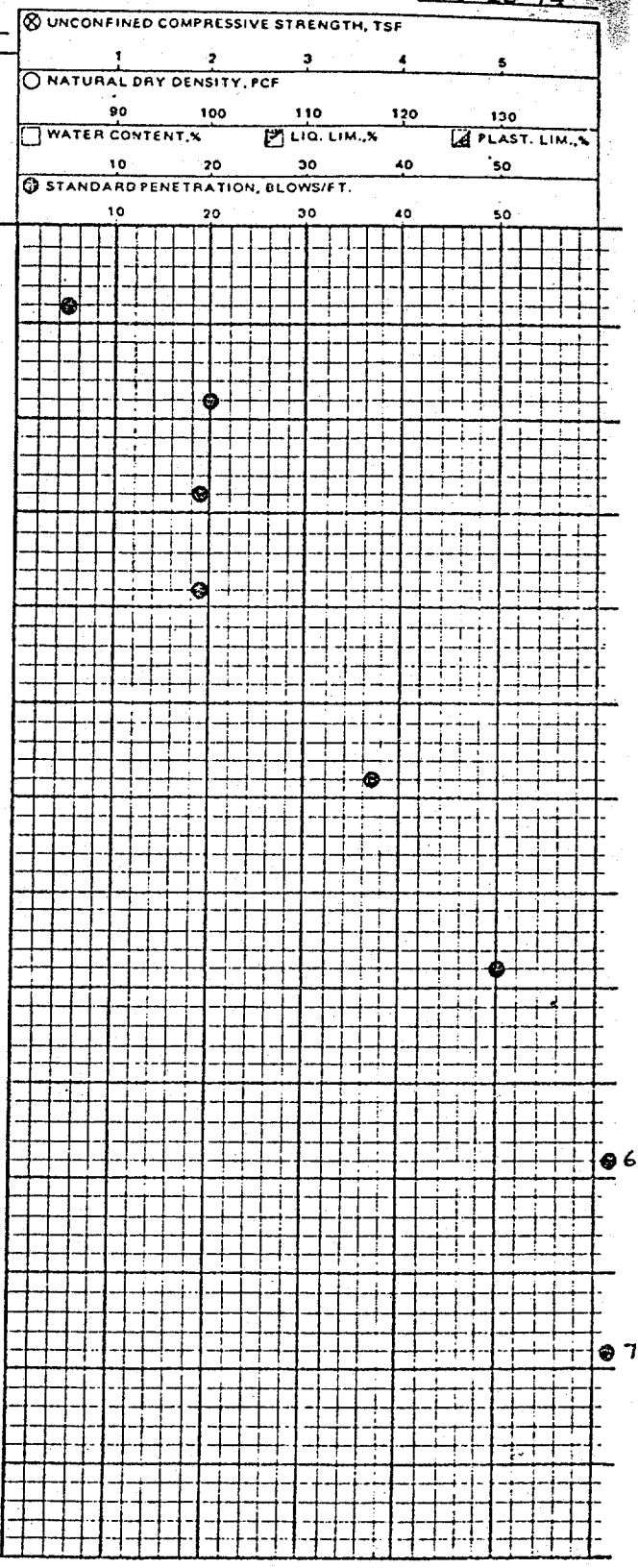
Reply To:

District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

CLIENT: Detroit Diesel Allison
BORING NO.: 6E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203
DATE: 9-12-74
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison
INSPECTOR:
BORING METHOD: HSA
RC DIA. ___ in.
SHELBY TUBE O.D. ___ in.

SURFACE ELEVATION — 712

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3-6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Dark Brown moist soft SANDY CLAY (CL) w/tr. Gvl	3.0			1	3 3/2	100	
Gray moist very stiff SANDY CLAYEY SILT (ML) w/ little Gravel	6.0		5	2	6 9/11	100	
Brown moist medium dense medium to coarse SAND (SW) with trace Gravel		▽		3	6 8/11	75	
-wet below 8.5'		▽	10	4	6 8/11	75	
	17.5		15	5	8 16/21	100	
Gray moist very hard SANDY CLAYEY SILT (ML) with trace Gravel			20	6	8 19/31	0	
	27.5		25	7	16 25/38	100	
Brown and Gray wet very dense coarse SAND & fine to med. Gvl (SW-GW)	30.0		30	8	16 35/44	100	
Bottom of test boring 30'							



BORING METHOD
HSA — HOLLOW STEM AUGER
CFA — CONTINUOUS FLIGHT AUGER
DC — DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS 8.5 FT.
▼ AT COMPLETION 8.0 FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING ___ DRILLED A FEW FEET FROM BORING ___

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Form 7

RECORD OF SOIL EXPLORATION

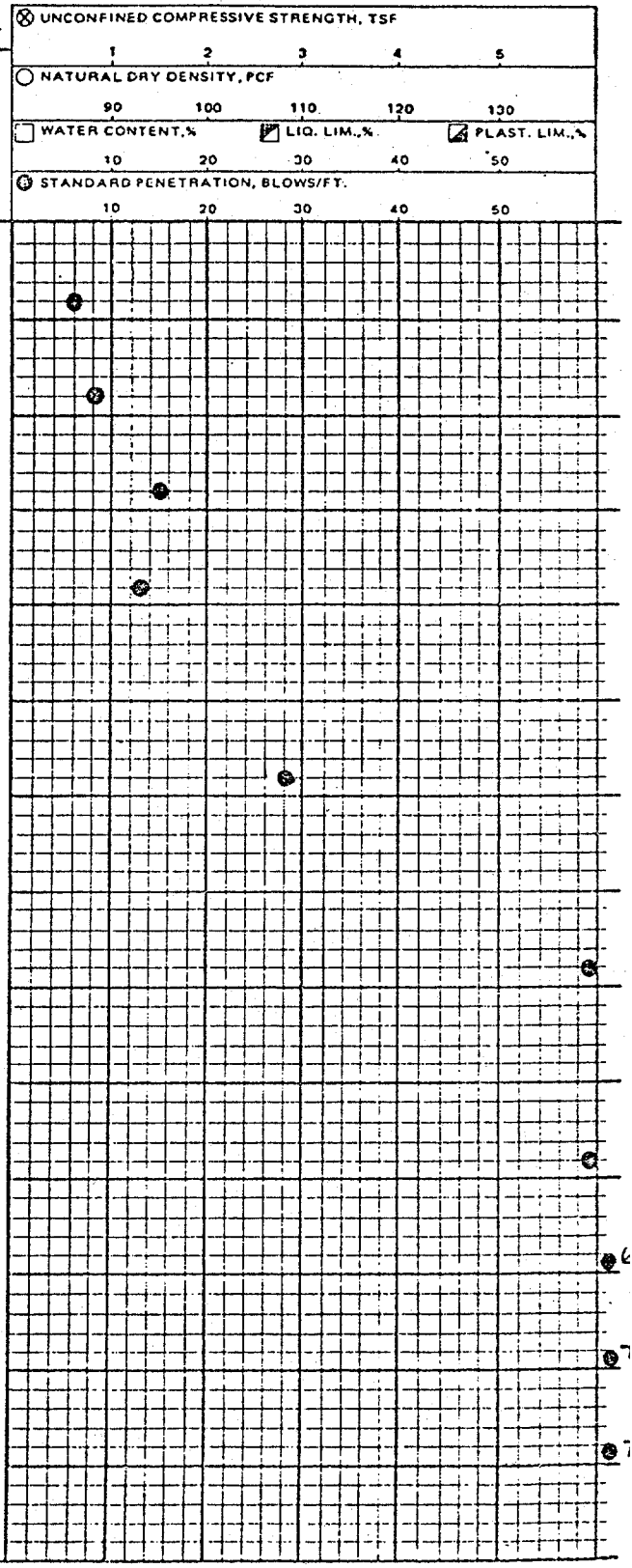
Reply To:

District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

CLIENT: Detroit Diesel Allison
BORING NO.: 7E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203
DATE: 9-13-74
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison
INSPECTOR:
BORING METHOD: HSA
RC DIA. ___ in.
SHELBY TUBE O.D. ___ in.

SURFACE ELEVATION — 712

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3→6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Brown moist medium stiff SANDY CLAY (CL)	3.0			1	2 2/4	50	
Brown moist fine to coarse SAND (SW) with little fine to medium Gravel			5	2	3 3/5	75	
-loose 3 to 5 ft				3	6 6/9	100	
-medium dense 5 to 15 ft		▽					
-dense 15 to 22.5'		▽	10	4	9 6/7	100	
			15	5	9 12/16	100	
			20	6	15 27/32	100	
	22.5						
Gray moist hard SANDY CLAYEY SILT (ML) with Sand and Gravel seams			25	7	17 27/32	75	
			30	8	20 27/41	60	
			35	9	20 37/41	60	
	40.0		40	10	20 31/42		
Bottom of test boring 40'							



BORING METHOD
HSA – HOLLOW STEM AUGER
CFA – CONTINUOUS FLIGHT AUGER
DC – DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS 8.5 FT.
▼ AT COMPLETION 8.5 FT.
AFTER 24 HRS. 8.5 FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING ___ DRILLED A FEW FEET FROM BORING ___

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Form 7

RECORD OF SOIL EXPLORATION

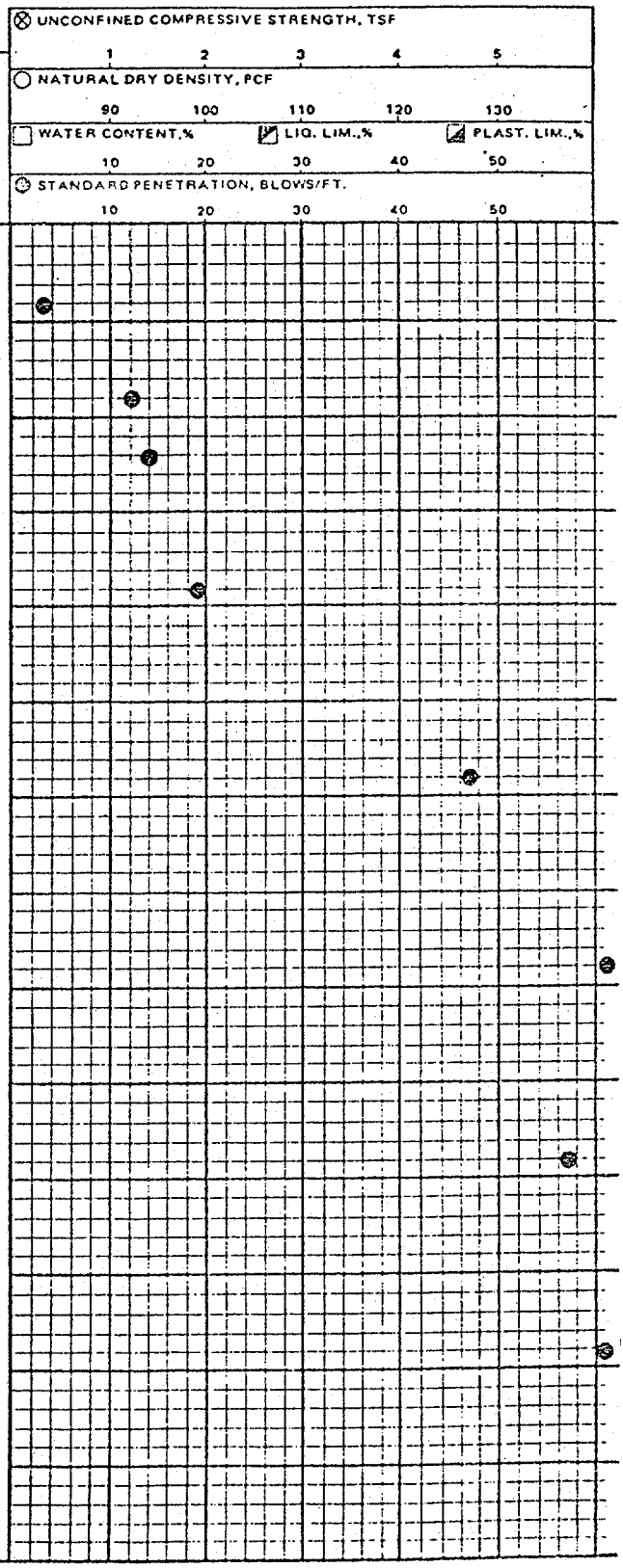
District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

To:

CLIENT: Detroit Diesel Allison
BORING NO.: 8E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203 DATE: 9-17-74
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison INSPECTOR:
BORING METHOD: HSA RC DIA. in.
SHELBY TUBE O.D. in.

SURFACE ELEVATION — 720

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3–6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Dark Brown moist SANDY CLAYEY SILT (ML) with trace Vegetation and trace Gravel	3.5			1	2 1/2	60	
Dark Brown moist medium dense CLAYEY SAND (SC)	5.5		5	2	3 5/7	100	
Dark Brown moist stiff SANDY CLAY (CL) with trace Gravel	7.5			3	6 6/8	100	
Brown moist medium to coarse SAND (SW) with trace Gravel	13.0		10	4	19 10/9	100	
Gray moist hard SANDY CLAYEY SILT (ML) with trace Gravel			15	5	23 27/20	75	
-with sand and gravel layers 17 to 22 ft.		▼	20	6	29 31/39	100	
		▼▽	25	7	19 29/28	100	
	30.0		30	8	19 28/36	60	
Bottom of test boring 30'							



BORING METHOD
HSA – HOLLOW STEM AUGER
CFA – CONTINUOUS FLIGHT AUGER
DC – DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS 23.5 FT.
▼ AT COMPLETION 23.0 FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING _____ DRILLED A FEW FEET FROM BORING _____

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RECORD OF SOIL EXPLORATION

Reply To:

District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

CLIENT: Detroit Diesel Allison
BORING NO.: 9E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
DATE: 10-2-74
FOREMAN: L. Bacon
INSPECTOR:
BORING METHOD: HSA
RC DIA. in.
SHELBY TUBE O.D. in.

SURFACE ELEVATION — 720

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3-6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Dark Brown moist medium stiff SANDY CLAY (CL) with trace Gravel -very stiff 5 to 8 ft	8.0		5	1	6 6/6	20	
				2	6 7/8	80	
				3	13 16/12	20	
Brown moist dense fine to medium SAND (SP) with some Gravel	11.0		10	4	14 24/50/3"	10	
Gray moist hard SANDY CLAYEY SILT (ML) with trace Gravel			15	5	19 33/36	20	
			20	6	33 50/6"	20	
			25	7	19 23/38	100	
			30	8	24 44/50 5"	80	
			35	9	15 27/39	100	
	41.0		40	10	23 19/47	90	
Gray moist dense fine to coarse SAND (SW) with little Gravel and trace Silt			45	11	8 33/50/4"	70	
			50	12	10 19/27	30	
	55.0		55	13	50/5"	0	
Bottom of test boring 55'							

⊗ UNCONFINED COMPRESSIVE STRENGTH, TSF (1, 2, 3, 4, 5)
○ NATURAL DRY DENSITY, PCF (90, 100, 110, 120, 130)
□ WATER CONTENT, % ☑ LIQ. LIM., % ☑ PLAST. LIM., %
⊙ STANDARD PENETRATION, BLOWS/FT. (10, 20, 30, 40, 50)

BORING METHOD
A – HOLLOW STEM AUGER
A – CONTINUOUS FLIGHT AUGER
– DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS _____ FT.
▼ AT COMPLETION _____ FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING _____ DRILLED A FEW

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RECORD OF SOIL EXPLORATION

Reply To:

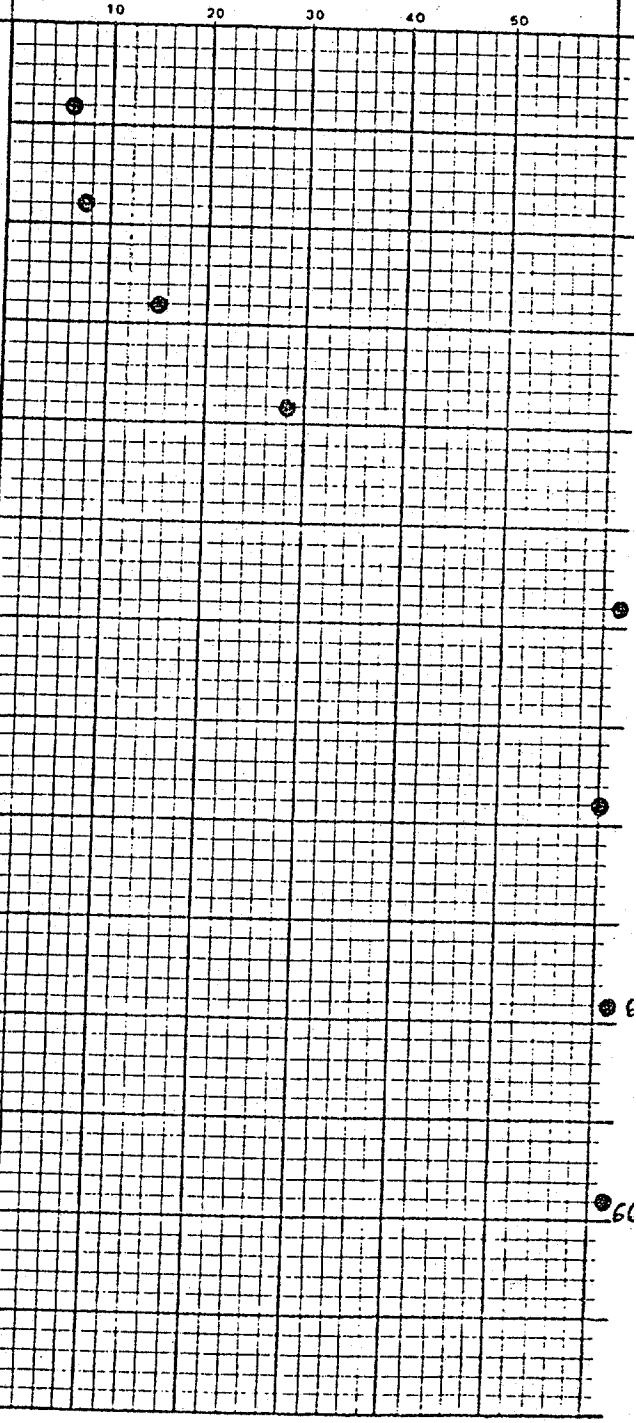
District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

CLIENT: Detroit Diesel Allison
BORING NO.: 10E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203 DATE: 9-16-74
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison INSPECTOR:
BORING METHOD: HSA RC DIA. in.
SHELBY TUBE O.D. in.

SURFACE ELEVATION — 720

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3-6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Brown moist medium stiff SANDY CLAY (CL) (CL-SC) 3 to 4.5'	4.5			1	2 3/3	100	
Brown moist medium dense medium to coarse SAND (SW) with trace Gravel	7.5		5	2	3 3/4	75	
Brown moist very stiff SANDY CLAYEY SILT (ML) with trace Gravel		▽		3	5 6/9	100	
-sand and gravel layers from 13 to 16 ft -hard below 13 ft		▼	10	4	9 11/17	90	
			15	5	26 37/44	100	
			20	6	17 22/38	100	
Brown wet very dense medium to coarse SAND (SW) with little fine to medium Gravel	22.5		25	7	38 30/35	75	
	30.0		30	8	12 30/36	100	
Bottom of test boring 30'							

⊗ UNCONFINED COMPRESSIVE STRENGTH, TSF (1, 2, 3, 4, 5)
○ NATURAL DRY DENSITY, PCF (90, 100, 110, 120, 130)
□ WATER CONTENT, % ▨ LIQ. LIM., % ◪ PLAST. LIM., %
⊖ STANDARD PENETRATION, BLOWS/FT. (10, 20, 30, 40, 50)



BORING METHOD
HSA – HOLLOW STEM AUGER
CFA – CONTINUOUS FLIGHT AUGER
DC – DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS 8.5 FT.
▼ AT COMPLETION 12.0 FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING _____ DRILLED A FEW

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Engineering Geology
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Form 7

RECORD OF SOIL EXPLORATION

Reply To:

District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

CLIENT: Detroit Diesel Allison
BORING NO.: 11E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203 DATE: 9-16-74
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison INSPECTOR:
BORING METHOD: HSA RC DIA. in.
SHELBY TUBE O.D. in.

SOIL CLASSIFICATION
SURFACE ELEVATION — 718

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3—6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Dark Brown moist soft to medium stiff SANDY CLAY (CL) with little fine Gravel	5.0		5	1	2 1/1	60	
				2	2 2/5	75	
Brown moist medium dense fine to coarse SAND (SW) with trace Gravel	8.0	▽		3	4 6/8	100	
Gray moist hard SANDY CLAYEY SILT (ML) with trace Gravel		▼	10	4	12 22/19	100	
			15	5	31 43/48	100	
			20	6	21 29/50	100	
	22.5						
Gray wet very dense medium to coarse SAND & fine to medium Gravel (SW)			25	7	23 29/34	100	
			30	8	39 50/4"	100	
Bottom of test boring 35'	35.0		35	9	33 29/35	35	

⊗ UNCONFINED COMPRESSIVE STRENGTH, TSF (1, 2, 3, 4, 5)
○ NATURAL DRY DENSITY, PCF (90, 100, 110, 120, 130)
☐ WATER CONTENT, % ☑ LIQ. LIM., % ☑ PLAST. LIM., % (10, 20, 30, 40, 50)
⊙ STANDARD PENETRATION, BLOWS/FT. (10, 20, 30, 40, 50)

BORING METHOD
HSA — HOLLOW STEM AUGER
CFA — CONTINUOUS FLIGHT AUGER
DC — DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS 8.5 FT.
▼ AT COMPLETION 12.5 FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING _____ DRILLED A FEW FEET FROM BORING

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Engineering Geology
Materials Testing

Form 7

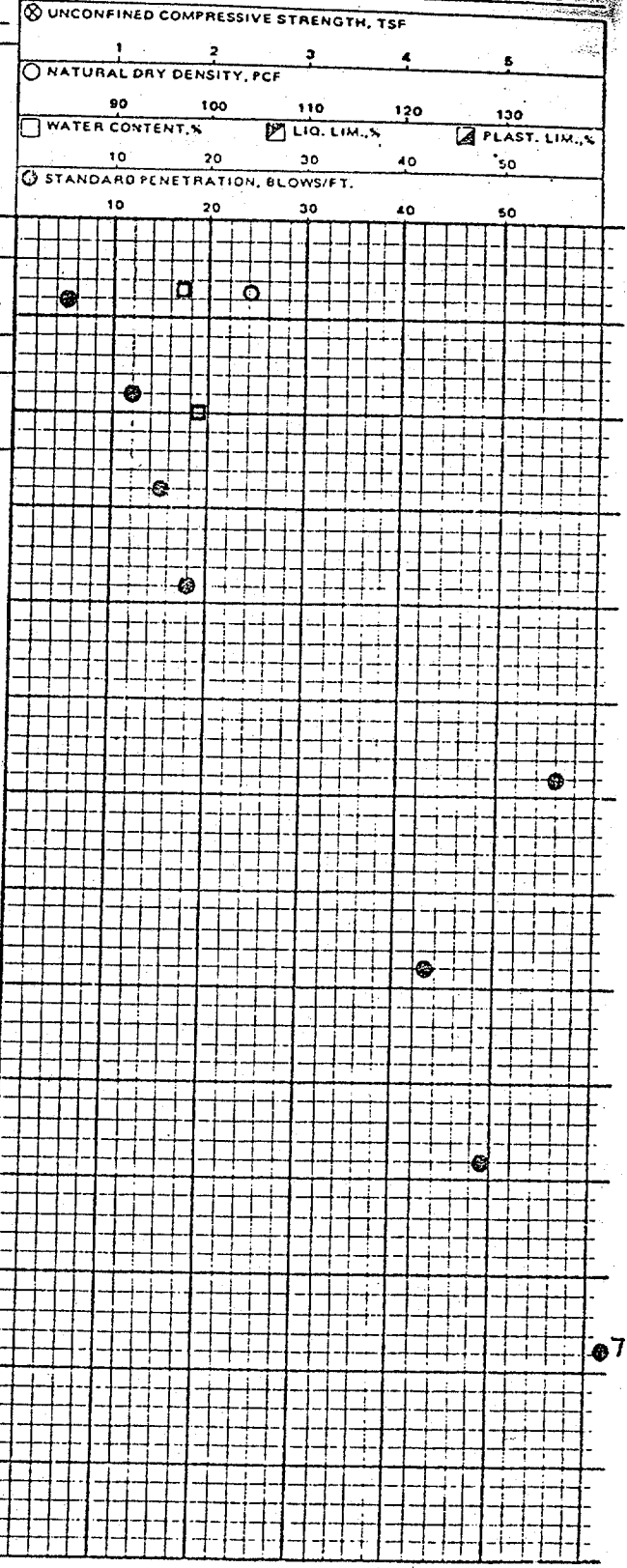
RECORD OF SOIL EXPLORATION

District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

Reply To:

CLIENT: Detroit Diesel Allison
BORING NO.: 12E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
DATE: 9-16-74
FOREMAN: L. Garrison
INSPECTOR:
BORING METHOD: HSA
RC DIA. ___ in.
SHELBY TUBE O.D.: 3.0 in.
SURFACE ELEVATION: 716

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3→4 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Brown and Gray moist soft SANDY CLAY (CL) with trace Gravel				1	2 2/3	100	1
-stiff below 4 ft			5	2	5 7/5	75	2
	7.5			3	6 6/9	100	
Brown wet medium dense fine to coarse SAND (SW) with little fine Gravel		▽		4	7 5/13	40	
	12.5	▽	10				
Gray moist hard SANDY CLAYEY SILT (ML) with trace Gvl				5	16 24/32	100	
-with sand and gravel layers below 18.5 ft			15	6	15 18/25	100	
			20	7	22 24/25	100	
			25	8	29 33/37	100	
	30.0		30				
Bottom of test boring 30'							



BORING METHOD
HSA – HOLLOW STEM AUGER
CFA – CONTINUOUS FLIGHT AUGER
DC – DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS 8.5 FT.
▼ AT COMPLETION 12.0 FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING 12E-a DRILLED A FEW

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Materials Testing

Form 7

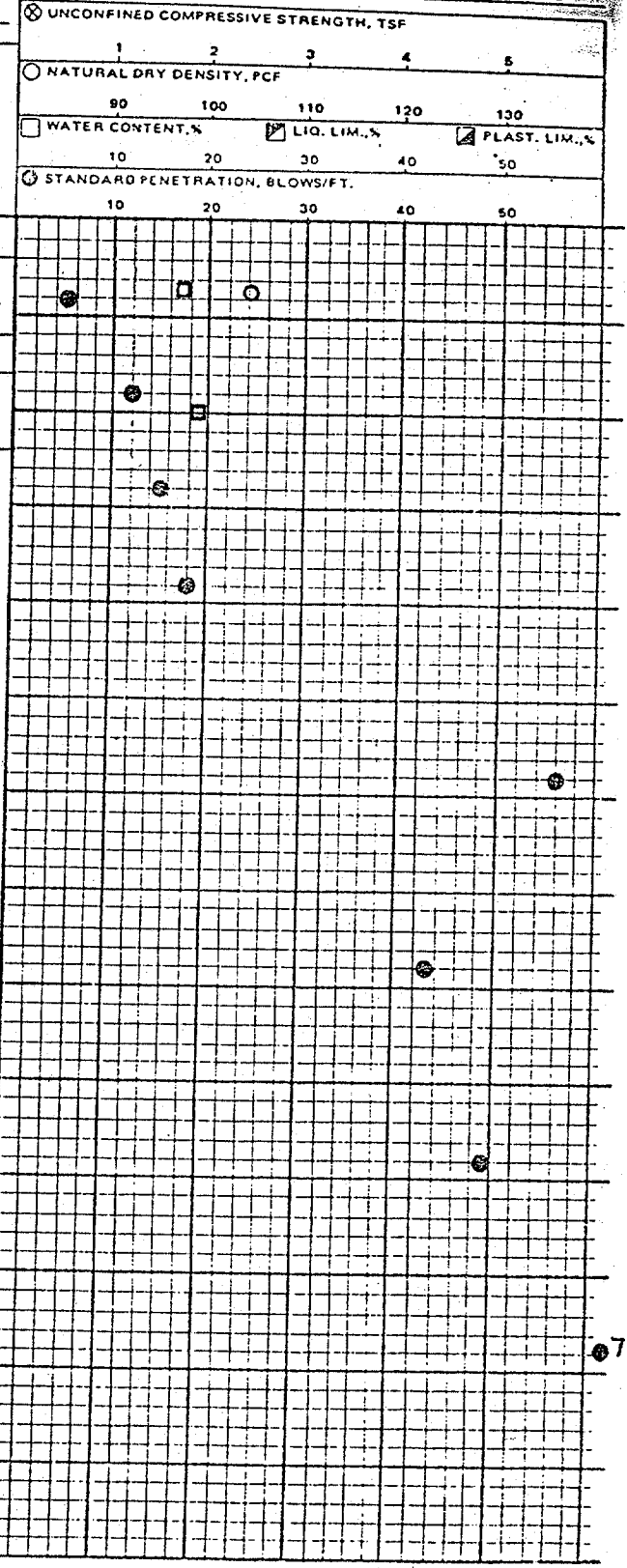
RECORD OF SOIL EXPLORATION

District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

Reply To:

CLIENT: Detroit Diesel Allison
BORING NO.: 12E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
DATE: 9-16-74
FOREMAN: L. Garrison
INSPECTOR:
BORING METHOD: HSA
RC DIA. ___ in.
SHELBY TUBE O.D.: 3.0 in.
SURFACE ELEVATION: 716

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3→4 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Brown and Gray moist soft SANDY CLAY (CL) with trace Gravel				1	2 2/3	100	1
-stiff below 4 ft			5	2	5 7/5	75	2
	7.5			3	6 6/9	100	
Brown wet medium dense fine to coarse SAND (SW) with little fine Gravel		▽		4	7 5/13	40	
	12.5	▽	10				
Gray moist hard SANDY CLAYEY SILT (ML) with trace Gvl				5	16 24/32	100	
-with sand and gravel layers below 18.5 ft			15	6	15 18/25	100	
			20	7	22 24/25	100	
			25	8	29 33/37	100	
	30.0		30				
Bottom of test boring 30'							



BORING METHOD
HSA – HOLLOW STEM AUGER
CFA – CONTINUOUS FLIGHT AUGER
DC – DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS 8.5 FT.
▼ AT COMPLETION 12.0 FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING 12E-a DRILLED A FEW

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Form 7

RECORD OF SOIL EXPLORATION

Reply To:

District Offices: Indianapolis/Cincinnati/Columbus
Baltimore-Washington/Cincinnati/Columbus

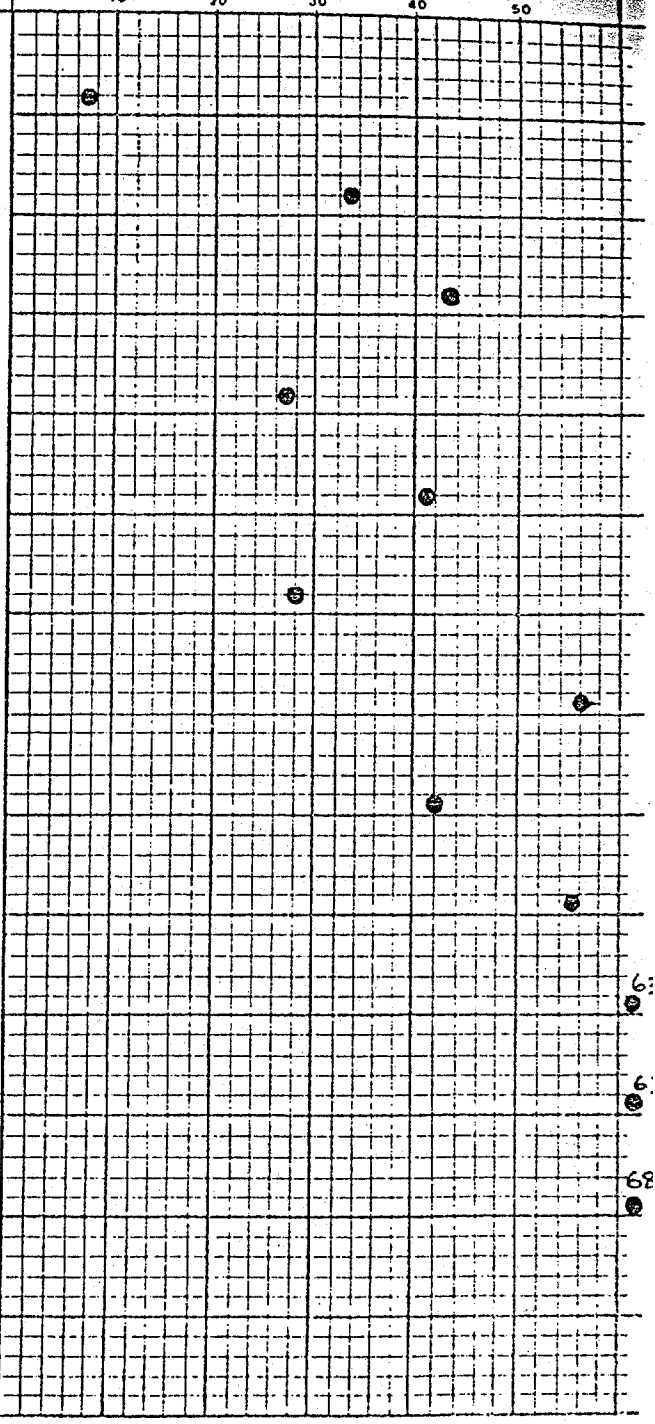
CLIENT: Detroit Diesel Allison
PROJECT NAME: Proposed Plant Building
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Bacon INSPECTOR:
BORING METHOD: HSA RC DIA. in.
SHELBY TUBE O.D. in.

BORING NO. 13E
JOB NO. E-74203 DATE

SOIL CLASSIFICATION
SURFACE ELEVATION — 712

Soil Classification	Stratum Depth, Ft.	Ground Water	Depth Scale, Ft.	Sample No.	Blows/6 in. 3-6 in. Increments	Recovery, %	Shelby Tube No.
Topsoil	1.0						
Dark Brown moist soft to medium stiff SANDY CLAY (CL) with trace Gravel and trace Roots -with some gravel below 3'	5.5	▽	5	1	2 3/4		
				2	11 * 16/17		
Brown moist dense fine to coarse SAND (SW) with trace to little Gravel	8.5			3	10 22/21		
Brown very moist medium dense medium SAND (SP) -with a trace gravel 12-19 ft	19.0		10	4	9 9/18		
			15	5	7 18/23		
Gray moist very stiff SANDY CLAYEY SILT (ML) w/tr.Gvl	23.0		20	6	10 13/15		
Gray moist dense medium to coarse SAND (SW) w/little Gravel	32.0		25	7	29 19/37		
			30	8	17 19/23		
Gray moist hard SANDY CLAYEY SILT (ML) with little Gravel	53.0		35	9	16 18/37		
			40	10	16 19/34		
			45	11	13 26/37		
			50	12	22 32/46		
Bottom of test boring 53' Auger refusal at 53' * high blow count due to gravel			55				

⊗ UNCONFINED COMPRESSIVE STRENGTH, TSF: 1 2 3 4 5
○ NATURAL DRY DENSITY, PCF: 90 100 110 120 130
□ WATER CONTENT, % ▨ LIQ. LIM., % ▨ PLAST. LIM.: 10 20 30 40 50
⊙ STANDARD PENETRATION, BLOWS/FT.: 10 20 30 40 50



BORING METHOD
HSA - HOLLOW STEM AUGER
CFA - CONTINUOUS FLIGHT AUGER
DC - DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS 6.0 FT.
▽ AT COMPLETION FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING DRILLED A FEW FEET FROM BORING

Atec Associates.
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Soil and Foundation Engineering
Subsurface Exploration
Engineering Geology
Materials Testing

Form 7

RECORD OF SOIL EXPLORATION

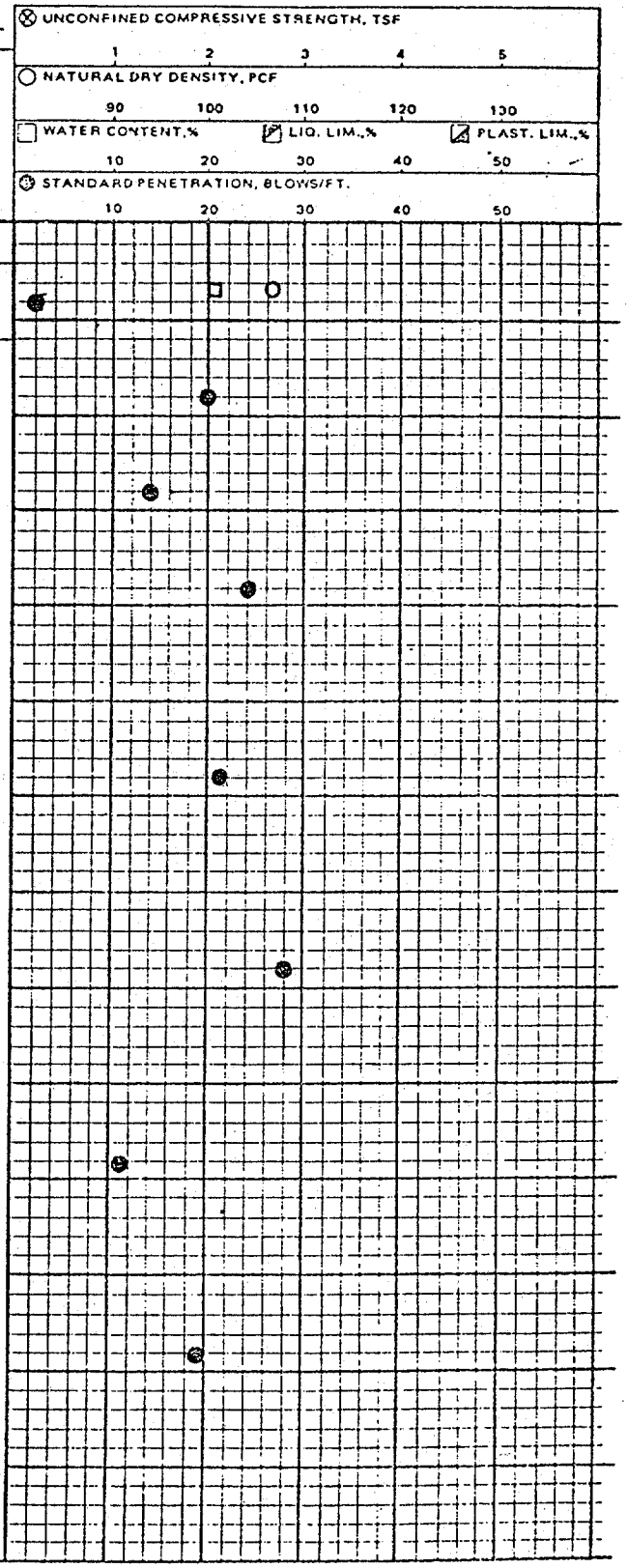
To:

District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

CLIENT: Detroit Diesel Allison
BORING NO.: 14E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203
DATE: 9-16-74
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison
INSPECTOR:
BORING METHOD: HSA
RC DIA. ___ in.
SHELBY TUBE O.D.: 3.0 in.

SURFACE ELEVATION — 711

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3–6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Brown moist very soft SANDY CLAYEY SILT (ML)	3.0			1	2 1/1		1
Brown moist stiff SANDY SILTY CLAY (CL)	5.0		5	2	7 13/7		
Brown moist medium dense medium to coarse SAND (SW) with little fine Gravel				3	9 8/6		
-wet below 8.5'		▽		4	11 11/13		
		▼	10				
		▼		5	8 8/13		
			15				
				6	10 14/14		
			20				
				7	4 5/6		
			25				
	27.0						
Gray moist very stiff SANDY CLAYEY SILT (ML) with Sand and Gravel layers	30.0			8	6 8/11		
			30				
Bottom of test boring 30'							



BORING METHOD
HSA – HOLLOW STEM AUGER
CFA – CONTINUOUS FLIGHT AUGER
DC – DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS 8.5 FT.
▼ AT COMPLETION 12.0 FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING 14E-a DRILLED A FEW FEET FROM BORING 14E

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Form 7

RECORD OF SOIL EXPLORATION

District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

Reply To:

CLIENT: Detroit Diesel Allison
PROJECT NAME: Proposed Plant Building
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison INSPECTOR:
BORING METHOD: HSA RC DIA. in.
SHELBY TUBE O.D. in.

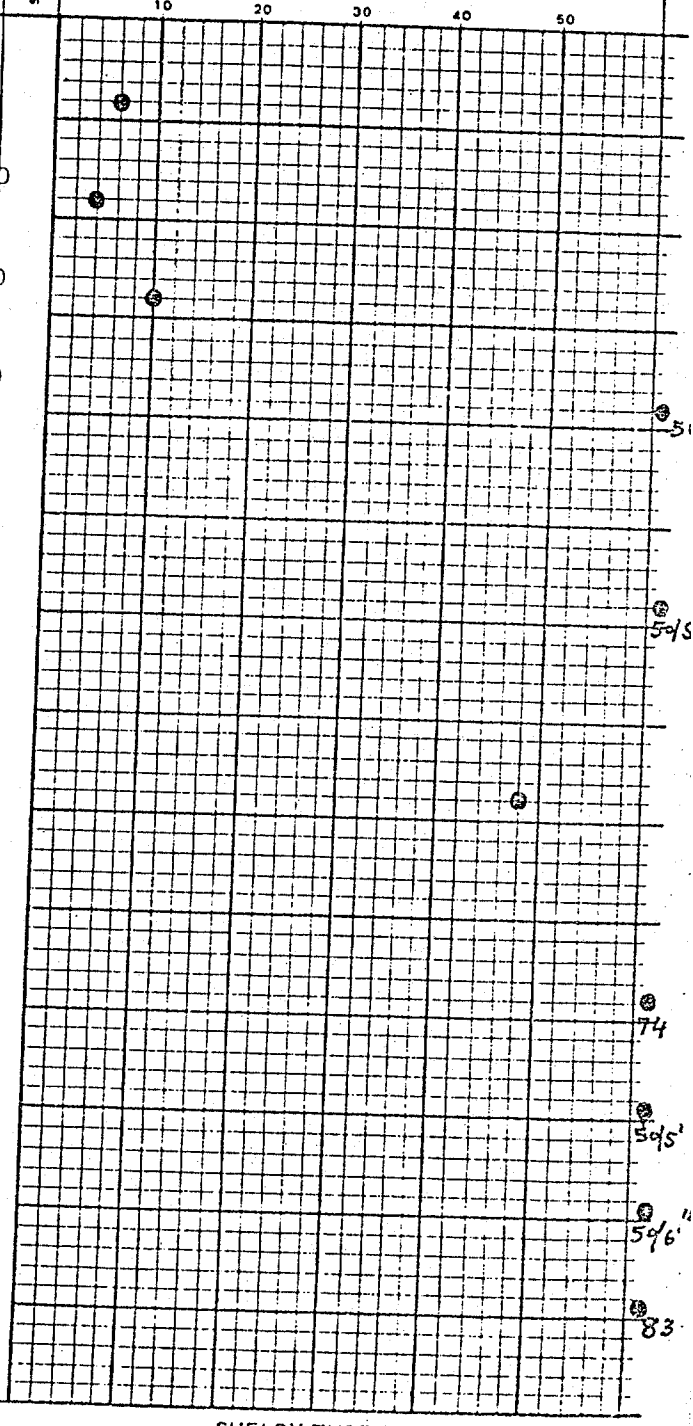
BORING NO. 15E
JOB NO. E-74203 DATE 9-17-74

SURFACE ELEVATION — 717

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3—6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0				
Brown moist medium stiff SANDY CLAY (CL) with trace Gravel	3.0	1	2 3/3	75	
Brown moist loose fine to medium SAND with trace Silt (SP-SW)	9.0	2	3 2/2	100	
		3	1 3/7	100	
Gray moist hard SANDY CLAYEY SILT (ML) with trace Gravel	17.3	4	27 50/for 5"	100	
		5	43 50/5"	100	
Gray wet dense fine to coarse SAND (SW) with trace to little Gravel	22.5	6	21 23/25	100	
Gray moist hard SANDY CLAYEY SILT (ML) with trace Gravel	40.0	7	17 24/50	90	
		8	31 50/for 5"	100	
		9	28 50/6"	100	
		10	37 39/44	100	
bottom of test boring 40'					

Depth scale: 5, 10, 15, 20, 25, 30, 35, 40

⊗ UNCONFINED COMPRESSIVE STRENGTH, TSF: 1, 2, 3, 4, 5
○ NATURAL DRY DENSITY, PCF: 90, 100, 110, 120, 130
☐ WATER CONTENT,% ☑ LIQ. LIM.,% ☑ PLAST. LIM.,%: 10, 20, 30, 40, 50
⊕ STANDARD PENETRATION, BLOWS/FT.: 10, 20, 30, 40, 50



BORING METHOD
A — HOLLOW STEM AUGER
A — CONTINUOUS FLIGHT AUGER
— DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS 18.5 FT.
▼ AT COMPLETION ____ FT

SHELBY TUBE SAMPLES OBTAINED IN BORING ____ DRILLED A FEW

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RECORD OF SOIL EXPLORATION

eply To:

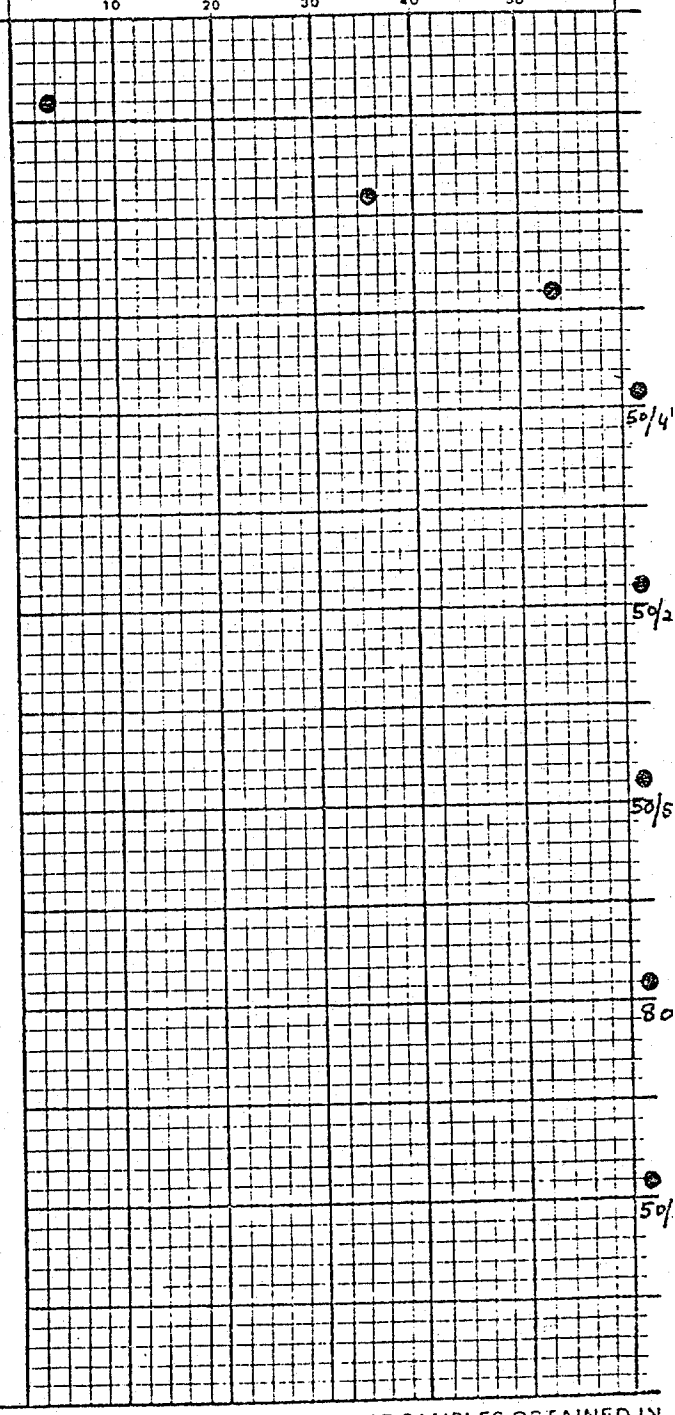
District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

CLIENT: Detroit Diesel Allison
BORING NO.: 16E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203
DATE: 9-17-74
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison
INSPECTOR:
BORING METHOD: HSA
RC DIA. ___ in.
SHELBY TUBE O.D. ___ in.

SURFACE ELEVATION — 716

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3-6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Dark Brown moist soft SANDY CLAY (CL)	3.0			1	1 1/2	90	
Brown moist dense fine to coarse SAND (SW) with little Gravel	7.0		5	2	16 21/14	30	
				3	16 18/35		
Gray moist hard SANDY CLAYEY SILT (ML) with trace Gravel			10	4	41 50/4"		
			15	5	50/ for 2"		
			20	6	41 50/5"		
			25	7	21 35/45		
	30.0		30	8	35 50/for 5"		
Bottom of test boring 30'							

⊗ UNCONFINED COMPRESSIVE STRENGTH, TSF (1, 2, 3, 4, 5)
○ NATURAL DRY DENSITY, PCF (90, 100, 110, 120, 130)
□ WATER CONTENT,% ▨ LIQ. LIM.,% ◪ PLAST. LIM.,% (10, 20, 30, 40, 50)
⊙ STANDARD PENETRATION, BLOWS/FT. (10, 20, 30, 40, 50)



BORING METHOD
HSA — HOLLOW STEM AUGER
CFA — CONTINUOUS FLIGHT AUGER
DC — DRIVEN CASING

GROUND WATER
NOTED ON RODS ___ FT.
AT COMPLETION dry FT.
AFTER ___ HRS. ___ FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING ___ DRILLED A FEW FEET FROM BORING

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RECORD OF SOIL EXPLORATION

District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville

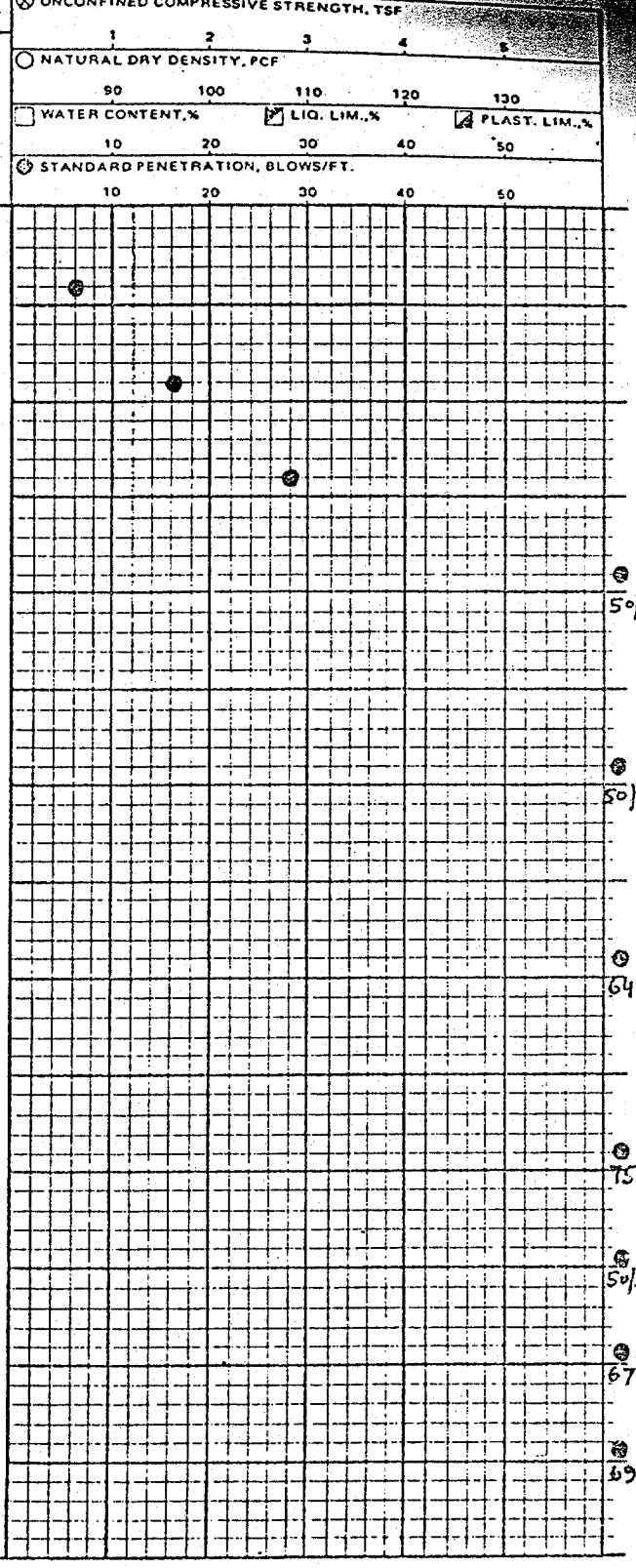
Report to:

CLIENT: Detroit Diesel Allison
PROJECT NAME: Proposed Plant Building
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison INSPECTOR:
BORING METHOD: HSA RC DIA. in.
SHELBY TUBE O.D. in.

BORING NO. 17E
JOB NO. E-74203 DATE 9-17-74

SURFACE ELEVATION — 717

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6 in. 3-6 in. INCREMENTS	SPT* RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Dark Brown moist medium stiff SANDY CLAY (CL) with trace Gravel	3.0			1	2 3/3	90	
Brown moist medium dense fine to coarse SAND (SW) with trace Silt	7.0		5	2	5 6/10	100	
				3	10 13/15	100	
Brown moist hard SANDY CLAYEY SILT (ML-CL) with trace Gravel	17.5		10	4	27 47/50/2"	100	
			15	5	41 50/4"	100	
Gray wet very dense medium to coarse SAND (SW) with little fine to medium Gravel	22.5	▽	20	6	21 33/31	100	
Gray moist hard SANDY CLAYEY SILT (ML) with trace Gravel			25	7	27 34/41	100	
			30	8	31 50/5"	100	
			35	9	20 31/36	100	
	40.0		40	10	22 31/38	100	
Bottom of test boring 40'							



BORING METHOD
HSA — HOLLOW STEM AUGER
CFA — CONTINUOUS FLIGHT AUGER
DC — DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS 18.0 FT.
▽ AT COMPLETION ____ FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING ____ DRILLED A FEW FEET FROM BORING ____

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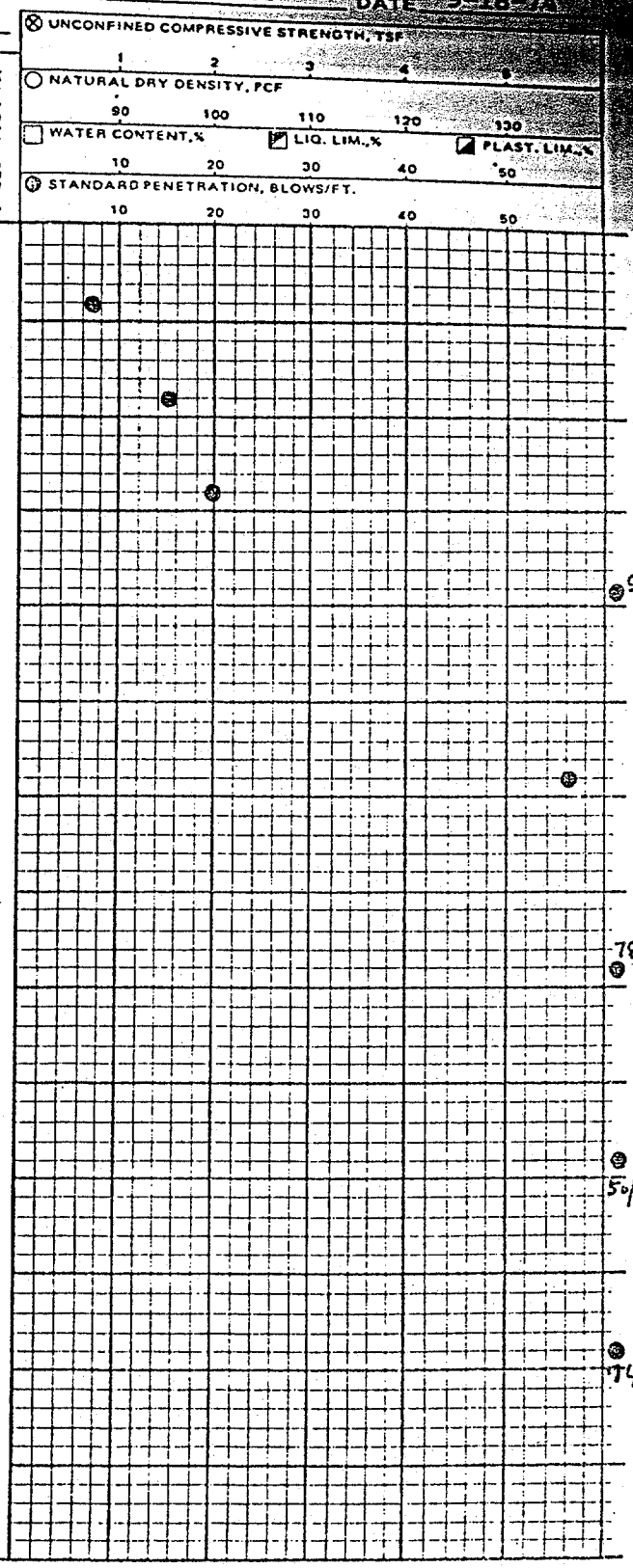
RECORD OF SOIL EXPLORATION

District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

CLIENT: Detroit Diesel Allison
PROJECT NAME: Proposed Plant Building
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison INSPECTOR:
BORING METHOD: HSA RC DIA. in.
SHELBY TUBE O.D. in.
BORING NO. 18E
JOB NO. E-74203 DATE 9-18-74

SURFACE ELEVATION — 716

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3-6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Dark Brown moist medium stiff SANDY CLAY (CL-ML)	3.5			1	2 3/4	100	
Brown moist medium SAND (SP) with trace Gravel	8.5		5	2	2 6/9	90	
				3	8 9/11	100	
Gray moist hard SANDY CLAYEY SILT (ML) with trace Gravel	22.5	▽	10	4	23 44/46	100	
			15	5	17 25/31	100	
			20	6	17 28/50	90	
Gray wet medium to coarse SAND (SW) with trace Gravel	27.5	▼	25	7	13 50/4"	100	
Gray hard SANDY CLAYEY SILT (ML) with trace Gravel	30.0		30	8	18 26/48	100	
Bottom of test boring 30'							



BORING METHOD
SA — HOLLOW STEM AUGER
FA — CONTINUOUS FLIGHT AUGER

GROUND WATER
▽ NOTED ON RODS 23.5FT.
▼ AT COMPLETION 19.0FT

SHELBY TUBE SAMPLES OBTAINED IN BORING _____ DRILLED A FEW

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Form 7

RECORD OF SOIL EXPLORATION

District Offices: Indianapolis, Baltimore-Washington/Cincinnati

Reply To:

CLIENT: Detroit Diesel Allison
PROJECT NAME: Proposed Plant Building
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison INSPECTOR:
BORING METHOD: HSA RC DIA. in.
SHELBY TUBE O.D.: 3.0 in.

BORING NO.: 19E
JOB NO.: E-74203

SOIL CLASSIFICATION
SURFACE ELEVATION – 716

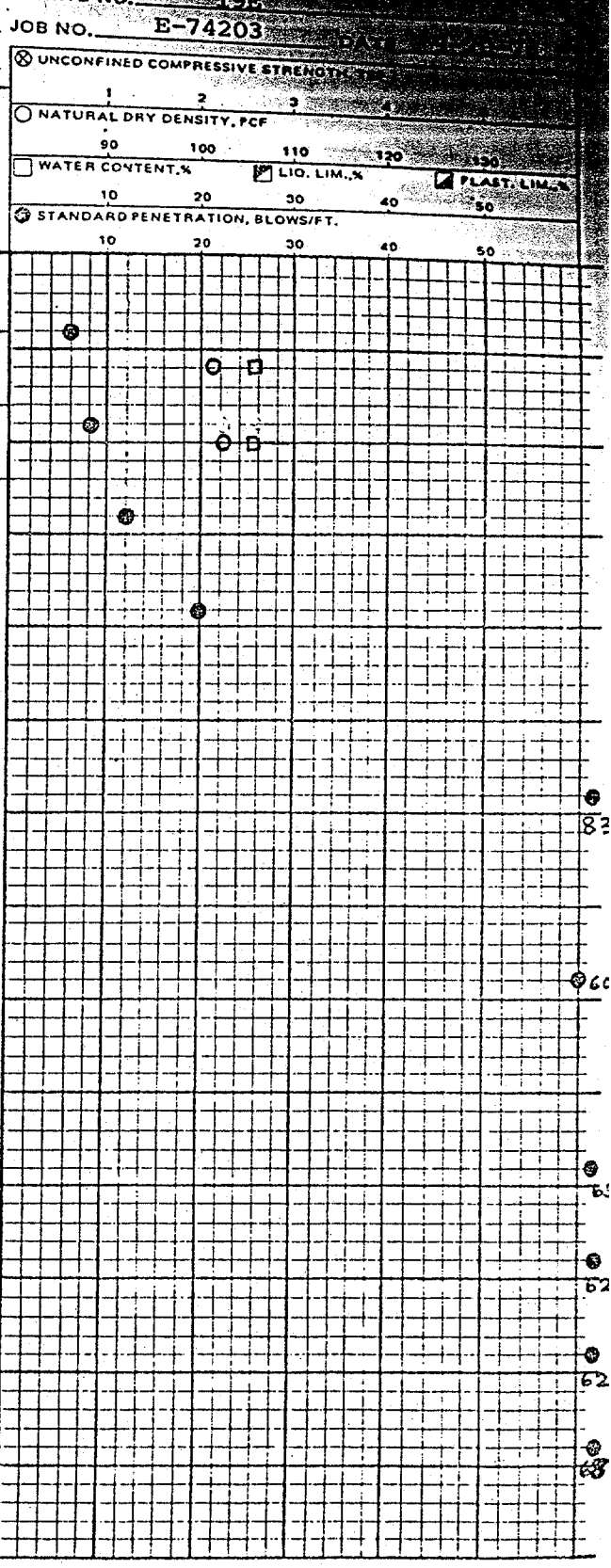
Description	Stratum Depth, Ft.
Topsoil	1.0
Brown moist medium stiff SANDY CLAY (CL) with trace Gravel	6.5
Brown moist medium dense SAND & GRAVEL (SW)	8.5
Gray moist very stiff SANDY CLAYEY SILT (ML) with trace Gravel	
-hard below 13 ft	17.5
Brown wet very dense coarse SAND & fine to medium GRAVEL (GW)	26.0
Gray wet hard SANDY CLAYEY SILT (ML) with little Gravel	40.0
Bottom of test boring 40'	

Ground Water: ▽ (13.5 ft); ▼ (10.0 ft)

Depth Scale, Ft.: 5, 10, 15, 20, 25, 30, 35, 40

SPT*

Sample No.	Blows/6in. 3–4 in. Increments	Recovery, %	Shelby Tube No.
1	2 3/3		1
2	6 5/3		2
3	5 6/6		
4	4 8/12		
5	20 33/50		
6	31 32/28		
7	15 30/35		
8	15 30/32		
9	18 27/35		
10	23 33/35		



BORING METHOD
HSA – HOLLOW STEM AUGER
CFA – CONTINUOUS FLIGHT AUGER
DC – DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS 13.5 FT.
▼ AT COMPLETION 10.0 FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING 19E-a DRILLED A FEW FEET FROM BORING 19E

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Form 7

RECORD OF SOIL EXPLORATION

District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

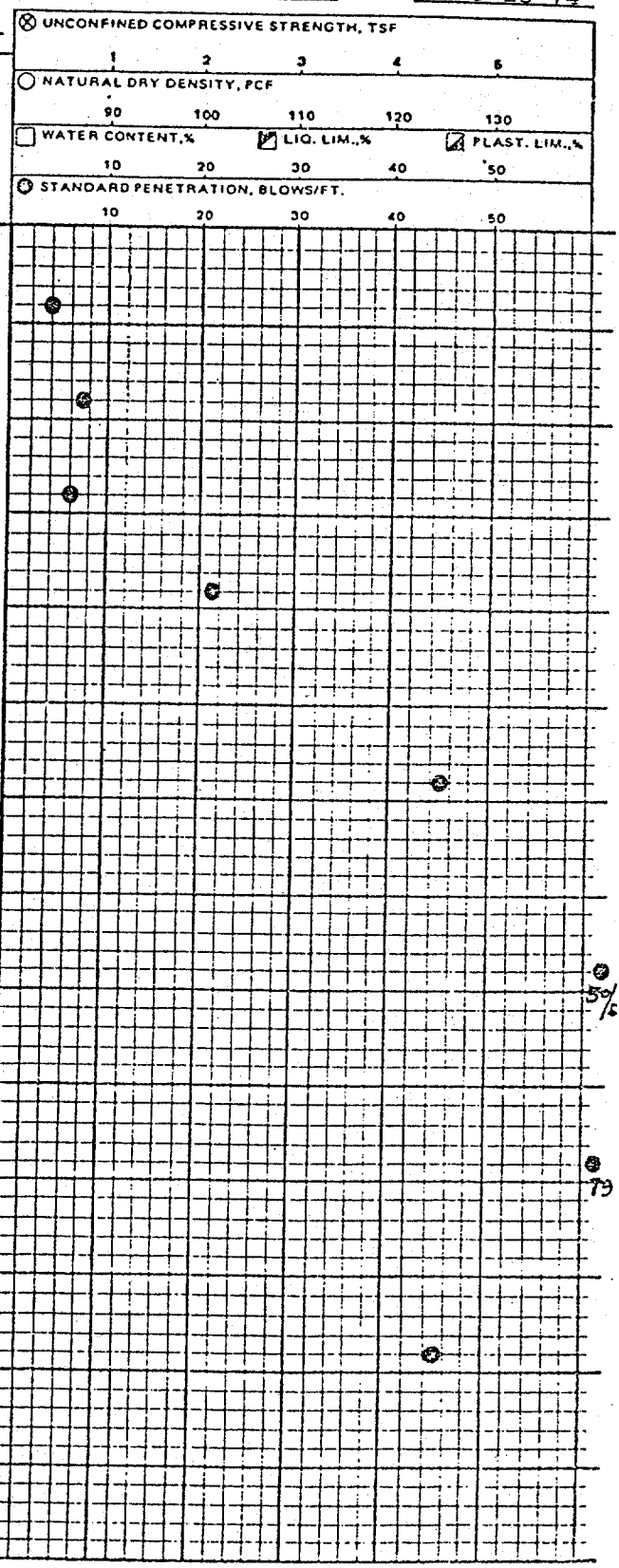
Reply To:

CLIENT: Detroit Diesel Allison
PROJECT NAME: Proposed Plant Building
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison INSPECTOR:
BORING METHOD: HSA RC DIA. in.
SHELBY TUBE O.D. in.

BORING NO. 20E offset 25' south to level rig
JOB NO. E-74203 DATE 9-23-74

SURFACE ELEVATION — 716

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3—6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Brown moist soft SANDY CLAY (CL) with trace Gravel	3.0			1	1 2/2	100	
Brown moist loose fine to medium SAND (SP-SW)	8.0		5	2	2 3/4	100	
				3	3 3/3	100	
Gray moist very stiff SANDY CLAYEY SILT (ML) with trace Gravel	12.5	▽	10	4	7 9/12	100	
Gray wet dense fine to coarse SAND (SW) with trace to little Gravel	19.0		15	5	10 20/25	100	
Gray moist hard SANDY CLAYEY SILT (ML) with little Gravel	27.5		20	6	50/5"	100	
			25	7	16 34/45	0	
Gray wet dense fine to coarse SAND (SW) with little fine to medium Gravel	30.0		30	8	12 18/27	100	
Bottom of test boring 30'							



BORING METHOD
HSA — HOLLOW STEM AUGER
FA — CONTINUOUS FLIGHT AUGER
C — DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS 13.5 FT.
▽ AT COMPLETION ____ FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING ____ DRILLED A FEW FEET FROM BORING

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RECORD OF SOIL EXPLORATION

District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

pply To:

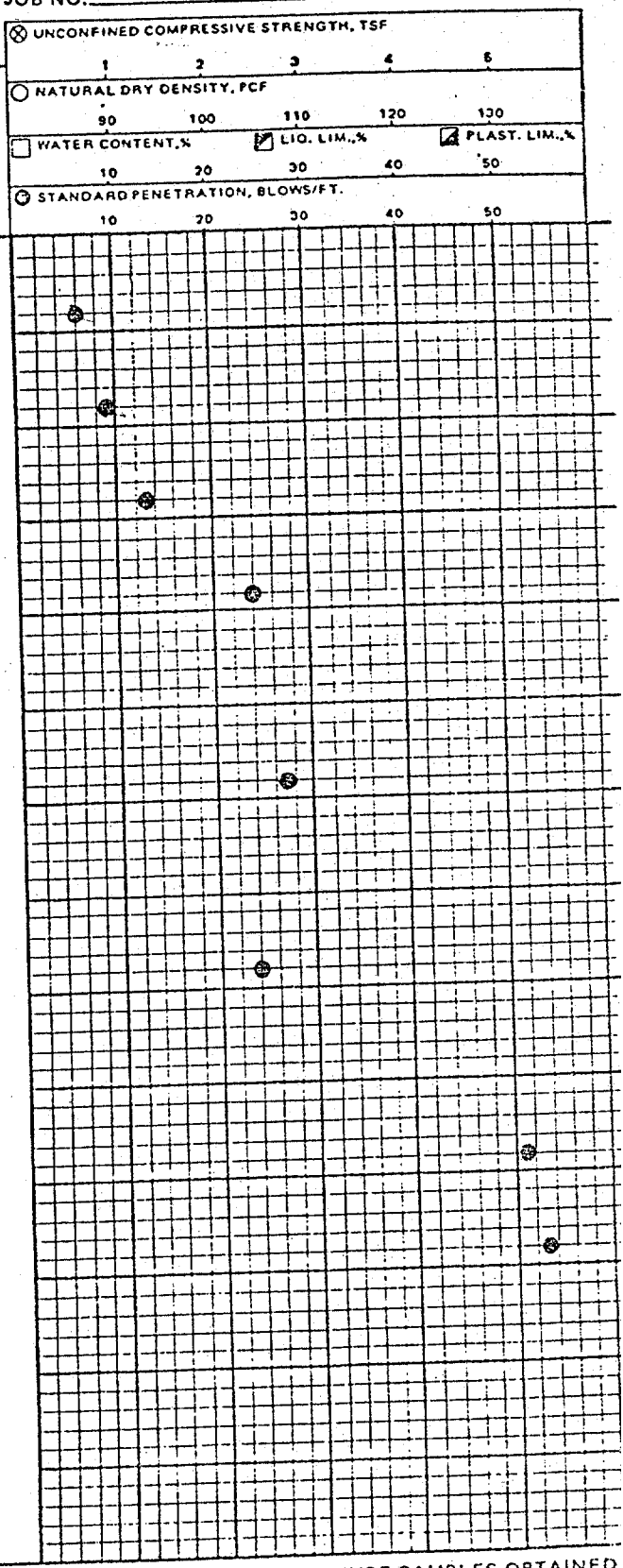
LIENT Detroit Diesel Allison
ROJECT NAME Proposed Plant Building
ROJECT LOCATION 10th Street, East of Grande, Indpls.
OREMAN L. Garrison INSPECTOR
ORING METHOD HSA RC DIA. in.
HELBY TUBE O.D. in.

BORING NO. 21E
JOB NO. E-74203 DATE 9-23-74

SURFACE ELEVATION — 711

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3-6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Brown moist medium stiff SANDY CLAY (CL) with trace fine Gravel	5.0		5	1	2 3/3	75	
				2	3 7/2	60	
Brown moist medium dense fine to coarse SAND (SW) with little Gravel	8.0			3	4 6/7		
Gray moist medium dense SILTY SAND (SM-ML) with trace Gravel	11.5		10	4	5 12/12		
ray and Brown moist medium dense fine to coarse SAND (SW) with little Gravel			15	5	7 12/15	100	
			20	6	8 11/13	100	
			25	7	12 21/30	100	
Gray hard SANDY CLAYEY SILT (ML) with little Gravel & Rock fragments	27.5		30	8	12 24/29	100	
			35	9	15 30/36	100	
	40.0		40	10	15 40/50	10	

Bottom of test boring 40'
* caved to 6'



BORING METHOD
HSA — HOLLOW STEM AUGER
CFA — CONTINUOUS FLIGHT AUGER
DC — DRIVEN CASING

GROUND WATER
NOTED ON RODS ____ FT.
AT COMPLETION * FT.
AFTER ____ HRS. ____ FT.

SHELBY TUBE SAMPLES OBTAINED
BORING ____ DRILLED A FE
FEET FROM BORING
FEET FROM BORING

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RECORD OF SOIL EXPLORATION

District Offices: Indianapolis, Baltimore-Washington/Cincinnati

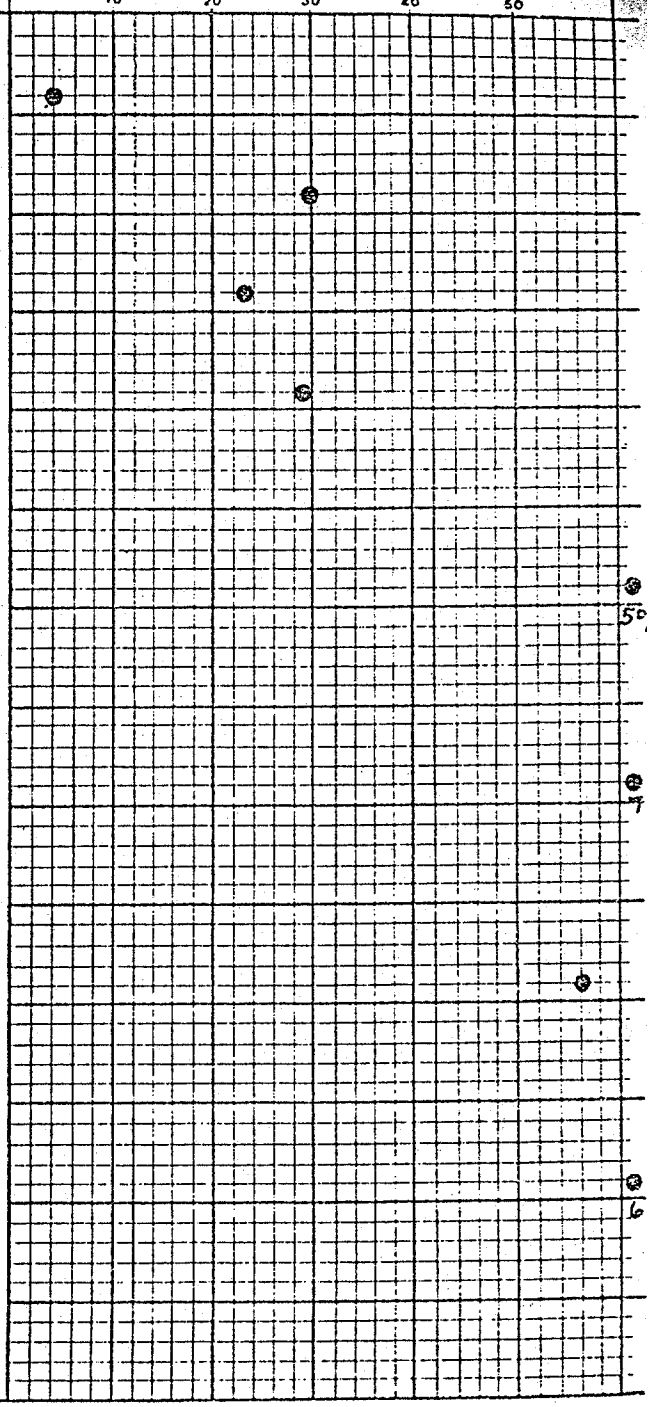
Reply To:

CLIENT: Detroit Diesel Allison
BORING NO.: 22E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
DATE: 9-3-
FOREMAN: L. Garrison
INSPECTOR:
BORING METHOD: HSA
RC DIA. ___ in.
SHELBY TUBE O.D. ___ in.

SURFACE ELEVATION — 716

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3-6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Dark Brown moist soft SANDY CLAY (CL) with trace Gravel	3.0			1	3 2/2		
Dark Brown moist very stiff SANDY CLAY (CL)	5.5		5	2	16 12/18		
Brown damp fine to coarse SAND (SW) with trace to little Gravel	11.0		10	3	9 11/12		
				4	12 13/16		
Gray moist hard SANDY CLAY-Y SILT (ML) with little Gravel		▽	15	5	20 40/50/3"		
(with sand and gravel seams)			20	6	25 36/36		
			25	7	19 20/36		
	30.0		30	8	20 24/38		
Bottom of test boring 30'							

⊗ UNCONFINED COMPRESSIVE STRENGTH, TSF: 1 2 3 4 5
○ NATURAL DRY DENSITY, PCF: 90 100 110 120 130
□ WATER CONTENT, % ▨ LIQ. LIM., % ◪ PLAST. LIM., %: 10 20 30 40 50
⊕ STANDARD PENETRATION, BLOWS/FT.: 10 20 30 40 50



BORING METHOD
HSA — HOLLOW STEM AUGER
CFA — CONTINUOUS FLIGHT AUGER
DC — DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS 13.5 FT.
▽ AT COMPLETION dry FT.
▽ AFTER ___ HRS. ___ FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING ___ DRILLED A FEW FEET FROM BORING ___

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Engineering Geology
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RECORD OF SOIL EXPLORATION

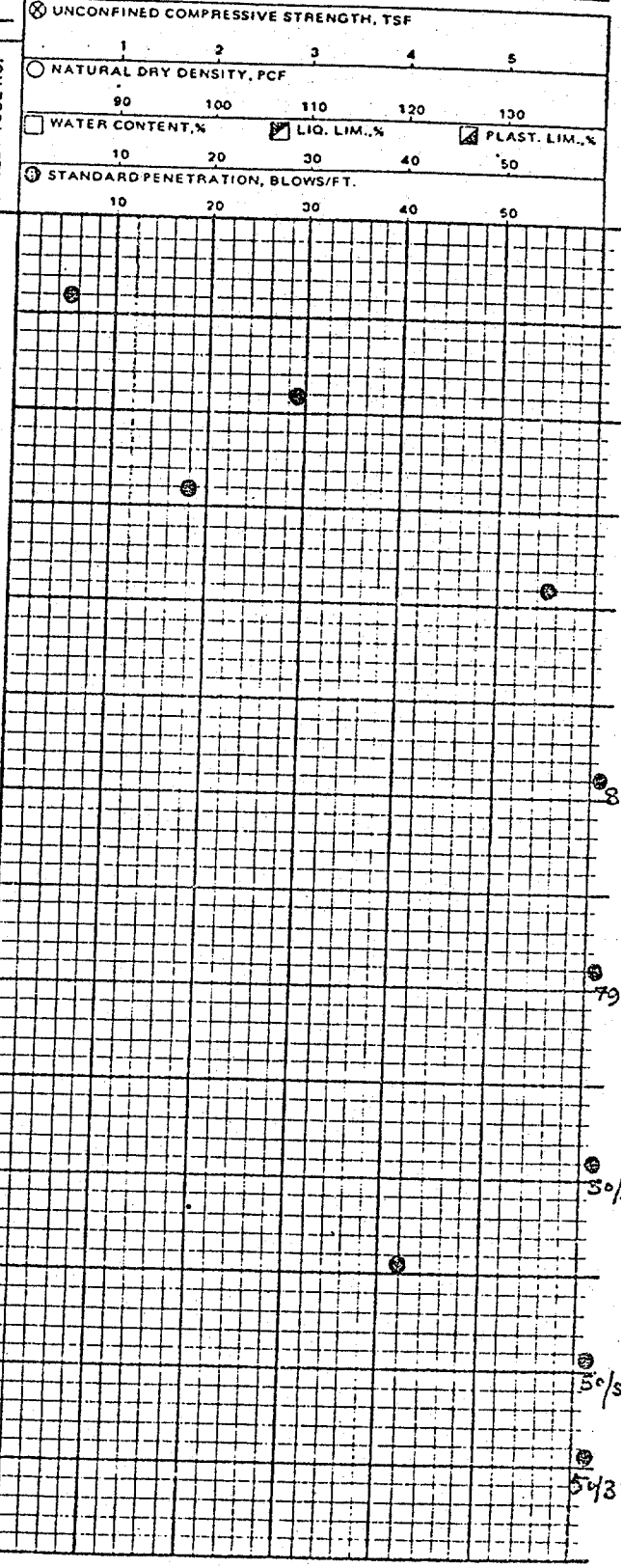
District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

Reply To:

CLIENT: Detroit Diesel Allison
BORING NO.: 23E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203 DATE: 8-18-74
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison INSPECTOR:
BORING METHOD: HSA RC DIA. in.
SHELBY TUBE O.D. in.

SURFACE ELEVATION — 716

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3-6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Dk. Brown moist soft SANDY CLAY (CL)	2.5			1	3 2/3	100	
Brown moist medium dense medium to coarse SAND (SP)	9.5		5	2	7 15/14	100	
				3	4 7/11	100	
Gray moist hard SANDY CLAYEY SILT (ML) with trace Gravel			10	4	19 14/41	100	
		▽	15	5	21 39/41	100	
-with sand and gravel seams below 18.5'		▽	20	6	29/50	100	
	22.0						
Gray moist dense SANDY SILT (ML-SM) with trace Gravel			25	7	28 38/50/5"	100	
	27.0						
Gray moist wet dense fine to coarse SAND (SW) with trace Silt			30	8	8 15/27	100	
	36.0		35	9	36 44/50/5"	100	
Gray moist hard SANDY CLAYEY SILT (ML) with trace Gravel	40.0		40	10	41 50/3"	100	
Bottom of test boring 40'							



BORING METHOD
HSA — HOLLOW STEM AUGER
CFA — CONTINUOUS FLIGHT AUGER
RC — DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS 18.5 FT.
▽ AT COMPLETION 14.5 FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING _____ DRILLED A FEW

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Subsurface Exploration
Engineering Geology
Materials Testing

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RECORD OF SOIL EXPLORATION

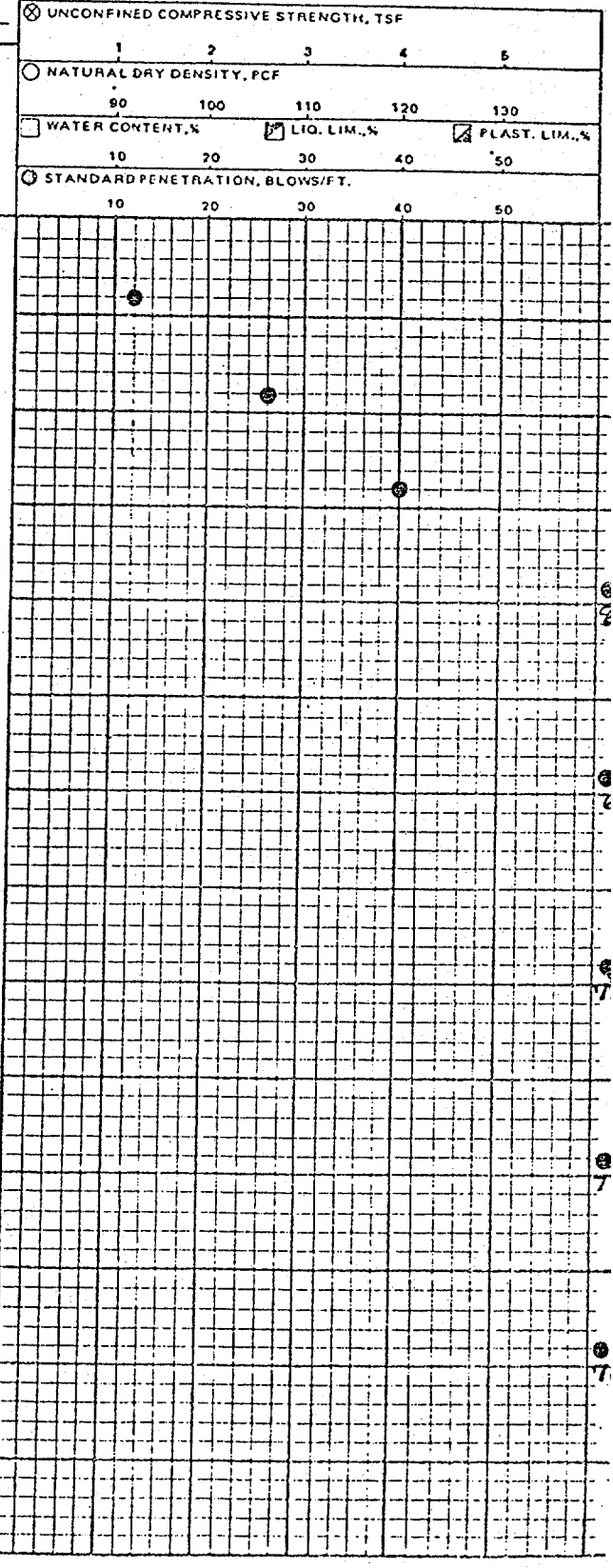
Reply To:

District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

CLIENT: Detroit Diesel Allison
BORING NO.: 24E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203
DATE: 9-24-74
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison
INSPECTOR:
BORING METHOD: HSA
RC DIA. in.
SHELBY TUBE O.D. in.

SURFACE ELEVATION — 716

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3—6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Brown moist medium stiff SANDY CLAY with trace Gvl	2.0			1	2 4/8	60	
Brown damp medium dense to dense fine to coarse SAND (SW) with trace Gvl			5	2	5 10/16	35	
	8.0			3	12 18/22	100	
Gray slightly moist hard SANDY CLAYEY SILT (ML) with little Gravel			10	4	12 34/50	100	
	11.0						
Gray very moist very dense medium to coarse SAND and fine GRAVEL (SW)			15	5	28 33/33	100	
	17.5	▽					
Gray moist hard SANDY CLAYEY SILT (ML) with little Gravel and occasional Sand and Gravel layers			20	6	26 25/50	100	
			25	7	28 35/42	100	
	30.0		30	8	17 26/44	100	
Bottom of test boring 30'							



BORING METHOD
HSA — HOLLOW STEM AUGER
CFA — CONTINUOUS FLIGHT AUGER
DC — DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS 18.5 FT.
▽ AT COMPLETION FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING DRILLED A FEW

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Form 7

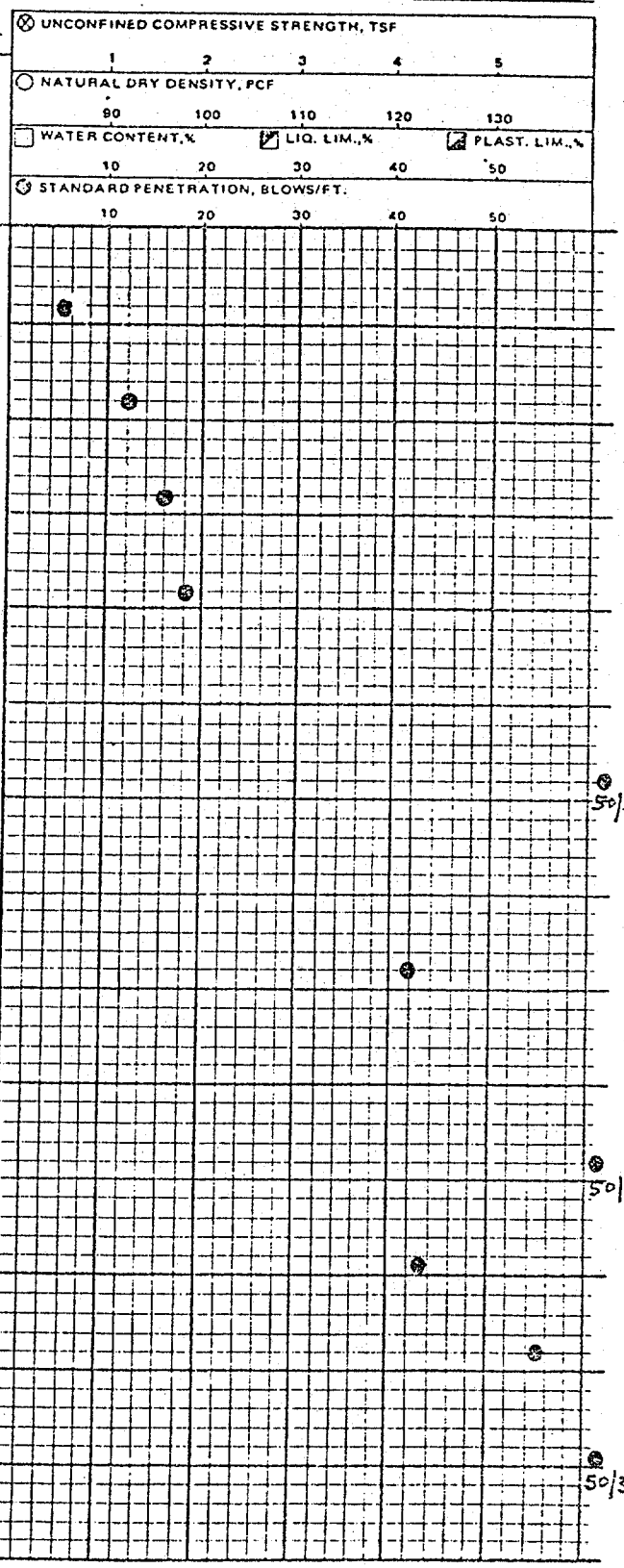
RECORD OF SOIL EXPLORATION

District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

IENT Detroit Diesel Allison
OJECT NAME Proposed Plant Building
OJECT LOCATION 10th Street, East of Grande, Indpls.
IEMAN L. Garrison INSPECTOR
ING METHOD HSA RC DIA. in.
LBY TUBE O.D. in.

BORING NO. 25E
JOB NO. E-74203 DATE 9-18-74

SOIL CLASSIFICATION URFACE ELEVATION — 716	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SPT* SAMPLE NO.	SPT* BLOWS/6in. 3-6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Brown moist soft SANDY CLAY (CL)	3.5			1	2 2/3		
Brown moist medium dense fine to coarse SAND (SP-SW)	9.0		5	2	4 6/6		
				3	6 7/9		
Gray moist very stiff SANDY CLAYEY SILT (ML) with trace Gravel			10	4	11 7/11		
			15	5	48 50/5"		
			20	6	17 19/23		
			25	7	37 45/50/3"		
Gray wet dense fine to coarse SAND (SW) with trace Gravel	27.5		30	8	9 19/24		
Gray moist very hard SANDY CLAYEY SILT (ML) with trace Gravel	32.5		35	9	11 20/35		
Bottom of test boring 40'	40.0		40	10	31 44/50/3"	100	



BORING METHOD
- HOLLOW STEM AUGER
- CONTINUOUS FLIGHT AUGER

GROUND WATER
NOTED ON RODS 8.5 FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING _____ DRILLED A FEW

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RECORD OF SOIL EXPLORATION

District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

IENT Detroit Diesel Allison
BORING NO. 26E
OJECT NAME Proposed Plant Building
JOB NO. E-74203 DATE 9-20-74
OJECT LOCATION 10th Street, East of Grande, Indpls.
IEMAN L. Garrison INSPECTOR
ING METHOD HSA RC DIA. in.
LBY TUBE O.D. 3.0 in.

⊗ UNCONFINED COMPRESSIVE STRENGTH, TSF (1, 2, 3, 4, 5)
○ NATURAL DRY DENSITY, PCF (90, 100, 110, 120, 130)
□ WATER CONTENT,% ☑ LIQ. LIM.,% ◪ PLAST. LIM.,% (10, 20, 30, 40, 50)
⊕ STANDARD PENETRATION, BLOWS/FT. (10, 20, 30, 40, 50)

SOIL CLASSIFICATION URFACE ELEVATION — 717	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3-6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Brown moist medium stiff SANDY CLAY (CL) with little Gravel	5.0		5	1	2 3/3		
				2	6 3/7		1
Brown wet medium dense medium to coarse SAND & fine to medium GRAVEL (SW)	11.0	▽ ▼	10	3	9 9/7		
				4	9 9/7		
Gr moist hard SANDY CLAYEY SILT (ML) with trace to little Gravel	30.0		15	5	28 37/50/4"		
			20	6	33 38/36		
			25	7	27 34/50/5"		
			30	8	34 41/50		
Bottom of test boring 30'							

50/4"
74
50/5"
91

BORING METHOD
- HOLLOW STEM AUGER
- CONTINUOUS FLIGHT AUGER

GROUND WATER
▽ NOTED ON RODS 8.5 FT.
▼ AT COMPLETION

SHELBY TUBE SAMPLES OBTAINED IN BORING 26E-a DRILLED A FEW

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RECORD OF SOIL EXPLORATION

District Offices: Indianapolis/Chicago
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ly

IENT Detroit Diesel Allison

BORING NO. 27E

OJECT NAME Proposed Plant Building

JOB NO. E-74203 DATE 8-19-74

OJECT LOCATION 10th Street, East of Grande, Indpls.

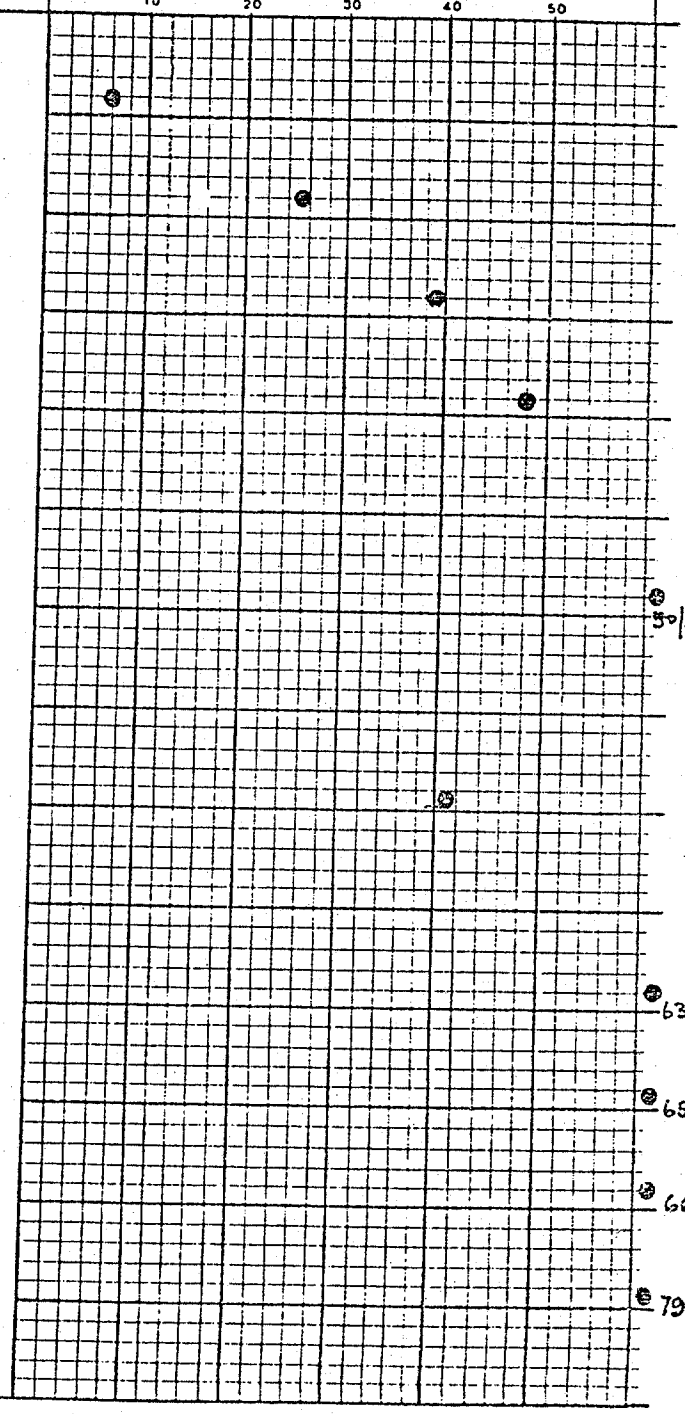
EMAN L. Garrison INSPECTOR

ING METHOD HSA RC DIA. in.

LBY TUBE O.D. in.

⊗ UNCONFINED COMPRESSIVE STRENGTH, TSF (1, 2, 3, 4, 5)
○ NATURAL DRY DENSITY, PCF (90, 100, 110, 120, 130)
□ WATER CONTENT,% ▨ LIQ. LIM.,% ▨ PLAST. LIM.,% (10, 20, 30, 40, 50)
⊕ STANDARD PENETRATION, BLOWS/FT. (10, 20, 30, 40, 50)

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3-6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
URFACE ELEVATION — 717							
Topsoil	1.0						
Dark Brown moist medium stiff SANDY CLAY (CL) with trace Gravel	3.0			1	3 3/3		
Brown damp medium dense to dense fine to coarse SAND (SW) with trace Gravel			5	2	5 8/17		
	8.0			3	27 20/19		
Gray moist hard SANDY CLAYEY SILT (ML) with trace gravel and occasional sand and Gravel seams			10	4	18 21/27		
			15	5	50/5"		
			20	6	23 17/24		
			25	7	17 29/34		
			30	8	18 25/40		
			35	9	17 29/37		
	40.0		40	10	19 29/50		
Bottom of test boring 40'							



BORING METHOD
— HOLLOW STEM AUGER

GROUND WATER

SHELBY TUBE SAMPLES OBTAINED IN

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RECORD OF SOIL EXPLORATION

District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

y To:

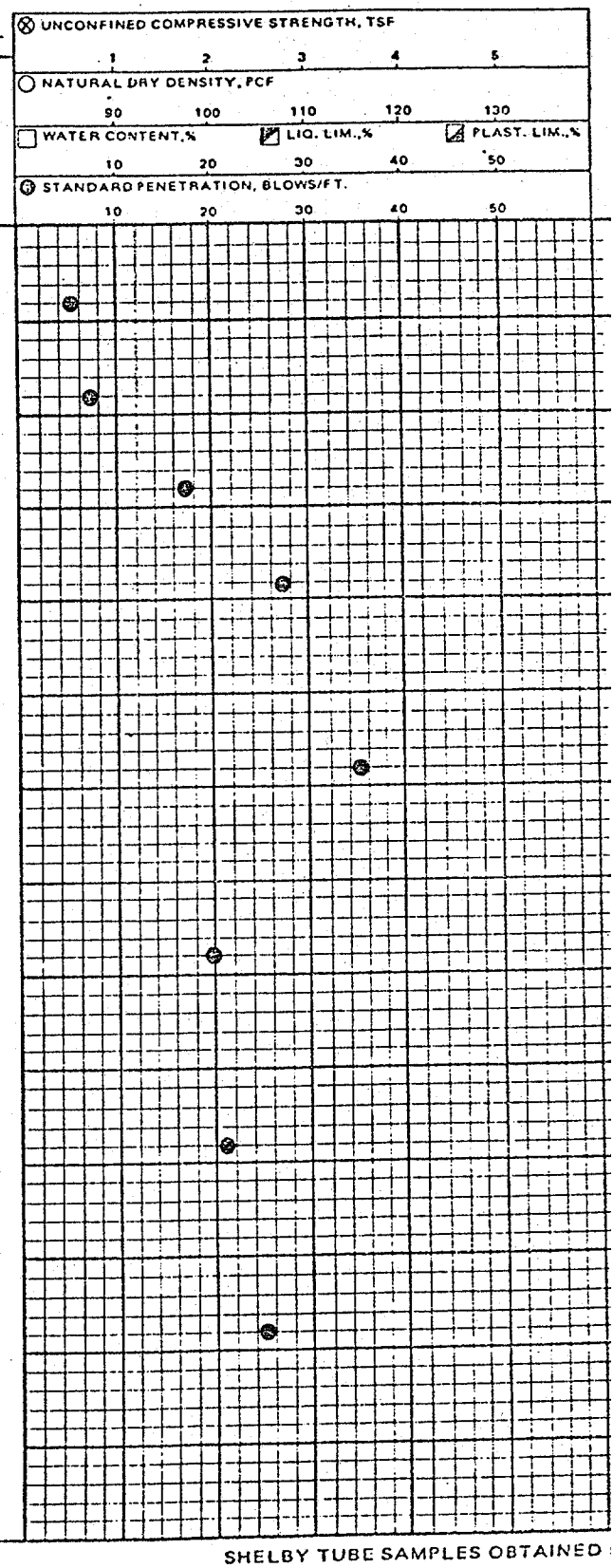
CLIENT: Detroit Diesel Allison
PROJECT NAME: Proposed Plant Building
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison INSPECTOR:
BORING METHOD: HSA RC DIA. in.
SHELBY TUBE O.D. in.

BORING NO. 28E offset 24'E 21'N rig leveling
JOB NO. E-74203 DATE 9-23-7

SURFACE ELEVATION — 711

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	BLOWS/6in. 3—6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Dark Brown moist soft to medium stiff SANDY CLAY (CL) with trace Gravel	5.0	▽	5	1	2 2/3	100	
				2	3 3/4	100	
Brown and Gray wet medium dense fine to coarse SAND (SW) with little Gravel		▽		3	6 8/9	100	
			10	4	7 10/17	90	
			15	5	6 12/23	100	
			20	6	7 9/11	60	
			25	7	8 10/11	75	
	30.0		30	8	9 12/13	75	
Bottom of test boring 30'							
* hole caved in to 9.8'							

SPT*



BORING METHOD
HSA — HOLLOW STEM AUGER
CFA — CONTINUOUS FLIGHT AUGER

GROUND WATER
▽ NOTED ON RODS 6.5 FT.

SHELBY TUBE SAMPLES OBTAINED
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RECORD OF SOIL EXPLORATION

District Offices: Indianapolis/Chicago
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ply To:

IENT Detroit Diesel Allison

BORING NO. 29E

OJECT NAME Proposed Plant Building

JOB NO. E-74203 DATE 9-24-74

OJECT LOCATION 10th Street, East of Grande, Indpls.

REMAN L. Garrison INSPECTOR

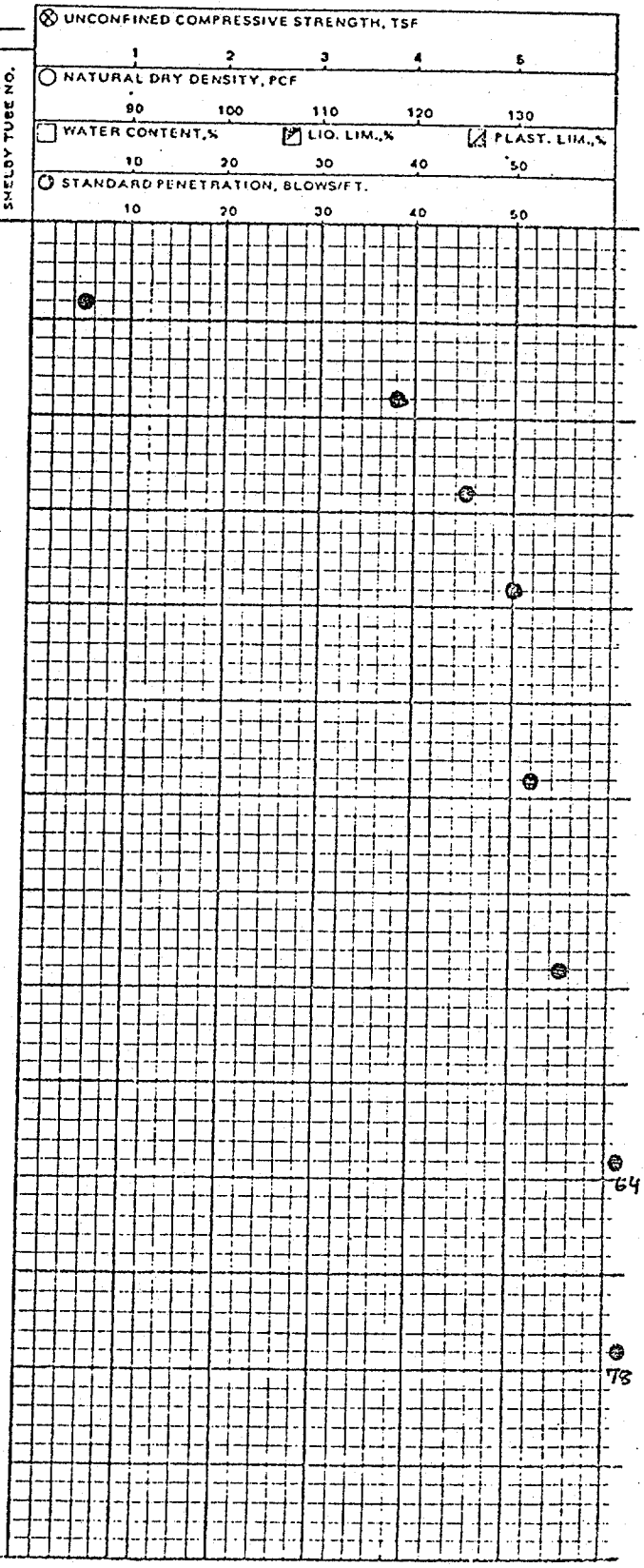
LING METHOD HSA RC DIA. in.

LBY TUBE O.D. in.

SOIL CLASSIFICATION

URFACE ELEVATION — 718

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3—6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Brown moist medium stiff SANDY CLAY (CL) with trace Gravel	4.0			1	3 3/2		
Brown damp dense medium to coarse SAND (SW) with little coarse Gravel	12.5		5	2	4 19/20		
				3	18 21/24		
			10	4	23 25/25		
Gray moist hard SANDY CLAYEY SILT (ML) with trace Gravel			15	5	19 23/29		
			20	6	19 27/28		
			25	7	22 29/35		
	30.0		30	8	29 38/40		
Bottom of test boring 30'							



BORING METHOD
— HOLLOW STEM AUGER
— CONTINUOUS FLIGHT AUGER

GROUND WATER
NOTED ON RODS none FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING DRILLED A FEW

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RECORD OF SOIL EXPLORATION

District Offices: Indianapolis/Chicago
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ply To:

IENT Detroit Diesel Allison

BORING NO. 30E

OJECT NAME Proposed Plant Building

JOB NO. E-74203 DATE 9-25-74

OJECT LOCATION 10th Street, East of Grande, Indpls.

REMAN L. Bacon INSPECTOR

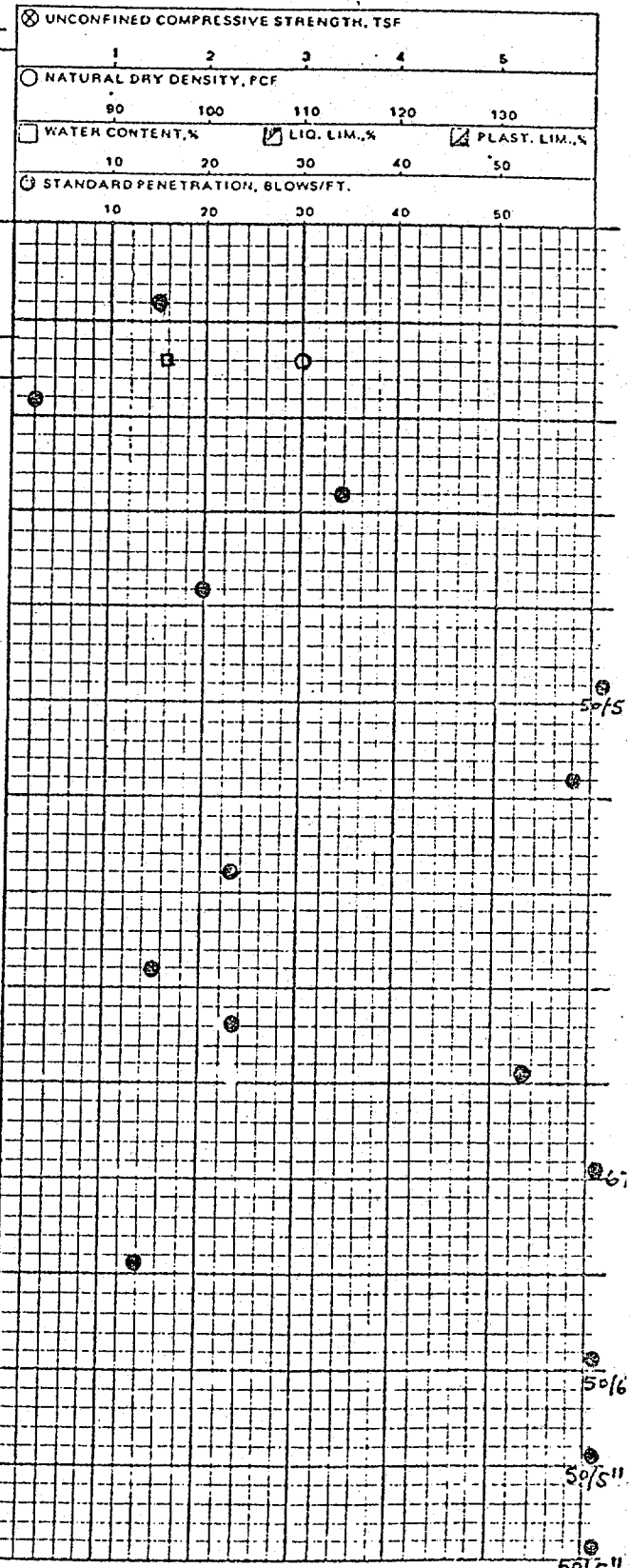
RING METHOD HSA RC DIA. in.

ELBY TUBE O.D. 3.0 in.

SOIL CLASSIFICATION

URFACE ELEVATION — 717

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	BLOWS/6in. 3—6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Dark Brown moist soft to medium stiff SILTY CLAY (CL) with trace Gravel	5.5		5	1	4 8/7	100	1
				2	2 1/1	10	
Brown moist medium dense to dense fine to coarse SAND (SW) with trace Gravel	12.0		10	3	12 15/19	60	
				4	10 10/10	65	
G moist very stiff to hard SANDY CLAYEY SILT (ML) with trace Gravel	27.0	▽	15	5	25/40 50/5"	100	
			20	6	15 23/35	100	
			25	7	3 8/15	100	
Brown very wet medium dense fine to medium SAND (SP) with trace Gravel	33.0		30	8	3 1/14	100	
				9	4 8/16	100	
Gray moist hard SANDY CLAYEY SILT (ML) with trace Gravel	42.0		35	10	6 20/33	100	
			40	11	7 17/50	100	
Brown very moist medium dense fine to coarse SAND (SW) with some Gravel	48.0		45	12	27 7/7	35	
Gray moist hard SANDY CLAYEY SILT (ML) with trace Gravel			50	13	31 50/6"	100	
			55	14	44 50/5"	80	
Bottom of test boring 60'	60.0		60	15	23 50/5"	50	



BORING METHOD
HOLLOW STEM AUGER
CONTINUOUS FLIGHT AUGER

GROUND WATER
▽ NOTED ON RODS 23.5 FT.

SHELBY TUBE SAMPLES OBTAINED FR
BORING 30E-a DRILLED A FEW

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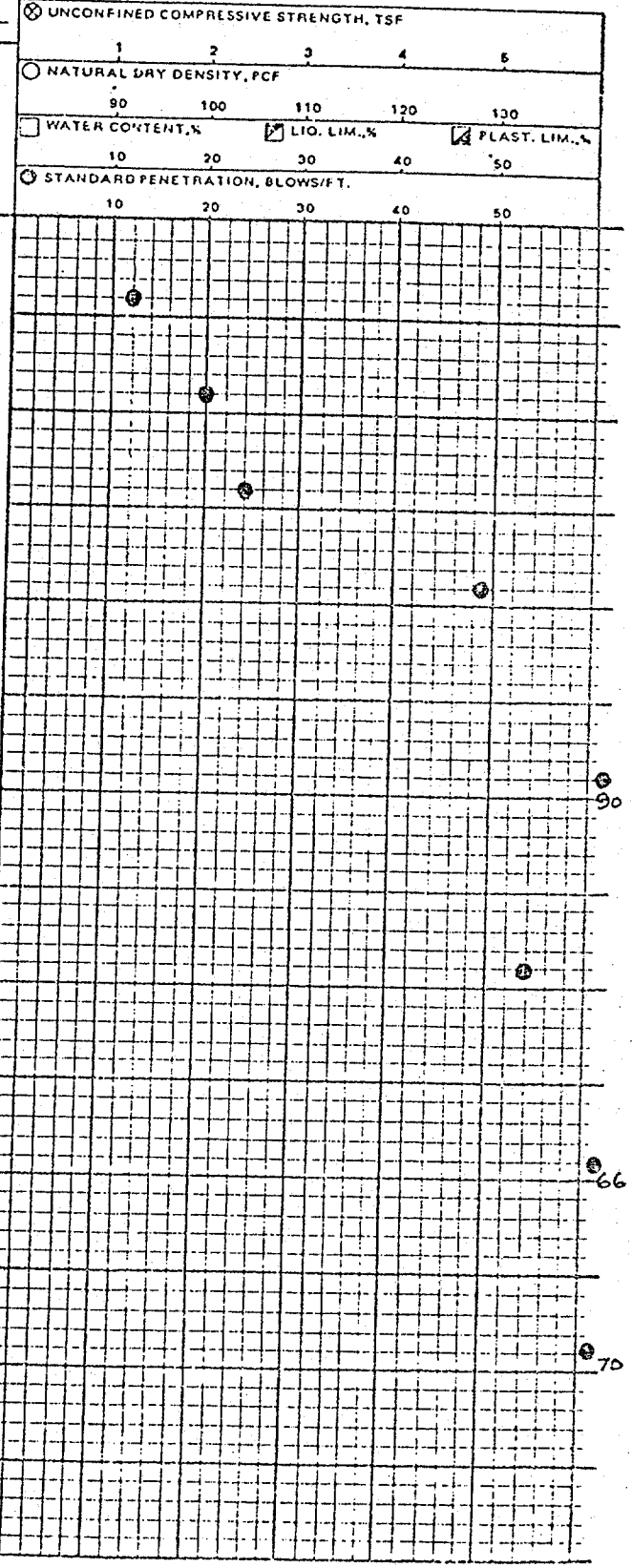
RECORD OF SOIL EXPLORATION

Reply To:

District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

CLIENT: Detroit Diesel Allison
BORING NO.: 31E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203
DATE: 9-24-74
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison
INSPECTOR:
BORING METHOD: HSA
RC DIA. in.
SHELBY TUBE O.D. in.
SURFACE ELEVATION — 716

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6 in. 3—6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Dark Brown moist SANDY CLAY (CL) with little Gravel	3.0			1	3 5/7	75	
Brown damp medium dense fine to coarse SAND (SW) with little coarse Gravel			5	2	6 10/10	100	
-dense below 8 ft				3	9 11/13	100	
	12.5		10	4	25 34/15	100	
Gray moist hard SANDY CLAYEY SILT (ML) with trace Gravel			15	5	40/50	100	
			20	6	16 20/34	100	
			25	7	14 28/38	100	
	30.0		30	8	23 36/34	100	
Bottom of test boring 30'							



BORING METHOD
- HOLLOW STEM AUGER
- CONTINUOUS FLIGHT AUGER
- DRIVEN CASING

GROUND WATER
NOTED ON RODS ____ FT.
AT COMPLETION ____ FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING ____ DRILLED A FEW

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RECORD OF SOIL EXPLORATION

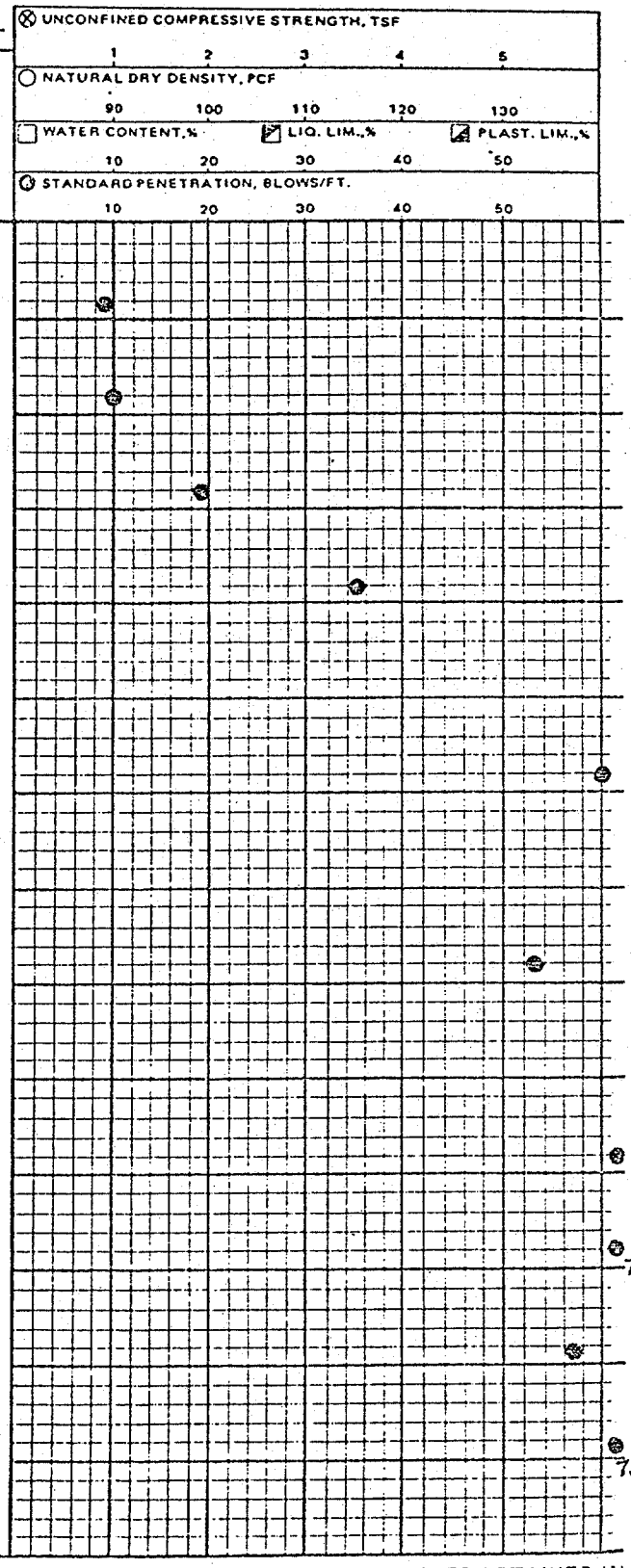
District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

R To:

CLIENT: Detroit Diesel Allison
BORING NO.: 32E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203
DATE: 9-23-74
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison
INSPECTOR:
BORING METHOD: HSA
RC DIA. in.
SHELBY TUBE O.D. in.

SURFACE ELEVATION — 716

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3—6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Dark Brown moist medium stiff SANDY CLAY (CL) with trace Gravel	5.0		5	1	2 3/6	75	
				2	5 5/5	100	
Brown wet medium dense fine to coarse SAND (SW) with trace Gravel	12.5	▽ ▼	10	3	3 8/11	100	
				4	9 16/19	100	
Gray moist hard SANDY CLAYEY SILT (ML) with trace Gravel	27.5		15	5	12 29/31	100	
			20	6	14 18/35	100	
			25	7	15 29/36	65	
Gray wet medium to coarse SAND (SP) with trace Gravel	32.0		30	8	12 28/43		
Gray moist hard SANDY CLAYEY SILT (ML) with trace to little Gravel	40.0		35	9	15 18/39	100	
Bottom of test boring 40'			40	10	18 29/46	100	



BORING METHOD
HSA — HOLLOW STEM AUGER
CFA — CONTINUOUS FLIGHT AUGER

GROUND WATER
▽ NOTED ON RODS 6.5 FT.
▼ AT COMPLETION 8.0 FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING _____ DRILLED A FEW

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RECORD OF SOIL EXPLORATION

District Offices: Indianapolis/Chicago
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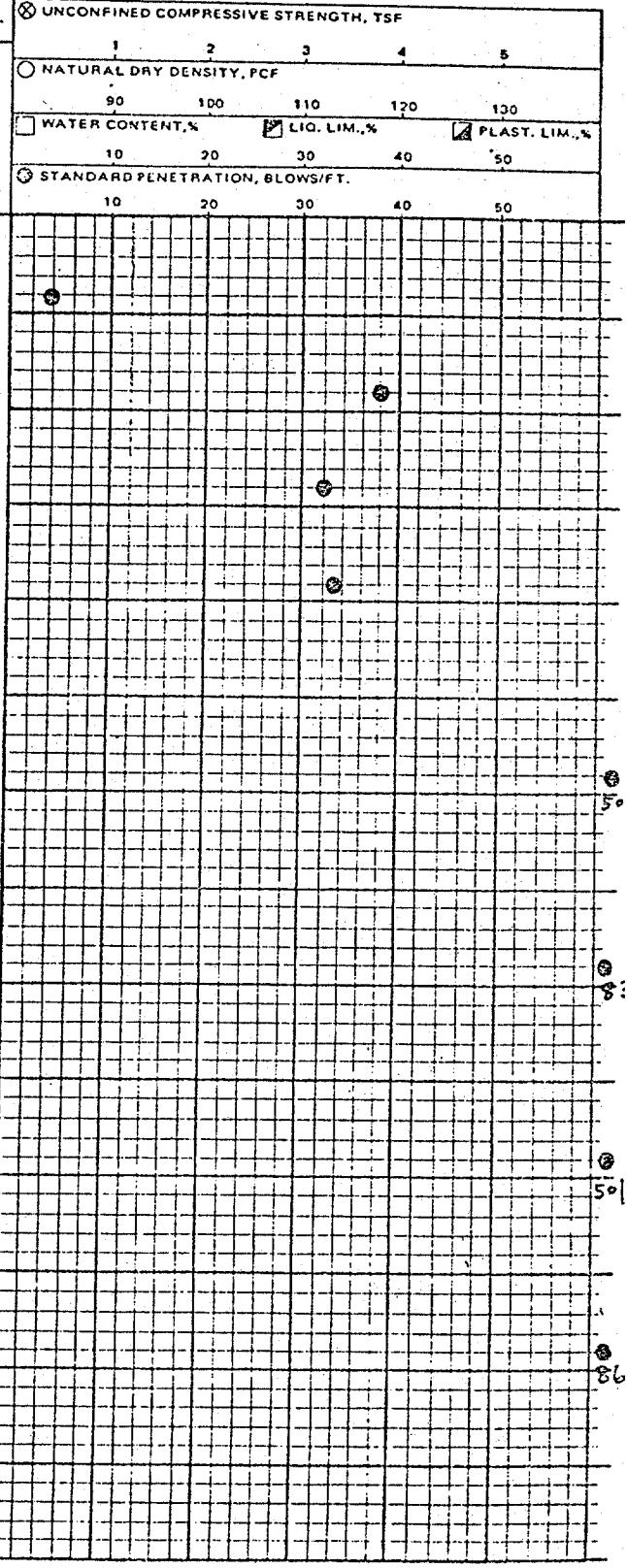
ly To:

CLIENT: Detroit Diesel Allison
BORING NO.: 33E
PROJECT NAME: Proposed Plant Building
JOB NO.: E-74203 DATE: 9-23-74
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison INSPECTOR:
BORING METHOD: HSA RC DIA. in.
SHELBY TUBE O.D. in.

SURFACE ELEVATION — 716

SOIL CLASSIFICATION	STRATUM DEPTH, FT.	GROUND WATER	DEPTH SCALE, FT.	SAMPLE NO.	SPT* BLOWS/6in. 3—6 in. INCREMENTS	RECOVERY, %	SHELBY TUBE NO.
Topsoil	1.0						
Dark Brown moist soft SANDY CLAY (CL) with trace Gravel	3.0			1	2 2/2		
Brown moist fine to coarse SAND with some Gravel and Rock fragments (SW)	5.5		5	2	15 23/15		
Gray wet medium dense fine to coarse SAND (SW)	8.0			3	8 14/18		
Gray moist very stiff to hard SANDY CLAYEY SILT (ML) with trace Gravel			10	4	12 16/17		
-hard below 13'			15	5	33 50/5"		
			20	6	17 33/50		
			25	7	33 50/5"		
	30.0		30	8	18 36/50		
Bottom of test boring 30'							



BORING METHOD
HSA — HOLLOW STEM AUGER
CFA — CONTINUOUS FLIGHT AUGER
DC — DRIVEN CASING

GROUND WATER
NOTED ON RODS ____ FT.
AT COMPLETION dry FT.

SHELBY TUBE SAMPLES OBTAINED IN BORING ____ DRILLED A FEW

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RECORD OF SOIL EXPLORATION

District Offices: Indianapolis/Chicago
Baltimore-Washington/Cincinnati/Louisville/Atlanta

Reply To:

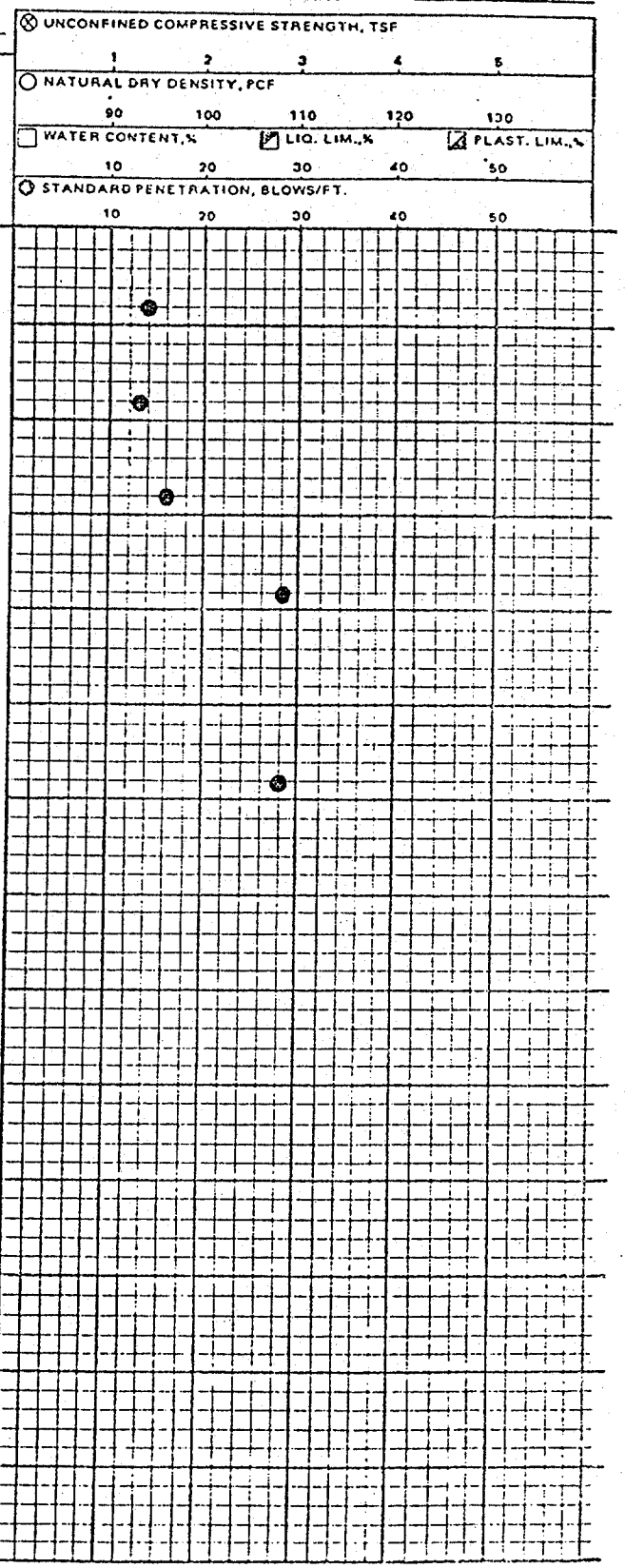
CLIENT: Detroit Diesel Allison
PROJECT NAME: Proposed Plant Building
PROJECT LOCATION: 10th Street, East of Grande, Indpls.
FOREMAN: L. Garrison INSPECTOR:
DRILLING METHOD: HSA RC DIA. in.
SHELBY TUBE O.D. in.

BORING NO. 34E
JOB NO. E-74203 DATE 9-24-74

SOIL CLASSIFICATION
SURFACE ELEVATION — 712

Soil Classification	Stratum Depth, Ft.	Ground Water	Depth Scale, Ft.	Sample No.	Blows/6 in. 3–6 in. Increments	Recovery, %	Shelby Tube No.
Topsoil	1.0						
Dark Brown moist medium stiff to stiff SILTY CLAY (CL)	4.5			1	6 6/8	75	
				2	6 6/7	90	
Gray wet medium dense fine to medium SAND (SP) with trace Clay	6.0		5	3	5 7/7	40	
Gray moist stiff SANDY CLAYEY SILT (ML) with little Gravel	8.0	▽▽		4	7 14/14	100	
Brown and Gray wet medium dense fine to coarse SAND with little Gravel	12.5		10				
Gray moist very stiff SANDY CLAYEY SILT (ML) with trace Gravel	15.0		15	5	8 12/16	10	

Bottom of test boring 15'



BORING METHOD
\ – HOLLOW STEM AUGER
\ – CONTINUOUS FLIGHT AUGER
– DRIVEN CASING

GROUND WATER
▽ NOTED ON RODS 8.5 FT.
▽ AT COMPLETION 8.5 FT

SHELBY TUBE SAMPLES OBTAINED IN BORING _____ DRILLED A FEW

PROJECT GM - Allison	LOCATION Next to Soil Gas Sample #50
DRILLING CONTRACTOR John Mathes	DRILLING EQUIP. D-25
HYDROGEOLOGIST Ed Ossi	DRILLER Chuck Harris
DATE START: 8-16-88 / DATE FINISH: 8-16-88	SURFACE EL. 720.00' / TOTAL DEPTH 12.0'

DRILLING	SAMPLE								GEOLOGIC LOG		
DEPTH (FT)		TYPE	NUMBER	DEPTH INTERVAL	BLOW COUNT 0/6	6/12	12/18	RECOVERY (IN)	USCS CLASS	CONTACT DEPTH	DESCRIPTIONS and COMMENTS
											12: Diameter Core through Concrete Floor 0.0 - 0.7
1		SS	01	0.7-2.0	3	16	33	12	GP	0.7	Light yellowish brown gravel with some very coarse sand, little coarse sand. Trace medium to fine sands. Sample wet from coring machine water. PID reading: 68 ppm. No Odor
2		SS	02	2.0-4.0	31	34	36	12	GP		Light Yellowish brown, very coarse sand with gravel. Some coarse - medium sand, trace fine sands, No Odor
3											
4		SS	03	4.0-6.0	9	17	18/25	12	GP		PID Reading : 108 ppm Same as above
5									CL	5.0'	Dark brown Clay with trace of pebbles, coarse sand, Odor (sample taken mainly from 5.0-6.0')
6		SS	04	6.0-8.0	16	26	31/37	12	SP	6.0'	PID Reading: 112 ppm Brown coarse to very coarse sand with gravel. Some medium to fine sand. Slight odor
7											
8											PID Reading: 320 ppm

DRILLING CONTRACTOR John Mathes | DRILLING EQUIP. D-25

HYDROGEOLOGIST Ed Ossi | DRILLER Chuck Harris

DATE START: 8-16-88 | DATE FINISH: 8-16-88 | SURFACE EL. 720.00' | TOTAL DEPTH 12.0'

DRILLING	SAMPLE								GEOLOGIC LOG		
DEPTH (FT)		TYPE	NUMBER	DEPTH INTERVAL	BLOW COUNT 0/6	6/12	12/18	RECOVERY (IN)	USCS CLASS	CONTACT DEPTH	DESCRIPTIONS and COMMENTS
		SS	05	8.0-10.0	9	12	25/27	18	SP		Light brown very-coarse to coarse sand with pebbles, some fine to medium sand
9											
10		SS	06	10.0-11.1	17	60	50/1"	12	SP		PID Reading: 720 ppm Light brown very coarse to coarse sand with gravel (pebbles), some medium to fine sand, trace of clay
11		SS	07	11.1-11.5	60			12	CL	11.1	PID Reading: 720 ppm Light Brown Clay at 11.1'
		SS	08	11.5-12.0		100			CH		Dark Grey Clay with some pebbles, some coarse sand, trace of medium to fine sand with silt No PID Sample
12											

PROJECT GM-Allison	LOCATION Next to Soil Gas Sample #56
DRILLING CONTRACTOR John Mathes	DRILLING EQUIP. D-25
HYDROGEOLOGIST Ed Ossi	DRILLER Chuck Harris
DATE START: 8-16-88 / DATE FINISH: 8-16-88	SURFACE EL. 720.00' / TOTAL DEPTH 12.0'

DRILLING	SAMPLE								GEOLOGIC LOG		
DEPTH (FT)		TYPE	NUMBER	DEPTH INTERVAL	BLOW COUNT 0/6	6/12	12/18	RECOVERY (IN)	USCS CLASS	CONTACT DEPTH	DESCRIPTIONS and COMMENTS
											Concrete Floor 0.0 - 0.8
1		SS	09	0.8-2.0	6	30	45	14	SP		Moderate Brown very coarse grained sand, some fine to medium sand with pebbles
2		SS	10	2.0-4.0	37	40	32/37	14	SP		PID Reading: 96 ppm Moderate Brown coarse to very coarse sand with gravel (pebbles). Some fine to medium sands. No odor
3											
		SS	11	4.0-6.0	8	21	8/13	18	SP		PID Reading: 88 ppm Moderate Brown very coarse sand with some gravel, some medium to fine sand
5										5.0'	Dark Brown Clay with some pebbles, trace of medium to fine sand
									CL		
6		SS	12	6.0-8.0	18	27	14/13	14	CL		PID Reading: 74 ppm Dark Brown Clay with some pebbles, trace of medium to fine sand PID Reading: 280 ppm
7											
8											

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The Environmental Services Company

PROJECT GM-Allison	LOCATION Next to Soil Gas Sample #56
DRILLING CONTRACTOR John Mathes	DRILLING EQUIP. D-25
HYDROGEOLOGIST Ed Ossi	DRILLER Chuck Harris
DATE START: 8-16-88 / DATE FINISH: 8-16-88	SURFACE EL. 720.00' / TOTAL DEPTH 12.0'

DRILLING	SAMPLE							GEOLOGIC LOG		
DEPTH (		TYPE	NUMBER	DEPTH INTERVAL	BLOW COUNT 0/6	6/12	12/18	RECOVERY (IN)	USCS CLASS	CONTACT DEPTH	DESCRIPTIONS and COMMENTS
		SS	13	8.0-10.0	2	3	2/3	20	CL		Dark Brown Clay with coarse sand, some medium sand trace of gravel
		SS	14	10.0-11.5	3	15	99	12	SP	10.0	PID REading: 320 ppm Moderate Brown fine-medium sand, trace of coarse sand. Strong odor Stone plugged spoon from 11.0-11.5
		SS	15	11.5-12.0	50			4	SP CH	11.8'	PID Reading: 880 ppm Moderate Brown very coarse sand with gravel some fine-med. sands Dark Grey Clay at base of spoon No odor PID REading: 740 ppm

PROJECT GM-Allison	LOCATION Due WEst of B-1 (Between colmns. T&U)
DRILLING CONTRACTOR John Mathes	DRILLING EQUIP. D-25
HYDROGEOLOGIST Ed Ossi	DRILLER Chuck Harris
DATE START: 8-17-88 / DATE FINISH: 8-17-88	SURFACE EL. 720.00' / TOTAL DEPTH 12.5'

DRILLING	SAMPLE								GEOLOGIC LOG		
DEPTH (FT)		TYPE	NUMBER	DEPTH INTERVAL	BLOW COUNT 0/6	BLOW COUNT 6/12	BLOW COUNT 12/18	RECOVERY (IN)	USCS CLASS	CONTACT DEPTH	DESCRIPTIONS and COMMENTS
		SS	16		3	15/33					Concrete Floor 0.0-0.8
										0.8	
1				0.8-2.0			10		SP		Light Brown very coarse sand and gravel with some medium to fine sands. No odor
2											PID Reading: 12 ppm
		SS	17	2.0-4.0	16	43	85/120	18	SP		Light Brown very coarse sand and gravel with some medium to fine sands. No odor
3											
											PID Reading: 8.0 ppm
4		SS	18	4.0-6.0	6	12	15/22	18	SP		Same As Above
5										5.0'	
									CL		Dark Brown Clay with some gravel and very coarse sand, trace of medium-fine sand. No Odor
6											PID Reading: 15 ppm
									CL	6.2'	Same As Above
		SS	19	6.0-8.0	17	12	18/23		SP		Light Brown very coarse sand with some gravel and medium to fine sand
7											
8											PID Reading: 300 ppm

JOB NO. 6214	PAGE 2 OF 2
PROJECT GM-Allison	BORE HOLE NO. B-3
DRILLING CONTRACTOR John Mathes	LOCATION Due West of B-1
HYDROGEOLOGIST Ed Ossi	DRILLING EQUIP. D-25
DATE START: 8-17-88	DRILLER Chuck Harris
DATE FINISH: 8-17-88	SURFACE EL. 720.00'
	TOTAL DEPTH 12.5'

DRILLING	SAMPLE									GEOLOGIC LOG	
DEPTH (FT.)		TYPE	NUMBER	DEPTH INTERVAL	BLOW COUNT 0/6	BLOW COUNT 6/12	BLOW COUNT 12/18	RECOVERY (IN)	USCS CLASS	CONTACT DEPTH	DESCRIPTIONS and COMMENTS
		SS	20	8.0-10.0	13	14	12/20	18	SP		Light Brown very coarse sand with medium to fine sands
9											
10		SS	21	10.0-12.0	4	19	42/100	18	SP		PID Reading: 150 ppm Light Brown medium-coarse sand, some fine sand
11											
12		SS	22	12.0-12.5	150			6	CH	12.0	PID Reading: 480 ppm Grey Clay with trace of silt. No Odor PID Reading: 66 ppm
13											

PROJECT GM-Allison	LOCATION East of Pipe Leak
DRILLING CONTRACTOR John Mathes	DRILLING EQUIP. D-25
HYDROGEOLOGIST Ed Ossi	DRILLER Chuck Harris
DATE START: 8-17-88 / DATE FINISH: 8-17-88	SURFACE EL. 720.00' / TOTAL DEPTH 11.5'

DRILLING	SAMPLE								GEOLOGIC LOG		
DEPTH (FT)		TYPE	NUMBER	DEPTH INTERVAL	BLOW COUNT 0/6	6/12	12/18	RECOVERY (IN)	USCS CLASS	CONTACT DEPTH	DESCRIPTIONS and COMMENTS
		SS	23	0.8-2.0	12	20	32	20			Cement Floor 0.0 - 0.8
1									GP		Gravel and very coarse sand (light Brown) some medium-fine grained sand, stron odor
											PID Reading: 280 ppm
2		SS	24	2.0-4.-	43	80	108/35	20	GP		Light Brown gravel and very coarse sand, some medium to fine grained sand
3											
											PID Reading: 480 ppm
4		SS	25	4.0-6.0	3	7	23/57	20	CL	4.0'	Dark Brownish Gray Clay, with some gravel, some very coarse to coarse sands, trace of medium to fine grained sands. Dry
5											
											PID Reading: 106 ppm
6		SS	26	6.0-8.0	120	59	44/49	20	SP	6.0'	Moderate Brown very coarse sand with gravel, some medium to fine grained sand
7											PID Reading: 320 ppm
8											

JOB NO. 6214	PAGE 2 OF 2
PROJECT GM-Allison	BORE HOLE NO. B-4
DRILLING CONTRACTOR John Mathes	LOCATION East of Pipe Leak
HYDROGEOLOGIST Ed Ossi	DRILLING EQUIP. D-25
DATE START: 8-17-88 / DATE FINISH: 8-17-88	DRILLER Chuck Harris
DRILLING / SAMPLE	SURFACE EL. 720.00' / TOTAL DEPTH 11.5'

GEOLOGIC LOG

DEPTH (FT)		TYPE	NUMBER	DEPTH INTERVAL	BLOW COUNT 0/6	6/12	12/18	RECOVERY (IN)	USCS CLASS	CONTACT DEPTH	DESCRIPTIONS and COMMENTS
		SS	27	8.0-10.0	24	34	24/31	20	SP		Moderate Brown very coarse sand with gravel, some medium to fine grained sand
9											
10		SS	28	10.0-10.5	15			6	SP		PID Reading: 510 ppm Moderate Brown very coarse sand with gravel, some fine to medium sand.
		SS	29	10.5-11.0		28		6	SP		No PID Sample Same As Above
									CL	10.8'	Dark Grey Clay with silt and fine sand
		SS						2	CL		Same As Above - No sample taken

JOB NO. 6214	BORE HOLE NO. B-5
PROJECT GM-Allison	LOCATION Between Columns 32 & 34 Row S
DRILLING CONTRACTOR John Mathes	DRILLING EQUIP. D-25
HYDROGEOLOGIST Ed Ossi	DRILLER Chuck Harris
DATE START: 8-17-88 / DATE FINISH: 8-17-88	SURFACE EL. 720.00' / TOTAL DEPTH 11.0'

DRILLING	SAMPLE								GEOLOGIC LOG		
DEPTH (FT)		TYPE	NUMBER	DEPTH INTERVAL	BLOW COUNT 0/6	BLOW COUNT 6/12	BLOW COUNT 12/18	RECOVERY (IN)	USCS CLASS	CONTACT DEPTH	DESCRIPTIONS and COMMENTS
											Concrete Floor 0.0-0.9
1		SS	30	0.9-2.0		15	27	18	GP		Moderate Brown gravel with very coarse - coarse sand and some medium to fine sand
											PID Reading: 34 ppm
2		SS	31	2.0-4.0	26	26	32/42	22	GP		Moderate Brown gravel with very coarse - coarse sand and some medium to fine sand
3									CL	3.0'	2" Gravely Clay layer at 3.0'
											PID Reading: 32 ppm
4		SS	32	4.0-6.0	23	50	17/15	18	GP		Moderate Brown gravel with very coarse - coarse sand and some medium to fine sand
5									CL	5.0'	Dark Brownish Gray Clay with trace of gravel and little sand
											PID Reading: 20 ppm
6		SS	33	6.0-8.0	15	17	16/15	18	CL		Dark Brownish Gray Clay with trace of gravel and sand. Slightly moist. (Area is adjacent to 10' deep process cooling sump, may be contributing to moisture in the subsurface
7											
											PID Reading: 28 ppm
8											

JOB NO. 6214	BORE HOLE NO. B-5
PROJECT GM-Allison	LOCATION Between Columns 32 & 33 Row S
DRILLING CONTRACTOR John Mathes	DRILLING EQUIP. D-25
HYDROGEOLOGIST Ed Ossi	DRILLER Chuck Harris
DATE START: 8-17-88 / DATE FINISH: 8-17-88	SURFACE EL. 720.00' / TOTAL DEPTH 11:0'

DRILLING	SAMPLE								GEOLOGIC LOG		
DEPTH (FT)		TYPE	NUMBER	DEPTH INTERVAL	BLOW COUNT 0/6	6/12	12/18	RECOVERY (IN)	USCS CLASS	CONTACT DEPTH	DESCRIPTIONS and COMMENTS
		SS	34	8.0-10.0	5	7	52/34	12	SP	8.0	Slightly moist very coarse sand with some gravel, some medium and fine sands. Some Clay
9											
10		SS	35	10.0-11.0	40	131			SP		PID Reading: 46 ppm Same As Above
								12	CL	10.5	Dark Grey silty Clay with pebbles PID Reading: 19 ppm
11											

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JOB NO. 6214	BORE HOLE NO. B-6
PROJECT GM-Allison	LOCATION Due West of B-1-Outside 50'
DRILLING CONTRACTOR John Mathes	DRILLING EQUIP. D-25
HYDROGEOLOGIST Ed Ossi	DRILLER Chuck Harris
DATE START: 8-17-88 / DATE FINISH: 8-18-88	SURFACE EL. 719.00' / TOTAL DEPTH 13.0'

DRILLING	SAMPLE								GEOLOGIC LOG		
DEPTH (FT)		TYPE	NUMBER	DEPTH INTERVAL	BLOW COUNT 0/6	6/12	12/18	RECOVERY (IN)	USCS CLASS	CONTACT DEPTH	DESCRIPTIONS and COMMENTS
		SS	36	0.0-2.0	5	12	38/26	24	OL		Topsoil - Dark Brown silt with Clay. Trace fine sand and gravel.
1											
2											PID Reading: 18 ppm
		SS	37	2.0-4.0	10	14	13/12	15	ML		Dark Brown silt with Clay, trace of gravel.
3											
											PID Reading: 15 ppm
		SS	38	4.0-6.0	2	3	18/42	18	ML		Same As Above
									CL	4.5	Dark Brown Clay with pebbles, some fine sand and silt.
5										5.0	
									SP		Light Brown gravel with very coarse sand and some fine to medium sand.
6											PID Reading: 20 ppm
		SS	39	6.0-8.0	25	23	16/13	18	SP		Gravel with very coarse and medium grained sand, some fine grained sand.
7											
8											PID Reading: 16 ppm

PROJECT GM-Allison	LOCATION Due West of B-1 Outside-30
DRILLING CONTRACTOR John Mathes	DRILLING EQUIP. D-25
HYDROGEOLOGIST Ed Ossi	DRILLER Chuck Harris
DATE START: 8-18-88 / DATE FINISH: 8-18-88	SURFACE EL. 719.00' / TOTAL DEPTH 13.0'

DRILLING	SAMPLE							GEOLOGIC LOG		
DEPTH (FT)	TYPE	NUMBER	DEPTH INTERVAL	BLOW COUNT 0/6	6/12	12/18	RECOVERY (IN)	USCS CLASS	CONTACT DEPTH	DESCRIPTIONS and COMMENTS
	SS	40	8.0-10.0	13	33	20/13	20	SP		Light Brown very coarse sand with medium fine sand. Slightly moist.
										PID Reading: 16 ppm
	SS	41	10.0-12.0	13	16	13/32	24	SP		Light Brown very coarse sand with with medium and some fine sand, some gravel
										PID Reading: 10 ppm
	SS	42	12.0-13.0	60	100		12"	SP		Same As Above, slightly moist.
								CL	12.6'	Dark Gray Clay with silt, trace pebbles PID Reading: 11ppm

A Subsidiary of Environmental Treatment and Technologies Corp.

The Environmental Services Company

HERITAGE REMEDIATION/ENGINEERING, INC.

BORING LOG

BORING NO. ATSB-1

PROJECT- ALLISON TRANSMISSION

LOCATION- INDIANAPOLIS, INDIANA

DATE INSTALLED- 5/29/91

GEOLOGIST- R. BEYKE

HR/E JOB NO. 25369

DEPTH BELOW GRADE (FT)	OVA (PPM)	SAMPLED/ RETRIEVED INTERVALS	LITHOLOGY	LITHOLOGIC DESCRIPTIONS AND/OR REMARKS
0	0.0			0.0 to -1.8: SANDY CLAY: (Fill) dark brown (10YR3/3), slightly calcareous, loose, moist.
	1.4			-1.8 to -3.4: CLAY: (Fill) dark yellowish brown (10YR4/4), very slightly calcareous, firm, moist.
-5	5.0			-3.4 to -4.0: SILT LOAM: (Fill) yellowish brown (10YR5/4), strongly calcareous, loose, dry.
	6.0			-4.0 to -4.5: SILTY CLAY: (Fill) dark gray (5Y4/1), strongly calcareous, firm, dry
-10	10.0			-4.5 to -6.1: SANDY CLAY: (Fill) dark yellowish brown (10YR4/4), very slightly calcareous, loose.
	8.4			-6.1 to -6.6: CLAY: (Fill) dark gray (5Y4/1), noncalcareous, firm, moist.
-15	6.8			-6.6 to -7.5: CLAY WITH PEBBLES: (Fill) dark yellowish brown (10YR3/4), noncalcareous, firm, dry
-20				-7.5 to -11.0: SAND WITH PEBBLES: (Fill) light olive brown (2.5Y5/4), strongly calcareous, loose, dry, angular to subrounded, poorly sorted.
-25				-11.0 to -15.0 PEBBLES: (Fill) pea gravel.
-30				
-35				
-40				

Driller Name: R. Myers

Drilling Co.: HR/E

Drilling Method: HSA

Sampling Method: SPLIT SPOON

Total Depth (ft.): 15 feet

Weather: Cloudy, hot, humid.

HERITAGE REMEDIATION/ENGINEERING, INC

BORING LOG

BORING NO. ATSB-2

PROJECT- ALLISON TRANSMISSION

LOCATION- INDIANAPOLIS, INDIANA

DATE INSTALLED- 5/29/91

GEOLOGIST- R. BEYKE

HR/E JOB NO. 25369

DEPTH BELOW GRADE (FT)	OVA (PPM)	SAMPLED/ RETRIEVED INTERVALS	LITHOLOGY	LITHOLOGIC DESCRIPTIONS AND/OR REMARKS
0	0.0			0.0 to -5.6: SANDY CLAY: (Fill) brown (10YR4/3), very slightly calcareous, firm, dry.
-5	2.0			
	10.0			-5.6 to -14.3: SAND WITH PEBBLES: (Fill) yellowish brown (10YR5/4), strongly calcareous, loose, dry, angular to subrounded, poorly sorted, stained brown at 9.2, stained orange from 10.0- 10.2 and at 11.8 and 12.3, odors from 14.1 to 14.3 where color is dark gray (N4).
-10	42.0			
	20.0			
	68.0			
-15	110.0			-14.3 to -16.0: CLAY WITH PEBBLES: strong brown (7.5YR4/6), strongly calcareous, very firm, dry
-20				
-25				
-30				
-35				
-40				

Driller Name: R. Myers

Drilling Co.: HR/E

Drilling Method: HSA

Sampling Method: SPLIT SPOON

Total Depth (ft.): 15 feet

Weather: Cloudy, hot, humid.

HERITAGE REMEDIATION/ENGINEERING, INC

BORING LOG

BORING NO. ATSB-3

PROJECT- ALLISON TRANSMISSION

LOCATION- INDIANAPOLIS, INDIANA

DATE INSTALLED- 5/29/91

GEOLOGIST- R. BEYKE

HR/E JOB NO. 25369

DEPTH BELOW GRADE (FT)	OVA (PPM)	SAMPLED/ RETRIEVED INTERVALS	LITHOLOGY	LITHOLOGIC DESCRIPTIONS AND/OR REMARKS
0				0.0 to -3.0: SAND: (Fill) yellowish brown (10YR5/4), slightly calcareous, loose, dry to moist, angular to subrounded, poorly sorted.
	2.1			
	3.8			-3.0 to -6.2: SANDY CLAY: (Fill) grayish brown (10YR5/2), very slightly calcareous, loose, dry, from 5.0-5.6 brown (10YR4/3), from 5.6-6.2 dark gray (5Y4/1).
-5	10.0			-6.2 to -6.8: CLAY: (Fill) dark gray (5Y4/1), very slightly calcareous, firm, dry.
				-6.8 to -7.0: CLAY: (Fill) brown (10YR4/3), very slightly calcareous, firm, dry.
-10	2.6			-7.0 to -11.6: SAND: (Fill) pale yellow (5Y7/3), strongly calcareous, loose, dry, angular to subrounded, poorly sorted, from 11.0 to 11.6 strong brown (7.5YR5/8).
	12.0			-11.6 to -11.8: PEBBLES: (Fill) limestone gravel
-15				-11.8 to -15.0: SAND: (Fill) yellowish brown (10YR5/4), strongly calcareous, loose, dry, angular to subrounded, poorly sorted, strong odor at base of sand.
	120.0			-15.0 to -16.6: CLAY: (Fill) grayish brown (2.5Y5/2), to green in color, strongly calcareous, firm, moist
-20				-16.6 to -17.0: SAND WITH PEBBLES: FILL:
-25				
-30				
-35				
-40				

Driller Name: R. Myers
Drilling Co.: HR/E
Drilling Method: HSA
Sampling Method: SPLIT SPOON
Total Depth (ft.): 17 feet
Weather: Cloudy, hot, humid

HERITAGE REMEDIATION/ENGINEERING, INC.

BORING LOG

BORING NO. ATSB-4

PROJECT- ALLISON TRANSMISSION

LOCATION- INDIANAPOLIS, INDIANA

DATE INSTALLED- 5/29/91

GEOLOGIST- R. BEYKE

HR/E JOB NO. 25369

DEPTH BELOW GRADE (FT)	OVA (PPM)	SAMPLED/ RETRIEVED INTERVALS	LITHOLOGY	LITHOLOGIC DESCRIPTIONS AND/OR REMARKS
0				0.0 to -3.5: SANDY CLAY LOAM: (Fill) brown (10YR4/3), slightly calcareous, loose, dry.
	0.4			
-5	0.8			-3.5 to -6.2: SAND: (Fill) dark yellowish brown (10YR4/6), noncalcareous, loose, dry, angular to subrounded, poorly sorted.
	1.6			-6.2 to -7.4: SANDY CLAY LOAM: (Fill) dark yellowish brown (10YR4/6), very slightly calcareous, loose, moist, angular to subrounded, poorly sorted.
	8.4			
-10	12.0			-7.4 to -8.3: SAND: (Fill) brownish yellow (10YR6/8), strongly calcareous, loose, dry, angular to subrounded, poorly sorted.
	240.0			-8.3 to -13.5: SAND WITH PEBBLES: (Fill) pale brown (10YR6/3), strongly calcareous, loose, dry, angular to subrounded, poorly sorted, from 11.4-11.7 gray (5Y5/1) with odors, from 11.7 to 13.5 v. dark gray (2.5Y3/0) with strong odors.
-15	110.0			-13.5 to -15.0: CLAY LOAM: gray (10YR6/1), strongly calcareous, firm, dry to moist.
-20				
-25				
-30				
-35				
-40				

Driller Name: R. Myers
Drilling Co.: HR/E
Drilling Method: HSA
Sampling Method: SPLIT SPOON
Total Depth (ft.): 15 feet
Weather: Cloudy, hot, humid

HERITAGE REMEDIATION/ENGINEERING, INC.

BORING LOG

BORING NO. ATSB-5

PROJECT- ALLISON TRANSMISSION

LOCATION- INDIANAPOLIS, INDIANA

DATE INSTALLED- 5/30/91

GEOLOGIST- R. BEYKE

HR/E JOB NO. 25369

DEPTH BELOW GRADE (FT)	OVA (PPM)	SAMPLED/ RETRIEVED INTERVALS	LITHOLOGY	LITHOLOGIC DESCRIPTIONS AND/OR REMARKS
0	1.0			0.0 to -7.3: SAND: (Fill) light brownish gray (10YR6/2), slightly calcareous, loose, moist, angular to subrounded, poorly sorted, from 4.0 to 7.3 yellowish brown (10YR5/6).
-5	0.8			
	0.2			
	0.5			-7.3 to -8.0: SANDY LOAM: (Fill) dark gray (10YR4/1), very slightly calcareous, firm, moist to wet
-10	10.0			-8.0 to -8.4: SANDY CLAY: (Fill) dark gray (5Y4/1), noncalcareous, firm, moist.
	12.0			-8.4 to -17.5: SANDY CLAY LOAM: (Fill) olive gray (5Y5/2), slightly calcareous, loose, moist to wet, silty clay seams from 14.0-14.2 and 14.7-14.8, wet from 16.3 to 17.5, odors from 12.0-17.5
-15	100.0			
	630.0			
	480.0			-17.5 to -19.1: SILT: mixed with fine sand, dark gray (5Y4/1), strongly calcareous, firm, dry to moist.
-20	96.0			-19.1 to -20.0: CLAY LOAM: dark gray (5Y4/1), strongly calcareous, very firm, dry.
-25				
-30				
-35				
-40				

Driller Name: R. Myers

Drilling Co.: HR/E

Drilling Method: HSA

Sampling Method: SPLIT SPOON

Total Depth (ft.) 20 feet

Weather: sunny, hot, humid.

HERITAGE REMEDIATION/ENGINEERING, INC.

BORING LOG

BORING NO. ATSB-6

PROJECT- ALLISON TRANSMISSION

LOCATION- INDIANAPOLIS, INDIANA

DATE INSTALLED- 5/30/91

GEOLOGIST- R. BEYKE

HR/E JOB NO. 25369

DEPTH BELOW GRADE (FT)	OVA (PPM)	SAMPLED/ RETRIEVED INTERVALS	LITHOLOGY	LITHOLOGIC DESCRIPTIONS AND/OR REMARKS
0	0.1			0.0 to -5.0: SANDY CLAY LOAM: (Fill) brown (10YR4/3), slightly calcareous, firm, dry.
-5	4.8			-5.0 to -11.0: SAND WITH PEBBLES: (Fill) dark yellowish brown (10YR4/4), strongly calcareous, loose, moist, angular to subrounded, poorly sorted
-10	6.0 5.2			
	1000.0			-11.0 to -11.5: SANDY LOAM: (Fill) olive gray (5Y4/2), slightly calcareous, firm, moist to wet.
				-11.5 to -13.1: SAND: (Fill) very dark gray (5Y3/1), slightly calcareous, loose, wet, strong odors.
-15	1000.0			-13.1 to -15.0: CLAY LOAM: dark gray (5Y4/1), very slightly calcareous, very firm, dry.
-20				
-25				
-30				
-35				
-40				

Driller Name: R. Myers
Drilling Co.: HR/E
Drilling Method: HSA
Sampling Method: SPLIT SPOON
Total Depth (ft.): 15 feet
Weather: Cloudy, hot, humid

NOTE: OVA of 1000.0 is actually >1000.0

HERITAGE REMEDIATION/ENGINEERING, INC.

BORING LOG

BORING NO. ATSB-7

PROJECT- ALLISON TRANSMISSION

LOCATION- INDIANAPOLIS, INDIANA

DATE INSTALLED- 5/30/91

GEOLOGIST- R. BEYKE

HR/E JOB NO. 25369

DEPTH BELOW GRADE (FT)	OVA (PPM)	SAMPLED/ RETRIEVED INTERVALS	LITHOLOGY	LITHOLOGIC DESCRIPTIONS AND/OR REMARKS
0				0.0 to -0.7: CONCRETE
	0.0			-0.7 to -3.0: SAND: (Fill) brown (10YR4/3), strongly calcareous, loose, dry.
	6.2			-3.0 to -5.2: SANDY CLAY LOAM: (Fill) dark yellowish brown (10YR3/6), very slightly calcareous, loose, dry to moist.
-5	4.0			-5.2 to -6.2: SAND: (Fill) dark yellowish brown (10YR4/6), noncalcareous, loose, moist, angular to subrounded, poorly sorted.
	3.4			-6.2 to -7.7: SANDY CLAY LOAM: (Fill) v. dark grayish brown (10YR3/2), very slightly calcareous, loose, dry to moist.
-10	1.4			-7.7 to -11.8: SAND: (Fill) dark yellowish brown (10YR4/6), noncalcareous, loose, moist, angular to subrounded, poorly sorted, becoming coarser with depth.
	0.4			-11.8 to -13.6: CLAY LOAM: dark gray (10YR4/1), strongly calcareous, very firm, dry.
-15	18.0			-13.6 to -14.5: SILT: dark gray (10YR4/1), strongly calcareous, firm, dry.
				-14.5 to -15.0: SAND: fine, dark gray (10YR4/1), strongly calcareous, firm, dry, very well sorted
-20				
-25				
-30				
-35				
-40				

Driller Name: R. Myers
Drilling Co.: HR/E
Drilling Method: HSA
Sampling Method: SPLIT SPOON
Total Depth (ft.): 15 feet
Weather: Cloudy, hot, humid

HERITAGE REMEDIATION/ENGINEERING, INC

BORING LOG

BORING NO. ATSB-8

PROJECT- ALLISON TRANSMISSION

LOCATION- INDIANAPOLIS, INDIANA

DATE INSTALLED- 5/31/91

GEOLOGIST- R. BEYKE

HR/E JOB NO. 25369

DEPTH BELOW GRADE (FT)	OVA (PPM)	SAMPLED/ RETRIEVED INTERVALS	LITHOLOGY	LITHOLOGIC DESCRIPTIONS AND/OR REMARKS
0	44.0			0.0 to -3.8: SANDY CLAY LOAM: (Fill) dark brown (10YR3/3), slightly calcareous, loose, dry to moist.
-5	12.0			-3.8 to -7.5: SANDY CLAY: (Fill) yellowish brown (10YR5/4), very slightly calcareous, firm, moist, sand seams at 5.3-5.5 and 5.8-6.0.
	7.4			
	0.0			-7.5 to -11.9: SAND: (Fill) brown (10YR5/3), slightly calcareous, loose, moist, angular to subrounded, moderately sorted, becomeing coarser with depth.
-10	0.8			
	11.0			-11.9 to -13.2: CLAY LOAM: (Fill) yellowish brown (10YR5/4), strongly calcareous, very firm, dry.
-15	10.0			-13.2 to -15.0: CLAY LOAM: gray (10YR5/1), strongly calcareous, very firm, dry
-20				
-25				
-30				
-35				
-40				

Driller Name: R. Myers
Drilling Co.: HR/E
Drilling Method: HSA
Sampling Method: SPLIT SPOON
Total Depth (ft.): 15 feet
Weather: Sunny, hot, humid.

HERITAGE REMEDIATION/ENGINEERING, INC.

BORING LOG

BORING NO. ATSB-9

PROJECT- ALLISON TRANSMISSION

LOCATION- INDIANAPOLIS, INDIANA

DATE INSTALLED- 5/31/91

GEOLOGIST- R. BEYKE

HR/E JOB NO. 25369

DEPTH BELOW GRADE (FT)	OVA (PPM)	SAMPLED/ RETRIEVED INTERVALS	LITHOLOGY	LITHOLOGIC DESCRIPTIONS AND/OR REMARKS
0	1.2			0.0 to -5.4: SANDY CLAY LOAM: (Fill) dark brown (10YR3/3), noncalcareous, loose, moist.
-5	0.2			
	1.8			-5.4 to -11.1: SAND: (Fill) brown (10YR5/3), strongly calcareous, loose, dry, angular to subrounded, very poorly sorted.
	0.6			
-10	6.1			
	310.0			-11.1 to -11.9: SAND: (Fill) very dark gray (N3), slightly calcareous, loose, moist, angular to subrounded, very poorly sorted, strong odors.
-15	90.0			-11.9 to -13.4: CLAY: (Fill) dark gray (5Y4/1), very slightly calcareous, very firm, dry to moist, strong odors.
				-13.4 to -15.0: CLAY LOAM: dark gray (5Y4/1), slightly calcareous, very firm, dry to moist.
-20				
-25				
-30				
-35				
-40				

Driller Name: R. Myers
Drilling Co.: HR/E
Drilling Method: HSA
Sampling Method: SPLIT SPOON
Total Depth (ft.): 15 feet
Weather: Sunny, hot, humid

HERITAGE REMEDIATION/ENGINEERING, INC.

BORING LOG

BORING NO. ATSB-10

PROJECT- ALLISON TRANSMISSION

LOCATION- INDIANAPOLIS, INDIANA

DATE INSTALLED- 5/31/91

GEOLOGIST- R BEYKE

HR/E JOB NO. 25369

DEPTH BELOW GRADE (FT)	OVA (PPM)	SAMPLED/ RETRIEVED INTERVALS	LITHOLOGY	LITHOLOGIC DESCRIPTIONS AND/OR REMARKS
0	1.4			0.0 to -2.8: SANDY CLAY LOAM: (Fill) dark grayish brown (2.5Y4/2), strongly calcareous, firm, dry.
	11.0			-2.8 to -5.3: SAND: (Fill) yellowish brown (10YR5/4), strongly calcareous, loose, dry, angular to subrounded, very poorly sorted.
-5	0.2			-5.3 to -6.0: SANDY CLAY: (Fill) yellowish brown (10YR5/4), slightly calcareous, firm, moist.
	3.4			-6.0 to -8.3: SANDY CLAY LOAM: (Fill) yellowish brown (10YR5/4), strongly calcareous, firm, moist.
-10	22.0			-8.3 to -14.0: SAND: (Fill) olive gray (5Y4/2), strongly calcareous, loose, moist, angular to subrounded, poorly sorted, from 10.0-14.0 dark gray (5Y4/1), odors from 10.0-14.0.
	480.0			
	1000.0			
-15	1000.0			-14.0 to -18.0: SAND WITH PEBBLES: (Fill) olive gray (5Y4/2), very slightly calcareous, loose, wet, strong odors.
	180.0			
-20	60.0			-18.0 to -20.0: CLAY LOAM: gray (10YR5/1), very slightly calcareous, firm, dry to moist.
-25				
-30				
-35				
-40				

Driller Name: R. Myers
Drilling Co: HR/E
Drilling Method: HSA
Sampling Method: SPLIT SPOON
Total Depth (ft.): 20 feet
Weather: Cloudy, hot, humid

NOTE: OVA reading of 1000.0 is actually >1000

BORING LOG

BORING NO: SB-32

PROJECT NO: IN000473.0005.9

PROJECT NAME: Allison Transmission CLIENT:

PROJECT LOCATION: Plant 2 DRILLING CONTRACTOR: Midway Services

DRILLING MTHD: Geoprobe SAMPLE MTHD:

TIME STARTED: 1400 TIME FINISHED: 1430 DATE: 2-9-00 GEOLOGIST: B. Pickard

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	1		90	<1		FILL: Brown medium to coarse sand, moist, trace gravel.	
	2		90	<1		Dark Brown Silty Clay, moist, trace sand (CL).	As, TOC soil sample
5.0	3		80	1.0		Light Brown medium sand, trace gravel, moist (SM)	
	4		80	1.4			
	5		90	1.6			
10.0	6		90	2.8			As soil sample
	7		90	3.4			
15.0	8		90	3.0			
	9		75	5.0			As, TOC soil sample
	10		75	4.7			Groundwater @ 19.0 Rock @ 19.0
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 20.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: SB-33

PROJECT NO: IN000473.0005.9

PROJECT NAME: Allison Transmission CLIENT:

PROJECT LOCATION: Plant 2 DRILLING CONTRACTOR: Midway Services

DRILLING MTHD: Geoprobe SAMPLE MTHD:

TIME STARTED: 1430 TIME FINISHED: 1500 DATE: 2-9-00 GEOLOGIST: B. Pickard

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	1		95	<1		Fill: Black, brown, and dark gray medium sand, trace gravel, moist.	
	2		95	<1		Brown Sandy Silty Clay, trace gravel, moist, plastic. (CL)	As, TOC soil sample
5.0	3		75	<1			
	4		75	<1		Light Brown medium sand, trace gravel, moist (SM)	
	5		95	<1			
10.0	6		95	1.3			As, TOC soil sample
	7		80	1.0			
15.0	8		80	1			
	9		75	1.4			As soil sample
	10		75	1.4			Groundwater @ 19.0
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 20.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: SB-34

PROJECT NO: IN000473.0005.9

PROJECT NAME: Allison Transmission CLIENT:

PROJECT LOCATION: Plant 2 DRILLING CONTRACTOR: Midway Services

DRILLING MTHD: Geoprobe SAMPLE MTHD:

TIME STARTED: 1510 TIME FINISHED: 1555 DATE: 2-9-00 GEOLOGIST: B. Pickard

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	BPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0						FILL: Black and brown medium sand, moist.	
	1		95	<1		Brown Sandy Silty Clay, moist, plastic, trace gravel (CL)	
	2		95	<1			As, TOC soil sample. MS/MSD #1
5.0	3		80	<1		Brown medium sand, moist, trace gravel (SM)	
	4		80	1.0			
	5		95	1.8			
10.0	6		95	3.0			As, TOC soil sample
	7		100	<1			
15.0	8		100	1.8			As soil sample
	9		60	<1			
	10		50	<1			Groundwater @ 19.0 Rock @ 19.0
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 20.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: BB-35

PROJECT NO: IN000473.0005.9

PROJECT NAME: Allison Transmission CLIENT:

PROJECT LOCATION: Plant 2 DRILLING CONTRACTOR: Midway Services

DRILLING MTHD: Geoprobe SAMPLE MTHD:

TIME STARTED: 1500 TIME FINISHED: 1640 DATE: 2-9-00 GEOLOGIST: B. Pickard

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	1		95	4.5		FILL: Black medium sand, moist, trace gravel, loose.	
	*2		95	<1		Brown Sandy Silty Clay, moist, plastic, trace gravel (CL)	As, TOC soil sample.
5.0	3		80	1.0		Light Brown medium sand, moist, trace gravel (SM)	
	4		80	2.0			
	*5		90	1.8			
10.0	6		90	1.4			As soil sample
	7		90	1.4			
15.0	*8		90	4.8			As, TOC soil sample
	9		80	3.8			
	10		80	4.5			Groundwater @ 19.0
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 20.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: BB-36

PROJECT NO: IN000473.0005.9

PROJECT NAME: Allison Transmission CLIENT:

PROJECT LOCATION: Plant 2 DRILLING CONTRACTOR: Midway Services

DRILLING MTHD: Geoprobe SAMPLE MTHD:

TIME STARTED: 1700 TIME FINISHED: 1730 DATE: 2-9-00 GEOLOGIST: B. Pickard

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	1		60	<1		FILL: Black medium sand, coal fragments, moist, loose.	
	2		60	<1		Brown fine to medium sand, moist, loose, trace gravel (SM)	
5.0	3		70	1.9			VOC, PNA soil sample.
	4		70	3.3			
	5		100	2.0			VOC, PNA soil sample.
10.0	6		100	1.8			
	7		100	3.9			VOC, PNA soil sample
15.0							
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 14.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: SB-37

PROJECT NO: IN000473.0005.9

PROJECT NAME: Allison Transmission CLIENT:

PROJECT LOCATION: Plant 2 DRILLING CONTRACTOR: Midway Services

DRILLING MTHD: Geoprobe SAMPLE MTHD:

TIME STARTED: TIME FINISHED: DATE: 2-10-00 GEOLOGIST: B. Pickard

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 5"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	*1		80	1.3		Light Brown fine to medium sand, trace gravel, loose (SM)	VOC, PNA, pH, Tin, Antimony, and Leadsoil sample.
	2		80	1		Brown sandy clay, moist, trace gravel (CL)	
5.0	*3		100	1.9			VOC, PNA, pH, Tin, Antimony, and Lead soil sample.
	4		100	1		Brown fine to medium sand, trace gravel, loose (SM)	Dup A @ 4-5'
	*5		75	1.5			VOC, PNA, pH, Tin, Antimony, and Lead soil sample
10.0	6		75	1.1			
	*7		100	1.4			VOC, PNA, pH, Tin, Antimony, and Lead soil sample
15.0							
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 14.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: SB-38

PROJECT NO: IN000473.0005.9

PROJECT NAME: Allison Transmission CLIENT:

PROJECT LOCATION: Plant 2 DRILLING CONTRACTOR: Midway Services

DRILLING MTHD: Geoprobe SAMPLE MTHD:

TIME STARTED: TIME FINISHED: DATE: 2-10-00 GEOLOGIST: B. Pickard

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	1		60	1		Dark Brown Sand, trace gravel (SM)	VOC, PNA, pH, Tin, Antimony, and Lead soil sample.
	2		50	1		Brown sandy clay, moist, trace gravel (CL)	
5.0	3		80	<1		Brown fine to medium sand, trace gravel, loose (SM)	VOC, PNA, pH, Tin, Antimony, and Lead soil sample.
	4		80	<1			
	5		90	<1			VOC, PNA, pH, Tin, Antimony, and Lead soil sample
10.0	6		90	1.1			
	7		95	<1			VOC, PNA, pH, Tin, Antimony, and Lead soil sample
15.0							
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 14.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: SB-10

PROJECT NO: IN000473.0005.9

PROJECT NAME: Allison Transmission

CLIENT:

PROJECT LOCATION: Plant 2

DRILLING CONTRACTOR: Midway Services

DRILLING MTHD: Geoprobe

SAMPLE MTHD:

TIME STARTED: TIME FINISHED: DATE: 2-10-00 GEOLOGIST: B. Pickard

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	1		75	<1		Brown sandy clay, moist, trace gravel, slightly plastic (CL)	VOC, PNA, pH, Tin, Antimony, and Lead soil sample.
	2		75	<1			
5.0	3		90	<1		Brown fine to medium sand, moist, loose, trace gravel (SM)	VOC, PNA, pH, Tin, Antimony, and Lead soil sample.
	4		75	<1			
	5		80	<1			VOC, PNA, pH, Tin, Antimony, and Lead soil sample
10.0	6		80	<1			
	7		80	<1			VOC, PNA, pH, Tin, Antimony, and Lead soil sample
15.0							
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 14.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: SB-11

PROJECT NO: IN000473.0005.9

PROJECT NAME: Allison Transmission

CLIENT:

PROJECT LOCATION: Plant 2

DRILLING CONTRACTOR: Midway Services

DRILLING MTHD: Geoprobe

SAMPLE MTHD:

TIME STARTED:

TIME FINISHED:

DATE: 2-10-00

GEOLOGIST: B. Pickard

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0							
	1		60	2.5		Brown medium sand, moist, trace gravel (SM)	
						Brown sandy clay, moist, trace gravel (CL)	VOC soil sample.
	2		50	1.5			
5.0	3		80	25		Brown fine to medium sand, moist, loose, trace gravel (SM)	VOC soil sample.
	4		80	22			
	5		95	24			VOC soil sample
10.0	6		95	60			VOC soil sample
							DUP B
	7		85	27			
15.0	8		85	22			
	9		90	104			VOC soil sample
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 18.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: BB-12
PROJECT NO: IN000473.0005.9

PROJECT NAME: Allison Transmission
CLIENT:
PROJECT LOCATION: Plant 2
DRILLING CONTRACTOR: Midway Services
DRILLING MTHD: Geoprobe
SAMPLE MTHD:
TIME STARTED:
TIME FINISHED:
DATE: 2-10-00
GEOLOGIST: B. Pickard

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	BPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	1		90	1.2		Brown fine to medium sand, moist, trace gravel (SM)	VOC soil sample.
	2		90	72		Brown sandy clay, moist, trace gravel (CL)	
5.0	3		90	30		Brown fine to medium sand, moist, loose, trace gravel (SM)	VOC soil sample.
	4		90	32			
	5		90	58			VOC soil sample
10.0	6		90	66			VOC soil sample
	7		50	24			
15.0	8		50	106			
	9		100	114			VOC soil sample
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 18.00'

BPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: BB-13
PROJECT NO: IN000473.0005.9

PROJECT NAME: Allison Transmission
CLIENT:
PROJECT LOCATION: Plant 2
DRILLING CONTRACTOR: Midway Services
DRILLING MTHD: Geoprobe
SAMPLE MTHD:
TIME STARTED:
TIME FINISHED:
DATE: 8-10-00
GEOLOGIST: B. Pickard

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	1		80	3.2		Brown fine to medium sand, moist, trace gravel (SM)	VOC soil sample.
	2		80	5		Brown sandy clay, moist, trace gravel (CL)	
5.0	3		80	4.6		Brown fine to medium sand, moist, loose, trace gravel (SM)	VOC soil sample.
	4		80	7.2			
	5		100	36			VOC soil sample
10.0	6		100	32			VOC soil sample
	7		95	4.4			
15.0	8		95	<1			
	9		90	<1			VOC soil sample
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 18.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: SB-11
PROJECT NO: IN000473.0005.9

PROJECT NAME: Allison Transmission
CLIENT:
PROJECT LOCATION: Plant 2
DRILLING CONTRACTOR: Midway Services
DRILLING MTHD: Geoprobe
SAMPLE MTHD:
TIME STARTED:
TIME FINISHED:
DATE: 2-11-00
GEOLOGIST: B. Pickard

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	1		95	114		FILL: Black fine to medium sand, coal fragments, trace gravel.	VOC, PNA, PCB soil sample.
	2		95	50		Brown sandy silt, moist, hard, trace gravel (SM) Below 4 Feet - Brown fine to medium sand, moist	
5.0	3		80	42			VOC, PNA, PCB soil sample.
	4		80	96			VOC, PNA, PCB soil sample
	5		95	54			
10.0	6		95	44			VOC, PNA, PCB soil sample
	7		95	4.4			
15.0							
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 14.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: BB-45

PROJECT NO: IN000473.0005.9

PROJECT NAME: Allison Transmission CLIENT:

PROJECT LOCATION: Plant 2 DRILLING CONTRACTOR: Midway Services

DRILLING MTHD: Geoprobe SAMPLE MTHD:

TIME STARTED: TIME FINISHED: DATE: 2-11-00 GEOLOGIST: B. Pickard

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	1		50	6.4		Brown Sandy Silt, moist, trace gravel (SM) Below 3.5 feet - Brown fine to medium sand, moist, loose, trace gravel	VOC, PNA, PCB soil sample.
	2		50	4			
5.0	3		75	32			VOC, PNA, PCB soil sample. DUP C
	4		75	20			
	5		90	16			VOC, PNA, PCB soil sample MS/MSD
10.0	6		90	14			
	7		95	4.2			VOC, PNA, PCB soil sample
15.0							
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 14.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: SB-16

PROJECT NO: IN000473.0005.9

PROJECT NAME: Allison Transmission

CLIENT:

PROJECT LOCATION: Plant 2

DRILLING CONTRACTOR: Midway Services

DRILLING MTHD: Geoprobe

SAMPLE MTHD:

TIME STARTED:

TIME FINISHED:

DATE: 2-11-00

GEOLOGIST: B. Pickard

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	1		50	10.2		Brown fine to medium sand, moist, trace gravel (SM) Below 1 foot - Brown sandy silt, moist, hard, trace gravel Below 3 feet - Orange-brown fine to medium sand, moist, loose, trace gravel Brown below 5 feet	VOC, PNA, PCB soil sample.
	2		50	2.5			
5.0	3		80	<1			VOC, PNA, PCB soil sample.
	4		80	<1			
	5		80	32			VOC, PNA, PCB soil sample
10.0	6		80	32			
	7		90	58			VOC, PNA, PCB soil sample
15.0							
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 14.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: BB-47

PROJECT NO: IN000473.0005.9

PROJECT NAME: Allison Transmission CLIENT:

PROJECT LOCATION: Plant 2 DRILLING CONTRACTOR: Midway Services

DRILLING MTHD: Geoprobe SAMPLE MTHD:

TIME STARTED: TIME FINISHED: DATE: 2-11-00 GEOLOGIST: B. Pickard

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	1		100	34		Brown Sandy silt, moist, hard, trace clay, trace gravel (SM) Below 3.5 feet - Brwon fine to medium sand, moist, trace gravel, trace clay	VOC, PNA, PCB soil sample.
	2		100	18			
5.0	3		40	22			VOC, PNA, PCB soil sample. DUP D
	4		40	4.8			
	5		75	29			VOC, PNA, PCB soil sample
10.0	6		75	50			VOC, PNA, PCB soil sample
	7		80	1.4			
15.0							
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 14.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: BB-4B

PROJECT NO: IN000473.0005.9

PROJECT NAME: Allison Transmission CLIENT:

PROJECT LOCATION: Plant 2 DRILLING CONTRACTOR: Midway Services

DRILLING MTHD: Geoprobe SAMPLE MTHD:

TIME STARTED: TIME FINISHED: DATE: 2-11-00 GEOLOGIST: B. Pickard

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	1		80	4		Brown Sandy silt, moist, hard, trace clay, trace gravel (SM) Below 3 feet - Brown fine to medium sand, moist, trace gravel	VOC, PNA, PCB soil sample.
	2		80	2.3			
5.0	3		70	3			VOC, PNA, PCB soil sample.
	4		70	<1			
	5		70	<1			VOC, PNA, PCB soil sample
10.0	6		70	1.9			
	7		90	19.4			VOC, PNA, PCB soil sample
15.0							
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 14.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: BB-49

PROJECT NO: IN000473.0005.9

PROJECT NAME: Allison Transmission CLIENT:

PROJECT LOCATION: Plant 2 DRILLING CONTRACTOR: Midway Services

DRILLING MTHD: Geoprobe SAMPLE MTHD:

TIME STARTED: TIME FINISHED: DATE: 2-11-00 GEOLOGIST: B. Pickard

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	1		95	<1		Brown Sandy Silt, moist, hard, trace gravel (SM) Below 3.8 feet - Brown fine to medium sand, moist, trace gravel	VOC, PNA, PCB soil sample.
	2		95	2			
5.0	3		60	4.2			VOC, PNA, PCB soil sample.
	4		60	1.1			
	5		50	<1			VOC, PNA, PCB soil sample
10.0	6		50	9.6			MS/MSD VOC, PNA, PCB soil sample
	7		60	3.6			
15.0							
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 14.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: BB-50

PROJECT NO: IN000473.0005.9

PROJECT NAME: Allison Transmission CLIENT:

PROJECT LOCATION: Plant 2 DRILLING CONTRACTOR: Midway Services

DRILLING MTHD: Geoprobe SAMPLE MTHD:

TIME STARTED: TIME FINISHED: DATE: 2-11-00 GEOLOGIST: B. Pickard

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0						FILL: Brown sand	
	1		95	<1		Brown Sandy silt, moist, hard, trace gravel (SM)	VOC, PNA, PCB soil sample.
	2		95	2.8		Below 4 feet - Brown fine to medium sand, moist, loose, trace gravel	
5.0	3		90	4.0			VOC, PNA, PCB soil sample.
	4		90	20			
	5		95	72			VOC, PNA, PCB soil sample
10.0	6		95	3.8			
	7		90	47			VOC, PNA, PCB soil sample
15.0							
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 14.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: SB-51

PROJECT NO: IN000473.0005.9

PROJECT NAME: Allison Transmission CLIENT:

PROJECT LOCATION: Plant 2 DRILLING CONTRACTOR: Midway Services

DRILLING MTHD: Geoprobe SAMPLE MTHD:

TIME STARTED: TIME FINISHED: DATE: 2-11-00 GEOLOGIST: B. Pickard

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	BPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	1		75	<1		FILL: Brown sand, fine to medium, loose, dry, trace gravel	VOC, PNA, PCB soil sample.
	2		75	2.6		Brown Sandy Silt, moist, hard, trace gravel (SM) Below 5 feet - Brown fine to medium sand, moist, loose, trace gravel	
5.0	3		60	8.0			VOC, PNA, PCB soil sample.
	4		60	9.8			
	5		80	30			VOC, PNA, PCB soil sample
10.0	6		80	18.2			
	7		95	84			VOC, PNA, PCB soil sample
15.0	8		95	70			
	9		80	64			VOC, PNA, PCB soil sample
20.0							Groundwater @ 19'. Water sample collected from 19-21'
25.0							
30.0							

BOTTOM OF TEST BORING: 18.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: SB-52

PROJECT NO: IN000473.0005.9

PROJECT NAME: Allison Transmission CLIENT:

PROJECT LOCATION: Plant 2 DRILLING CONTRACTOR: Midway Services

DRILLING MTHD: Geoprobe SAMPLE MTHD:

TIME STARTED: TIME FINISHED: DATE: 2-15-00 GEOLOGIST: B. Pickard

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 5"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	1		95	<1		FILL: Brown Sand, fine to medium, loose, dry, trace gravel	VOC, PNA, PCB soil sample.
	2		95	<1		Brown Sandy Silt, moist, hard, trace gravel (SM) Below 5 feet - Brown fine to medium sand, moist, loose, trace gravel	
5.0	3		95	<1			VOC, PNA, PCB soil sample.
	4		80	1.0			VOC, PNA, PCB soil sample
	5		80	1.5			
10.0	6		90	1.6			
	7		100	1.8			VOC, PNA, PCB soil sample
15.0							
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 14.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: SB-53

PROJECT NO: IN000473.0005.9

PROJECT NAME: Allison Transmission CLIENT:

PROJECT LOCATION: Plant 2 DRILLING CONTRACTOR: Midway Services

DRILLING MTHD: Geoprobe SAMPLE MTHD:

TIME STARTED: TIME FINISHED: DATE: 2-15-00 GEOLOGIST: B. Pickard

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	#1		90	<1		Brown Sandy Silt, moist, hard, trace gravel (SM) Below 4 feet - Brown fine to medium sand, moist, loose, trace gravel	VOC, PNA, PCB soil sample.
	2		90	<1			
5.0	#3		80	1			VOC, PNA, PCB soil sample.
	#4		90	1.2			VOC, PNA, PCB soil sample
	5		90	1.8			
10.0	6		95	1			
	#7		95	1			VOC, PNA, PCB soil sample
15.0							
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 14.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: D62300GP1(0-3)3

PROJECT NO: IN000473.0005

PROJECT NAME: Allison Retooling Investigation CLIENT: Allison Transmission Division

PROJECT LOCATION: Speedway, IN DRILLING CONTRACTOR: Midway Services, Inc.

DRILLING MTHD: Geoprobe SAMPLE MTHD:

TIME STARTED: 10:10 TIME FINISHED: 10:20 DATE: 6-23-00 GEOLOGIST: S. Fisher

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	*1		100	23		6 inches concrete 4 inches FILL Light Brown Sand (fine - medium), dry, some coarse fragments (SM)	VOC 8260, PNA 8310, 8 RCRA Metals 6010/7471
5.0							
10.0							
15.0							
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 3.00'

SPT = STANDARD PENETRATION TEST

REC = SAMPLE RECOVERY

ND = NON-DETECTABLE

FID = FLAME IONIZATION DETECTOR

PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: 062300GP2(0-3)3

PROJECT NO: IN000473.0005

PROJECT NAME: Allison Retooling Investigation CLIENT: Allison Transmission Division

PROJECT LOCATION: Speedway, IN DRILLING CONTRACTOR: Midway Services, Inc.

DRILLING MTHD: Geoprobe SAMPLE MTHD:

TIME STARTED: 10:50 TIME FINISHED: 11:00 DATE: 6-23-00 GEOLOGIST: S. Fisher

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	#1		100	6.8		6 inches concrete (FILL) Dark Brown Sandy Loam, slightly moist, friable (SM)	VOC 8260, PNA 8310, 8 RCRA Metals 6010/7471
5.0							
10.0							
15.0							
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 3.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: 062300GP3(0-3)3

PROJECT NO: IN000473.0005

PROJECT NAME: Allison Retooling Investigation CLIENT: Allison Transmission Division

PROJECT LOCATION: Speedway, IN DRILLING CONTRACTOR: Midway Services, Inc.

DRILLING MTHD: Geoprobe SAMPLE MTHD:

TIME STARTED: 10:25 TIME FINISHED: 10:35 DATE: 6-23-00 GEOLOGIST: S. Fisher

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	*1		100	4.2		6 inches concrete (FILL) Brown Clay Loam, slightly moist, Friable (CL)	VOC 8260, PNA 8310, 8 RCRA Metals 6010/7471
5.0							
10.0							
15.0							
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 3.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: 062300GP4(0-3)3

PROJECT NO: IN000473.0005

PROJECT NAME: Allison Retooling Investigation

CLIENT: Allison Transmission Division

PROJECT LOCATION: Speedway, IN

DRILLING CONTRACTOR: Midway Services, Inc.

DRILLING MTHD: Geoprobe

SAMPLE MTHD:

TIME STARTED: 13:00

TIME FINISHED: 13:10

DATE: 6-23-00

GEOLOGIST: B. Fisher

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	*1		100	1.0		6 inches concrete 6 inches FILL	VOC 8260, PNA 8310, 8 RCRA Metals 6010/7471
						Dark Brown Sandy Loam, dry, friable (SM) Approximately 6 inches dark staining at 1.5 feet Below 3 feet - Dark Gray Sandy Clay Loam, dry, cohesive, some rocks	
5.0							
10.0							
15.0							
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 3.00'

SPT = STANDARD PENETRATION TEST

REC = SAMPLE RECOVERY

ND = NON-DETECTABLE

FID = FLAME IONIZATION DETECTOR

PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: 062300GP5(0-3)3

PROJECT NO: IN000473.0005

PROJECT NAME: Allison Retooling Investigation

CLIENT: Allison Transmission Division

PROJECT LOCATION: Speedway, IN

DRILLING CONTRACTOR: Midway Services, Inc.

DRILLING MTHD: Geoprobe

SAMPLE MTHD:

TIME STARTED: 11:10

TIME FINISHED: 11:20

DATE: 6-23-00

GEOLOGIST: S. Fisher

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	*1		100	4.1		6 inches concrete (FILL)	VOC 8260, PNA 8310, 8 RCRA Metals 6010/7471
						Reddish Brown Sandy Loam, dry, Friable (SM) Approximately 4 inches gray layer at 2 Feet	
5.0							
10.0							
15.0							
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 3.00'

SPT = STANDARD PENETRATION TEST

REC = SAMPLE RECOVERY

ND = NON-DETECTABLE

FID = FLAME IONIZATION DETECTOR

PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: D62300GP6(0-3)3

PROJECT NO: IN000473.0005

PROJECT NAME: Allison Retooling Investigation

CLIENT: Allison Transmission Division

PROJECT LOCATION: Speedway, IN

DRILLING CONTRACTOR: Midway Services, Inc.

DRILLING MTHD: Geoprobe

SAMPLE MTHD:

TIME STARTED: 11:30

TIME FINISHED: 11:45

DATE: 6-23-00

GEOLOGIST: B. Fisher

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	#1		100	5.0		6 inches concrete (FILL)	VOC 8260, PNA 8310, 8 RCRA Metals 6010/7471
						Brown Sandy Loam, dry, friable (SM) Approximately 4 inches gray layer at 1.5 feet	
5.0							
10.0							
15.0							
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 3.00'

SPT = STANDARD PENETRATION TEST

REC = SAMPLE RECOVERY

ND = NON-DETECTABLE

FID = FLAME IONIZATION DETECTOR

PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: 062300GP7(0-3)3

PROJECT NO: IN000473.0005

PROJECT NAME: Allison Retooling Investigation

CLIENT: Allison Transmission Division

PROJECT LOCATION: Speedway, IN

DRILLING CONTRACTOR: Midway Services, Inc.

DRILLING MTHD: Geoprobe

SAMPLE MTHD:

TIME STARTED: 9:40

TIME FINISHED: 9:50

DATE: 6-23-00

GEOLOGIST: S. Fisher

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	*1		100	0.5		6 inches concrete (FILL)	VOC 8260, PNA 8310, 8 RCRA Metals 6010/7471
						Light Brown Sand, dry, friable (SM) 2 inches gray staining at 3 feet	
5.0							
10.0							
15.0							
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 3.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: 062300GP8(0-3)3

PROJECT NO: IN000473.0005

PROJECT NAME: Allison Retooling Investigation CLIENT: Allison Transmission Division

PROJECT LOCATION: Speedway, IN DRILLING CONTRACTOR: Midway Services, Inc.

DRILLING MTHD: Geoprobe SAMPLE MTHD:

TIME STARTED: 13:20 TIME FINISHED: 13:30 DATE: 6-23-00 GEOLOGIST: S. Fisher

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	*1		75	10.0		6 inches concrete (FILL)	VOC 8260, PNA 8310, 8 RCRA Metals 6010/7471
						Light Brown Sand (fine - coarse), dry, friable (SM)	
5.0							
10.0							
15.0							
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 3.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: D62300GP9(0-3)3

PROJECT NO: IN000473.0005

PROJECT NAME: Allison Retooling Investigation

CLIENT: Allison Transmission Division

PROJECT LOCATION: Speedway, IN

DRILLING CONTRACTOR: Midway Services, Inc.

DRILLING MTHD: Geoprobe

SAMPLE MTHD:

TIME STARTED: 13:35

TIME FINISHED: 13:45

DATE: 6-23-00

GEOLOGIST: S. Fisher

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	*1		75	6.8		6 inches concrete 6 inches FILL	VOC 8260, PNA 8310, 8 RCRA Metals 6010/7471
						Dark Brown Sandy Loam, dry, cohesive (SM) Encountered a rock at 2.5 feet	
5.0							
10.0							
15.0							
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 3.00'

SPT = STANDARD PENETRATION TEST

REC = SAMPLE RECOVERY

ND = NON-DETECTABLE

FID = FLAME IONIZATION DETECTOR

PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: 092900GP10P1t3
PROJECT NO: IN000473.005T12

PROJECT NAME: Retooling Investigation
CLIENT: Allison Transmission Division
PROJECT LOCATION: Plant 3
DRILLING CONTRACTOR: Midway Services, Inc.
DRILLING MTHD: Geoprobe
SAMPLE MTHD: 4" Sample Sleeve
TIME STARTED: 10:30
TIME FINISHED: 12:30
DATE: 9/29/00
GEOLOGIST: S. Fisher

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0							
	1		100	1.0		CONCRETE (FILL)	
						REDDISH BROWN SANDY CLAY LOAM, COHESIVE, MOIST, FRIABLE	
	2		100	0		REDDISH BROWN SAND, DRY, FRIABLE, NON-COHESIVE	2-4 VOC AND METALS
5.0	3		100	0		REDDISH BROWN SANDY CLAY, FIRM, COHESIVE, SLIGHTLY MOIST	4-6 - VOC AND METALS
	4		100	0		LIGHT BROWN SAND, DRY, LOOSE, FINE-MEDIUM SAND	6-8 - VOC AND METALS
						DARK REDDISH BROWN SANDY CLAY, SLIGHTLY MOIST, COHESIVE, VERY FIRM	
	5		100	0		LIGHT BROWN SAND WITH TRACE GRAVEL, FINE-MEDIUM SAND, DRY, LOOSE	
10.0	6		100	0			
	7		100	0		GRAY CORASE SAND AND GRAVEL, DRY, LOOSE, FRIABLE, ODOR	
15.0	8		100	15			
	9		100	180			
	10		100	100		GRAY COARSE SAND AND GRAVEL, WET, LOOSE, FRIABLE, ODOR	GROUNDWATER SAMPLE - VOC, PNA, METALS
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 20.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: 092900GP11Plt3
PROJECT NO: IN000473.005T12

PROJECT NAME: Retooling Investigation
CLIENT: Allison Transmission Division
PROJECT LOCATION: Plant 3
DRILLING CONTRACTOR: Midway Services, Inc.
DRILLING MTHD: Geoprobe
SAMPLE MTHD: 4" Sample Sleeve
TIME STARTED: 12:30
TIME FINISHED: 13:00
DATE: 9/29/00
GEOLOGIST: S. Fisher

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0							
	1		100	1.0		CONCRETE (FILL)	
						LIGHT BROWN SAND, DRY, LOOSE, FRIABLE, NON-COHESIVE	
	2		100	0			2-4 VOC AND METALS DUP 3 - VOC
						DARK BROWN SAND, DRY, LOOSE, FRIABLE, NON-COHESIVE, MEDIUM GRAINED SAND	4-6 - VOC AND METALS
5.0	3		100	0			
							6-8 - VOC AND METALS
	4		100	0		BROWN SAND WITH TRACE CLAY,	
	5		100	0		BROWN SAND WITH TRACE GRAVEL	
10.0							
	6		100	0		LIGHT BROWN SAND, DRY, FRIABLE, LOOSE, NON-COHESIVE	
	7		100	0			
						LIGHT BROWN SAND, DRY, LOOSE, FRIABLE, NON-COHESIVE	
15.0	8		100	0.5			
						LIGHT BROWN SAND, DRY LOOSE, FINE-MEDIUM SAND	
	9		100	1.0		LIGHT BROWN LAND WITH TRACE GRAVEL, DRY, FINE-MEDIUM SAND	
	10		100	165		GRAY COARSE SAND AND GRAVEL, WET, LOOSE, FRIABLE, NON-COHESIVE, ODOR	GROUNDWATER SAMPLE - VOC, PNA, METALS
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 20.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

ARCADIS
GERAGHTY & MILLER

SOIL BORING LOG

Client:
Project:
Address:

PROJECT NUMBER:
BORING NUMBER: GP-12
BORING LOCATION:
SAMPLE DATE: 930-1030 9/27/00
BORING METHOD: 1030-1130 - H_2O
DRILLER:
FIELD SCIENTIST:

SOIL/ROCK DESCRIPTION	DEPTH (FT.)	SCALE (FT.)	SAMPLE INT.	SPT	% RECOVERY	TPV PPM	CN	REMARKS
1' concrete			1			5.0	0	
1-2 Sand br, mo, FR,			2			8.0	0	* VOC Metals CN
2-3.5 Fld k brw/black mottling SL		5	3			10.0	0	
3.5-5 Reddish br SL mo FR			4			6.8	0	
5-9 odor dk br SL dry		10	5			6.0	0	* VOC Metals CN
9-14 S, Ltbr, dry FR, Fine-Med			6			6.0	0	* VOC Metals
14-~~15~~ Gray/br Sand 19 dry, FR, LO, Med-co.		15	7			15	0	
19-20 wet SR Sand strong odor CS+S			8			9	0	
@ 19.75 fine sand		20	9			9	0	
GW @ 19'			10			160	0	
		25						GW Sample PNA, Metals CN 1130
		30						1100 VOC @ 1100

WATER LEVEL OBSERVATIONS

NOTED ON RODS: FT
AT COMPLETION: FT

BORING METHODS

HSA – HOLLOW STEM AUGERS
LBS – LARGE BORE SAMPLE
GEO – GEOPROBE

NOTES

SPT – STANDARD PENETRATION TEST IN 6" INCH INCREMENTS
TPV – TOTAL PHOTOIONIZABLE VAPORS
PPM – PARTS PER MILLION
ND – NONE DETECTED
NA – NOT APPLICABLE

ARCADIS
GERAGHTY & MILLER

SOIL BORING LOG

Client:
Project:
Address:

PROJECT NUMBER:
BORING NUMBER: GP-13
BORING LOCATION:
SAMPLE DATE:
BORING METHOD: 1130-
DRILLER:
FIELD SCIENTIST:

SOIL/ROCK DESCRIPTION	DEPTH (FT.)	SCALE (FT.)	SAMPLE INT.	SPT	% RECOVERY	TPV PPM	CN	REMARKS
0-1 concrete			1			2	0	
1-2 lt brn sand loose, dry			2			7	0	
2-3 Lt brn SL coh, dmo, Fl		5	3			4	0	
3-7 dk brn SL mo blk mottles			4			5.5	0	
7-15 dry lt brn sand, Lo strong odor @ 8'		10	5			55	0	* VOC Metals CN
			6			7	0	* VOC Metals CN DUP. VOC 2
15-16 black sand dry, loose			7			8.5	0	* VOC Metal CN
16-18 lt brn dry sand. loose. cr.		15	8			8.8	0	
			9			8.5	0	
Refusal @ 18'. offset by 1' Refusal @ 17' No Water Sample		20	~~10~~					
		25						
		30						

WATER LEVEL OBSERVATIONS

NOTED ON RODS: FT
AT COMPLETION: FT

BORING METHODS

HSA – HOLLOW STEM AUGERS
LBS – LARGE BORE SAMPLE
GEO – GEOPROBE

NOTES

SPT – STANDARD PENETRATION TEST IN 6" INCH INCREMENTS
TPV – TOTAL PHOTOIONIZABLE VAPORS
PPM – PARTS PER MILLION
ND – NONE DETECTED
NA – NOT APPLICABLE

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SOIL BORING LOG

Client:
Project:
Address:

PROJECT NUMBER:
BORING NUMBER: GP-14
BORING LOCATION:
SAMPLE DATE:
BORING METHOD:
DRILLER:
FIELD SCIENTIST:

SOIL/ROCK DESCRIPTION	DEPTH (FT.)	SCALE (FT.)	SAMPLE INT.	SPT	% RECOVERY	TPV PPM	REMARKS
0- Reddish brn SCL moist odor		5, 10, 15, 20, 25, 30					* hit Refusal @ 3' @ first location offset 1.5' SE Refusal @ 1' offset 1' Refusal @ 3' offset 1' Refusal @ 3' Move to GP 15 Talked w/ Phil he said to offset North of hole & take it easy. offset North ~3' Refusal offset South 6-10' Refusal offset East 4' Refusal Dave Favero OK to not sample took sample @ 2-3'

WATER LEVEL OBSERVATIONS

NOTED ON RODS: FT
AT COMPLETION: FT

BORING METHODS

HSA – HOLLOW STEM AUGERS
LBS – LARGE BORE SAMPLE
GEO – GEOPROBE

NOTES

SPT – STANDARD PENETRATION TEST IN 6" INCH INCREMENTS
TPV – TOTAL PHOTOIONIZABLE VAPORS
PPM – PARTS PER MILLION
ND – NONE DETECTED
NA – NOT APPLICABLE

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SOIL BORING LOG

PROJECT NUMBER:
BORING NUMBER: GP-15
BORING LOCATION:
SAMPLE DATE:
BORING METHOD:
DRILLER:
FIELD SCIENTIST:

Client:
Project:
Address:

SOIL/ROCK DESCRIPTION	DEPTH (FT.)	SCALE (FT.)	SAMPLE INT.	SPT	% RECOVERY	TPV PPM	CN	REMARKS
0-1 Concrete			1			0	0	
1-2 Reddish Br S			2			1.0	0	
2-3 Gray SL, SLMO, FR, coh.		5	3			1.2	0	
3-6.5 DK br SL SLMO FI, coh.			4			2.0	0	* VOC Met. CN
		10	5			1.2	0	* VOC Met CN
6.5-7 Reddish br SL, SL MO, FR			6			1.5	0	* VOC met CN
7-7.5 Green SL Odor			7			1.6	0	
7.5-13.5 Lt brn Sand, dry odor, LO, FR		15	8			1.4	0	
10-11 tiny rocks sand			9			1.0	0	
13.5-15 br S, LO dry FR N-coh		20	10			160	0	
15-18 br S dry N-coh, FR, lo fine-med		25						
18-20 gray/black wet Sand (18-18.5 coarse) (18.5-20 fine-med)		30						

WATER LEVEL OBSERVATIONS

NOTED ON RODS: FT
AT COMPLETION: FT

BORING METHODS

HSA – HOLLOW STEM AUGERS
LBS – LARGE BORE SAMPLE
GEO – GEOPROBE

NOTES

SPT – STANDARD PENETRATION TEST IN 6" INCH INCREMENTS
TPV – TOTAL PHOTOIONIZABLE VAPORS
PPM – PARTS PER MILLION
ND – NONE DETECTED
NA – NOT APPLICABLE

ARCADIS
GERAGHTY & MILLER

SOIL BORING LOG

Client:
Project:
Address:

PROJECT NUMBER:
BORING NUMBER:
BORING LOCATION: GP-16
SAMPLE DATE:
BORING METHOD:
DRILLER:
FIELD SCIENTIST:

SOIL/ROCK DESCRIPTION	DEPTH (FT.)	SCALE (FT.)	SAMPLE INT.	SPT	% RECOVERY	TPV PPM	CN	REMARKS
0-1 concrete						2	0	
1-3 Reddish br FILL sand w/trace gravel dry, LO, N-coh						10		* MS/MSD VOC Metals CN
3-6 dk br SL, coh, FR, Sl me.		5			75	6		
6-7 Lt br sand dry trace gravel						6		
7-15 dk br SCL Sl mo, Fl, coh		10			25 Rock with	6 4		
15-16 dk br SL Sl mo FR, Coh		15			25 Rock with	6		
16-18 Lt br sand dry, FR, LO, N coh. SL odor						2		
18-18.3 black sand wet (oily) St. odor, N-coh FR		20				150		
18.3-19 Gray sand wet St odor N coh FR		25						
19-20 br sand LO wet FR, N coh		30						

WATER LEVEL OBSERVATIONS

NOTED ON RODS: FT
AT COMPLETION: FT

BORING METHODS

HSA – HOLLOW STEM AUGERS
LBS – LARGE BORE SAMPLE
GEO – GEOPROBE

NOTES

SPT – STANDARD PENETRATION TEST IN 6" INCH INCREMENTS
TPV – TOTAL PHOTOIONIZABLE VAPORS
PPM – PARTS PER MILLION
ND – NONE DETECTED
NA – NOT APPLICABLE

BORING LOG

BORING NO: D92800GP17Plt3
PROJECT NO: IN000473.005T12

PROJECT NAME: Retooling Investigation
CLIENT: Allison Transmission Division
PROJECT LOCATION: Plant 3
DRILLING CONTRACTOR: Midway Services, Inc.
DRILLING MTHD: Geoprobe
SAMPLE MTHD: 4" Sample Sleeve
TIME STARTED: 16:30
TIME FINISHED: 17:30
DATE: 9/26/00
GEOLOGIST: S. Fisher

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	1		100	0		GRASS DARK BROWN SANDY LOAM, MOIST, COHESIVE, FRIABLE	0-1.5 - METALS AND CYANIDE
	2		100	0		LIGHT BROWN SAND, DRY, FRIABLE, LOOSE, NON-COHESIVE	
5.0	3		100	0		DARK BROWN SANDY CLAY	3.5-5.5 - METALS AND CYANIDE
	4		100	0		LIGHT BROWN SAND, MOIST, LOOSE, NON-COHESIVE, FRIABLE	
	5		100	0			
10.0	6		100	0			10-12 - METALS AND CYANIDE
	7		100	0			
15.0	8		100	0			
	9		100	0.2			
	10		100	0.4		BROWN SAND, MOIST, LOOSE, NON-COHESIVE, FRIABLE	
20.0	11		100	0.6		GRAY SAND, MOIST	
	12		100	105		BROWN/GRAY SAND, WET, FRIABLE, COHESIVE, TRACE SILT, ODOR	
25.0	13		100	100		BLACK/GRAY SAND, WET	
	14		100	20			
30.0							

BOTTOM OF TEST BORING: 26.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: D928006P18Plt3

PROJECT NO: IN000473.005T12

PROJECT NAME: Retooling Investigation

CLIENT: Allison Transmission Division

PROJECT LOCATION: Plant 3

DRILLING CONTRACTOR: Midway Services, Inc.

DRILLING MTHD: Geoprobe

SAMPLE MTHD: 4" Sample Sleeve

TIME STARTED: 17:30 TIME FINISHED: 18:30 DATE: 9/28/00 GEOLOGIST: B. Fisher

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	1		100	0		GRASS DARK BROWN SILT LOAM, MOIST, COHESIVE, FRIABLE	
	2		100	0			2-4 - METALS AND CYANIDE
5.0	3		100	0		DARK BROWN SILTY CLAY, COHESICE, FIRM, MOIST	4-6 - METALS AND CYANIDE
	4		100	0			
	5		100	0		LIGHT BROWN SAND, DRY, NON-COHESIVE, LOOSE, FINE-MEDIUM SAND	8-10 - METALS AND CYANIDE
10.0	6		100	0			
	7		100	0		BROWN SAND, MOIST, LOOSE, MEDIUM-COARSE SAND	
15.0	8		100	0			
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 16.00'

SPT = STANDARD PENETRATION TEST

REC = SAMPLE RECOVERY

ND = NON-DETECTABLE

FID = FLAME IONIZATION DETECTOR

PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: 092900GP19Plt3

PROJECT NO: IN000473.005T12

PROJECT NAME: Retooling Investigation

CLIENT: Allison Transmission Division

PROJECT LOCATION: Plant 3

DRILLING CONTRACTOR: Midway Services, Inc.

DRILLING MTHD: Geoprobe

SAMPLE MTHD: 4" Sample Sleeve

TIME STARTED: 12:20

TIME FINISHED: 13:30

DATE: 9/29/00

GEOLOGIST: S. Fisher

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	1		100	0		GRASS DARK BROWN SANDY LOAM, COHESIVE, FRIABLE, MOIST	1-3 - METALS AND CYANIDE
	2		100	0		DARK BROWN SILTY CLAY LOAM, MOIST, FIRM, COHEISVE	
5.0	3		100	0		DARK BROWN SANDY CLAY LOAM, FIRM, COHESIVE, MOIST	6-8 - METALS AND CYANIDE
	4		100	0			
	5		100	0		LIGHT BROWN SAND, DRY, NON-COHESIVE, LOOSE, MEDIUM-COARSE SAND	8-10 - METALS AND CYANIDE
10.0	6		100	0			
	7		100	0			
15.0							
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 14.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

BORING LOG

BORING NO: D92900GP20Plt3

PROJECT NO: IN000473.005T12

PROJECT NAME: Retooling Investigation

CLIENT: Allison Transmission Division

PROJECT LOCATION: Plant 3

DRILLING CONTRACTOR: Midway Services, Inc.

DRILLING MTHD: Geoprobe

SAMPLE MTHD: 4" Sample Sleeve

TIME STARTED: 13:30

TIME FINISHED: 14:30

DATE: 9/29/00

GEOLOGIST: S. Fisher

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	REMARKS
0.0	1		100	0		GRASS DARK BROWN SILT LOAM, MOIST, COHESIVE, FRIABLE	1-3 - METALS AND CYANIDE
	2		100	0			3-5 - METALS AND CYANIDE
5.0	3		100	0		DARK BROWN SANDY CLAY, MOIST COHESIVE, FIRM	
	4		100	0		LIGHT BROWN SAND, DRY, LOOSE, MEDIUM - COARSE SAND WITH SOME COARSE FRAGMENTS	
	5		100	0			
10.0	6		100	0			10-12 - METALS AND CYANIDE
	7		100	0			
15.0	8		100	0			
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 16.00'

SPT = STANDARD PENETRATION TEST

REC = SAMPLE RECOVERY

ND = NON-DETECTABLE

FID = FLAME IONIZATION DETECTOR

PID = PHOTO-IONIZATION DETECTOR

ARCADIS

BORING LOG

BORING LOG: **GP101**

TOTAL DEPTH: **26.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Midway Services
SITE LOCATION:	Speedway, Indiana	DRILLER:	John Grider
LOGGED BY:	MJ	DRILLING METHOD:	Geoprobe
DATE STARTED:	4/19/2001	COORDINATES	
DATE COMPLETED:	4/19/2001	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		FILL: asphalt and fill gravel	D		0
		CLAY: Silty clay, 10YR2/1 black, dry, slightly plastic, slight odor, trace sand and gravel. Changes to 10YR5/4 yellowish brown at 3.5 feet.	D		2
-5		~~SAND: Sand and gravel, 10YR4/4 dark yellowish brown, dry,~~ loose, medium to coarse, slight odor. Staining and odor at 21.5 feet.	D		0
					0
					1
-10					0
					2
-15					0
					0
					0
-20					90
				GP101 (22-24)	90
		SILT: Sandy silt, 2.5Y5/0 gray, moist, stained,odor	M		
-25		SAND: Sand and gravel, 10YR4/4 dark yellowish brown, wet, loose, staining, odor	W		80

ARCADIS

BORING LOG

BORING LOG: **GP102**

TOTAL DEPTH: **28.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Midway Services
SITE LOCATION:	Speedway, Indiana	DRILLER:	John Grider
LOGGED BY:	MJ	DRILLING METHOD:	Geoprobe
DATE STARTED:	4/19/2001	COORDINATES	
DATE COMPLETED:	4/19/2001	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		FILL: asphalt and fill gravel	D		0
		CLAY: Silty clay, 10YR3/2 very dark grayish brown, dry, slightly plastic, slightly sticky, trace sand and gravel	D		0
-5		SAND: Sand and gravel, 10YR4/4 dark yellowish brown, dry, loose, medium to coarse	D		0
					0
					0
-10					0
					0
-15					0
					NA
-20					0
					0
				GP102 (22-24)	90
-25		SILT: Sandy silt, 2.5Y2/0 black, moist, stained, odor, water at 26 feet.	M		50
		SAND: Sand and gravel, 10YR4/4 dark yellowish brown, wet, loose, staining, odor	W		48

ARCADIS

BORING LOG

BORING LOG: **GP103**

TOTAL DEPTH: **24.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Midway Services
SITE LOCATION:	Speedway, Indiana	DRILLER:	John Grider
LOGGED BY:	MJ	DRILLING METHOD:	Geoprobe
DATE STARTED:	4/19/2001	COORDINATES	
DATE COMPLETED:	4/19/2001	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		TOPSOIL: top soil	M		0
		CLAY: Silty clay, 10YR4/2 brown, moist, plastic, trace sand and gravel			0
-5		SAND: Sand and gravel, 10YR4/4 dark yellowish brown, dry, loose, medium to coarse. Slight odor at 19 feet. Moist, staining, odor at 22 feet.	D		0
					0
					0
-10					0
					0
-15					0
					0
					1
-20					0
				GP103 (22-24)	180

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BORING LOG

BORING LOG: **GP104**

TOTAL DEPTH: **24.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Midway Services
SITE LOCATION:	Speedway, Indiana	DRILLER:	John Grider
LOGGED BY:	MJ	DRILLING METHOD:	Geoprobe
DATE STARTED:	4/19/2001	COORDINATES	
DATE COMPLETED:	4/19/2001	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		FILL: top soil	M		0
		CLAY: Silty clay, 10YR4/3 brown, moist, plastic, slightly sticky, trace sand and gravel			0
					0
-5					0
					0
					0
-10					0
					0
-15					0
					3
		SILT: Sandy silt, 2.5Y5/0 gray, moist, stained, odor	M		
-20		SAND: Sand and gravel, 2.5Y4/1 dark gray, wet, loose, medium to coarse grained, staining, odor	W M		23
		SAND: Sand and gravel, 10YR4/4 dark yellowish brown, moist, loose, medium to coarse grained, staining, odor		GP104 (22-24)	55
		SAND: Sand and gravel, 2.5Y4/1 dark gray moist, loose, medium to coarse grained, staining, odor	M		

ARCADIS

BORING LOG

BORING LOG: **GP105**

TOTAL DEPTH: **32.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Midway Services
SITE LOCATION:	Speedway, Indiana	DRILLER:	John Grider
LOGGED BY:	MJ	DRILLING METHOD:	Geoprobe
DATE STARTED:	4/19/2001	COORDINATES	
DATE COMPLETED:	4/19/2001	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		FILL: Asphalt and gravel	D		0
		CLAY: Silty clay, 10YR4/2 brown, moist, plastic, trace sand and gravel	M		0
-5					0
		SAND: Sand and gravel, 10YR4/4 dark yellowish brown, dry, loose, medium to coarse. Moist, staining, odor at 20 feet. Water at 24 feet.	D		1
					1
-10					1
					0
-15					1
					1
					4
-20					2.2
				GP105 (22-24)	100
-25					110
					NA
					NA
-30					[illegible]

ARCADIS

BORING LOG

BORING LOG: **GP106**

TOTAL DEPTH: **26.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Midway Services
SITE LOCATION:	Speedway, Indiana	DRILLER:	John Grider
LOGGED BY:	MJ	DRILLING METHOD:	Geoprobe
DATE STARTED:	4/20/2001	COORDINATES	
DATE COMPLETED:	4/20/2001	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		FILL: Asphalt and fill gravel	D M		0
		CLAY: Silty clay, 10YR4/4 dark yellowish brown, moist, plastic, slightly sticky			0
-5					0
		SAND: Sand and gravel, 10YR4/3 brown, moist, loose, medium to coarse	M		0
					0
-10					0
					0
-15					0
					0
				GP106 (18-20)	NA
-20					0
					0.5
		LOAM: Silty clay loam, 2.5Y4/2 dark grayish brown, moist, stiff, slightly plastic, trace sand	M		
-25					0

ARCADIS

BORING LOG

BORING LOG: **GP107**

TOTAL DEPTH: **24.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Midway Services**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**John Grider**
LOGGED BY:	**MJ**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**4/20/2001**	**COORDINATES**	
DATE COMPLETED:	**4/20/2001**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		FILL: Top soil	M		0
		CLAY: Silty clay, 10YR4/3 brown, moist, plastic, slightly sticky, trace sand and gravel			0
-5		SAND: Sand and gravel, 10YR4/4 dark yellowish brown, moist, loose, medium to coarse	M		0
					0
					0
-10					0
					0
-15					0
					3
		SILT: Sandy silt, 2.5Y5/0 gray, moist, stained, odor	M		
-20		SAND: Sand and gravel, 2.5Y4/1 dark gray, wet, loose, medium to coarse grained, staining, odor	W M		23
		SAND: Sand and gravel, 10YR4/4 dark yellowish brown, moist, loose, medium to coarse grained, staining, odor		GP107 (22-24)	55
		SAND: Sand and gravel, 2.5Y4/1 dark gray moist, loose, medium to coarse grained, staining, odor	M		

BORING LOG

ARCADIS

BORING LOG: **GP108**

TOTAL DEPTH: **22.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Midway Services
SITE LOCATION:	Speedway, Indiana	DRILLER:	John Grider
LOGGED BY:	MJ	DRILLING METHOD:	Geoprobe
DATE STARTED:	4/20/2001	COORDINATES	
DATE COMPLETED:	4/20/2001	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		LOAM: Silty clay loam, 10YR4/4 dark yellowish brown, moist, plastic, slightly sticky, trace sand and gravel	M		0
					0
-5					0
					0
		SAND: Sand and gravel, 10YR4/3 brown, moist, loose, medium to coarse	M		0
-10					0
					0
		CLAY: Silty sandy clay, 10YR4/3 brown, moist, soft, slightly plastic, sticky, trace gravel	M	GP108 (14-16)	0
-15		SAND: Sand and gravel, 10YR4/3 brown, moist, loose, medium to coarse grained	M		0
					0
		SAND: Clayey silty sand, 10YR4/3 brown, moist, soft, slightly plastic, slightly sticky	M		
-20				GP108 (20-22)	50
		SAND: Sand and gravel, 2.5Y4/2 dark grayish brown, wet, loose, medium to coarse grained, stained, odor	W		

BORING LOG

ARCADIS

BORING LOG: **GP109**

TOTAL DEPTH: **14.50**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Midway Services
SITE LOCATION:	Speedway, Indiana	DRILLER:	Rob
LOGGED BY:	JS	DRILLING METHOD:	Geoprobe
DATE STARTED:	4/21/2001	COORDINATES	
DATE COMPLETED:	4/21/2001	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		SAND: Sand and gravel, 10YR5/4 yellowish brown, dry, non-plastic, non-cohesive, fine to very coarse, loose	D		45
					90
					120
-5		CLAY: Clay, 10YR4/4 dark yellowish brown, dry, plastic, sticky, firm, sweet odor, trace sand and gravel	D		110
				GP109 (8-10)	250
-10				GP109 (10-12)	210
		LOAM: Clay loam, 10YR5/1 gray, dry, plastic, sticky, sweet odor	D		160

ARCADIS

BORING LOG

BORING LOG: **GP110**

TOTAL DEPTH: **18.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Midway Services
SITE LOCATION:	Speedway, Indiana	DRILLER:	Rob
LOGGED BY:	JS	DRILLING METHOD:	Geoprobe
DATE STARTED:	4/21/2001	COORDINATES	
DATE COMPLETED:	4/21/2001	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		SAND: Sand and gravel, 10YR5/4 yellowish brown, dry, nonplastic, noncohesive, fine to very coarse, loose	D		NA
					110
					110
-5					
					180
					160
-10					160
		CLAY: Silty clay, 10YR5/4 yellowish brown, dry, slightly plastic, slightly sticky, friable, sweet odor, trace sand and gravel	D	GP110 (12-14)	180
		SAND: Sand and gravel, 10YR5/4 yellowish brown, dry, nonplastic, noncohesive, fine to very coarse, loose	D	GP110 (14-16)	200
-15		CLAY: Clay, 10YR5/1 gray, dry, sticky, plastic, sweet odor, firm	D		360

ARCADIS

BORING LOG

BORING LOG: **GP111**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Midway Services
SITE LOCATION:	Speedway, Indiana	DRILLER:	Rob
LOGGED BY:	JS	DRILLING METHOD:	Geoprobe
DATE STARTED:	4/21/2001	COORDINATES	
DATE COMPLETED:	4/21/2001	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		SAND: Sand and gravel, 10YR5/2 grayish brown, dry, nonplastic, slightly cohesive, fine to very coarse, loose	D		NA
					10
					150
-5				GP111 (6-8) 100 MS/kg	150
		CLAY: Clay, 10YR4/1, dark gray, dry, slightly plastic, sticky, friable, sweet odor, trace sand and gravel	D D		
		SAND: Sand and gravel, 10YR5/2 grayish brown, dry, nonplastic, slightly cohesive, fine to very coarse, loose. Slightly moist at 10 feet.		GP111 (8-10) 73	200
-10					310
		CLAY: Clay, 10YR5/1 gray, slightly moist, plastic, sticky, firm, odor, trace sand and gravel	M		270
					160
-15					

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BORING LOG

BORING LOG: **GP112**

TOTAL DEPTH: **17.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Midway Services
SITE LOCATION:	Speedway, Indiana	DRILLER:	Rob
LOGGED BY:	JS	DRILLING METHOD:	Geoprobe
DATE STARTED:	4/21/2001	COORDINATES	
DATE COMPLETED:	4/21/2001	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		SAND: Sand and gravel, 10YR5/4 yellowish brown, dry, nonplastic, slightly cohesive, fine to very coarse, loose	D		NA
					0
					0
-5					0
				GP112 (8-10)	0
		SAND: Sand and gravel, 10YR5/2 grayish brtown, dry, nonplastic, slightly cohesive, fine to very coarse, loose. Slightly moist at 10 feet.	D		
-10			D		0
		CLAY: Clay, 10YR5/1 gray, dry, slightly plastic, sticky, firm, trace sand and gravel			0
				GP112 (14-16)	0
-15					0

ARCADIS

BORING LOG

BORING LOG: **GP113**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Midway Services
SITE LOCATION:	Speedway, Indiana	DRILLER:	John Grider
LOGGED BY:	MJ	DRILLING METHOD:	Geoprobe
DATE STARTED:	4/23/2001	COORDINATES	
DATE COMPLETED:	4/23/2001	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		LOAM: Silty clay loam, 10YR4/4 dark yellowish brown, moist, plastic, slightly sticky, trace sand and gravel	M		0
					0
-5		SAND: Sand and gravel, 10YR4/3 brown, dry, loose, medium to coarse	D		0
					0
					0
-10					0
					0
		SAND: Sand and gravel, 10YR4/3 brown, dry, loose, medium to coarse, more fine grained clasts	D		0
-15					
				GP113 (16-18)	0
					0
-20		SAND: Sand and gravel, 2.5Y4/2 dark grayish brown moist, loose, fine to medium grained, staining, odor. Water at 23 feet.	M		40
				GP113 (22-24)	100
-25					0

ARCADIS

BORING LOG

BORING LOG: **GP114**

TOTAL DEPTH: **24.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**

SITE LOCATION: **Speedway, Indiana**

LOGGED BY: **MJ**

DATE STARTED: **4/23/2001**

DATE COMPLETED: **4/23/2001**

DRILLING INFORMATION

DRILLING CO.: **Midway Services**

DRILLER: **John Grider**

DRILLING METHOD: **Geoprobe**

COORDINATES

NORTHING:

EASTING:

ELEVATION:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		LOAM: Silty clay loam, 10YR4/3 brown, moist, plastic, slightly sticky, trace sand and gravel	M		0
					0
-5		SAND: Sand and gravel, 10YR4/3 brown, dry, loose, medium to coarse	D		0
					0
					0
-10					0
					0
-15		LOAM: Silty clay loam, 10YR4/4 dark yellowish brown, dry, stiff, slightly plastic, trace sand and gravel changes color to 2.5Y4/3 olive brown at 15 feet	D		0
		SAND: Sand and gravel, 10YR4/3 brown, dry, loose, medium to coarse grained	D	GP114 (16-18)	0
		LOAM: Sandy silty loam, 2.5Y4/2 dark grayish brown, dry, stiff	D		0
-20				GP114 (20-22)	0
		SAND: Water, formation gets more sandy, still a fine sand	W		0
		LOAM: Silty clay loam, 2.5Y4/0 dark gray, dry, stiff, slightly plastic, trace sand and gravel	D		

ARCADIS

BORING LOG

BORING LOG: **GP115**

TOTAL DEPTH: **28.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Midway Services
SITE LOCATION:	Speedway, Indiana	DRILLER:	John Grider
LOGGED BY:	MJ	DRILLING METHOD:	Geoprobe
DATE STARTED:	4/23/2001	COORDINATES	
DATE COMPLETED:	4/23/2001	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		LOAM: Silty clay loam, 10YR3/3 dark brown, moist, plastic, slightly sticky	M		0
					0
					0
-5		CLAY: Silty sandy clay, 10YR4/3 brown, moist, soft, trace gravel	M		0
					0
		SAND: Sand and gravel, 10YR4/4 dark yellowish brown, dry, loose, medium to coarse grained	D		0
-10					0
					0
					0
-15		SAND: Sand and gravel, 10YR4/4 dark yellowish brown, dry, loose, finer grained	D		0
					0
-20		SAND: Slight odor	D		40
				GP115 (22-24)	40
					5
-25				GP115 (26-28)	100

ARCADIS

BORING LOG

BORING LOG: **GP116**

TOTAL DEPTH: **24.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Midway Services
SITE LOCATION:	Speedway, Indiana	DRILLER:	John Grider
LOGGED BY:	MJ	DRILLING METHOD:	Geoprobe
DATE STARTED:	4/23/2001	COORDINATES	
DATE COMPLETED:	4/23/2001	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		LOAM: Silty clay loam, 10YR4/4 dark yellowish brown, moist, plastic, slightly sticky, trace sand and gravel	M		0
					0
		SAND: Sand and gravel, 10YR4/4 olive brown, dry, loose, medium to coarse	D		0
-5					0
					0
-10					0
					0
-15					2
		SAND: Sand and gravel, 10YR4/4 olive brown, dry, loose, medium to coarse, stained, odor	D	GP116 (18-20)	30
-20					30
				GP116 (22-24)	100

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BORING LOG

BORING LOG: **GP117**

TOTAL DEPTH: **18.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Midway Services**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Rob**
LOGGED BY:	**MJ**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**4/24/2001**	**COORDINATES**	
DATE COMPLETED:	**4/24/2001**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		FILL: fill gravel			0
					0
					4
-5					0
		FILL: fill gravel, slight odor			NA
		SAND: Sand and gravel, 10YR4/4 dark yellowish brown, moist, loose, medium to coarse grained, slight odor	M		
-10				GP117 (10-12)	2.5
				GP117 (12-14)	3
					15
-15		SAND: Water, strong odor and staining	W		
		LOAM: Silty clay loam, 2.5Y3/3 dark olive brown, moist, slightly plastic, very cohesive, slightly sticky, trace sand and gravel	M		4

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BORING LOG

BORING LOG: **GP118**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Midway Services
SITE LOCATION:	Speedway, Indiana	DRILLER:	Rob
LOGGED BY:	MJ	DRILLING METHOD:	Geoprobe
DATE STARTED:	4/24/2001	COORDINATES	
DATE COMPLETED:	4/24/2001	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		FILL: Fill gravel			0
					0
					0
-5					0
					NA
-10					0
		SAND: Sand and gravel, backfill material, 10YR4/4 dark yellowish brown, moist, loose, slightly cohesive, medium to coarse grained, slight odor. Water at 14.5 feet	M	GP118 (12-14)	14
-15					NA

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BORING LOG

BORING LOG: **GP119**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Midway Services
SITE LOCATION:	Speedway, Indiana	DRILLER:	Rob
LOGGED BY:	MJ	DRILLING METHOD:	Geoprobe
DATE STARTED:	4/24/2001	COORDINATES	
DATE COMPLETED:	4/24/2001	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		FILL: Fill gravel			0
					0
					0
-5					1
					1
-10					0
				GP119 (12-14)	15
		SAND: Sand and gravel, backfill material, 10YR4/4 dark yellowish brown, moist, loose, slightly cohesive, medium to fine grained, slight odor	M		NA
-15		SAND: Water, staining, odor			

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BORING LOG

BORING LOG: **GP120**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Midway Services
SITE LOCATION:	Speedway, Indiana	DRILLER:	Rob
LOGGED BY:	MJ	DRILLING METHOD:	Geoprobe
DATE STARTED:	4/24/2001	COORDINATES	
DATE COMPLETED:	4/24/2001	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		FILL: Fill gravel			0
					0
					0
-5		SAND: Sand and gravel, backfill material, 10YR4/4 dark yellowish brown, moist, loose, slightly cohesive, medium to coarse grained, slight odor	M		0
		FILL: Fill gravel			NA
-10					0
		SAND: Sand and gravel, backfill material, 10YR4/4 dark yellowish brown, moist, loose, slightly cohesive, medium to coarse grained, slight odor. Water at 14.5 feet.	M	GP120 (12-14)	3
-15					3

ARCADIS

BORING LOG

BORING LOG: **GP122**

TOTAL DEPTH: **16.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Midway Services
SITE LOCATION:	Speedway, Indiana	DRILLER:	Greg
LOGGED BY:	MJ	DRILLING METHOD:	Geoprobe
DATE STARTED:	4/23/2001	COORDINATES	
DATE COMPLETED:	4/23/2001	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		FILL: Fill gravel and sand			4
					2
		FILL: Slight odor			5.2
-5		SAND: Sand and gravel, backfill material, 10YR3/4 dark yellowish brown, moist, loose, slightly cohesive, medium to coarse grained, slight odor	M	GP122 (6-8)	0.5
				GP122 (8-10)	4.5
-10		CLAY: Silty sandy clay, backfill material, 10YR3/1 very dark gray, moist, slightly plastic, very cohesive, slightly sticky, odor and staining, trace gravel	M		80
		SAND: Sand and gravel, backfill material, 10YR4/4 dark yellowish brown, moist, loose, slightly cohesive, medium to coarse grained, odor and black staining. Water at 13.4 feet.	M		55
-15		CLAY: Silty clay, 10YR3/1 very dark gray, dry, stiff, non-plastic, non-sticky, slight odor	D		50

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BORING LOG

BORING LOG: **GP123**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Midway Services**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Greg**
LOGGED BY:	**MJ**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**4/23/2001**	**COORDINATES**	
DATE COMPLETED:	**4/23/2001**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		FILL: Concrete, fill gravel			5
					3
		SAND: Clayey sand and gravel, backfill material, 10YR3/4 dark yellowish brown, dry, slightly plastic, cohesive, medium to coarse grained	D		4.5
-5					6
		SAND: Sand and gravel, 10YR4/4 dark yellowish brown, moist, loose, fine to medium grained	M		4
-10					NA
		CLAY: Silty clay, 10YR3/1 very dark gray, moist, plastic, slightly sticky, trace sand	M	GP123 (12-14)	50
		SAND: Clayey sand, 10YR3/1 very dark gray,wet, slightly plastic, slightly cohesive, staining, odor	W		
-15					

ARCADIS

BORING LOG

BORING LOG: **GP124/MW0103**

TOTAL DEPTH: **16.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Midway Services
SITE LOCATION:	Speedway, Indiana	DRILLER:	Greg
LOGGED BY:	MJ	DRILLING METHOD:	Geoprobe
DATE STARTED:	4/23/2001	COORDINATES	
DATE COMPLETED:	4/23/2001	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		FILL: Concrete and gravel fill			0
					7.1
		CLAY: Silty clay, 10YR3/3 dark brown, moist, soft, plastic, slightly cohesive	M		4
-5					1
		SAND: Sand and gravel, backfill material, 10YR36/ dark yellowish brown, loose, dry, non-cohesive, fine to medium grained	D		
				GP124 (8-10)	8
-10					1
				GP124 (12-14)	3
		SAND: Sand and gravel, 10YR3/4 dark yellowish brown, moist to wet, loose, slight odor	M		
		LOAM: Silty clay loam, 10YR4/6 dark yellowish brown, dry, slightly plastic, changes to color 10YR4/1 dark gray at base of spoon	D		41
-15					

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BORING LOG

BORING LOG: **GP125**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Midway Services
SITE LOCATION:	Speedway, Indiana	DRILLER:	Rob
LOGGED BY:	JS	DRILLING METHOD:	Geoprobe
DATE STARTED:	4/23/2001	COORDINATES	
DATE COMPLETED:	4/23/2001	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete			0
		SAND: Sand and gravel, 10YR3/4, poorly sorted, loose			0
					0
-5					0
					0
-10		CLAY: Sandy clay, 10YR4/4, slightly sticky, slightly plastic, with sand and gravel, soft, moist	M		0
				GP125 (12-14)	3.0
		CLAY: Clay, 10YR2/1, sticky, plastic, with sand and gravel, stiff		GP125 (14-15)	12
-15					

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BORING LOG

BORING LOG: **GP126**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Midway Services
SITE LOCATION:	Speedway, Indiana	DRILLER:	Greg
LOGGED BY:	MJ	DRILLING METHOD:	Geoprobe
DATE STARTED:	4/23/2001	COORDINATES	
DATE COMPLETED:	4/23/2001	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		FILL: Concrete, fill gravel			1
					3
		SAND: Clayey sand and gravel, backfill material, 10YR3/4 dark yellowish brown, dry, slightly plastic, slightly cohesive, medium to coarse grained, brick fragments. Water at 11.5 feet.	D		NA
-5				GP126 (6-8)	1
					NA
-10				GP126 (10-12)	2.8
					0
-15					0

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BORING LOG

BORING LOG: **GP127**

TOTAL DEPTH: **16.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Midway Services
SITE LOCATION:	Speedway, Indiana	DRILLER:	Marty Hicks
LOGGED BY:	MJ	DRILLING METHOD:	Hollow Stem Auger
DATE STARTED:	4/27/2001	COORDINATES	
DATE COMPLETED:	4/27/2001	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		FILL: Concrete and gravel fill			0
		SAND: Sand and gravel, 10YR4/3 brown, moist, loose, poorly sorted, medium to coarse grained	M		0
		SAND: Still sand and gravel but gets a little more clayey	M		NA
-5					NA
				GP127 (8-10)	0
-10					0
				GP127 (12-14)	40
		SAND: Water, strong odor, formation stained black	W		
-15		LOAM: Silty clay loam, 2.5Y3/3 dark olive brown, dry, stiff, non-plastic, odor	D		40

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BORING LOG

BORING LOG: **GP128**

TOTAL DEPTH: **16.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Midway Services
SITE LOCATION:	Speedway, Indiana	DRILLER:	Marty Hicks
LOGGED BY:	MJ	DRILLING METHOD:	Hollow Stem Auger
DATE STARTED:	4/27/2001	COORDINATES	
DATE COMPLETED:	4/27/2001	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		FILL: Concrete and gravel fill			3
		SAND: Sand and gravel, 10YR4/3 brown, moist, loose, poorly sorted, medium to coarse grained	M		1
-5		SAND: Increased clay content, slightly plastic, slightly sticky	M		3.2
					1
				GP128 (8-10)	1
-10					1
		SAND: Sand and gravel, 10YR4/3 brown, moist, loose, poorly sorted, medium to coarse grained	M		0
				GP128 (14-16)	60
-15		SAND: Very thin saturated seam	W		
		LOAM: Silty clay loam, 2.5Y5/3 light olive brown, dry, stiff, non-plastic, odor	D		

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BORING LOG

BORING LOG: **GP129**

TOTAL DEPTH: **18.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Midway Services
SITE LOCATION:	Speedway, Indiana	DRILLER:	Marty Hicks
LOGGED BY:	MJ	DRILLING METHOD:	Hollow Stem Auger
DATE STARTED:	4/27/2001	COORDINATES	
DATE COMPLETED:	4/27/2001	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		FILL: Concrete and fill gravel			2.1
		CLAY: Silty sandy clay, 10YR4/3 brown, moist, slightly plastic, slightly sticky	M		1.3
-5		SAND: Sand and gravel, 10YR4/3 brown, dry, loose, medium to coarse grained	D		3
					1.2
				GP129 (8-10)	0.5
-10					1
					2
				GP129 (14-16)	3
-15		SAND: Very thin saturated zone	W		
		LOAM: Silty clay loam, 2.5Y3/3 dark olive brown, dry, stiff, slightly plastic, odor, trace sand and gravel			1

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BORING LOG

BORING LOG: **GP130**

TOTAL DEPTH: **14.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Midway Services
SITE LOCATION:	Speedway, Indiana	DRILLER:	Marty Hicks
LOGGED BY:	MJ	DRILLING METHOD:	Hollow Stem Auger
DATE STARTED:	4/30/2001	COORDINATES	
DATE COMPLETED:	4/30/2001	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		FILL: Concrete and fill gravel			0
		SAND: Sand and gravel, 10YR4/3 brown, moist, loose, poorly sorted, medium to coarse grained	M		0
					NA
-5					0
				GP130 (8-10)	0
-10					0
					NA

BORING LOG

ARCADIS

BORING LOG: **GP131**

TOTAL DEPTH: **14.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Midway Services
SITE LOCATION:	Speedway, Indiana	DRILLER:	Marty Hicks
LOGGED BY:	MJ	DRILLING METHOD:	Hollow Stem Auger
DATE STARTED:	4/30/2001	COORDINATES	
DATE COMPLETED:	4/30/2001	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		FILL: Asphalt and fill gravel			0
		SAND: Sand and gravel, 10YR4/4 dark yellowish brown, moist, loose, poorly sorted, medium to coarse grained	M		0
		SAND: Clayey sand, 10YR4/4 dark yellowish brown, moist, slightly plastic, slightly cohesive	M	GP131 (4-6)	0.5
-5					0.5
		SAND: Sand and gravel, 10YR4/4 dark yellowish brown, moist, loose, poorly sorted, medium to coarse grained	M	GP131 (8-10)	1
-10					0.5
					0.5
		SAND: Water	W		

ARCADIS

BORING LOG

BORING LOG: **GP132**

TOTAL DEPTH: **14.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Midway Services**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Marty Hicks**
LOGGED BY:	**MJ**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**4/30/2001**	**COORDINATES**	
DATE COMPLETED:	**4/30/2001**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		FILL: Asphalt and fill gravel			1
		SAND: Sand and gravel, 10YR4/4 dark yellowish brown, moist, loose, poorly sorted, medium to coarse grained	M		0
		SAND: Clayey sand, 10YR4/4 dark yellowish brown, moist, slightly plastic, slightly cohesive	M	GP132 (4-6)	0
-5					0
		SAND: Sand and gravel, 10YR4/4 dark yellowish brown, moist, loose, poorly sorted, medium to coarse grained	M	GP132 (8-10)	0
-10					0
					0
		SAND: Color change to 2.5Y4/0 dark gray	M		
		SAND: Water	W		

ARCADIS
GERAGHTY & MILLER

BORING LOG

BORING LOG: **SB0101**

TOTAL DEPTH: **22.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Dan**
LOGGED BY:	**Matt Johnston**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**9/12/2001**	**COORDINATES**	
DATE COMPLETED:	**9/12/2001**	NORTHING:	
		EASTING:	
		ELEVATION:	0.00

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		SAND: Sand with silt and clay, dry, slightly plastic, frim, trace gravel, 10YR 4/3	D	SB0101 (0-2)	.8
					8
-5					2.2
				SB0101 (8-10)	8.5
-10		SAND: Fine to medium sand, well sorted, loose, dry, 10YR 4/4	D		20
		SAND: Gravelly sand, loose, dry, 10 YR 4/4	D		17.8
-15		SAND: Gravelly sand, loose, 10YR 4/4, saturated	W		7.8
		CLAY: Silty clay, stiff, dry, sligthly plastic, trace gravel	D		2
		SAND: Fine sand, loose, moist	M		0
-20		CLAY: Silty clay, stiff, dry, slightly plastic, trace gravel	D		0

ARCADIS
GERAGHTY & MILLER

BORING LOG

BORING LOG: **SB0102**

TOTAL DEPTH: **34.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Dan**
LOGGED BY:	**Matt Johnston**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**9/12/2001**	**COORDINATES**	
DATE COMPLETED:	**9/12/2001**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		SAND: Sand with silt and clay, trace gravel, slightly plastic, firm, 10YR 4/3		SB0102 (0-2)	1
		SAND: Sand with silt and clay, trace gravel, plastic, increase in clay			0
-5					.8
		SAND: Gravelly sand, dry, loose, 10YR 4/3	D		1.5
				SB0102 (8-10)	1.5
					2
-15					
		CLAY: Silty clay, trace gravel, stiff, dry, slightly plastic	D	SB0102 (16-18)	1.8
-20					.8
					0
-25					.5
				SB0102 (26-28)	.5
-30					.5
		SAND: Poorly graded sand, wet, loose	W		

ARCADIS
GERAGHTY & MILLER

BORING LOG

BORING LOG: **SB0104**

TOTAL DEPTH: **38.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**
SITE LOCATION: **Speedway, Indiana**
LOGGED BY: **Matt Johnston**
DATE STARTED: **9/14/2001**
DATE COMPLETED: **9/14/2001**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**
DRILLER: **Dan**
DRILLING METHOD: **Hollow Stem Auger**
COORDINATES
NORTHING:
EASTING:
ELEVATION:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		SC: Clayey sands with silt, dry, slightly plastic, trace gravel, 10YR 4/3	D	SB0104 (0-2)	.5
-5					60
		SAND: Gravelly sand, loose, dry, 10YR 4/4	D		70
				SB0104 (8-10)	40
-10					45
-15					20
		CLAY: Silty clay, stiff, dry, slightly plastic	D		0
-20					0
		SAND: Medium sand, wet, (sand seam)	W		
		CLAY: Silty clay, stiff, dry, slightly plastic	D	SB0104 (22-24)	0
-25					0
				SB0104 (28-30)	0
-30					0
					0
-35		SAND: Fine sand, wet, loose	W		0
					0

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GERAGHTY & MILLER

BORING LOG

BORING LOG: **SB0105**

TOTAL DEPTH: **34.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**
SITE LOCATION: **Speedway, Indiana**
LOGGED BY: **Matt Johnston**
DATE STARTED: **9/17/2001**
DATE COMPLETED: **9/17/2001**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**
DRILLER: **Dan**
DRILLING METHOD: **Hollow Stem Auger**
COORDINATES
NORTHING:
EASTING:
ELEVATION:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		SAND: Clayey sand with silt, dry, slightly plastic, trace gravel, 10YR 4/3	D		0
					0
-5					6.5
		SAND: Gravelly sand, dry, loose, 10YR 4/1	D		20
					15
-10				SB0105 (10-12)	32
					3
-15		CLAY: Silty clay, dry, slightly plastic, trace gravel	D		0
		CLAY: Silty clay, dry, slightly plastic, trace gravel, 2.5Y 4/1	D		3
		SAND: Fine sand, wet, loose, 2.5 Y 4/1	W		0
-20					0
		CLAY: Silty clay, stiff, dry, trace gravel	D		
		SAND: Fine to medium sand, loose, wet	W		0
-25			D		0
		CLAY: Silty clay, dry, stiff, trace gravel			0
					0
-30					2
		SAND: Gravelly sand, loose, wet, 2.5Y 4/1	W		2

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BORING LOG

BORING LOG: **SB0106**

TOTAL DEPTH: **34.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Dan**
LOGGED BY:	**Matt Johnston**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**9/17/2001**	**COORDINATES**	
DATE COMPLETED:	**9/17/2001**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		SAND: Clayey sand with silt, slightly plastic, dry, trace gravel	D		0
					50
-5					25
					80
		SAND: Fine to medium sand, loose, dry, trace gravel, 10YR 4/4	D		90
-10					210
				SB0106 (12-14)	300
-15		CLAY: Silty clay, dry, stiff, trace gravel, 2.5Y 4/1	D		11
					48
-20				SB0106 (20-22)	0
					0
-25					0
					3.5
-30					0
					0
		SAND: Fine sand, loose, wet, well sorted, 2.5Y 4/1	W		0

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BORING LOG

BORING LOG: **SB0107**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Dan**
LOGGED BY:	**Matt Johnston**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**9/18/2001**	**COORDINATES**	
DATE COMPLETED:	**9/25/2001**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0107 (0-2)	0
		SAND: Loose, slightly moist, odor noted	M		0
					0
-5		CLAY: Silty clay, stiff, no odor, slightly plastic, slightly moist, trace gravel and sand, 2.5Y 4/1	M		
		SAND: Loose, dry, trace gravel, no odor	D		0
		SAND: Loose, dry, trace gravel, 10YR 4/2, oily odor with slight staining	D	SB0107 (8-10)	7
-10					

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BORING LOG

BORING LOG: **SB0108**

TOTAL DEPTH: **35.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**
SITE LOCATION: **Speedway, Indiana**
LOGGED BY: **Matt Johnston**
DATE STARTED: **9/18/2001**
DATE COMPLETED: **9/18/2001**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**
DRILLER: **Dan**
DRILLING METHOD: **Hollow Stem Auger**
COORDINATES
NORTHING:
EASTING:
ELEVATION:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0108 (0-2)	2
		SAND: Gravelly sand, loose, slightly moist, odor, fill material	M		0
-5					4
				SB0108 (7.5-9.5)	1.8
-10					
		CLAY: Silty sandy clay, firm, with gravel 2.5 Y 4/1			.5
-15					2
					2
-20					0
				SB0108 (22-24)	4
-25					0
				SB0108 (28-30)	
-30					
		SAND: Fine sand, loose, wet	W		
-35					

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BORING LOG

BORING LOG: **SB0109**

TOTAL DEPTH: **34.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**
SITE LOCATION: **Speedway, Indiana**
LOGGED BY: **Matt Johnston**
DATE STARTED: **9/18/2001**
DATE COMPLETED: **9/28/2001**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**
DRILLER: **Dan**
DRILLING METHOD: **Hollow Stem Auger**
COORDINATES
NORTHING:
EASTING:
ELEVATION:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete	M	SB0109 (0-2)	3.2
		SAND: Gravelly sand, loose, slightly moist, odor noted, 10YR 4/2			2
-5					2
		CLAY: Slightly moist, slightly plastic, tracel gravel, strong odor noted (bitter smell), 2.5Y 4/1	M		15.5
				SB0109 (8-10)	4.5
-10		SAND: Fine to medium sand, well sorted, loose, slightly moist, trace gravel, oily odor and feel , 2.5Y 4/1	M	SB0109 (10-12)	5
		SAND: Fine to medium sand, well sorted, loose, slightly moist, trace gravel, 2.5Y 4/1	M		0
-15					0
					0
					0
-20					0
					0
-25					0
				SB0109 (26-28)	0
					0
-30		SAND: Fine sand, well sorted, loose, wet	W		0
					0

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BORING LOG

BORING LOG: **SB0110**

TOTAL DEPTH: **12.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Dan**
LOGGED BY:	**Matt Johnston**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**9/18/2001**	**COORDINATES**	
DATE COMPLETED:	**9/24/2001**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0110 (0-2)	28
		SAND: Gravelly sand, loose, odor, slightly moist, 10YR 2/2	M		13.5
					10
-5		CLAY: Silty clay, stiff, dry, slightly plastic, trace gravel and sand, 2.5Y 4/1	D		
				SB0110 (8-10)	10
-10					10

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BORING LOG

BORING LOG: **SB0111**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**
SITE LOCATION: **Speedway, Indiana**
LOGGED BY: **Matt Johnston**
DATE STARTED: **9/19/2001**
DATE COMPLETED: **9/25/2001**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**
DRILLER: **Dan**
DRILLING METHOD: **Hollow Stem Auger**
COORDINATES
NORTHING:
EASTING:
ELEVATION:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0111 (0-2)	0
		SAND: Gravelly sand, loose, slightly moist, odor noted, 10YR 4/2	M		1
-5					11
				SB0111 (8-10)	11
-10					

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BORING LOG

BORING LOG: **SB0112**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**
SITE LOCATION: **Speedway, Indiana**
LOGGED BY: **Matt Johnston**
DATE STARTED: **9/18/2001**
DATE COMPLETED: **9/25/2001**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**
DRILLER: **Dan**
DRILLING METHOD: **Hollow Stem Auger**
COORDINATES
NORTHING:
EASTING:
ELEVATION:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0112 (0-2)	0
		SAND: Gravelly sand, slightly moist, loose, odor noted. Becomes compact at 6 ft Bg.	M		0
-5					
		SAND: Gravelly sand, slightly moist, odor noted, 10YR 4/2, compact	M		8.9
				SB0112 (8-10)	10
-10					

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BORING LOG

BORING LOG: **SB0113**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:		DRILLER:	**Dan**
LOGGED BY:	**Matt Johnston**	DRILLING METHOD:	
DATE STARTED:	**9/19/2001**	**COORDINATES**	
DATE COMPLETED:	**9/25/2001**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0113 (0-2)	0
		SAND: Gravelly sand, slightly moist, odor, loose, 10 YR 4/2	M		
-5		CLAY: Silty clay, slightly plastic, stiff, moist, trace gravel, 2.5Y 4/1	M		
-10		SAND: Well graded sand, loose, dry, trace gravel, 10YR 4/2	D	SB0113 (8-10)	6

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BORING LOG

BORING LOG: **SB0114**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**
SITE LOCATION: **Speedway, Indiana**
LOGGED BY: **Matt Johnston**
DATE STARTED: **9/18/2001**
DATE COMPLETED: **9/26/2001**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**
DRILLER: **Dan**
DRILLING METHOD: **Hollow Stem Auger**
COORDINATES
NORTHING:
EASTING:
ELEVATION:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0114 (0-2)	0
		SAND: Gravelly sand, loose, slightly moist, odor noted	M		0
					0
-5		CLAY: Slightly firm, slightly plastic, moist, 10YR 4/1	M		
		SAND: Loose, dry, trace gravel, 10YR 4/1	D		2.1
				SB0114 (8-10)	5
-10					

ARCADIS
GERAGHTY & MILLER

BORING LOG

BORING LOG: **SB0115**

TOTAL DEPTH: **26.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**
SITE LOCATION: **Speedway, Indiana**
LOGGED BY: **Mark Fisherkeller**
DATE STARTED: **9/26/2001**
DATE COMPLETED: **9/28/2001**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**
DRILLER: **Dan**
DRILLING METHOD: **Hollow Stem Auger**
COORDINATES
NORTHING:
EASTING:
ELEVATION:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete			
		SAND: Gravelly sand, loose, slightly moist, 10YR 4/4	M	SB0115 (0-2)	30
					50
-5					300
		SAND: Fine to medium sand, loose, dry, trace gravel	D		
		SAND: Clayey sand, slightly moist, slightly plastic, 10YR 4/3	M		55
				SB0115 (8-10)	80
-10		SAND: Loose, dry, odor at 10 ft Bg., 10YR 4/3	D	SB0115 (10-12)	300
					50
-15		CLAY: Slightly moist, stiff, slightly plastic, trace gravel	M	SB0115 (14-16)	58
					0
					130
-20		SAND: Fine sand, saturated, loose, 2.5Y 4/1			3
					0
-25					0

ARCADIS
GERAGHTY & MILLER

BORING LOG

BORING LOG: **SB0116**

TOTAL DEPTH: **26.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**
SITE LOCATION: **Speedway, Indiana**
LOGGED BY: **Mark Fisherkeller**
DATE STARTED: **9/27/2001**
DATE COMPLETED: **9/27/2001**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**
DRILLER: **Dan**
DRILLING METHOD: **Hollow Stem Auger**
COORDINATES
NORTHING:
EASTING:
ELEVATION:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0116 (0-2)	7.5
		SAND: Loose, slightly moist, 10YR 4/4	M		14
-5		SAND: Information missing			
-10		SAND: Silty sand, loose, slightly moist, poorly sorted, trace gravel, 10YR 4/4	M	SB0116 (10-12)	50
		SILT: Silt, slightly firm, slightly moist, trace sand, 2.5Y 5/1, at 20 ft. Bg increase in sand to 10-15%, trace gravel	M		10
-15					2
					2.2
				SB0116 (18-20)	2
-20		SILT: Silt, 2.5Y 5/1, slightly firm, slightly moist, trace gravel, 10-15% sand	M		1.2
					1
		SAND: clayey sand, loose to slightly compact, moist, 10YR 4/5	M		
-25		SAND: Sand, poorly sorted, saturated, trace silt and clay, 10YR 4/5	W		0

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BORING LOG

BORING LOG: **SB0117**

TOTAL DEPTH: **22.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**
SITE LOCATION: **Speedway, Indiana**
LOGGED BY: **Mark Fisherkeller**
DATE STARTED: **9/27/2001**
DATE COMPLETED: **9/27/2001**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**
DRILLER: **Dan**
DRILLING METHOD: **Hollow Stem Auger**
COORDINATES
NORTHING:
EASTING:
ELEVATION:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0117 (0-2)	0
		SAND: Gravelly sand, loose, dry, 10YR 4/8	D		0
-5		SAND: Information missing			
		SAND: Fine to medium sand, dry, loose to slightly firm, trace silts, clay, and gravel	D		20
-10		SAND: Fine to medium sand, dry, loose to slightly firm, silt, clay and gravel drop out	D	SB0117 (8-10)	10
					10
-15		SILT: Clayey silt, frim to very firm, slightly plastic, slightly moist, minor sand, 2.5Y 4/1	M		0
				SB0117 (14-16)	0
					0
					1.5
-20		SAND: Medium sand, loose, saturated, slight odor, 2.5Y 4/1	W		50

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GERAGHTY & MILLER

BORING LOG

BORING LOG: **SB0118**

TOTAL DEPTH: **4.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Dan**
LOGGED BY:	**Mark Fisherkeller**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**9/27/2001**	**COORDINATES**	
DATE COMPLETED:		NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0118 (0-2)	0
		SAND: Gravelly sand, loose, slightly moist	M		0

ARCADIS
GERAGHTY & MILLER

BORING LOG

BORING LOG: **SB0119**

TOTAL DEPTH: **38.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Dan**
LOGGED BY:	**Matt Johnston**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**9/28/2001**	**COORDINATES**	
DATE COMPLETED:	**10/1/2001**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete	M	SB0119 (0-2)	130
		SAND: Gravelly sand, slightly moist loose, slight odor	M		150
-5		CLAY: Silty sand, clay, trace gravel, slight odor, soft, slightly moist, 2.5Y 3/1			150
					158
		CLAY: Silty clay, stiff		SB0119 (8-10)	50
-10					140
				SB0119 (12-14)	500
-15					30
					8
-20					5
					3
-25					5
					5
					0
-30					0
				SB0119 (32-34)	35
-35					40
		SILT: Sandy silt, loose, saturated, no odor			30

ARCADIS
GERAGHTY & MILLER

BORING LOG

BORING LOG: **SB0120**

TOTAL DEPTH: **26.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**
SITE LOCATION: **Speedway, Indiana**
LOGGED BY: **Mark Fisherkeller**
DATE STARTED: **9/28/2001**
DATE COMPLETED: **10/2/2001**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**
DRILLER: **Dan**
DRILLING METHOD: **Hollow Stem Auger**
COORDINATES
NORTHING:
EASTING:
ELEVATION:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0120 (0-2)	50
		SAND: Gravelly sand, slightly moist, loose, 10YR 4/4	M		50
-5		CLAY: Slightly moist, firm, slightly plastic, 10YR 4/4, description based on auger cuttings	M		
		SAND: Medium to coarse sand, well sorted, loosed, solvent odor noted, trace gravel, slightly moist	M	SB0120 (8-10)	300
-10					250
		SILT: Silt, slightly moist, firm, 2.5Y 4/1. At 22 ft Bg. increase in clay to trace, very firm	M		
-15					15
-20					9
		SILT: Silt, trace clay, very firm		SB0120 (22-24)	10
-25					2
		SAND: Medium sand, well sorted, loose, saturated, 2.5Y 4/1	W		

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BORING LOG

BORING LOG: **SB0121**

TOTAL DEPTH: **14.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Dan**
LOGGED BY:	**Mark Fisherkeller**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**10/1/2001**	**COORDINATES**	
DATE COMPLETED:	**10/2/2001**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0121 (0-2)	100
		SAND: Gravelly sand, slightly moist, loose, 10YR 4/4	M		200
					400
-5		SAND: Sand, medium grained, dry, loose, tracel gravel, heavy odor, 10YR 4/1	D		300
				SB0121 (8-10)	500
-10					100
		SILT: Sandy silt, slightly firm, slightly moist, strong odor, 2.5 Y 4/1	M		200

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BORING LOG

BORING LOG: **SB0122**

TOTAL DEPTH: **30.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**
SITE LOCATION: **Speedway, Indiana**
LOGGED BY: **Mark Fisherkeller**
DATE STARTED: **10/1/2001**
DATE COMPLETED: **10/5/2001**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**
DRILLER: **Dan**
DRILLING METHOD: **Hollow Stem Auger**
COORDINATES
NORTHING:
EASTING:
ELEVATION:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		SAND: Gravelly sand, slightly moist, loose, 10YR 4/3	M	SB0122 (0-2)	120
					150
-5					320
					400
				SB0122 (8-10)	420
					700
					70
-15		CLAY: Silty clay, stiff, slightly plastic, dry, trace gravel			400
					100
-20		CLAY: Silty clay, very stiff			0
-25		CLAY: Silty clay, increase in sand, becomes loose to stiff		SB0122 (24-26)	
		SAND: Silty sand, trace clay, loose, saturated, 2.5Y 5/1	W		600
-30					200

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BORING LOG

BORING LOG: **SB0123**

TOTAL DEPTH: **26.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**

SITE LOCATION: **Speedway, Indiana**

LOGGED BY: **Mark Fisherkeller**

DATE STARTED: **10/2/2001**

DATE COMPLETED: **10/4/2001**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Dan**

DRILLING METHOD: **Hollow Stem Auger**

COORDINATES

NORTHING:

EASTING:

ELEVATION:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete	M	SB0123 (0-2)	4
		SAND: Gravelly sand, slightly moist, loose, 10YR 4/4			5
					16
-5		SAND: Information missing			
-10			M	SB0123 (12-14)	10
		CLAY: Silty clay, very firm, plastic, slightly moist, 2.5 Y 5/1			7
-15					
-20				SB0123 (20-22)	2
					2
		SAND: Silty sand, loose, saturated, trace gravel and clay, 2.5Y 5/1	W		0
-25					

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BORING LOG

BORING LOG: **SB0124**

TOTAL DEPTH: **28.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**
SITE LOCATION: **Speedway, Indiana**
LOGGED BY: **Mark Fisherkeller**
DATE STARTED: **10/3/2001**
DATE COMPLETED: **10/3/2001**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**
DRILLER: **Dan**
DRILLING METHOD: **Hollow Stem Auger**
COORDINATES
NORTHING:
EASTING:
ELEVATION:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0124 (0-2)	5
		SAND: Gravelly sand, slightly moist, loose, 10YR 4/4	M		10
-5		SAND: Fine to coarse sand, poorly sorted, slightly moist, loose, trace gravel, 10YR 4/5	M		200
-10		CLAY: trace sand and gravel, stiff, slightly moist, slightly plastic, 2.5Y 4/1. 16-22 ft. Bg. described based on auger cuttings	M	SB0124 (10-12)	2
					5
-15					2
-20					
				SB0124 (22-24)	7
-25					4
					0
		SAND: Saturated, loose, slightly plastic			

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BORING LOG

BORING LOG: **SB0125**

TOTAL DEPTH: **30.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**
SITE LOCATION: **Speedway, Indiana**
LOGGED BY: **Mark Fisherkeller**
DATE STARTED: **10/4/2001**
DATE COMPLETED: **10/8/2001**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**
DRILLER: **Dan**
DRILLING METHOD: **Hollow Stem Auger**
COORDINATES
NORTHING:
EASTING:
ELEVATION:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete	M	SB0125 (0-2)	0
		CLAY: Moist, plastic, stiff, trace gravel, 10YR 4/1	M		1
-5		SAND: Medium to coarse sand, slightly moist, loose, trace gravel, well sorted			2
					0
					0
				SB0125 (10-12)	0
		CLAY: Silty clay, dry, stiff, slightly plastic, trace gravel, 2.5Y 4/1	D		0
-15					2
				SB0125 (16-18)	0
-20					0
		SAND: Medium sand, dark grey, saturated, loose, well sorted	W		2
-25					3
					2.5
30					1
		CLAY: Moist, sandy clay			

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BORING LOG

BORING LOG: **SB0126**

TOTAL DEPTH: **36.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**
SITE LOCATION: **Speedway, Indiana**
LOGGED BY: **Mark Fisherkeller**
DATE STARTED: **10/5/2001**
DATE COMPLETED: **10/9/2001**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**
DRILLER: **Dan**
DRILLING METHOD: **Hollow Stem Auger**
COORDINATES
NORTHING:
EASTING:
ELEVATION:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0126 (0-2)	10
		SAND: Gravelly sand, loose, slightly moist	M		0
-5					10
		CLAY: Silty clay, firm to very firm, plastic, trace gravel, slightly moist, 2.5Y 4/1	M		0
				SB0126 (8-10)	15
-10					3.5
		SAND: Sand, moist, loose, poorly sorted sand, trace silt and clay, 10YR 5/5	M		8
			M		
-15		SILT: Sandy silt, slightly moist, slightly plastic, trace clay and gravel, 2.5Y 4/1	M		1
					2
		CLAY: Silty clay, slightly moist, plastic, trace gravel and sand, 2.5Y 4/1	W	SB0126 (18-20)	1
-20		SAND: Fine to medium sand saturated, loose, dark brown			2
					2.5
-25		CLAY: Silty clay, stiff, slightly plastic, trace gravel			0
					1
-30				SB0126 (30-32)	1
					1
-35		SAND: Poorly sorted sand, loose, saturated, 2.5Y 4/1	W		0

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BORING LOG

BORING LOG: **SB0127**

TOTAL DEPTH: **30.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**
SITE LOCATION: **Speedway, Indiana**
LOGGED BY: **Mark Fisherkeller**
DATE STARTED: **10/9/2001**
DATE COMPLETED: **10/10/2001**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**
DRILLER: **Dan**
DRILLING METHOD: **Hollow Stem Auger**
COORDINATES
NORTHING:
EASTING:
ELEVATION:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete	M	SB0127 (0-2)	25
		SAND: Gravelly sand, loose, slightly moist, 10YR 4/5			25
-5					0
					0
		SAND: Increase clay to trace amounts becoming slightly firm	M	SB0127 (8-10)	0
		CLAY: Stiff, slightly moist, plastic, trace sand and gravel, 2.5Y 4/1	M		1.5
		SILT: Loose to slightly stiff, slightly moist, trace sand and gravel, 2.5Y 4/1	M		7.5
-15		CLAY: Silty clay, very stiff, plastic, slightly moist, trace gravel, 2.5Y 4/1	M		3
					3
					0
-20				SB0127 (20-22)	0
					2
-25					2
		SAND: Fine to medium sand, loose, saturated, 2.5Y 4/1	W		3
					1.5
-30					

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BORING LOG

BORING LOG: **SB0128**

TOTAL DEPTH: **16.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Dan**
LOGGED BY:	**Matt Johnston**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**10/16/2001**	**COORDINATES**	
DATE COMPLETED:	**10/16/2001**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		SAND: Gravelly sand with clay, moist, non-plastic	M	SB0128 (0-2)	0
					1
-5					2
		SAND: Gravelly sand, fill, loose, moist, stained with odor at 15 ft Bg.	M		
-10				SB0128 (10-12)	1
					1
-15					40

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BORING LOG

BORING LOG: **SB0129**

TOTAL DEPTH: **14.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Dan**
LOGGED BY:	**Matt Johnston**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**10/19/2001**	**COORDINATES**	
DATE COMPLETED:	**10/19/2001**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		GRAVEL: Fill gravel, very coarse, dry	D		0
					0
		SAND: Fill sand (fine to coarse) with gravel, loose, slightly moist			1
-5					4
				SB0129 (8-10)	4
-10					4

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BORING LOG

BORING LOG: **SB0130**

TOTAL DEPTH: **18.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:		DRILLER:	**Dan**
LOGGED BY:	**Matt Johnston**	DRILLING METHOD:	
DATE STARTED:	**10/18/2001**	**COORDINATES**	
DATE COMPLETED:	**10/18/2001**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		GRAVEL: Coarse fill gravel, white, loose, dry	D		
-5				SB0130 (8-10)	6
-10		SAND: Gravelly sand with clay, slightly moist, non-plastic, stained with odor, 10YR 3/1	M		
-15		CLAY: Silty clay, stained, wet, slightly plastic, strong petro odor, 2.5Y 4/1	W	SB0130 (15-16)	180

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BORING LOG

BORING LOG: **SB0131**

TOTAL DEPTH: **12.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Dan**
LOGGED BY:	**Matt Johnston**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**10/18/2001**	**COORDINATES**	
DATE COMPLETED:	**10/18/2001**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		GRAVEL: Coarse fill gravel, loose			0
					0
					1
-5		SAND: Clay sand, slightly moist, soft, trace gravel	M		
					1
				SB0131 (8-10)	1
-10		SAND: Gravelly sand, loose, dry	D		0

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BORING LOG

BORING LOG: **SB0132**

TOTAL DEPTH: **24.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**
SITE LOCATION: **Speedway, Indiana**
LOGGED BY: **Matt Johnston**
DATE STARTED: **10/19/2001**
DATE COMPLETED: **10/19/2001**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**
DRILLER: **Dan**
DRILLING METHOD: **Hollow Stem Auger**
COORDINATES
NORTHING:
EASTING:
ELEVATION:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		GRAVEL: Coarse fill gravel		SB0132 (0-2)	0
					0
					0
-5		SAND: Gravelly sand, loose, dry, poorly sorted, 10YR 4/1	D		
					0
				SB0132 (8-10)	0
-10					0
					8
		GRAVEL: Clayey sand and gravel, very moist, very plastic, stained black, petro odor	M		30
-15		SAND: Fine sand, stained black, wet, slightly plastic, strong petro odor, 2.5 4/2, coarsens down	W		30
					4
-20		CLAY: Silty clay, stiff, dry, slightly plastic, 2.5Y 4/1	D	SB0132 (20-21)	4
				SB0132 (22-24)	2

BORING LOG

ARCADIS

BORING LOG: **SB0201**

TOTAL DEPTH: **62.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Dan Harrison**
LOGGED BY:	**Bryant Griggs**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**2/27/2002**	**COORDINATES**	
DATE COMPLETED:	**2/27/2002**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		TOPSOIL: Grass, loose material, 10YR 4/3, sticky, moist			0
		CLAY: Soft, sandy, silty, clay, plastic, sticky moist, 10YR 4/4	M		
-5					
		CLAY: Fine gravel/clay mix, moist, firm, 10YR 4/4	M		
-10		CLAY: Silty clay with fine gravel, dry, friable, 10YR 4/1	D	SB0201 (10-12)	0
		SAND: Fine-medium sand, fine gravel, moist, 10YR 4/5	M		
-15		BLANK: No recovery, spoon wet			
		SAND: Wet, silty sand, light brown, 10YR 4/4	W	SB0201 (16-20)	5
		SAND: Silty sand, fine gravel, brown, wet, 10YR 4/4	W		
-20		CLAY: Silty clay, gray, trace amounts of fine gravel, dry to moist	M		
-25		BLANK: No recovery, wet spoon, gray silty sand smear inside			
		SAND: Gray, wet, silty sand, trace fine gravel, 10YR 4/1	W		
		CLAY: Gray, moist, silty clay, firm, trace gravel	M		
-30		BLANK: No recovery, wet spoon, gray silty sand smear inside			
		CLAY: Gray, moist, silty clay, firm, gravel in matrix, odd odor	M	SB0201 (34-36)	0
		CLAY: Gray silty clay, slightly moist, frim, slightly plastic,	M		

FIELD BOREHOLE LOG

BOREHOLE NO.: **SB0201**

TOTAL DEPTH: **62.00**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
-40					
		SAND: Light gray brown gravel sand mix	W		
		SAND: Silty sand, wet, odor, 10YR 4/2	W		
-45		SAND: Silty sand and gravel, wet, odor, black streaks, 2"" thick hard clay between silty sand/silty-sand gravel	W W M		
		SAND: Silty sand, wet, 10YR 4/2	W		
		CLAY: Silty, clayey fine gravel, wet, 10YR 4/2			
-50		CLAY: Silty sand clay, soft, moist, 2"" clay firm, 10YR 4/2			
		SAND: Sandy, silty, gravel, wet, 10YR 4/3			
		BLANK: No recovery, some sluff, wet	W		
-55		SAND: Sandy, silty, gravel, wet, 10YR 4/3			
		BLANK: No recovery, silty sand smear, wet spoon			
		SAND: Silty wet sand	W		
		CLAY: Hard silty clay, 10YR 4/2			

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BORING LOG

BORING LOG: **SB0202**

TOTAL DEPTH: **26.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Randy**
LOGGED BY:	**Mark Fisherkeller**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**3/5/2002**	**COORDINATES**	
DATE COMPLETED:	**3/5/2002**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		TOPSOIL: Grass, soil, backfill, loose sandy clayey, 10YR 4/3			0 0
-5		SAND: Medium sand, trace gravel, loose, slightly moist, 10YR 6/4. Saturated at 10 feet, increased gravel at 12 feet	M		0
-10					0
-15		CLAY: Silt trace clay, non-cohesive, firable, slightly moist, 10YR 4/1	M		
		CLAY: Silty clay, trace sand and gravel, very stiff, slightly cohesive w/water added, slightly moist	M		0
-20					
-25		SAND: Fine sand, trace silt and clay, saturated, loose, 10YR 4/1	W		

BORING LOG

BORING LOG: **SB0203**

TOTAL DEPTH: **60.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Dan Harrison**
LOGGED BY:	**Bryant Griggs**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**2/28/2002**	**COORDINATES**	
DATE COMPLETED:	**3/1/2002**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		ASPHALT			0
		TOPSOIL: Backfill, clay, large rock			
		TOPSOIL: Backfill, sand clay rock mix (pit run material), moist			
-5		SAND: Yellow-brown, medium-fine sand, gravel varies in size, 10YR 5/4			
-10				SB0203 (10-12)	1
-15					
		CLAY: Sandy clay mix, some gravel, moist, slightly sticky	M		
		CLAY: Soft moist-wet, sand clay, black streak with odor at 19.5-19.7 feet, 10YR 4/4	M	SB0203 (18-20)	500
-20		BLANK: No recovery, rock in spoon			
		CLAY: Silty clay, dry, firm, 10YR 4/1	D		
-25				SB0203 (24-26)	1
		SAND: Brown medium sand with soft clay mix, very moist, 10YR 4/3	M		
-30		SAND: Medium-fine silty sand, wet	W		
		CLAY: Silty clay, firm, slightly moist, 10YR 4/1	M		

FIELD BOREHOLE LOG

BOREHOLE NO.: **SB0203**

TOTAL DEPTH: **60.00**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
-40		SAND: Silty sand, moist-wet, very compact, 10YR 4/1	M		
		SAND: Less silty sand than before, moist-wet, yellow-brown, 10YR 5/6	M M		
-45		SAND: Silty sand, moist-wet, very compact, 10YR 4/1	W M		
		SAND: Orange-yellow brown, silty sand, trace gravel, wet, 10YR 4/6	W		
-50		SAND: Clayey sand, sticky, trace gravel, very moist, 10YR 4/4	W		
		SAND: Silty sand, slightly sticky, trace gravel, wet, 10YR 4/4			
		SAND: Small grained consistent sand, very moist-wet, 10YR 4/4	W		
		SAND: Gravelly sand, low silt, trace gravel, wet, 10YR 4/1			
-55		SAND: Poorly graded sand, mostly fines, 10YR 4/4	M		
		CLAY: Silty clay, slightly moist, till, extremely firm, 10YR 4/1			
		CLAY: Silty clay, very firm, 10YR 4/1			

BORING LOG

BORING LOG: **SB0204**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Chris Harrison**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**3/1/2002**	**COORDINATES**	
DATE COMPLETED:	**3/1/2002**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE		SB0204 (0-2)	0
		SAND: Dark yellowish brown fine to medium sand and gravel, dry, 10YR 3/6	D		
-5		CLAY: Brown silty, sandy, clay, slightly moist, plastic, slightly sticky, 10YR 4/3	M		
		SAND: Light gray fine to medium sand with gravel, 10YR 6/1		SB0204 (8-10)	
-10		CLAY: Dark gray silty clay, cohesive, slightly plastic, non-sticky, dry, 10YR 4/1	D		
-15					
				SB0204 (18-20)	
-20					

BORING LOG

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BORING LOG: **SB0205**

TOTAL DEPTH: **20.00**

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PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Chris Harrison**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**3/1/2002**	**COORDINATES**	
DATE COMPLETED:	**3/1/2002**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE		SB0205 (0-2)	
		SAND: Brownfind to medium sand and gravel, dry, 10YR 4/3			
-5		CLAY: Dark brown clay, plastic, cohesive, nonsticky, moist, 10YR 3/3	M M M		
		CLAY: Light brown clay, plastic, cohesive, nonsticky, moist, 10YR 5/4	D	SB0205 (8-10)	
-10		CLAY: Light brown silty sandy clay, slightly plastic, cohesive, slightly sticky, moist, 10YR 5/4	D		
		SAND: Light gray sand (fine to medium) and gravel, dry, 10YR 6/1			
-15		CLAY: Dark gray clay, cohesive, nonplastic, nonsticky, dry, 10YR 4/1			
				SB0205 (18-20)	
-20		SAND: Dark yellowish brown fine to medium sand with gravel, wet, 10YR 4/4	W		

ARCADIS

BORING LOG

BORING LOG: **SB0206**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Chris Harrison**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**3/4/2002**	**COORDINATES**	
DATE COMPLETED:	**3/5/2002**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE		SB0206 (0-2)	0.0
		SAND: Dark yellowish brown fine to medium sand and gravel, dry, 10YR 4/4	D		
-5		CLAY: Brown silty sandy clay, slightly plastic, slightly cohesive, slightly sticky, slightly moist, gravel	M		
		SAND: Light grayish brown fine to medium sand, 10YR 5/2		SB0206 (8-10)	10.6
-10		CLAY: Dark gray clay, high plasticity, cohesive, non-sticky, slightly moist, 10YR 4/1	M		
		CLAY: Dark gray silty clay, slightly cohesive, non-sticky, non-plastic, dry, trace gravel, 10YR 4/1	D		
-15					
				SB0206 (18-20)	3.6
-20					

BORING LOG

ARCADIS

BORING LOG: **SB0207**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Chris Harrison**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**3/5/2002**	**COORDINATES**	
DATE COMPLETED:	**3/5/2002**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE		SB0207 (0-1)	4.8
		SAND: Dark yellowish brown fine to medium sand with gravel, dry, 10YR 4/4	D		
-5		CLAY: Brown silty sandy clay with trace gravel, slightly moist, slightly plastic, cohesive, slightly sticky	M		
				SB0207 (8-10)	3.6
-10		SAND: Light grayish brown fine to medium sand, dry, trace gravel, 10YR 5/2	D		
		CLAY: Dark gray silty clay, cohesive, slightly plastic, slightly sticky, slightly moist, 10YR 4/1	M		
-15		CLAY: Dark gray silty clay, cohesive, non-plastic, non-sticky, dry, trace gravel, 10YR4/1	D		
				SB0207 (18-20)	.2
-20					

BORING LOG

BORING LOG: **SB0208**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Chris Harrison**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**2/27/2002**	**COORDINATES**	
DATE COMPLETED:	**2/28/2002**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE		SB0208 (0-2)	3.0
		SAND: Brown fine to medium sand with gravel, dry, 10YR 4/3	D		
-5		CLAY: Dark brown, silty sandy clay, moist and plastic, slightly cohesive, slightly sticky, 10YR 3/3	M		
		SAND: Light grayish brown fine to meidum sand with trace gravel, dry, 10 YR 5/2	D		
-10				SB0208 (8-10)	2.0
		CLAY: Light yellowish brown sandy clay, moist, cohesive, plastic, slightly sticky, 10YR 5/6	M D		
-15		SILT: Dark gray sandy silt, hard, dry, cohesive, slightly plastic, sticky, 10YR 4/1			
-20				SB0208 (18-20)	27.6

BORING LOG

BORING LOG: **SB0209**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Chris Harrison**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**2/28/2002**	**COORDINATES**	
DATE COMPLETED:	**2/28/2002**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE		SB0209 (0-2)	
		SAND: Dark yellowish brown fine to medium sand and gravel, dry, slight odor, 10YR 3/6	D		
-5		CLAY: Brown silty sandy clay, plastick, cohesive, slightly sticky, moist, with trace gravel	D		
		SAND: Light yellowish brown fine sand, dry, 10YR 4/6	D	SB0209 (8-10)	
-10			D		
-15		CLAY: Dark gray silty clay, hard, dry, cohesive, slightly plastic, slightly sticky, 10YR 4/1	D	SB0209 (18-20)	
-20					

ARCADIS

BORING LOG

BORING LOG: **SB0210**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**

SITE LOCATION: **Speedway, Indiana**

LOGGED BY: **Heather Gastineau-Lyons**

DATE STARTED: **9/11/2002**

DATE COMPLETED: **9/11/2002**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Dan Harrison**

DRILLING METHOD: **Geoprobe**

COORDINATES

NORTHING:

EASTING:

ELEVATION:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		SAND: Yellowish brown silty sand, dry, loose, 10YR5/6	D	SB0210 (0-2)	0
		CLAY: Dark yellowish brown sandy silty clay w/trace gravel, sticky, pliable, 10YR4/6	M		
-5		SAND: Yellowish brown silty sand w/trace gravel, loose, dry, 10YR5/6	D		0
				SB0210 (8-10)	
-10		SAND: Yellowish brown w/gray tones, medium sands, trace gravel, rust mottling, slightly moist at 20ft, 10YR5/6	M		0
-15					0
				SB0210 (18-20)	
-20					33.9
		SAND: Dark gray medium to coarse fine grained sand, strong odor, black staining, 10YR4/1	M	SB0210 (22-24)	
-25		CLAY: Medium brown clay w/trace sand and gravel; sticky	M		
		SAND: Yellow brown medium to coarse sand with trace gravel, wet, 10YR5/6			
		CLAY: Dark gray clay, hard, 10YR4/1			

ARCADIS

BORING LOG

BORING LOG: **SB0211**

TOTAL DEPTH: **30.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**

SITE LOCATION: **Speedway, Indiana**

LOGGED BY: **Heather Gastineau-Lyons**

DATE STARTED: **9/11/2002**

DATE COMPLETED: **9/11/2002**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Dan Harrison**

DRILLING METHOD: **Geoprobe**

COORDINATES

NORTHING:

EASTING:

ELEVATION:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		SILT: Dark yellowish brown sandy silt w/clay seams, minor trace gravel, loose, dry, 10YR4/6	D	SB0211 (0-2)	0.6
-5		SILT: Dark yellowish brown sandy silt and silty sand w/trace gravel, sand size is medium, loose, dry, 10YR4/6	D		0.3
				SB0211 (8-10)	0.3
-10		SAND: Grayish brown w/strong rust mottling medium grained sand w/trace gravel, loose, wet, 10YR5/2	W		0
-15		CLAY: Dark yellowish brown sandy clay w/trace gravel, sticky, cohesive, 10YR4/6	M		
		BLANK: No recovery			0
-20		SAND: Dark yellowish brown medium grained sand, trace gravel, loose, slightly moist, 10YR4/6	M	SB0211 (18-20)	
		CLAY: Dark gray clay w/trace sand and pebbles, very hard, cohesive, 10YR4/1	D		0.3
					0.3
-25					0.3
					1
-30					0

ARCADIS

BORING LOG

BORING LOG: **SB0212**

TOTAL DEPTH: **35.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Dan Harrison
LOGGED BY:	Heather Gastineau-Lyons	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/12/2002	COORDINATES	
DATE COMPLETED:	9/12/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		SILT: Dark yellowish brown sandy silt w/trace gravel, loose, dry, 10YR4/6	D	SB0212 (0-2)	0.7
-5					0.4
		SAND: Dark yellowish brown, medium to fine grained sand w/trace gravel, loose, dry, rust mottled, w/10% silt, 10YR4/6	D		
				SB0212 (8-10)	
-10					0.3
-15				SB0212 (14-16)	0
-20		SAND: Dark yellow brown, coarse sand and gravel, very wet, rust mottled, 10YR4/6	W		0.7
-25					0.7
-30					0.7
35		CLAY: Dark gray clay w/trace sand and gravel, very hard, brittle, 10YR4/1			

ARCADIS

BORING LOG

BORING LOG: **SB0213**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Dan Harrison
LOGGED BY:	Heather Gastineau-Lyons	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/13/2002	COORDINATES	
DATE COMPLETED:	9/16/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		SILT: Yellow brown clayey silt w/trace sand and gravel, loose, dry, rust mottling, 10YR5/6	D	SB0213 (0-2)	1.4
-5		SAND: Dark yellow brown clayey sand w/10% silt, medium sticky, medium cohesive, strongly rust mottled	M	SB0213 (8-10)	0.9
-10		SAND: Yellow brown fine to medium sand w/10% silt and gravel, dry, loose, 10YR5/6	D		3.3
-15		SAND: Yellow brown medium to fine grained sand w/trace gravel, very slightly moist, loose, 10YR5/6	M	SB0213 (18-20)	6.2
-20		CLAY: Brown clay w/trace sand and silt, sticky, cohesive, plastic, pliable, not very hard, 10YR5/2	W		1.7
-25		SAND: Yellow brown medium to coarse sand w/trace gravel, wet, loose, 10YR5/6			

BORING LOG

ARCADIS

BORING LOG: **SB0214**

TOTAL DEPTH: **30.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Dan Harrison
LOGGED BY:	Heather Gastineau-Lyons	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/17/2002	COORDINATES	
DATE COMPLETED:	9/17/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		SAND: Dark yellow brown silty clayey sand w/trace gravel, slightly cohesive, dry to slightly moist, 10YR4/4	M	SB0214 (0-2)	6.2
-5		BLANK: No recovery			4.8
		SAND: Dark yellow brown medium grained sand, highly rust mottled, slightly moist, 10YR4/4	M	SB0214 (8-10)	
			M		
-10		SAND: Dark yellow brown clayey sand w/trace gravel, rust mottled, slighlty cohesive, 10YR4/4	M		6.9
		SAND: Yellow brown silty sand (5-10%) w/trace gravel, rust mottled, slightly moist, 10YR5/4			
-15					5.9
				SB0214 (16-18)	
-20		SILT: Yellow brown silt, saturated, 10YR5/4	W		
			W		5.9
		SAND: Yellow brown coarse sand and gravel, saturated, loose, 10YR5/4	W		
		CLAY: Dark gray clay w/trace gravel and sand, hard, cohesive, brittle, 25-26.5 very saturated, gooey, 10YR4/1			
-25					3.5
		SAND: Yellow brown medium grained sand w/trace gravel, wet, loose, 10YR5/4	W		
-30					

BORING LOG

BORING LOG: **SB0215**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Alan Thomas
LOGGED BY:	Heather Gastineau-Lyons	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/16/2002	COORDINATES	
DATE COMPLETED:	9/16/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		ASPHALT: Asphalt	D	SB0215 (0-2)	0.7
		SAND: Light yellowish brown silty sand w/trace gravel - fill material, loose, dry, 10YR6/4	M		
		CLAY: Very dark grayish brown, silty clay w/trace gravel (quartzite & gneiss), sticky, pliable, 10YR3/2	M		
-5		CLAY: Very dark grayish brown silty clay w/trace sand and gravel, rust staining and black staining but no odor, slightly moist			3.8
		SAND: Yellowish brown fine grained sand w/tract silt and clay, moist, slightly cohesive	M	SB0215 (8-10)	
-10		CLAY: Dark yellow gray brown sandy clay, sticky, cohesive, moist	M		5.9
		GRAVEL: Broken gravel - limestone	M		
		SAND: Yellow brown fine to coarse sand, 5% silt, trace gravel, rust mottling, loose, moist to slightly moist		SB0215 (14-16)	
-15					6.2
		SAND: Yellow brown clayey silty sand w/trace gravel, black staining but no odor, cohesive	M		
		SAND: Gray brown medium grained sand w/trace gravel, loose, slightly moist	M		
-20		SILT: Yellow brown sandy silt w/trace clay and gravel, cohesive, moist	W		210
		SAND: Yellow brown medium to coarse sand w/trace gravel, loose, wet at 20 ft, strong odor at 20 ft			
-25					

ARCADIS

BORING LOG

BORING LOG: **SB0216**

TOTAL DEPTH: **30.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Alan Thomas
LOGGED BY:	Heather Gastineau-Lyons	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/16/2002	COORDINATES	
DATE COMPLETED:	9/16/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		ASPHALT: Asphalt		SB0216 (0-2)	-0.7
		SAND: Fill material			
		CLAY: Dark yellow brown sandy clay, sticky, cohesive, w/trace gravel			
-5		SAND: Dark yellow brown medium grained sand w/trace gravel, loose, slightly moist	M		-1.4
				SB0216 (8-10)	
-10					-1.4
-15		SAND: Dark yellow brown medium-fine grained sand w/trace gravel, 10% silt, slightly moist	M		64.6
		SAND: Dark yellow brown medium to coarse sand w/trace gravel, strong odor at 18 ft (acetone), 18.5 ft (diesel), stained black at 22 ft, 20-25 ft strong diesel odor, wet at 20 ft, 25-30 ft no detectable odor	W	SB0216 (18-18.2)	
-20					166
-25					13.1
30					

ARCADIS

BORING LOG

BORING LOG: **SB0217**

TOTAL DEPTH: **30.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Dan Harrison
LOGGED BY:	Heather Gastineau-Lyons	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/17/2002	COORDINATES	
DATE COMPLETED:	9/17/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0				SB0217 (0-2)	-2.1
		CLAY: Dark yellow brown silty clay w/trace sand and gravel, sticky, cohesive, some black staining in places but no odor, rust mottling	M		
-5		SAND: Dark yellow brown medium grained sand, moist, loose, rust mottled, 10YR3/6	M		-1.4
		SAND: Dark yellow brown medium grained sand w/trace gravel, 5-10% silt, some black staining but no odor, rust mottled, 10YR4/6		SB0217 (8-10)	
-10					-1.4
-15					-1.4
-20		SILT: Dark yellow brown silt w/trace clay, moist, rust mottled, 10YR4/6	M		
				SB0217 (20-20.5)	30.4
		CLAY: Brown 10YR4/3 at 20.5-21 ft, dark gray clay w/trace gravel, rust mottled, 10YR4/1 at 21-30 ft		SB0217 (21)	
-25					0
-30					

ARCADIS

BORING LOG

BORING LOG: **SB0218**

TOTAL DEPTH: **30.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Alan Thomas
LOGGED BY:	Heather Gastineau-Lyons	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/16/2002	COORDINATES	
DATE COMPLETED:	9/16/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		ASPHALT: Asphalt		SB0218 (0-2)	-2.1
		CLAY: Dark yellow brown silty clay w/trace sand and gravel, some black staining, no odor, sticky, cohesive, slightly moist, 10YR3/4	M M		
		SAND: Dark yellow brown, medium to fine grained sand w/trace gravel, loose, rust mottled, slightly moist, 10YR4/6			
-5					-1.4
				SB0218 (8-10)	
-10					0
-15					0
				SB0218 (16-18)	
		SILT: Dark yellow brown very fine grained sand/silt material w/trace sand and clay, moist to wet, 10YR4/6	W	SB0218 (19-20)	
-20		CLAY: Dark gray clay w/trace gravel, 10% silt, hard, dry, brittle, 10YR4/1	D		0.7
-25					1.7
		SAND: Dark yellow brown medium to fine grained sand w/trace gravel, loose, wet, 10YR 4/6	W		
-30					

ARCADIS

BORING LOG

BORING LOG: **SB0219**

TOTAL DEPTH: **30.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Alan Thomas
LOGGED BY:	Heather Gastineau-Lyons	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/12/2002	COORDINATES	
DATE COMPLETED:	9/12/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		SILT: Gray brown sandy silt w/trace gravel, loose, dry, some rust mottling, 10YR5/2	D	SB0219 (0-2)	0.7
		SAND: Yellowish brown medium to fine grained sand w/5-10% silt and trace gravel, loose, dry, rust mottled, 10YR5/4	D		
-5					0.3
				SB0219 (8-10)	
-10					0.5
		CLAY: Dark gray clay w/trace sand and gravel, hard, dry, brittle, 10YR4/1	D		
-15		SAND: Yellow brown medium to fine grained sand w/trace gravel, loose, very slightly moist, rust mottling	M D	SB0219 (15-15.5)	0.7
		CLAY: Dark gray clay w/trace sand and silt, trace gravel, dry, brittle, rust mottled, not plastic or pliable, 10YR4/1			
-20					0.3
-25					0.7
-30		SAND: Yellow brown medium to fine grained sand w/trace gravel, loose, wet, 10YR5/4			

ARCADIS

BORING LOG

BORING LOG: **SB0220**

TOTAL DEPTH: **30.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Alan Thomas
LOGGED BY:	Tim Yates	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/11/2002	COORDINATES	
DATE COMPLETED:	9/11/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		ASPHALT: Asphalt	D	SB0220 (0-2)	-3.2
		SAND: Brown medium sand w/trace gravel, dry			-2.4
-5		CLAY: Brown silty sandy clay w/trace gravel, plastic, cohesive, moist	M		0
					0.1
		SAND: Dark yellowish brown medium sand and gravel, dry	D	SB0220 (8-10)	0.4
-10					-1.6
					-2.3
-15					0.8
					0
					0.2
-20		SILT: Dark gray clayey silt, slightly plastic, cohesive, dry, wet at 30 ft	D		0.3
					-0.2
-25					0.8
				SB0220 (26-28)	1.4
					0.3
-30					

ARCADIS

BORING LOG

BORING LOG: **SB0221**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Alan Thomas
LOGGED BY:	Tim Yates	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/11/2002	COORDINATES	
DATE COMPLETED:	9/11/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		ASPHALT: Asphalt	D	SB0221 (0-2)	PID Malfunction (Readings Not Taken)
		SAND: Brown medium sand w/trace gravel, dry			
		CLAY: Brown silty sandy clay w/trace gravel, plastic, cohesive, moist	M		
-5					
		SAND: Dark yellowish brown medium sand and gravel, dry	D	SB0221 (8-10)	
-10					
		SILT: Dark gray clayey silt, slightly plastic, cohesive, dry	D	SB0221 (14-16)	
-15					
		SILT: Dark gray clayey silt, slightly plastic, cohesive, wet	W		
-20					

ARCADIS

BORING LOG

BORING LOG: **SB0222**

TOTAL DEPTH: **35.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Alan Thomas
LOGGED BY:	Heather Gastineau-Lyons	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/13/2002	COORDINATES	
DATE COMPLETED:	9/13/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		ASPHALT: Asphalt/loose concrete material	D	SB0222 (0-2)	3.8
		CLAY: Dark gray silty clay to clayey silt w/trace sand and gravel, hard but not plastic, 10YR4/1	M		
-5		CLAY: Dark yellowish brown silty clay to clayey silt w/trace sand and gravel, plastic, cohesive, slightly moist, rust mottled, 10YR4/4			4.3
-10		SAND: Dark yellowish brown medium-fine grained sand w/5-10% silt and trace gravel, loose, slightly moist, rust mottled, 10YR4/4	M	SB0222 (8-10)	3.3
				SB0222 (11-13)	
-15		CLAY: Dark gray yellow brown clay w/trace sand and gravel, hard, dry, brittle, cracked appearance, 10YR4/1-4/4	D		
			M		3.8
		CLAY: Dark gray silty clay w/trace gravel and sand, dry, brittle, cracked appearance, 10YR4/1	D		
-20					2.8
-25					-6.6
		SAND: Dark gray fine to medium sand, very moist, loose, 10YR4/1	M	SB0222 (26-26.1)	
		CLAY: Dark gray clay w/trace gravel, 10YR4/1		SB0222 (28-30)	
-30		SAND: Dark gray fine to medium sand, wet, loose, 10YR 4/1	W		0.9
-35					

ARCADIS

BORING LOG

BORING LOG: **SB0223**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Alan Thomas
LOGGED BY:	Heather Gastineau-Lyons	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/12/2002	COORDINATES	
DATE COMPLETED:	9/13/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		SILT: Yellow brown sandy silt w/trace gravel, loose, dry, 10YR5/4	D	SB0223 (0-2)	2.5
		SAND: Dark yellow brown sandy silty clay w/trace gravel, very dry and hard, not pliable, 10YR3/4	D		
-5		SAND: Brown 10YR5/3 to dark yellow brown 10YR3/4 medium to fine grained sand, 10% silt, trace gravel, very dry, very loose, some rust mottling	D		1.4
				SB0223 (8-10)	
-10					0.3
				SB0223 (11-13)	
-15		SAND: Dark yellow brown, medium to coarse sand w/trace gravel, loose, wet, rust mottled, 10YR3/4	W D		2.5
		CLAY: Dark yellow brown clay w/trace sand and gravel, hard, sticky, rust mottled, slightly moist, 10YR3/4			
-20		CLAY: Dark gray hard clay w/trace sand and gravel, dry, not pliable or sticky, cracked appearance from 15-20 ft			0.9
-25					

ARCADIS

BORING LOG

BORING LOG: **SB0224**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Dan Harrison
LOGGED BY:	Heather Gastineau-Lyons	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/17/2002	COORDINATES	
DATE COMPLETED:	9/17/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		ASPHALT: Asphalt and fill material		SB0224 (0-2)	-2.4
		CLAY: Dark gray sandy clay w/trace gravel and silt, cohesive, pliable, 10YR			
		CLAY: Dark yellow brown sandy clay w/trace gravel and silt, cohesive, pliable, 10YR4/4			4.5
-5		SAND: Yellow brown medium grained sand, loose, moist, rust mottled in places, 10YR5/4	M	SB0224 (8-10)	3.5
-10		SILT: Brown clayey silt to silty clay, rust mottled, very moist, sticky, cohesive, 10YR5/3	M		
		CLAY: Dark gray clay w/trace gravel and sand, 10YR4/1	M		0
		SAND: Yellow brown coarse sand and gravel, moist, loose, 10YR5/4			
-15		CLAY: Dark gray clay w/trace sand and gravel, busted rocks at 15-15.5 ft, 10YR4/1			0
		CLAY: Yellow brown sandy clay, rust mottled, cohesive, 10YR5/4			
-20		CLAY: Dark gray clay w/trace gravel, 10YR4/1		SB0224 (18-20)	

BORING LOG

ARCADIS

BORING LOG: **SB0225**

TOTAL DEPTH: **28.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Alan Thomas
LOGGED BY:	Mark Fisherkeller	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/25/2002	COORDINATES	
DATE COMPLETED:	9/25/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0225 (0-2)	5.6
		FILL: Fill material, sand, gravel, and trace clay			6.1
					0
-5		SAND: SW, well graded sand, loose, dry, 10YR4/4	D		0
		CLAY: CL, sandy silty clay, 10YR3/4, soft, plastic		SB0225 (8-10)	0
-10		SAND: SW, well graded sand, trace gravel, 10YR6/4			2.6
					0
-15		CLAY: CL, hard clay w/trace sand, silt, and gravel, non plastic, 10YR3/1			0
					0
					2.8
-20					3.6
				SB0225 (21-23)	
					0
-25		SAND: SM-SC, clayey silty sand, saturated, loose to slightly plastic	W		0

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BORING LOG

BORING LOG: **SB0226**

TOTAL DEPTH: **5.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Chris Harrison**
LOGGED BY:	**Heather Gastineau-Lyons**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**9/26/2002**	**COORDINATES**	
DATE COMPLETED:	**9/26/2002**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		ASPHALT: Asphalt		SB0226 (0-2)	9.5
		FILL: Fill material, sandy silt w/trace gravel, loose, dry	D		
		SAND: SC clayey sand w/trace gravel, sticky, slightly moist, dark yellow brown 10YR4/4	M		9.1
				SB0226 (3-5)	
-5					

ARCADIS

BORING LOG

BORING LOG: **SB0227**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Alan Thomas
LOGGED BY:	Heather Gastineau-Lyons	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/25/2002	COORDINATES	
DATE COMPLETED:	9/25/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0227 (0-2)	23.3
		FILL: Fill material, sandy silt and trace gravel	M		14.1
		SAND: SP, poorly graded sands and trace gravel, loose, slightly moist, dark yellow brown, 10YR4/4			17.8
-5					20
		CLAY: CL, silty clay w/5-10% sand and trace gravel, black staining, dark yellow brown 10YR4/4 (missing 10-11.5)		SB0227 (8-10)	22
-10					17.2
				SB0227 (11-13)	
		SILT: Red siltstone w/2% coarse sand	M		20.9
		SAND: SW, well graded sand and trace gravel, rust mottled, moist	M		21.6
-15		SAND: SM, very fine grained sand and 10% clay, very moist, brown 10YR	W		35.4
		SAND: SP, poorly graded sand and trace gravel, wet, loose, dark yellow brown 10YR4/4	W		21.8
		SAND: SC, clayey sand, sticky, wet, dark gray, 10YR 4/1			
-20		CLAY: CL, clay w/trace sand and gravel, 10YR4/1 dark gray			

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BORING LOG

BORING LOG: **SB0228**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Alan Thomas
LOGGED BY:	Tim Yates	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/24/2002	COORDINATES	
DATE COMPLETED:	9/24/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0228 (0-2)	-1.2
		SAND: Brown medium sand w/trace gravel, dry	D		2.3
-5		CLAY: Brown silty sandy clay, plastic, cohesive, moist			2.9
					4.2
		SAND: Dark yellowish brown medium sand w/trace gravel, dry	D	SB0228 (8-10)	3.5
-10					3.6
					101
		SAND: Dark gray to black medium sand, wet, strong odor	W		129
-15					86
		SILT: Dark gray clayey silt, slightly plastic, cohesive, slightly moist	M		35
-20					

ARCADIS

BORING LOG

BORING LOG: **SB0229**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Alan Thomas
LOGGED BY:	Tim Yates	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/24/2002	COORDINATES	
DATE COMPLETED:	9/24/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0229 (0-2)	-3.5
		SAND: Dark brown medium sand w/trace gravel, dry	D		-2.7
-5		CLAY: Dark brown silty sandy clay, plastic, cohesive, moist	M		-0.9
		SAND: Light brown/gray medium sand, moist, strong odor	M		-1.3
				SB0229 (8-10)	0.8
-10					2.4
					20.3
-15				SB0229 (14-16)	41.1
		SAND: Light brown/gray medium sand w/trace gravel, dry	D		
		SILT: Dark gray clayey silt, slightly plastic, cohesive, slightly moist	M		39.0
		SAND: Dark gray medium sand w/trace gravel, wet	W		142.3
-20		SILT: Dark gray clayey silt, slightly plastic, cohesive, slightly moist			

ARCADIS

BORING LOG

BORING LOG: **SB0230**

TOTAL DEPTH: **6.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Alan Thomas
LOGGED BY:	Heather Gastineau-Lyons	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/26/2002	COORDINATES	
DATE COMPLETED:	9/26/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		ASPHALT: Asphalt		SB0230 (0-2)	5
		FILL: Fill material, sandy silt w/trace gravel, loose, dry	D		25
		SAND: SC, clayey sands about 45% sand, 5% gravel, 50% clay and silt w/clay being the major component, sticky, pliable, dark yellow brown 10YR4/4	M		
-5		SAND: SC, clayey sands (same as 2.4-4 ft), black to dark gray w/rust mottling, no odor		SB0230 (4-6)	80 55

BORING LOG

ARCADIS

BORING LOG: **SB0231**

TOTAL DEPTH: **35.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Alan Thomas
LOGGED BY:	Heather Gastineau-Lyons	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/25/2002	COORDINATES	
DATE COMPLETED:	9/25/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0231 (0-2)	5
		FILL: Fill material, sandy silt w/trace gravel	D		5
		SAND: SM, silty sand, loose, dry, yellow brown, 10YR4/4			6
-5		SAND: SC, clayey sand, sticky, pliable, yellow brown 10YR4/4	M		6.8
		SAND: SM, silty sand w/trace clay and gravel, loose, slightly moist, yellow brown 10YR4/4		SB0231 (8-10)	NA
-10					7.2
					5.6
-15		CLAY: CL, silty clay, medium plastic, dark gray 10YR4/4	M		2.5
		SAND: SM, silty sand w/trace gravel, loose, very slightly moist, yellow brown 10YR4/4			19
		CLAY: CL, silty clay w/trace gravel, medium plastic, dark gray 10YR4/4		SB0231 (19-21)	19
-20					18
		SAND: SM, silty sand w/trace gravel, loose, very slightly moist, yellow brown 10YR4/4	M		19
-25		CLAY: CL, silty clay w/trace gravel, medium plastic, dark gray 10YR4/1	W		13
		SAND: Very fine grained sand w/15-20% clay, wet, sticky, dark gray 10YR4/1	W		18
-30		SAND: SC, medium to coarse sand w/15% clay and gravel, wet, sticky, dark gray 10YR4/1	D		14
		CLAY: CL, silty clay, low plasticity, hard, dark gray 10YR4/1, w/trace gravel			16
-35					19

ARCADIS

BORING LOG

BORING LOG: **SB0232**

TOTAL DEPTH: **24.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Alan Thomas
LOGGED BY:	Tim Yates	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/23/2002	COORDINATES	
DATE COMPLETED:	9/23/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0232 (0-2)	-1.4
		SAND: Light grayish brown medium sand w/trace gravel, dry	D		-2.5
-5		CLAY: Dark brown silty sandy clay, plastic, cohesive, moist	M		-0.8
					-1.0
				SB0232 (8-10)	3.1
-10					2.6
		SAND: Orangish brown medium sand w/trace gravel, dry	D	SB0232 (12-14)	4.0
		SAND: Light grayish brown medium sand w/trace gravel, dry	D		15.4
-15					56.7
		SAND: Dark gray medium sand w/trace gravel and clay, strong odor, wet	W		57.2
-20					40.3
					21.2
		SILT: Dark gray clayey silt, slightly plastic, cohesive, slightly moist, slight odor	M		

BORING LOG

ARCADIS

BORING LOG: **SB0233**

TOTAL DEPTH: **28.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Alan Thomas
LOGGED BY:	Tim Yates	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/20/2002	COORDINATES	
DATE COMPLETED:	9/20/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0233 (0-2)	-1.3
		SAND: Brown medium sand w/gravel and red brick, dry	D		-2.4
					0.2
-5		CLAY: Dark brown silty sandy clay, plastic, cohesive, moist	M		1.0
				SB0233 (8-10)	-3.4
-10		SAND: Light brown medium sand w/trace gravel, dry	D		-2.5
					-0.8
-15					2
					2.1
				SB0233 (18-20)	20.6
-20		SAND: Dark gray medium sand, dry, odor	D		3.5
		SILT: Dark gray clayey silt, plastic, cohesive, dry			2.9
-25					3.1
					2.0

ARCADIS

BORING LOG

BORING LOG: **SB0234**

TOTAL DEPTH: **24.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Alan Thomas
LOGGED BY:	Tim Yates	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/20/2002	COORDINATES	
DATE COMPLETED:	9/20/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete	M	SB0234 (0-2)	PID Malfunction (Readings Not Taken)
		CLAY: Dark brown silty sandy clay, plastic, cohesive, moist			
-5		SAND: Dark yellowish brown medium sand w/trace gravel, dry	D		
-10				SB0234 (8-10)	
-15				SB0234 (18-20)	
-20		SILT: Dark gray clayey silt, slightly plastic, cohesive, moist, slight odor	M		
		SAND: Gray medium sand w/trace gravel, wet, odor	W		

ARCADIS

BORING LOG

BORING LOG: **SB0235**

TOTAL DEPTH: **24.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Alan Thomas
LOGGED BY:	Tim Yates	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/23/2002	COORDINATES	
DATE COMPLETED:	9/23/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0235 (0-2)	PID Malfunction (Readings Not Taken)
		CLAY: Dark brown silty sandy clay, plastic, cohesive, moist	M		
-5		SAND: Dark yellowish brown medium sand w/trace gravel, dry	D		
-10				SB0235 (8-10)	
-15				SB0235 (12-14)	
-20		SAND: Dark gray medium sand w/trace gravel, wet, strong odor	W		
		SILT: Dark gray clayey silt, slightly plastic, cohesive, slightly moist, slight odor	M		

ARCADIS

BORING LOG

BORING LOG: **SB0236**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Alan Thomas
LOGGED BY:	Tim Yates	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/23/2002	COORDINATES	
DATE COMPLETED:	9/23/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0236 (0-2)	-3.3
		CLAY: Brown silty sandy clay, plastic, cohesive, moist	M		-3.4
					-3.1
-5		SAND: Dark yellowish brown medium sand w/trace gravel, dry	D		-2.9
				SB0236 (8-10)	-3.5
-10					-3.3
				SB0236 (12-14)	-1.8
-15					80.2
		SAND: Dark gray medium to coarse sand w/gravel, wet, odor	W		72.4
		SILT: Dark gray clayey silt, slightly plastic, cohesive, moist	M		30.2
-20					

ARCADIS

BORING LOG

BORING LOG: **SB0237**

TOTAL DEPTH: **27.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Alan Thomas
LOGGED BY:	Heather Gastineau-Lyons	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/19/2002	COORDINATES	
DATE COMPLETED:	9/19/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		SAND: Yellow brown medium to fine grained sand, 10% silt w/trace gravel, loose, dry	D	SB0237 (0-2)	5.9
-5					6.3
		CLAY: Yellow brown clay w/trace sand and gravel, sticky, pliable		SB0237 (8-10)	
-10		SAND: Yellow brown medium to fine grained sand w/5% silt and trace gravel, loose, dry, odor w/gray staining	D		7.8
-15		SILT: Yellow brown silt, 10% fine grained sand w/trace gravel, loose, dry	D		84.6
		CLAY: Dark gray clay w/trace sand and gravel, cohesive, brittle, clay turning brown from16.5-17.5 ft		SB0237 (16-18)	
		SAND: Yellow brown medium grained sand w/trace gravel, strong odor at 17.5-18 ft and slightly moist	M		
-20		CLAY: Dark gray clay w/trace sand and gravel, sticky	W		366
		SAND: Dark gray fine grained sand w/trace gravel and clay, wet, strong odor, black staining			
-25					130
		SAND: Dark gray medium to coarse sand w/trace gravel, wet, strong odor	W		

ARCADIS

BORING LOG

BORING LOG: **SB0238**

TOTAL DEPTH: **26.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Alan Thomas
LOGGED BY:	Tim Yates	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/18/2002	COORDINATES	
DATE COMPLETED:	9/18/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete	D	SB0238 (0-2)	-1.4
		SAND: Dark brown medium sand w/trace gravel, dry			-3.7
					1.8
-5		SAND: Dark yellowish brown medium sand w/trace gravel, dry	D		0.3
				SB0238 (8-10)	-1.1
-10					-2.0
					1.3
-15					1.7
				SB0238 (16-18)	1.9
		SILT: Dark gray clayey silt, non plastic, cohesive, dry, odor	D		100
-20		SAND: Dark gray medium sand, strong odor, wet	W		127
					118
-25					125

BORING LOG

ARCADIS

BORING LOG: **SB0239**

TOTAL DEPTH: **26.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Alan Thomas
LOGGED BY:	Tim Yates	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/17/2002	COORDINATES	
DATE COMPLETED:	9/17/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Dark yellow brown sandy clay w/trace gravel, sticky, pliable, cohesive		SB0239 (0-2)	-3.1
		CLAY: Dark yellow brown sandy clay w/trace gravel, sticky, pliable, cohesive			
-5					0
		SAND: Yellow brown fine to medium grained sand w/10% silt and trace gravel, loose, dry, rust mottled	D	SB0239 (8-10)	0
-10					3.8
		SAND: Fine to medium grained sand, pink color (rose quartz sand), loose, dry	D		
-15			D		
		SAND: Yellow brown, fine to medium grained sand w/trace gravel and 10% silt, loose, dry	D		0
		SILT: Dark gray clayey silt, nonplastic, cohesive, dry		SB0239 (18-20)	-1.4
-20					-0.2
					120
		SAND: Dark gray medium sand, wet, strong odor	W		9.3
-25					

ARCADIS

BORING LOG

BORING LOG: **SB0240**

TOTAL DEPTH: **26.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Alan Thomas
LOGGED BY:	Tim Yates	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/17/2002	COORDINATES	
DATE COMPLETED:	9/18/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete	M	SB0240 (0-2)	0
		CLAY: Brown silty sandy clay, plastic, cohesive, moist			.8
					2.4
-5		SAND: Dark yellowish brown medium sand w/trace gravel, dry	D		1.6
				SB0240 (8-10)	1.8
-10					1
					1.2
-15					2
		SILT: Dark gray clayey silt, non plastic, cohesive, dry, hard	D		2.2
				SB0240 (18-20)	1.6
-20					1.4
		SAND: Dark gray fine sand, non plastic, slightly cohesive, wet	W		2.8
		SILT: Dark gray clayey silt, nonplastic, cohesive, dry, hard	D		3.0
-25		SAND: Dark gray fine sand, non plastic, slightly cohesive, wet	W		

ARCADIS

BORING LOG

BORING LOG: **SB0241**

TOTAL DEPTH: **29.50**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Alan Thomas
LOGGED BY:	Tim Yates	DRILLING METHOD:	Geoprobe
DATE STARTED:	9/19/2002	COORDINATES	
DATE COMPLETED:	9/20/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0241 (0-2)	PID Malfunction (Readings Not Taken)
		CLAY: Dark brown silty sandy clay, plastic, cohesive, moist	M		
		SAND: Yellow medium sand w/trace gravel, dry	D		
-5		CLAY: Dark brown silty sandy clay, plastic, cohesive, moist w/bright yellow staining	M	SB0241 (8-10)	
-10		SAND: Yellow medium sand w/trace gravel, dry, slight green staining	D	SB0241 (12-14)	
-15		SILT: Dark gray clayey silt, non plastic, cohesive, hard, dry	D		
-20					
-25				SB0241 (25-27)	
		SAND: Dark yellowish brown medium sand and gravel, wet			

ARCADIS

BORING LOG

BORING LOG: **SB0242**

TOTAL DEPTH: **5.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	
LOGGED BY:	Mark Fisherkeller	DRILLING METHOD:	Hand Auger
DATE STARTED:	10/8/2002	COORDINATES	
DATE COMPLETED:	10/8/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0242 (0-2)	0.4
		SAND: Light brown medium sand and gravel, dry	D		
					0.2
				SB0242 (3-5)	0.9
-5					

ARCADIS

BORING LOG

BORING LOG: **SB0243**

TOTAL DEPTH: **5.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	
LOGGED BY:	Mark Fisherkeller	DRILLING METHOD:	Hand Auger
DATE STARTED:	10/8/2002	COORDINATES	
DATE COMPLETED:	10/8/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0243 (0-2)	0.4
		SAND: Brown medium sand and gravel, dry	D		0.2
		SAND: Orangish-red/brown medium sand and gravel, dry	D	SB0243 (3-5)	0
-5					

ARCADIS

BORING LOG

BORING LOG: **SB0244**

TOTAL DEPTH: **4.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	
LOGGED BY:	**Mark Fisherkeller**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**10/8/2002**	**COORDINATES**	
DATE COMPLETED:	**10/8/2002**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0244 (0-2)	0.8
		SAND: Light brown medium sand and gravel, dry	D	SB0244 (2-4)	0.3

ARCADIS

BORING LOG

BORING LOG: **SB0245**

TOTAL DEPTH: **4.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	
LOGGED BY:	Mark Fisherkeller	DRILLING METHOD:	Hand Auger
DATE STARTED:	10/8/2002	COORDINATES	
DATE COMPLETED:	10/8/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0245 (0-2)	0
		SAND: Light brown medium sand and gravel, dry	D	SB0245 (2-4)	0.3

ARCADIS

BORING LOG

BORING LOG: **SB0246**

TOTAL DEPTH: **3.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	
LOGGED BY:	Tim Yates	DRILLING METHOD:	Hand Auger
DATE STARTED:	10/7/2002	COORDINATES	
DATE COMPLETED:	10/7/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0246 (0-2)	13.6
		SAND: Light brown medium sand and gravel, dry, slight odor	D		
				SB0246 (2-4)	22.5
		CLAY: Brown/gray silty sandy clay w/gravel, plastic, cohesive, moist, slight odor			

ARCADIS

BORING LOG

BORING LOG: **SB0247**

TOTAL DEPTH: **2.50**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	
LOGGED BY:	Tim Yates	DRILLING METHOD:	Hand Auger
DATE STARTED:	10/7/2002	COORDINATES	
DATE COMPLETED:	10/7/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0247 (0-2)	3.4
		SAND: Light brown medium sand and gravel, slight odor, dry	D		
				SB0247 (2-4)	3.4

ARCADIS

BORING LOG

BORING LOG: **SB0248**

TOTAL DEPTH: **3.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	
LOGGED BY:	Tim Yates	DRILLING METHOD:	Hand Auger
DATE STARTED:	10/7/2002	COORDINATES	
DATE COMPLETED:	10/7/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0248 (0-2)	0.2
		SAND: Light brown medium sand and gravel, dry, slight odor	D		
				SB0248 (2-4)	0
		CLAY: Brown silty sandy clay and gravel, plastic, cohesive, moist, slight odor			

ARCADIS

BORING LOG

BORING LOG: **SB0249**

TOTAL DEPTH: **3.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**10/7/2002**	**COORDINATES**	
DATE COMPLETED:	**10/7/2002**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0249 (0-2)	5.8
		SAND: Light brown medium sand and gravel, dry, odor (slight)	D		
				SB0249 (2-4)	12.6
		CLAY: Brown sandy clay and gravel w/trace silt, plastic, cohesive, moist, slight odor			

ARCADIS

BORING LOG

BORING LOG: **SB0250**

TOTAL DEPTH: **1.50**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	
LOGGED BY:	Mark Fisherkeller	DRILLING METHOD:	Hand Auger
DATE STARTED:	10/8/2002	COORDINATES	
DATE COMPLETED:	10/8/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0250 (0-2)	3.8
		SAND: Light brown medium sand and gravel, dry, odor	D		

ARCADIS

BORING LOG

BORING LOG: **SB0251**

TOTAL DEPTH: **3.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	
LOGGED BY:	Mark Fisherkeller	DRILLING METHOD:	Hand Auger
DATE STARTED:	10/8/2002	COORDINATES	
DATE COMPLETED:	10/8/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0251 (0-2)	2.7
		SAND: Light brown medium sand w/gravel, dry, loose	D		
				SB0251 (2-4)	1.3
		CLAY: Brown silty sandy clay, slightly plastic, moist, cohesive			

ARCADIS

BORING LOG

BORING LOG: **SB0253**

TOTAL DEPTH: **6.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	
LOGGED BY:	Mark Fisherkeller	DRILLING METHOD:	Hand Auger
DATE STARTED:	10/8/2002	COORDINATES	
DATE COMPLETED:	10/8/2002	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0253 (0-2)	4.7
		SAND: Light brown medium sand and gravel, dry, slight odor	D		
				SB0253 (2-4)	51.3
		CLAY: Brown silty sandy clay and gravel, plastic, cohesive, moist, slight odor	M		
				SB0253 (4-6)	3.8
-5					

BORING LOG

BORING LOG: ~~MW0405~~ SB-0400

TOTAL DEPTH: **42.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Mark Doan**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**2/19/2004**	**COORDINATES**	
DATE COMPLETED:	**2/20/2004**	NORTHING:	5269.5
		EASTING:	4623.1
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		ASPHALT: Asphalt	M		0
		CLAY: Brown silty sandy clay, cohesive, sticky, moist, trace gravel	D		0
-5		SAND: Dark yellowish brown medium to coarse sand and gravel, poorly graded, sub-angular, dry	D		0.6
		SAND: Dark yellowish brown fine to medium sand, poorly graded, sub-angular, dry	D		4
-10		SAND: Dark yellowish brown medium to coarse sand and gravel, poorly graded, sub-angular, dry			4.2
					3.8
					6.4
-15					8.6
					10.2
-20		SAND: Light gray fine to medium sand, moist, sub-angular, poorly graded, odor	M M	MW0405 (18-20)	74
					22
		SAND: Dark yellowish brown fine to medium sand, moist, poorly graded, sub-angular		MW0405 (22-24)	120
-25		SAND: Very dark gray medium to coarse sand and gravel, wet, sub-angular, poorly graded, strong odor	W W		20
					19.6
		SAND: Dark yellowish brown medium to coarse sand and gravel, poorly graded, sub-angular, wet	B B		0
-30		SILT: Dark yellowish brown clayey silt, nonplastic, cohesive, non-sticky, hard, dry			0
					0
-35		SILT: Dark gray clayey silt, nonplastic, cohesive, non-sticky, dry, hard, sand stringers: 32.5-32.6 ft and 36.5-36.6 ft wet			0
					0
					0
-40		BLANK: No recovery			0
		SAND: Dark gray fine to medium sand, sub-angular, poorly graded, wet			

BORING LOG

ARCADIS

BORING LOG: **SB0401**

TOTAL DEPTH: **35.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Cameron Mason**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**4/29/2004**	**COORDINATES**	
DATE COMPLETED:	**4/29/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0401 (0-2)	0
		SAND: Dark yellowish brown medium to coarse sand and gravel, sub-rounded, poorly graded, dry	D		0
-5					0
					0
				SB0401 (8-10)	0
-10					0
					0
		CLAY: Dark yellowish brown silty sandy clay, plastic, cohesive, non-sticky, moist, hard, trace gravel	M		0
-15		SAND: Gray fine to medium sand, sub-angular, poorly graded, wet	M		0
		SILT: Dark gray clayey silt, nonplastic, cohesive, non-sticky, moist, hard, trace gravel			0
-20					0
					0
		SAND: Gray clayey sand, nonplastic, non-cohesive, sticky, wet	W		0
-25		SILT: Dark gray clayey silt, nonplastic, cohesive, non-sticky, moist, hard, trace gravel	M		0
					0
		SAND: Gray medium to coarse sand and gravel, sub-rounded, poorly graded, wet	W		0
-30					0
					0
-35		SILT: Dark gray clayey silt, nonplastic, cohesive, non-sticky, moist, hard, trace gravel	M		0
		SAND: Gray fine to medium sand, sub-angular, poorly graded, wet			

BORING LOG

BORING LOG: **SB0402**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	EFS
SITE LOCATION:	Speedway, Indiana	DRILLER:	Cameron Mason
LOGGED BY:	Tim Yates	DRILLING METHOD:	Geoprobe
DATE STARTED:	4/29/2004	COORDINATES	
DATE COMPLETED:	4/29/2004	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0402 (0-2)	0
		SAND: Dark yellowish brown medium to coarse sand and gravel, dry	D		0
					0
5					0
				SB0402 (8-10)	0
-10					0
					0
		CLAY: Dark yellowish brown silty sandy clay, plastic, cohesive, slightly sticky, moist	M		0
-15		SAND: Gray fine to medium sand, wet	W		0
		SILT: Gray clayey silt, nonplastic, cohesive, non-sticky, moist, hard, trace gravel	M W M		
		SAND: Gray fine to medium sand, wet			0
20		SILT: Gray clayey silt, nonplastic, cohesive, non-sticky, moist, hard, trace gravel			

BORING LOG

BORING LOG: **SB0403**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Cameron Mason**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**4/28/2004**	**COORDINATES**	
DATE COMPLETED:	**4/28/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0403 (0-2)	0
		SAND: Dark yellowish brown medium to coarse sand and gravel, dry	D		0
-5					0
					0
				SB0403 (8-10)	0
-10					0
					0
-15		SAND: Dark yellowish brown clayey sand, slightly plastic, slightly cohesive, sticky, slightly moist	M	SB0403 (14-16)	0
					0
					0
-20		SAND: Dark yellowish brown fine to medium sand, wet	W		0
					0
		SILT: Dark gray clayey silt, nonplastic, cohesive, non-sticky, moist, trace gravel	M		0
-25					

BORING LOG

BORING LOG: **SB0404**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Cameron Mason**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**4/28/2004**	**COORDINATES**	
DATE COMPLETED:	**4/28/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0404 (0-2)	0
		SAND: Dark yellowish brown medium to coarse sand and gravel, dry	D		0
					0
					0
		CLAY: Brown silty sandy clay, plastic, cohesive, sticky, trace gravel, moist	M	SB0404 (8-10)	0
-10		SAND: Gray clayey sand, slightly plastic, slightly cohesive, sticky, moist	M		0
					0
					0
-15		SAND: Gray fine to medium sand, wet	W		
		SAND: Gray medium to coarse sand and gravel, wet	W		0
		SILT: Gray clayey silt, nonplastic, cohesive, non-sticky, slightly moist, trace gravel	M		0
0					

BORING LOG

BORING LOG: **SB0405**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Cameron Mason**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**4/27/2004**	**COORDINATES**	
DATE COMPLETED:	**4/27/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0405 (0-2)	No PID measurements were taken
		SAND: Dark yellowish brown medium to coarse sand and gravel, sub-angular, poorly graded, dry	D		
5					
				SB0405 (8-10)	
-10				SB0405 (10-12)	
		CLAY: Dark yellowish brown silty sandy clay, plastic, cohesive, sticky, moist, trace gravel	M		
		SAND: Gray medium to coarse sand and gravel, sub-angular, poorly graded, wet.	W		
-15		SILT: Dark gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard, trace gravel	M		
		SAND: Gray medium to coarse sand and gravel, sub-angular, poorly graded, wet.	W		
		SILT: Dark gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard, trace gravel	M		
20					

BORING LOG

BORING LOG: **SB0406**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Cameron Mason**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**4/30/2004**	**COORDINATES**	
DATE COMPLETED:	**4/30/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0406 (0-2)	0
		SAND: Dark yellowish brown medium to coarse sand and gravel			0
-5					0
					0
		CLAY: Dark brown silty sandy clay, nonplastic, slightly cohesive, non-sticky, dry, trace gravel	D	SB0406 (8-10)	0
-10		CLAY: Gray silty sandy clay, plastic, cohesive, slightly sticky, slightly moist, trace gravel	M		0
		SAND: Gray clayey sand, slightly plastic, slightly cohesive, slightly sticky, slightly wet, trace gravel	W		0
-15					0
		SAND: Gray fine to medium sand, wet	W		0
					0
-20		SAND: Gray medium to coarse sand and gravel, wet	W		0
					0
		SILT: Gray clayey silt, non-plastic, cohesive, non-sticky, moist, hard, trace gravel	M		0
-25					

BORING LOG

BORING LOG: **SB0407**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Cameron Mason**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**4/28/2004**	**COORDINATES**	
DATE COMPLETED:	**4/28/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0407 (0-2) -	0
		SAND: Dark yellowish brown medium to coarse sand and gravel, dry	D		0
-5					0
					0
		CLAY: Dark brown silty sandy clay, nonplastic, slightly cohesive,non-sticky, dry, trace gravel, back and yellow mottling	D	SB0407 (8-10)	0
-10		CLAY: Grayish brown silty sandy clay, slightly plastic, cohesive, slightly sticky, slightly moist, trace gravel	M		0
				SB0407 (12-14)	0.2
		SAND: Grayish brown clayey sand, slightly plastic, slightly cohesive, slightly sticky, moist, trace gravel	M		0.8
-15					
		SAND: Gray fine to medium sand, wet	W		4.2
					5.2
-20					5.4
		SAND: Gray medium to coarse sand, wet	W		4.6
					3.2
-25		SILT: Gray clayey silt, nonplastic, cohesive, non-sticky, moist, trace gravel			

BORING LOG

BORING LOG: **SB0408**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Cameron Mason**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**4/28/2004**	**COORDINATES**	
DATE COMPLETED:	**4/28/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0408 (0-2)	0
		SAND: Dark yellowish brown medium to coarse sand, dry	D		0
-5					0
					0
		CLAY: Dark yellowish brown silty sandy clay, plastic, cohesive, slightly sticky, moist, trace gravel	M	SB0408 (8-10)	0
-10		CLAY: Dark brown silty sandy clay, nonplastic, slightly cohesive	M		0
		CLAY: Dark yellowish brown silty sandy clay, plastic, cohesive, slightly sticky, moist, trace gravel	W	SB0408 (12-14)	0
		SAND: Gray clayey sand, plastic, cohesive, non-sticky, slightly wet			0
-15					1.4
		SAND: Black fine to medium sand, wet	W		2.8
-20		SAND: Black medium to coarse sand with gravel, wet	W		3.2
					1.8
-25		SILT: Gray clayey silt, nonplastic, cohesive, non-sticky, moist, hard, trace gravel			0.2

BORING LOG

BORING LOG: **SB0410**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Cameron Mason**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**4/30/2004**	**COORDINATES**	
DATE COMPLETED:	**4/30/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0410 (0-2)	0
		SAND: Dark yellowish brown medium to coarse sand and gravel, dry	D		0
					0
-5					0
		SAND: Brown clayey sand, nonplastic, slightly cohesive, non-sticky, slightly moist, firm, trace gravel	M	SB0410 (8-10)	0
-10					0
		CLAY: Dark yellowish brown silty sandy clay, plastic, cohesive, sticky, moist	M		0
		SAND: Dark yellowish brown clayey sand, slightly plastic, cohesive, sticky, wet	W		0
-15		SAND: Dark yellowish brown fine to medium sand, wet	W W		
		SAND: Dark yellowish brown clayey sand, slightly plastic, cohesive, sticky, wet			0
		SILT: Dark gray clayey silt, nonplastic, cohesive, non-sticky, moist, hard, trace gravel	M		0
-20					

BORING LOG

BORING LOG: **SB0411**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Cameron Mason**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**4/27/2004**	**COORDINATES**	
DATE COMPLETED:	**4/27/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0411 (0-2)	0
		SAND: Dark yellowish brown medium to coarse sand and gravel, dry	D		0
					0
-5					0
		SAND: Dark yellowish brown clayey sand, slightly plastic, slightly cohesive, slightly sticky, moist, trace gravel	M	SB0411 (8-10)	0
-10					0
		CLAY: Gray silty sandy clay, plastic, cohesive, sticky, moist, trace gravel	M	SB0411 (14-16)	0
-15					0
					0
-20		SAND: Gray medium to coarse sand and gravel, wet	W		

BORING LOG

BORING LOG: **SB0412**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Cameron Mason**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**4/27/2004**	**COORDINATES**	
DATE COMPLETED:	**4/27/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0412 (0-2)	0
		FILL: Fill			0
-5		SAND: Dark yellowish brown medium to coarse sand and gravel, sub-angular, poorly graded, dry	D		0
					0
		SAND: Grayish brown clayey sand, slightly plastic, slightly cohesive, slightly sticky, moist, trace gravel	M		
				SB0412 (8-10)	0
-10					0
				SB0412 (12-14)	0
-15					0
		SAND: Gray medium to coarse sand and gravel, sub-angular, poorly graded, wet	W		0
		SILT: Gray clayey silt, nonplastic, cohesive, non-sticky, hard, trace gravel, moist	M		0
-20					

BORING LOG

BORING LOG: **SB0413**

TOTAL DEPTH: **5.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Jay McFall**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**4/30/2004**	**COORDINATES**	
DATE COMPLETED:	**4/30/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0413 (0-2)	0
		SAND: Dark yellowish brown medium to coarse sand and gravel	D		
				SB0413 (2-3)	0
-5					

BORING LOG

BORING LOG: **SB0414**

TOTAL DEPTH: **3.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Jay McFall**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**4/30/2004**	**COORDINATES**	
DATE COMPLETED:	**4/30/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0414 (0-2)	0
		SAND: Dark yellowish brown medium to coarse sand and gravel	D		
				SB0414 (2-4)	0

BORING LOG

BORING LOG: **SB0415**

TOTAL DEPTH: **3.50**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Jay McFall**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**4/30/2004**	**COORDINATES**	
DATE COMPLETED:	**4/30/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0415 (0-2)	0
		SAND: Dark yellowish brown medium to coarse sand and gravel	D		
				SB0415 (2-4)	0

BORING LOG

BORING LOG: **SB0416**

TOTAL DEPTH: **3.50**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Jay McFall**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**4/30/2004**	**COORDINATES**	
DATE COMPLETED:	**4/30/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0416 (0-2)	0
		SAND: Dark yellowish brown medium to coarse sand and gravel	D		
				SB0416 (2-4)	0

BORING LOG

BORING LOG: **SB0417**

TOTAL DEPTH: **3.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Jay McFall**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**4/30/2004**	**COORDINATES**	
DATE COMPLETED:	**4/30/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0417 (0-2)	0
		SAND: Dark yellowish brown medium to coarse sand and gravel	D		
				SB0417 (2-4)	0

BORING LOG

BORING LOG: **SB0419**

TOTAL DEPTH: **4.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Jay McFall**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**4/30/2004**	**COORDINATES**	
DATE COMPLETED:	**4/30/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0419 (0-2)	0
		SAND: Dark yellowish brown medium to coarse sand and gravel	D		
				SB0419 (2-4)	0

BORING LOG

BORING LOG: **SB0420**

TOTAL DEPTH: **3.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Jay McFall**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**4/30/2004**	**COORDINATES**	
DATE COMPLETED:	**4/30/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		SB0420 (0-2)	0
		SAND: Dark yellowish brown medium to coarse sand and gravel	D		
				SB0420 (2-4)	0

BORING LOG

BORING LOG: **SB0421**

TOTAL DEPTH: **22.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Cameron Mason**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**5/3/2004**	**COORDINATES**	
DATE COMPLETED:	**5/3/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		TOPSOIL: Topsoil		SB0421 (0-2)	0
		SAND: Dark yellowish browm medium to coarse sand, dry	D		
		CLAY: Brown silty sandy clay, nonplastic, cohesive, non-sticky, trace gravel, slightly moist	M		0
		SAND: Brown medium to coarse sand, slightly wet	W		
		CLAY: Brown silty sandy clay, nonplastic, cohesive, non-sticky, trace gravel, slightly moist	M		0
					8
				SB0421 (8-10)	10
		SAND: Brown clayey sand, slightly plastic, slightly cohesive, sticky, slightly wet, trace gravel	W		
-10		CLAY: Brown silty sandy clay, nonplastic, cohesive, non-sticky, trace gravel, slightly moist	M		36
		CLAY: Black silty sandy clay, slightly plastic, cohesive, slightly sticky, moist, trace gravel, odor			120
		SAND: Black clayey sand, plastic, cohesive, sticky, very moist, strong odor	M		88
-15					64
		SILT: Gray clayey silt, nonplastic, cohesive, non-sticky, slightly moist, trace gravel	M		5.4
0					0

BORING LOG

BORING LOG: **SB0422**

TOTAL DEPTH: **16.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Cameron Mason**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**5/3/2004**	**COORDINATES**	
DATE COMPLETED:	**5/3/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		TOPSOIL: Topsoil		SB0423 (0-2)	0
		SAND: Dark yellowish browm medium to coarse sand and gravel, dry	D		0
-5		CLAY: Brown silty sandy clay, slightly plastic, cohesive, sticky, trace gravel, slightly moist	M		0
		SAND: Light brown fine to medium sand, moist	M		0
		CLAY: Brown silty sandy clay, slightly plastic, cohesive, sticky, trace gravel, slightly moist	M	SB0423 (8-10)	12.8
-10		CLAY: Black silty sandy clay, plastic, cohesive, slightly sticky, moist, trace gravel, odor	M		52
		SAND: Light grayish brown medium to coarse sand and gravel, moist, odor at 13.5 ft	M		36
		SAND: Black coarse sand and gravel, strong odor, no water in sleeve but sample appears wet (product?)	W		126
-15		SILT: Gray clayey silt, nonplastic, cohesive, nonsticky, slightly moist, hard, trace gravel	M		

BORING LOG

BORING LOG: **SB0423**

TOTAL DEPTH: **16.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Cameron Mason**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**5/3/2004**	**COORDINATES**	
DATE COMPLETED:	**5/3/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		TOPSOIL: Topsoil		SB0423 (0-2)	0
		SAND: Dark yellowish brown medium to coarse sand and gravel, dry	D		0
		CLAY: Brown silty sandy clay, nonplastic, cohesive, non-sticky, dry	D		0
-5				SB0423 (6-8)	0
				SB0423 (8-10)	0.8
-10					4.6
					5.4
		SAND: Light grayish brown medium to coarse sand and gravel, water	W		56
-15		SAND: Black medium to coarse sand and gravel, wet, strong odor	W		
		SILT: Gray clayey silt, nonplastic, cohesive, non-sticky, hard, trace gravel, slightly moist	M		

BORING LOG

BORING LOG: **SB0424**

TOTAL DEPTH: **16.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Cameron Mason**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**5/3/2004**	**COORDINATES**	
DATE COMPLETED:	**5/3/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		TOPSOIL: Topsoil		SB0424 (0-2)	0
		SAND: Dark yellowish brown medium to coarse sand and gravel, dry	D		0
		CLAY: Brown silty sandy clay, plastic, cohesive, sticky, moist, trace gravel	M		0
-5					0
				SB0424 (8-10)	0
-10		CLAY: Dark brown to black silty sandy clay, plastic, cohesive, sticky, moist	M		4.2
					21
		SAND: Gray medium to coarse sand and gravel, wet	W		
-15		SILT: Gray clayey silt, nonplastic, cohesive, non-sticky, slightly moist, trace gravel	M		0.4

BORING LOG

BORING LOG: **SB0425**

TOTAL DEPTH: **32.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Cameron Mason**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**5/4/2004**	**COORDINATES**	
DATE COMPLETED:	**5/6/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete	D	No samples were collected	20
		SAND: Gray medium to coarse sand and gravel, dry, slight odor			18.6
-5		CLAY: Gray silty sandy clay, plastic, cohesive, sticky, moist, trace gravel	M		2.2
		CLAY: Brown silty sandy clay, plastic, cohesive, sticky, moist, trace gravel	M		0
		SAND: Dark yellowish brown medium to coarse sand, gravel, dry	D		0
-10					0
					0
-15		SAND: Dark yellowish brown fine to medium sand, slightly moist	M		0
		SAND: Dark yellowish brown medium to coarse sand and gravel, wet	W		0
-20		SILT: Gray clayey silt, nonplastic, cohesive, non-sticky, moist, hard, trace gravel	M		0
		SAND: Dark yellowish brown clayey sand, wet, slightly plastic, slightly cohesive, sticky	W		0
-25		SILT: Gray clayey silt, nonplastic, cohesive, non-sticky, moist, hard, trace gravel	M		34
		SAND: Gray medium to coarse sand and gravel, wet, odor	W		146
-30					78
		SILT: Gray clayey silt, nonplastic, cohesive, non-sticky, moist, hard, trace gravel	M		56

PCE Area - AOI-51

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BORING LOG

BORING LOG: **SB-0425**

TOTAL DEPTH: **32.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Wade Allen**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/2/2004**	**COORDINATES**	
DATE COMPLETED:	**11/2/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete			18.3
		SAND: Dark yellowish brown medium to coarse sand, dry	D		30.6
					16.4
-5		CLAY: Brown silty sandy clay, plastic, cohesive, sticky, moist, trace gravel	M		11
		SAND: Dark yellowish brown medium to coarse sand, dry. Moist at 10.5 feet	M		101
-10					228
		CLAY: Dark gray clayey silt, nonplastic, cohesive, non-sticky, dry, hard, trace gravel and wetness, strong odor 26 to 28 feet	D		0
-15					1.2
					2.4
					4.1
-20				SB-0425 (20-22)	222
					215
		SAND: Dark gray fine to medium sand, wet, strong odor.	W	SB-0425 (24-26)	187.2
-25		CLAY: Dark gray clayey silt, nonplastic, cohesive, non-sticky, dry, hard, trace gravel, strong odor	D		268.5
					127
-30					98.6

BORING LOG

BORING LOG: **SB-0426**

TOTAL DEPTH: **46.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Kevin Simpson**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/8/2004**	**COORDINATES**	
DATE COMPLETED:	**11/9/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete			10.1
		SAND: Dark yellowish brown medium to coarse sand and gravel, dry	D		12.4
-5		CLAY: Brown silty sandy clay, plastic, cohesive, sticky, moist, trace gravel	M		3.2
		SAND: Dark yellowish brown medium to coarse sand and gravel, dry	D		28.9
-10		CLAY: Dark gray clayey silt, nonplastic, slightly cohesive, non-sticky, dry, friable, hard, moist, slight odor 26 to 29 feet	D		32.6
					5.1
-15					4.7
					2.3
					1.5
-20					0.8
					6.4
					10.0
-25					49.5
					180.0
-30					40.6
					91.2
					89.4
-35					73.6
					54.6
					43.2
-40				SB-0426 (40-42)	64.2
		CLAY: Dark gray clayey silt, nonplastic, cohesive, non-sticky, moist, firm, with fine to medium sand stringers (dark gray) wet intermittently throughout 2 foot interval, thickest stringer approximately 1/8 inch	M		68.6
-45			M	SB-0426 (44-46)	53.6
		CLAY: Dark gray clayey silt, nonplastic, slightly cohesive, non-sticky, dry, friable, hard			

BORING LOG

BORING LOG: **SB-0427**

TOTAL DEPTH: **28.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Kevin Simpson**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/11/2004**	**COORDINATES**	
DATE COMPLETED:	**11/12/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete			0.1
		SAND: Dark yellowish brown medium to coarse sand and gravel,dry	D		12.2
-5					22.9
					29.8
					32.3
-10		CLAY: Dark gray clayey silt, nonplastic, cohesive, non-sticky, slightly moist, hard, trace gravel	M		8.1
					7.9
-15					6.2
					7.5
					8.1
-20					13.9
				SB-0427 (22-24)	27.2
-25		SAND: Dark gray medium to coarse sand and gravel, wet	W		69.7
		CLAY: Dark gray clayey silt, nonplastic, cohesive, non-sticky, slightly moist, hard, trace gravel	M	SB-0427 (26-28)	10.1

BORING LOG

BORING LOG: **SB-0428**

TOTAL DEPTH: **28.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Wade Allen**
LOGGED BY:	**Galvin Kaufman**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/3/2004**	**COORDINATES**	
DATE COMPLETED:	**11/4/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete			2.3
		SAND: Yellowish brown sand and gravel, dry, loose	D		3.9
-5					16.2
					16.5
					195
-10					83.3
		CLAY: Dark gray silty clay, dry, hard, trace sand and gravel, odor	D		140
-15					4.0
					5.9
					0.7
-20				SB-0428 (20-22)	0.9
		SAND: Gray sand and gravel, well graded, loose, saturated	W		20.2
-25					26.1
		CLAY: Dark gray silty clay, dry, hard, trace sand and gravel, odor	D	SB-0428 (26-28)	0.7

BORING LOG

BORING LOG: **SB-0429**

TOTAL DEPTH: **32.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	
LOGGED BY:	**Mark Fisherkeller**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/5/2004**	**COORDINATES**	
DATE COMPLETED:	**11/5/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete			0.0
		SAND: Yellowish brown sand and gravel, loose, dry, increased silt at 9 feet	D		4.4
					4.7
-5					25
					8.1
-10					2140
		CLAY: Dark gray silty clay, dry, hard, trace sand and gravel, odor	D		1461
					1119
-15					966
					946
-20					1300
					24
					6.3
-25				SB-0429 (25-27)	
					421
		SAND: Sand and gravel, light brown, well graded, loose, saturated	W		3.7
		CLAY: Dark gray silty clay, dry, hard, trace sand and gravel, odor	D	SB-0429 (29-31)	
-30					6.5

BORING LOG

BORING LOG: **SB-0430**

TOTAL DEPTH: **44.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Kevin Simpson**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/9/2004**	**COORDINATES**	
DATE COMPLETED:	**11/9/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete			0.4
		SAND: Dark yellowish brown medium to coarse sand and gravel, dry	D		1.6
-5					2.3
					1.9
					0.7
-10					0.2
		CLAY: Dark gray clayey silt, non-plastic, slightly cohesive, non-sticky, dry, trace gravel, hard, friable,slightly moist,non-friable at 15.5 feet.	D		2.4
-15					3.1
				SB-0430 (16-18)	1.2
					0.6
-20		SAND: Dark yellowish brown fine to medium sand, wet	W		1.4
		SAND: Dark yellowish brown medium to coarse sand and gravel, wet	W		2.8
-25		CLAY: Dark gray clayey silt, plastic, cohesive, sticky, wet	W		5.7
		SAND: Gray medium to coarse sand and gravel, wet.			4.1
					3.8
-30					6.4
					8.9
-35					10.1
					23.2
		GRAVEL: Gravel (multi-colored), wet, odor	W M		1836
0		CLAY: Black clayey silt, non-plastic, slighly cohesive, non-sticky, slightly moist, odor, slightly friable, soft	M	SB-0430 (40-42)	174
		CLAY: Dark gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard			162

BORING LOG

BORING LOG: **SB-0431**

TOTAL DEPTH: **32.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Wade Allen**
LOGGED BY:	**Galvin Kaufman**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/2/2004**	**COORDINATES**	
DATE COMPLETED:	**11/2/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete			1.0
		SAND: Yellow brown clayey sand and gravel, loose, dry	D		7.0
					15.6
-5		CLAY: Dark brown sandy gravelly clay, hard, moist	M		9.1
					14.4
		SAND: Yellow brown fine to medium sand, dry, trace gravel	D		45.0
-10		CLAY: Yellow brown (for 1 foot) then dark gray silty clay, hard, dry, trace gravel	D		9.1
					9.2
-15					795
				SB-0431 (18-20)	815
-20					311
					498
				SB-0431 (24-26)	339
-25					788
		SAND: Dark gray fine to coarse sand and gravel, wet	W		340
-30		CLAY: dark gray silty clay, hard, dry, trace gravel	D	SB-0431 (30-32)	24.4

BORING LOG

BORING LOG: **SB-0432**

TOTAL DEPTH: **38.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Kevin Simpson**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/10/2004**	**COORDINATES**	
DATE COMPLETED:	**11/10/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete			0.8
		SAND: Dark yellowish brown medium to coarse sand and gravel, dry	D		18.6
-5					13.4
					22.6
					58.9
0					42.7
		CLAY: Dark gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard	M		7.3
-15					5.9
					3.7
					5.8
-20				SB-0432 (20-22)	6.1
		SAND: Dark gray medium to coarse sand and gravel, wet	W		21.1
-25					33.8
					51.6
					42.7
-30					63.4
					59.5
-35					72.6
		CLAY: Dark gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard	M	SB-0432 (36-38)	5.7

BORING LOG

BORING LOG: **SB-0433**

TOTAL DEPTH: **40.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Kevin Simpson**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/10/2004**	**COORDINATES**	
DATE COMPLETED:	**11/10/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete			0.7
		SAND: Dark yellowish brown medium to coarse sand and gravel, dry, very moist at 12	M		2.4
-5					6.9
					8.7
					24.3
0					89.3
		CLAY: Dark gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard	M		112
-15					10.1
					4.2
					3.8
-20				SB-0433 (20-22)	5.6
		SAND: Dark gray medium to coarse sand and gravel, wet	W		33.1
-25		SAND: Dark gray fine to medium sand, wet	W		28.2
					47.5
					38.6
-30					41.8
					31.2
-35					47.7
					56.9
0		CLAY: Dark gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard	M	SB-0433 (38-40)	5.6

BORING LOG

BORING LOG: **SB-0434**

TOTAL DEPTH: **36.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Wade Allen**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/7/2004**	**COORDINATES**	
DATE COMPLETED:	**11/11/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete			8.7
		SAND: Dark yellowish brown medium to coarse sand and gravel, dry	D		18.6
-5					43.1
					26.8
					59
0					37.3
		CLAY: Dark gray clayey silt, non-plastic, slightly cohesive, non-sticky, slightly moist, hard, friable	M		8.5
-15					5.7
			M		6.1
					4.3
-20					7.9
				SB-0434 (22-24)	5.6
-25		SAND: Dark gray medium to coarse sand, wet	W		58.6
					62.3
					41.5
-30					72.6
					81.1
-35		CLAY: Dark gray clayey silt, non-plastic, slightly cohesive, non-sticky, slightly moist, hard, friable	M	SB-0434 (34-36)	81.2

BORING LOG

BORING LOG: **SB-0435**

TOTAL DEPTH: **36.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Wade Allen**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/2/2004**	**COORDINATES**	
DATE COMPLETED:	**11/2/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete			0
		SAND: Dark yellowish brown medium to coarse sand, dry	D		0
-5					0
					0
		CLAY: Brown silty sandy clay, plastic, cohesive, sticky, moist, trace gravel	M		1.5
-10		SAND: Dark yellowish brown medium to coarse sand, dry	D		1.3
		CLAY: Dark gray, silty clay, dry, non-plastic, 10yr4/1, hard, trace sand and gravel	D		61.5
-15					61.5
					2.5
					0
-20					0
					0
-25					0
				SB-0435 (26-28)	0
		SAND: Dark gray fine to coarse sand and gravel, wet, loose, trace clay, 10yr4/1	W		0
-30					1
		CLAY: Dark gray, silty clay, dry, non-plastic, 10yr4/1, hard, trace sand and gravel	D		700
-35				SB-0435 (34-36)	13

BORING LOG

BORING LOG: **SB-0436**

TOTAL DEPTH: **36.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Alan Thomas**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/2/2004**	**COORDINATES**	
DATE COMPLETED:	**11/2/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete			10
		SAND: Dark yellowish brown medium to coarse sand, dry	D		4
					5
-5		CLAY: Brown silty sandy clay, plastic, cohesive, sticky, moist, trace gravel	M		56
		SAND: Dark yellowish brown medium to coarse sand, dry, moist w/slight odor at 11.5 feet	M		14
0					8
		CLAY: Dark gray clayey silt, non-plastic, cohesive, non-sticky, moist, hard, trace gravel	M		0
-15					0
					0
					6
-20					2
					2
-25				SB-0436 (24-26)	10
					0
		SAND: Gray medium to coarse sand, wet, strong odor	W		52
-30					284
		CLAY: Dark gray clayey silt, non-plastic, cohesive, non-sticky, moist, hard, trace gravel	M		0
-35				SB-0436 (34-36)	0

BORING LOG

BORING LOG: **SB-0437**

TOTAL DEPTH: **32.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Kevin Simpson**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/11/2004**	**COORDINATES**	
DATE COMPLETED:	**11/12/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete			0.3
		SAND: Dark yellowish brown medium to coarse sand, dry	D		8.7
-5					9.6
					6.4
					5.1
-10					7.9
		CLAY: Dark gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard, trace gravel	M		2.0
-15					1.8
				SB-0437 (16-18)	2.6
					10.4
-20		SAND: Dark gray clayey sand, non-plastic, slightly cohesive, non-sticky, wet	W		12.9
		SAND: Dark yellowish brown fine to medium sand, wet	W		13.7
-25		SAND: Dark yellowish brown medium to coarse sand and gravel, wet	W		25.4
					28.3
					27.9
-30		CLAY: Dark gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard, trace gravel	M	SB-0437 (30-32)	5.8

BORING LOG

BORING LOG: **SB-0438**

TOTAL DEPTH: **30.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Mark Doan**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/12/2004**	**COORDINATES**	
DATE COMPLETED:	**11/12/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete			0.1
		SAND: Dark yellowish brown medium to coarse sand, dry	D		10.2
-5					13.1
					12.4
		CLAY: Brown silty sandy clay, plastic, cohesive, sticky, moist, trace gravel			84.9
-10				SB-0438 (10-12)	284
		SAND: Dark yellowish brown medium to coarse sand and gravel, wet, strong odor	W		
		CLAY: Dark gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard, odor at 22 feet	M		22.6
-15					42
					68.9
					55.6
-20					52.4
				SB-0438 (22-24)	101
					72.6
-25		SAND: Dark gray medium to coarse sand and gravel, wet	W		89.2
		CLAY: Dark gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard	M	SB-0438 (28-30)	46.7
-30					

BORING LOG

BORING LOG: **SB-0439**

TOTAL DEPTH: **40.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Mark Doan**
LOGGED BY:	**Galvin Kaufman**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/15/2004**	**COORDINATES**	
DATE COMPLETED:	**11/15/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete			4.0
		SAND: Yellow brown sand and gravel, fine coarse, loose, dry	D		5.4
-5		CLAY: Dark brown gravelly clay, moist, cohesive, trace sand	M		17.5
		SAND: Yellow brown fine coarse sand			8
-10					8.6
		CLAY: Silty clay, brown for 0.5 feet then gray till, hard, dry, trace gravel, non-plastic	D		11.8
-15					1.6
					0.4
				SB-0439 (16-17)	7.6
-20		SAND: Gray fine coarse sand and gravel, wet, 2 inches of hard moist silt at 19 feet	W		10.4
				SB-0439 (20-21)	0.9
		CLAY: Silt, hard, slighly moist, with 1 inch sand in center	M		90.4
-25		SAND: Gray fine coarse sand and gravel, wet	M		29
					7.4
					34.7
-30		SAND: Dark gray fine sand, wet, loose	W		2.3
		CLAY: Dark gray silt, very moist, fim	M		1.7
-35		SAND: Dark gray fine to coarse sand and gravel, wet	W		9.6
					0.8
-40		CLAY: Dark gray, silty clay till, very hard, dry	D	SB-0439 (39-40)	0

BORING LOG

BORING LOG: **SB-0501**

TOTAL DEPTH: **100.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**

SITE LOCATION: **Speedway, Indiana**

LOGGED BY: **Tim Yates**

DATE STARTED: **1/5/2005**

DATE COMPLETED: **1/6/2005**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Jim Robinson**

DRILLING METHOD: **Mini-Sonic**

COORDINATES

NORTHING:

EASTING:

ELEVATION:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		TOPSOIL: Topsoil	M	SB-0501 (0-2)	NM
-5		CLAY: Brown silty sandy clay, plastic, cohesive, sticky, moist, trace gravel	M		NM
-10		SAND: Dark yellowish brown fine to medium sand and gravel, moist		SB-0501 (8-10)	NM
-15					NM
-20		CLAY: Gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard, trace gravel	M		NM
5		SAND: Light gray medium to coarse sand and gravel, wet, slight odor	W		52.6
-30		CLAY: Gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard, trace gravel	M		27.1
-35		SAND: Light gray medium to coarse sand and gravel, wet	W		21.4
-40		CLAY: Gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard, trace gravel	M		10.1
-45		SAND: Gray fine to medium sand, wet (medium to coarse sand at 51 feet)	W		37.7
-50		CLAY: Gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard, trace gravel	M		58.9
-55		SAND: Gray fine to medium sand, wet	W		12.2
-60		CLAY: Gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard, trace gravel			5.6
-65		SAND: Gray fine to medium sand, wet	W		1.8
-70		CLAY: Gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard, trace gravel			1.2
-75		SAND: Gray fine to medium sand, wet	W		1.5
-80		SAND: Gray medium to coarse sand and gravel, wet	W		0.7
-85					0.4
-90					0.2
-95					0
100					0
					0
					0
					0.4
					1.6
					0.8
					4.1
					10.1
					8.2
					4.3
					5.7

BORING LOG

BORING LOG: **SB-0502**

TOTAL DEPTH: **110.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**

SITE LOCATION: **Speedway, Indiana**

LOGGED BY: **Galvin Kaufman**

DATE STARTED: **1/17/2005**

DATE COMPLETED: **1/17/2005**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Jim Robinson**

DRILLING METHOD: **Mini-Sonic**

COORDINATES

NORTHING:

EASTING:

ELEVATION:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		ASPHALT: Asphalt surface	M	SB-0502 (0-2)	1.8
-5		CLAY: Dark brown, sandy, silty clay, moist, sticky, trace gravel, non-plastic	M		1.3
-10		SAND: Light brown fine to coarse sand, trace gravel, loose, moist, turns dry at 6 feet, turns wet and silty at 17 feet		SB-0502 (8-10)	0.6
-15					
-20		CLAY: Dark gray clayey silt (till), trace gravel, hard, dry	D		
-25		SAND: Dark gray fine to medium sand, wet, loose	W		
-30		CLAY: Dark gray clayey silt (till), trace gravel, hard, dry	D		
-35		SAND: Brown fine to medium sand, moist, loose. Turns wet and gra at 32.5 feet	M		
-40		CLAY: Dark gray clayey silt, hard, dry, till, trace gravel	W		
-45		SAND: Dark gray fine to medium sand, moist, loose	D		
-50		CLAY: Dark gray clayey silt (till), hard, dry	M		
-55			D		
-60					
-65					
-70					
-75					
-80					
-85					
-90		SAND: Dark gray medium to coarse sand and gravel, wet	W		
-95		SAND: Dark gray fine sand with trace clays, wet	W		
-100		SAND: Dark gray fine to medium sand, wet	W		
-105		SAND: Dark gray medium to coarse sand and gravel, wet snad, increasing gravel content at 105 feet	W		
-110		CLAY: Very dark brown clayey silt, non-plastic, cohesive, non-sticky, hard, dry	D		

BORING LOG

BORING LOG: **SB-40-0501**

TOTAL DEPTH: **35.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	
DATE STARTED:	**8/25/2005**	**COORDINATES**	
DATE COMPLETED:	**8/25/2005**	NORTHING:	1649200.7
		EASTING:	168557.3
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		ASPHALT: Asphalt		SB-40-0501-01		0.0
		FILL: Fill		SB-40-0501-02		0.0
		CLAYEY SAND: Brown Clayey Sand, plastic, coh., sticky, moist, trace gravel, sl. firm, gray mottling		SB-40-0501-03		0.0
-5				SB-40-0501-04		0.2
		SAND: Dark Yellowish brown medium to coarse sand, dry, sub-rounded with gravel @ 9.0', sl. odor at 19.5'		SB-40-0501-05		0.0
-10				SB-40-0501-06		0.3
				SB-40-0501-07		0.0
-15				SB-40-0501-08		0.0
				SB-40-0501-09		5.7
				SB-40-0501-10		19.6
-20				SB-40-0501-11		27.4
		SAND AND GRAVEL: Dark gray, medium to coarse grained sand and gravel, dry, strong odor, and staining		SB-40-0501-12		265.0
-25		CLAYEY SILT: dark gray clayey silt, non-plastic, cohesive, non-sticky, very slight moisture, hard, trace gravel		SB-40-0501-13		0.0
				SB-40-0501-14		0.0
				SB-40-0501-15		0.0
-30				SB-40-0501-16		0.0
				SB-40-0501-17		0.0
-35		SAND		SB-40-0501-18		0.0

BORING LOG

BORING LOG: **SB-40-0502**

TOTAL DEPTH: **28.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	
DATE STARTED:	**8/25/2005**	**COORDINATES**	
DATE COMPLETED:	**8/25/2005**	NORTHING:	1649095.5
		EASTING:	168851.7
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		ASPHALT: Asphalt/Fill		SB-40-0502-01		0.0
		CLAY: Brown Silty, Sandy CLAY, plastic, cohesive, sticky, moist, trace gravel		SB-40-0502-02		0.0
				SB-40-0502-03		0.0
-5						
		SAND AND GRAVEL		SB-40-0502-04		0.0
				SB-40-0502-05		0.0
-10				SB-40-0502-06		0.0
				SB-40-0502-07		0.0
				SB-40-0502-08		0.0
-15						
				SB-40-0502-09		0.0
				SB-40-0502-10		0.0
-20				SB-40-0502-11		0.0
				SB-40-0502-12		0.0
				SB-40-0502-13		0.0
-25		SAND AND GRAVEL: Dark yellowish brown coarse Sand and Gravel, wet		SB-40-0502-14		0.0
		CLAYEY SILT: Dark gray Clayey Silt, non-plastic, cohesive, non-sticky, slightly moist, firm, trace gravel				

BORING LOG

BORING LOG: **SB-40-0502**

TOTAL DEPTH: **28.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	
DATE STARTED:	**8/25/2005**	**COORDINATES**	
DATE COMPLETED:	**8/25/2005**	NORTHING:	1649095.5
		EASTING:	168851.7
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)

BORING LOG

BORING LOG: **SB-40-0503**

TOTAL DEPTH: **28.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	
DATE STARTED:	**8/25/2005**	**COORDINATES**	
DATE COMPLETED:	**8/25/2005**	NORTHING:	1648704.8
		EASTING:	168876.8
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		ASPHALT: Asphalt/Fill		SB-40-0503-01		0.0
		CLAY		SB-40-0503-02		0.0
				SB-40-0503-03		0.0
-5		SAND AND GRAVEL: Dark yellowish brown medium to coarse Sand and Gravel, dry, sub-rounded		SB-40-0503-04		0.0
				SB-40-0503-05		0.0
-10				SB-40-0503-06		0.0
				SB-40-0503-07		0.0
				SB-40-0503-08		0.0
-15				SB-40-0503-09		0.0
				SB-40-0503-10		0.0
-20				SB-40-0503-11		459.0
		SAND AND GRAVEL: Gray med to coarse Sand and Gravel, dry, odor, staining, wet @ 26.0		SB-40-0503-12		562.0
				SB-40-0503-13		571.0
-25				SB-40-0503-14		582/9.3
		SAND AND GRAVEL: Dark brown medium to coarse Sand and Gravel, wet				

BORING LOG

BORING LOG: **SB-40-0504**

TOTAL DEPTH: **24.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	
DATE STARTED:	**8/25/2005**	**COORDINATES**	
DATE COMPLETED:	**8/25/2005**	NORTHING:	1648444.7
		EASTING:	168763.8
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		ASPHALT: Asphalt/Fill		SB-40-0504-01		0.0
		CLAY: Brown Silty Sandy Clay, plastic, cohesive, sticky, moist, trace gravel		SB-40-0504-02		0.0
-5				SB-40-0504-03		0.0
		SAND AND GRAVEL: Dark yellowish brown medium to coarse Sand and Gravel, dry		SB-40-0504-05		0.0
-10				SB-40-0504-06		0.0
				SB-40-0504-07		0.0
				SB-40-0504-08		0.0
-15				SB-40-0504-09		0.0
				SB-40-0504-10		0.0
-20				SB-40-0504-11		0.0
				SB-40-0504-12		0.0
		SAND: Dark yellowish brown, fine to medium Sand, wet				

BORING LOG

BORING LOG: **SB-40-0505**

TOTAL DEPTH: **28.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	
DATE STARTED:	**8/26/2005**	**COORDINATES**	
DATE COMPLETED:	**8/26/2005**	NORTHING:	1648704.8
		EASTING:	168579.7
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: Concrete		SB-40-0505-01		0.0
		CLAY: Brown silty sandy Clay, plastic, cohesive, sticky, moist, trace gravel		SB-40-0505-02		0.0
				SB-40-0505-03		0.0
-5		SAND AND GRAVEL: Dark yellowish brown medium to coarse Sand and Gravel, dry, sub-rounded		SB-40-0505-04		0.0
				SB-40-0505-05		0.0
-10				SB-40-0505-06		0.4
				SB-40-0505-07		0.2
				SB-40-0505-08		0.0
-15				SB-40-0505-09		1.2
				SB-40-0505-10		2.9
-20				SB-40-0505-11		21.7
				SB-40-0505-12		509.0
		SAND AND GRAVEL: Gray medium to coarse Sand and Gravel, dry, odor & staining, wet @ 27.0'		SB-40-0505-13		487
-25				SB-40-0505-14		492.0

BORING LOG

BORING LOG: **SB-40-0506**

TOTAL DEPTH: **24.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	
DATE STARTED:	**8/26/2005**	**COORDINATES**	
DATE COMPLETED:	**8/26/2005**	NORTHING:	1648025.7
		EASTING:	168836.5
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		ASPHALT: Asphalt/ Fill		SB-40-0506-01		0.0
		CLAY: Brown silty sandy Clay, plastic, cohesive, sticky, trace gravel, moist		SB-40-0506-02		0.0
				SB-40-0506-03		0.8
-5				SB-40-0506-04		0.0
		SAND AND GRAVEL: Dark yellowish brown med to coarse Sand and Gravel, dry, sub-rounded, wet @ 21.5		SB-40-0506-05		0.0
-10				SB-40-0506-06		1.1
				SB-40-0506-07		0.5
				SB-40-0506-08		0.0
-15				SB-40-0506-09		0.2
				SB-40-0506-10		0.7
-20				SB-40-0506-11		0.0
				SB-40-0506-12		1.2

BORING LOG

BORING LOG: **SB-40-0507**

TOTAL DEPTH: **24.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoporbe**
DATE STARTED:	**8/26/2005**	**COORDINATES**	
DATE COMPLETED:	**8/26/2005**	NORTHING:	1648022.5
		EASTING:	168691.8
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		ASPHALT: Asphalt / FILL		SB-40-0507-01		0.0
		CLAY: Brown silty sandy Clay, plastic, cohesive, sticky, moist, trace gravel		SB-40-0507-02		0.0
				SB-40-0507-03		0.0
-5						
		SAND AND GRAVEL: Dark yellowish brown medium to coarse Sand and Gravel, dry, wet @ 22.5		SB-40-0507-04		0.7
				SB-40-0507-05		0.5
-10				SB-40-0507-06		0.0
				SB-40-0507-07		1.9
				Sb-40-0507-08		2.4
-15						
				SB-40-0507-09		0.6
				SB-40-0507-10		0.4
-20				SB-40-0507-11		2.9
				SB-40-0507-12		1.8

BORING LOG

BORING LOG: **SB-40-0508**

TOTAL DEPTH: **32.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**8/26/2005**	**COORDINATES**	
DATE COMPLETED:	**8/26/2005**	NORTHING:	1648455.4
		EASTING:	168529.2
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: Topsoil		SB-40-0508-01		0.0
		CLAY: Brown silty sandy Clay, plastic, cohesive, sticky, moist, trace gravel		SB-40-0508-02		0.0
-5				SB-40-0508-03		0.0
				SB-40-0508-04		0.8
		SAND AND GRAVEL: Dark yellowish brown medium to coarse Sand and Gravel, dry		SB-40-0508-05		1.2
-10				SB-40-0508-06		2.7
				SB-40-0508-07		0.9
-15				SB-40-0508-08		0.1
				SB-40-0508-09		0.0
				SB-40-0508-10		0.4
-20		SAND AND GRAVEL: Gray medium to coarse Sand and Gravel, dry, odor and staining, wet @ 30.0'		SB-40-0508-11		0.2
				SB-40-0508-12		1.9
-25				SB-40-0508-13		18.7
				SB-40-0508-14		21.4
				SB-40-0508-15		352
-30				SB-40-0508-16		356

BORING LOG

BORING LOG: **SB-40-0509**

TOTAL DEPTH: **40.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**Tim Yates / Matt Grilas**	DRILLING METHOD:	
DATE STARTED:	**8/29/2005**	**COORDINATES**	
DATE COMPLETED:	**8/29/2005**	NORTHING:	1648884.3
		EASTING:	169208.6
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		ASPHALT: Asphalt / Fill		SB-40-0509-01		0.0
		CLAY: Brown silty sandy Clay, nonplastic, cohesive, non-sticky, slightly moist, trace gravel		SB-40-0509-02		0.2
				SB-40-0509-03		1.9
-5		SAND AND GRAVEL: Dark yellowish brown, medium to coarse Sand and Gravel, dry, poorly graded		SB-40-0509-04		1.6
				SB-40-0509-05		--
-10				SB-40-0509-06		--
				SB-40-0509-07		--
-15				SB-40-0509-08		39.6
				SB-40-0509-09		16.0
				SB-40-0509-10		19.6
-20				SB-40-0509-11		47.2
				SB-40-0509-12		23.9
-25		SAND: Very dark gray fine to medium Sand, dry, odor		SB-40-0509-13		282
		SAND: Black fine to medium Sand, wet, staining & odor		SB-40-0509-14		492.0
		SAND AND GRAVEL: Dark yellowish brown, medium to coarse Sand and Gravel, wet, poorly graded		SB-40-0509-15		5.4
-30						
-35						
		CLAYEY SILT: Gray clayey Silt, non-plastic, cohesive, non-sticky, trace gravel, hard, slightly moist				
-40						

BORING LOG

BORING LOG: **SB-40-0510**

TOTAL DEPTH: **36.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dale Remmler**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**8/31/2005**	**COORDINATES**	
DATE COMPLETED:	**9/7/2005**	NORTHING:	1648294.7
		EASTING:	168582.3
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: Topsoil		SB-40-0510-01		0.0
		CLAY: Brown silty sandy Clay, plastic, cohesive, sticky, moist, trace gravel, soft		SB-40-0510-02		0.0
-5				SB-40-0510-03		0.4
				SB-40-0510-04		1.7
		SAND AND GRAVEL: Dark yellowish brown medium to coarse Sand and Gravel, dry sub-rounded, poorly graded		SB-40-0510-05		0.3
-10				SB-40-0510-06		2.9
				SB-40-0510-07		3.8
-15				SB-40-0510-08		1.6
				SB-40-0510-09		0.8
				SB-40-0510-10		2.4
-20				SB-40-0510-11		11.9
				SB-40-0510-12		12.8
-25		SAND AND GRAVEL: Dark yellowish brown medium to coarse Sand and Gravel, hard-packed, sub-rounded, poorly sorted		SB-40-0510-13		13.4
				SB-40-0510-14		10.2
				SB-40-0510-15		9.4
-30				SB-40-0510-16		11.9
				SB-40-0510-17		21.8
-35				SB-40-0510-18		24.1

BORING LOG

BORING LOG: **SB-40-0511**

TOTAL DEPTH: **36.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dale Remmler**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	
DATE STARTED:	**8/31/2005**	**COORDINATES**	
DATE COMPLETED:	**9/7/2005**	NORTHING:	1648562
		EASTING:	169268.5
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		ASPHALT: Asphalt		SB-40-0511-01		0.0
		CLAY: Brown silty sandy Clay, plastic, cohesive, sticky, moist, trace gravel		SB-40-0511-02		0.2
-5				SB-40-0511-03		2.9
		SAND AND GRAVEL: Dark yellowish brown, medium to coarse Sand and Gravel, dry, sub-rounded, poorly graded, wet @ 24.0'		SB-40-0511-05		2.2
-10				SB-40-0511-06		0.4
				SB-40-0511-07		9.7
-15				SB-40-0511-08		0.8
				SB-40-0511-09		1.4
-20				SB-40-0511-10		5.2
				SB-40-0511-11		6.8
-25				SB-40-0511-12		12.2
-30						
-35						

BORING LOG

BORING LOG: **SB-40-0512**

TOTAL DEPTH: **24.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	
DATE STARTED:	**9/8/2005**	**COORDINATES**	
DATE COMPLETED:	**9/8/2005**	NORTHING:	1648802
		EASTING:	169310.3
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: Topsoil		SB-40-0512-01		0.0
		CLAY: Brown silty sandy Clay, slightly plastic, cohesive, non-sticky, slightly moist, trace gravel		SB-40-0512-02		0.0
				SB-40-0512-03		0.0
-5				SB-40-0512-04		2.4
		SAND AND GRAVEL: Dark yellowish brown, medium to coarse Sand and Gravel, dry, sub-rounded, poorly graded, wet @ 23.0'		SB-40-0512-05		3.9
-10				SB-40-0512-06		4.7
				SB-40-0512-08		10.6
-15				SB-40-0512-09		9.8
				SB-40-0512-10		12.4
-20				SB-40-0512-11		16.4
				SB-40-0512-12		20.9

RECORD OF SUBSURFACE EXPLORATION

Alt & Witzig Engineering, Inc.

Boring B-1

LFMW-1

Project Name: Monitoring Wells-Allison Plant Date of Boring: 1-2-86

Site: Indianapolis, Indiana Project No.: S5423

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
0-.2 Brown Clayey SILT w/Organics							
Brown Dry Fine to Coarse SAND and Gravel with Rock Fragments	5	1SS	9				
		2SS	33				
	10	3SS	39				
		4SS	48				
	15	5SS	46				
Brown Wet Medium to Coarse SAND and Gravel		6SS	52				
	20	7SS	47				
		8SS	44				
Gray Wet Fine to Coarse SAND with Gravel	25	9SS	62				
		10SS	56				
	30	11SS	55				
Brown Wet Medium to Coarse SAND and Gravel		12SS	59				
	35	13SS	37				
		14SS	50/.5				
	40	15SS	50				
		16SS	50/.3				
ay Clayey Sandy SILT with Large Gravel		17SS	50/.4				
Boring terminated at 44.4 feet							

RECORD OF SUBSURFACE EXPLORATION

Alt & Witzig Engineering, Inc.

Boring B-2

Project Name: Monitoring Wells-Allison Plant Date of Boring: 1-6-86

Site: Indianapolis, Indiana Project No.: S5423

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
Elevation SURFACE							
		1AU					
		2SS					
Gray Dry Fine to Coarse SAND with Concrete Fragments (Fill)	5	3SS	11				
		4SS					
	10	5SS	21				
Brown Dry Fine to Coarse SAND and Gravel (Natural)	15	6SS	59				
Gray Sandy Clayey SILT with trace of Gravel	20	7SS	10				
Brown to Gray Wet Fine to Coarse SAND and Gravel	25	8SS	41				
Boring terminated at 26.0 feet.							

RD OF SUBSURFACE EXPLORATION

Alt & Witzig Engineering, Inc.

Boring B-2A

LFMW-2

lls-Allison Plant Date of Boring: 1-7-86

Indiana Project No.: S5423

RIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
Brown Dry Fine to Coarse SAND and Gravel (Natural)	5	1SS	23				
	10	2SS	33				
	15	3SS	28				
Brown Wet Fine to Coarse SAND and Gravel		4SS	45				
Gray Clayey SILT with trace of Sand and Gravel	20	5SS	17				
Brown Wet Fine to Coarse SAND and Gravel		6SS	52				
Brown Sandy Clayey SILT with trace of Gravel	25	7SS	39				
Brown Wet Fine to Coarse SAND and Gravel		8SS	50/.4				
	30	9SS	50/.4				
		10SS	72				
	35	11SS	50/.4				
		12SS	49				
	40	13SS	56				
Brown Wet Fine to Coarse SAND with Boulder Fragments		14SS	75				Driving on a Boulder
Gray Clayey SILT with trace of Sand and Gravel		15SS	50/.4				
Boring terminated at 45.0 feet.							

RECORD OF SUBSURFACE EXPLORATION

Alt & Witzig Engineering, Inc.

Boring B-3

4MW-3

Project Name: Monitoring Wells-Allison Plant Date of Boring: 1-8-86

Site: Indianapolis, Indiana Project No.: S5423

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
Dark Gray Clayey SILT with Cinders, Sand and Gravel (Fill)	5	1SS	26				
Brown Silty Sandy CLAY (Fill)	10	2SS	8				
Gray Fine to Coarse Wet SAND and Gravel Cobbles	15	3SS	50/.2				Driving on Cobble
	20	4SS	52				
Gray Wet Fine to Coarse SAND and Gravel		5SS	34				
	25	6SS	47				
		7SS	69				
	30	8SS	50/.4				
Boring terminated at 35.0 feet							

RECORD OF SUBSURFACE EXPLORATION

Alt & Witzig Engineering, Inc.

Boring B-4 LFMW-4

Project Name: Monitoring Wells-Allison Plant **Date of Boring:** 1-3-85

Site: Indianapolis, Indiana **Project No.:** S5423

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
0-.2 Brown Clayey SILT w/Organics							
Brown Sandy Silty CLAY with trace of Gravel	5	1SS	14				
		2SS	27				
Brown Dry Fine to Coarse SAND and Gravel	10	3SS	26				
		4SS	54				
	15	5SS	31				
		6SS	50				
Brown Wet Medium to Coarse SAND and Gravel	20	7SS	43				
		8SS	67				
Gray Wet Medium to Coarse SAND and Gravel with Rock Fragments	25	9SS	40				
		10SS	61				
	30	11SS	50/.5				
		12SS	41				
Gray Wet Coarse SAND and Gravel	35	13SS	66				
		14SS	65				
Gray Wet Medium to Coarse SAND and Gravel		15SS	45				
		16SS	56				
Gray Clayey SILT with some Sand and Gravel	40	17SS	35				
ring terminated at 41.0 feet							

RECORD OF SUBSURFACE EXPLORATION

Alt & Witzig Engineering, Inc.

Boring B-5 LFMW 5

Project Name: Monitoring Wells-Allison Plant Date of Boring: 1-7-86

Site: Indianapolis, Indiana Project No.: S5423

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
		1SS	50/.2				
	5						
Black Dry Foundary SAND with Concrete Fragments (Fill)		2SS	26				
	10						
		3SS	31				
	15						
		4SS	13				
	20						
Black Wet Foundary SAND (Fill)		5SS	20				
	25						
		6SS	24				
	30	7SS	22				
		8SS	25				
Brown Wet Fine to Coarse SAND (Natural)	35	9SS	17				
		10SS	50/.4				
Gray Wet Fine to Coarse SAND and Gravel		11SS	50/.3				
	40						
Gray Clayey SILT w/Sand & Gravel		12SS	50/.2				
oring terminated at 42.2 feet							

RECORD OF SUBSURFACE EXPLORATION

Alt & Witzig Engineering, Inc.

Boring B-6

LFMW-6 - LCMW-6

Project Name: Monitoring Wells- Allison Plant Date of Boring: 1-3-86

Site: Indianapolis, Indiana Project No.: S5423

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
0-.1 Brown Clayey SILT w/Organics							
Black Coarse SAND & Gravel (Fill)							
Gray Sandy Silty CLAY with Small Gravel and trace of Organics (Fill)	5	1SS	6				
Gray Dry Silty Fine SAND with Silt Seams	10	2SS	4				
Brown Dry Medium to Coarse SAND and Gravel	15	3SS	50				
	20	4SS	59				
	25	~~5SS~~	50/.5				
Gray Clayey SILT with trace of Sand and Gravel		6SS	50/.5				
	30	7SS	78				
	35	8SS	69				
Gray Wet Medium to Coarse Sand and Gravel		9SS	65				
Boring terminated at 40.0 feet							

RECORD OF SUBSURFACE EXPLORATION

Alt & Witzig Engineering, Inc.

Boring MW-7

Project Name: Allison Wells

Date of Boring: 4/29/87

Site: Indianapolis, Indiana

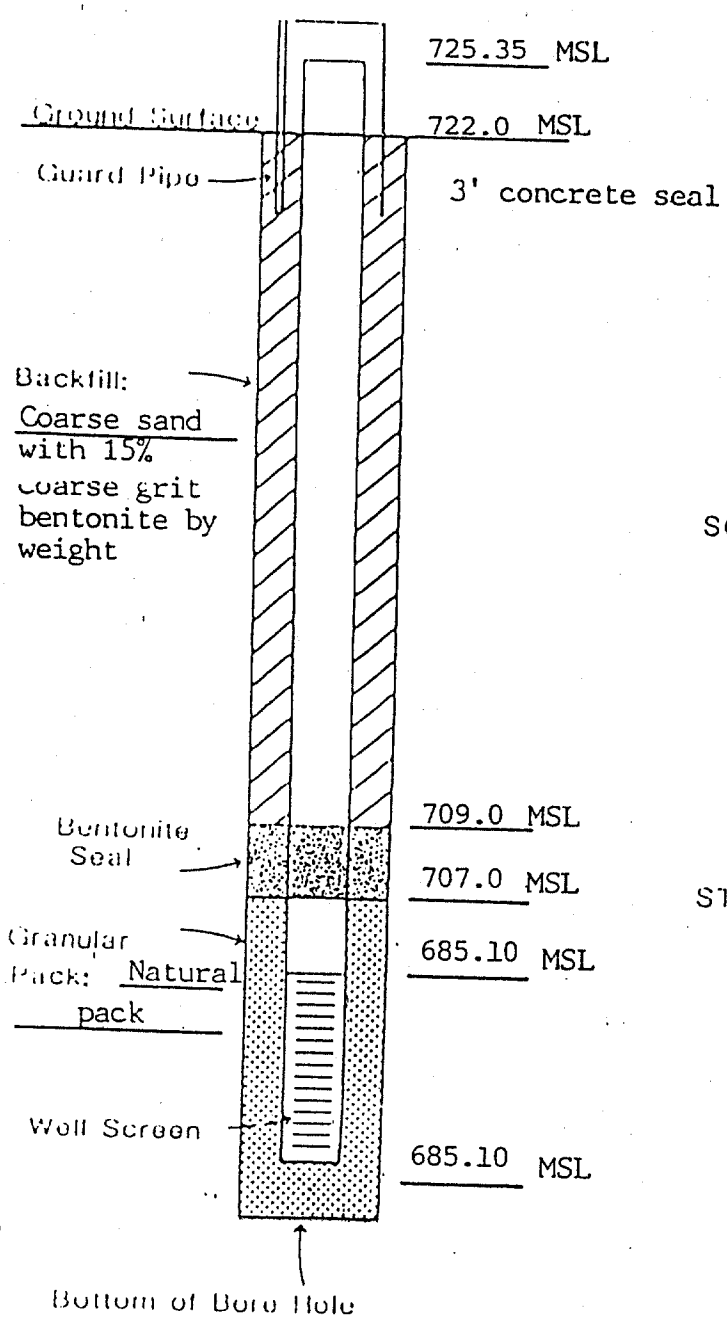
Project No.: S7085

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
Brown Silty Sandy CLAY (Fill)		1AU					
	5	2SS	7		2.7	15	
Brown Silty Sandy CLAY with a trace of Cinders (Fill)	10	3SS	6		1.5	17	
Gray Dry Fine to Coarse SAND & Gravel	15	4SS	15				
Brown Clayey SILT with a trace of Sand & Gravel	20	5SS	28	3.8	4.5+	11	
Gray Clayey SILT with a trace of Sand & Gravel	25	6SS	50/.4		4.5+	9	
	30	7SS	50/.4		4.5+	9	
	35	8SS	50/.4			9	
Gray Wet Coarse SAND with a trace of Gravel							
Gray Clayey SILT with a trace of Sand & Gravel	40	9SS	32				
	45	10SS	85		4.5+	10	
Boring terminated at 45.0 feet.							

Regional Services Corp., Inc.

3200 SYCAMORE CT.—#2B
COLUMBUS, INDIANA 47203
TELEPHONE (812) 372-9511

WELL COMPLETION DIAGRAM



Project: Detroit Diesel Allison Plant #3

Well No. MW-7 (downgradient)

Time & Date Started. 4/29/87, 8:00am

Time & Date Completed: 4/29/87, 12:45pm

SCREEN:

Type 2", 316 stainless steel

Slot Size 0.010"

Top Blank 0.25'

Bottom Blk. 0.50'

Total Scr. 5.00'

Tot.Length 5.75'

STAND PIPE:

Type 2" 316 stainless steel

Length 40.00'

NOT TO SCALE

RECORD OF SUBSURFACE EXPLORATION

Alt & Witzig Engineering, Inc.

Boring MW-8

Project Name: Allison Wells

Date of Boring: 4/30/87

Site: Indianapolis, Indiana

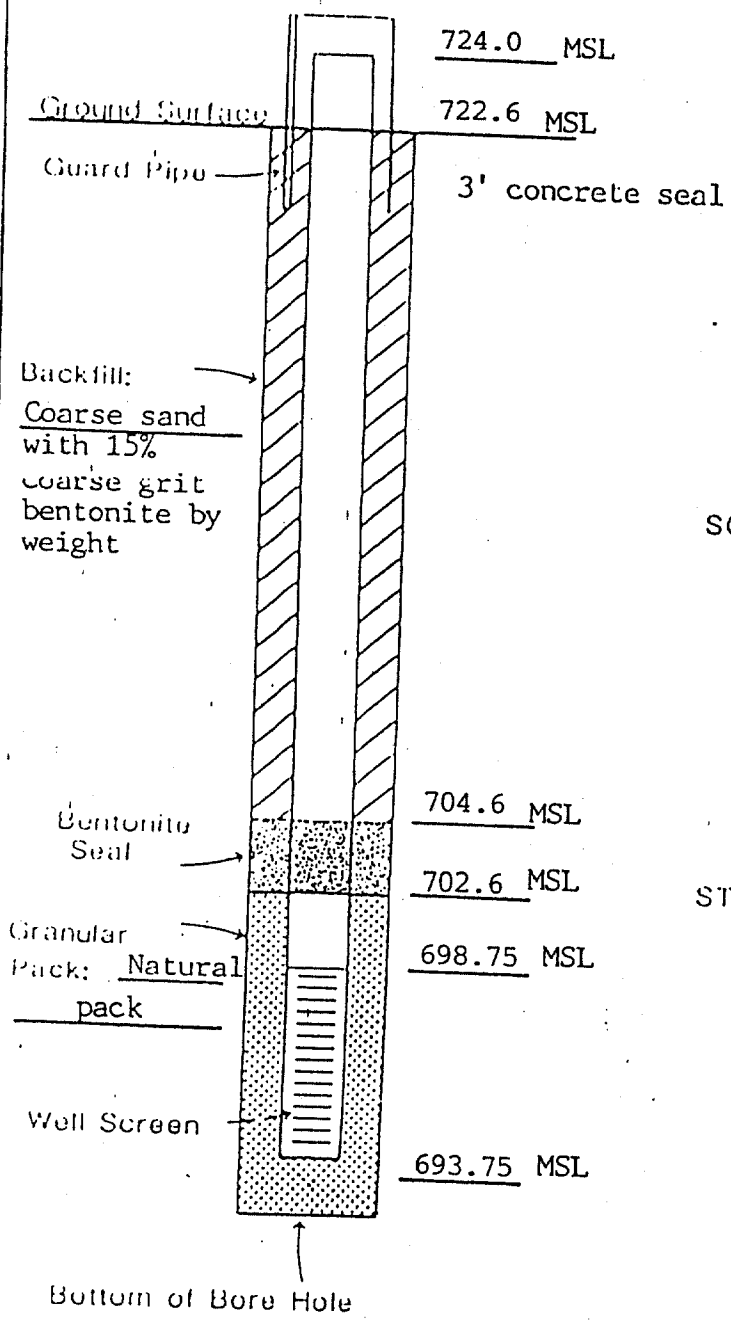
Project No.: S7085

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
0-4" GRAVEL							
Brown Silty CLAY with Sand and Large Rock Fragments	5	1SS	20				
Brown Sandy SILT	10	2SS	5				
Brown Moist Fine to Medium SAND and Gravel with a trace of Clay	15	3SS	20				
Brown Wet Coarse SAND & Gravel	20	4SS	44				
	25	5SS	37				
	30	6SS	36				
	35	7SS	50/.4				
	40	8SS	50/.5				
Brown Clayey SILT with a trace of Sand & Gravel		9SS	50/.3				
Boring terminated at 44.3 feet.							

Regional Services Corp., Inc.

3200 SYCAMORE CT. – #2B
COLUMBUS, INDIANA 47203
TELEPHONE (812) 372-9511

WELL COMPLETION DIAGRAM



Project: Detroit Diesel Allison Plant #3

Well No. MW-8 (downgradient)

Time & Date Started: 4/30/87, 2:15pm

Time & Date Completed: 5/1/87, 8:00am

SCREEN:

Type 2", 316 stainless steel

Slot Size 0.010"

Top Blank 0.25'

Bottom Blk. 0.50'

Total Scr. 5.00'

Tot.Length 5.75'

STAND PIPE:

Type 2" 316 stainless steel

Length 25.00'

RECORD OF SUBSURFACE EXPLORATION

Alt & Witzig Engineering, Inc.

Boring MW-9

Project Name: Allison Wells

Date of Boring: 5/1/87

Site: Indianapolis, Indiana

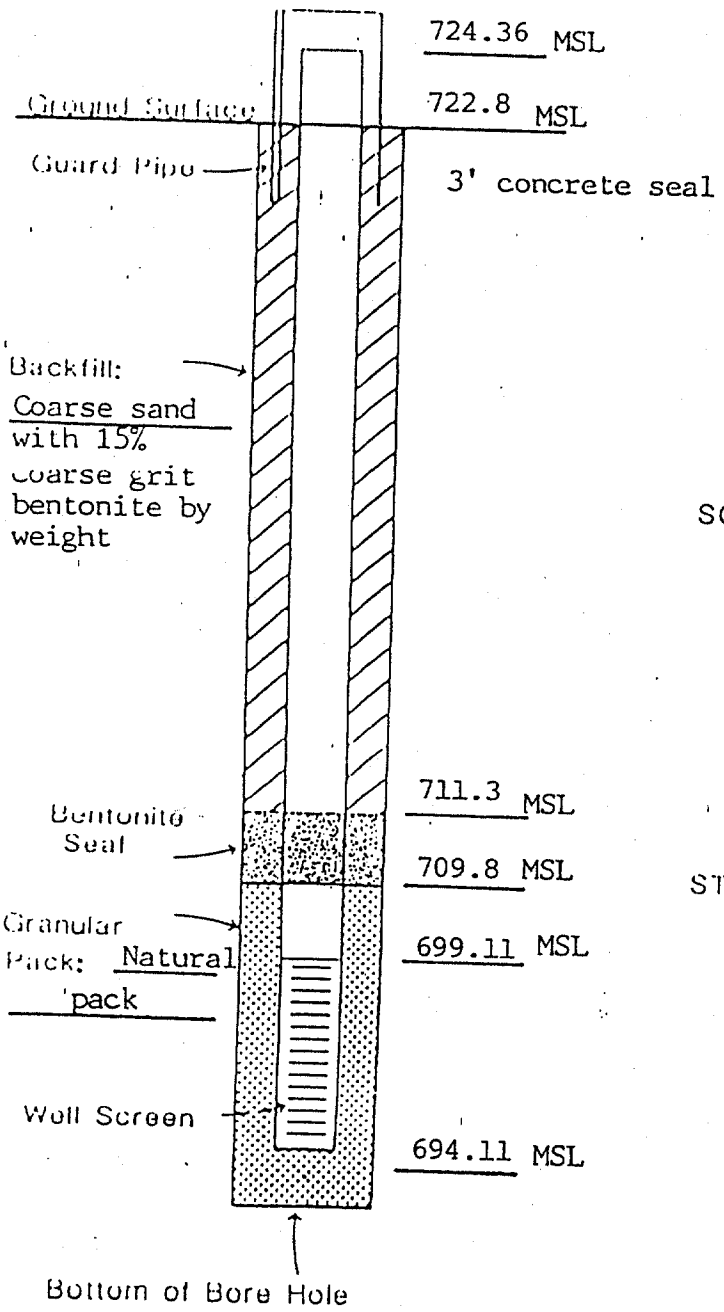
Project No.: S7085

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE 0-3" ASPHALT							
Brown Silty CLAY with some Sand and a trace of Gravel (Fill)	5	1SS	6				
Brown Dry Fine to Coarse SAND and Gravel	10	2SS	47				
	15	3SS	39				
Brown Wet Coarse SAND & Gravel	20	4SS	25				
	25	5SS	36				
	30	6SS	34				
	35	7SS	43				
Gray Wet Sandy GRAVEL	40	8SS	50				
Gray Clayey SILT with some Sand and a trace of Gravel	45	9SS	44				
Boring terminated at 45.0 feet.							

Regional Services Corp., Inc.

3200 SYCAMORE CT. – #2B
COLUMBUS, INDIANA 47203
TELEPHONE (812) 372-9511

WELL COMPLETION DIAGRAM



Project: Detroit Diesel Allison Plant #3

Well No. MW-9 (downgradient)

Time & Date Started. 5/1/87, 10:00am

Time & Date Completed: 5/1/87, 1:00pm

SCREEN:

Type 2", 316 stainless steel

Slot Size 0.010"

Top Blank 0.25'

Bottom Blk. 0.50'

Total Scr. 5.00'

Tot.Length 5.75'

STAND PIPE:

Type 2" 316 stainless steel

Length 25.00'

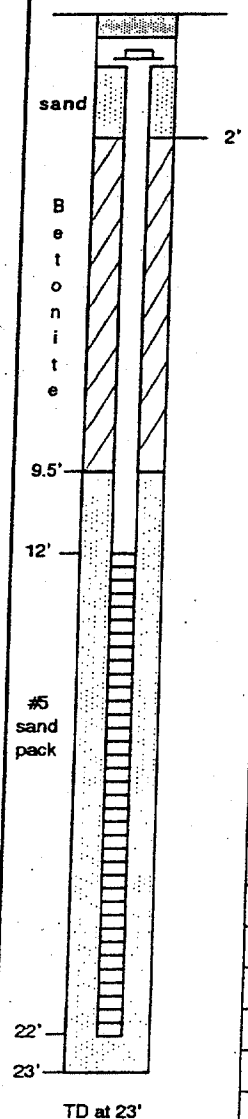
JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant #2	MW-2	1 of 2

DRILLING METHOD: Rotary Hollow Stem Auger	SAMPLING METHOD: Split Spoon continuous from 2 ft.
DRILLING START 6/2/92 3:05 pm FINISH 6/2/92 8:00 pm	DEVELOPMENT 6/8/92
STATIC DTW 13.44 DATE 6/18/92 DTO	DRILLED BY Reynolds
ELEVATION TOC 721.60 GL 722.18	LOGGED BY Tim Northam

Well Construction Informatioin:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold™
- Cement: Sackrete 4000 - concrete mix

WELL CONSTRUCTION FLUSH MOUNT



DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
2		Clay/silty	SC	Top 6" 10YR3/3, dark brown, silty	M	8	1	10	50	SS
		sand		40%, sand 30%, clay 30% soft				19		
				cohesive, sand very fine grain,				20		
				round, no odor, 0 ppm in spoon,				22		
				become 10YR4/4, dark yellow						
		Sand/gravel	SP	brown, sand 70% gravel 30%,						
				loose, sand very fine to medium						
				grain, some coarse grain, round						
				to subround, moderate to poorly						
				sorted, gravel fine grain, no odor,						
				0 ppm in spoon.						
4		Sand/gravel	SW	10YR5/3, brown, sand 80%, gravel	D	6.5	2	26	70	SS
				20%, sand, fine to very coarse				16		
6				grain, predominately medium grain,				23		
				some graded bedding with iron				29		
				stain, loose, no odor, 0.2 ppm in						
				spoon.						
9		Sand/gravel	SW	As above, with abundant iron stain,	SM	9.5	3	13	60	SS
				mottled to bedded, 0 ppm in spoon,				40		
				some cobbles.				30		
								30		
11		Sand/gravel	SW	As above, becoming 10YR3/2 at 12'.	SM	11	4	7	80	SS
		clay/silt	ML	very dark gray brown, clay 40%,				19		
				silt 50%, sand 10%, trace gravel,				7		
				moist, plastic, cohesive, soft, no				6		
				odor, 0 ppm in spoon.						
13				No recovery	--	--	5	12	0	SS
				Cobble chips in spoon.				21		
								26		

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant #2	MW-2	2 of 2

DRILLING METHOD Rotary Hollow Stem Auger	SAMPLING METHOD Split Spoon continuous from 2 ft.
DRILLING START 6/2/92 3:05 pm FINISH 6/2/92 8:00 pm	DEVELOPMENT 6/8/92
STATIC DTW 13.44 DATE 6/18/92 DTO	DRILLED BY Reynolds
ELEVATION TOC 721.60 GL 722.18	LOGGED BY Tim Northam

Well Construction Informatioin:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold™
- Cement: Sackrete 4000 - concrete mix

DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
								31		
15				No recovery	W	--	6	21	0	SS
				splitspoon is wet				19		
								25		
								26		
17				Drilled to 20'. No recovery						
20		Sand/gravel	SW	10YR4/1, dark gray, sand 80%,	W	11	7	15		SS
				gravel 20%, sand, fine to very				22		
				coarse grain, round, moderate to well				27		
				sorted, grading to very coarse at				26		
22				bottom, gravel very fine to fine,						
				loose, no odor, 0 ppm in spoon.						
23				TD at 23'						
				Sand heave to 21'						
				Bail out sand to 22'						
				Set screen 12' to 22'						

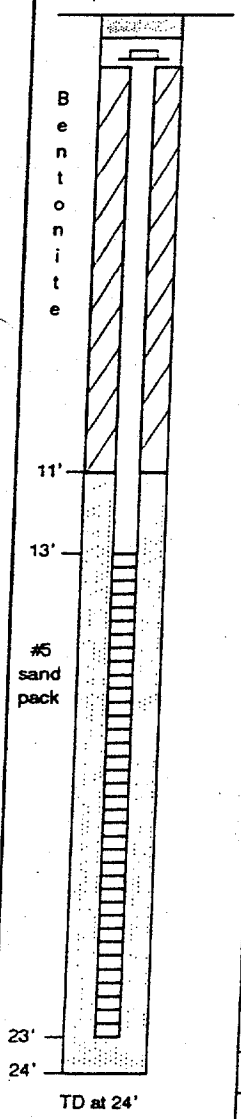
JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant 2	MW-3	1 of 1

DRILLING METHOD: Rotary Hollow Stem Auger	SAMPLING METHOD: Split Spoon continuous from 2 ft
DRILLING START 6/2/92 08:57 FINISH 6/2/92 11:05	DEVELOPMENT 6/8/92
STATIC DTW 16.67 DATE 6/18/92 DTO	DRILLED BY ETC
ELEVATION TOC 725.02 GL 725.27	LOGGED BY Steve Owens

Well Construction Information:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold TM
- Cement: Sackrete 4000 - concrete mix

WELL CONSTRUCTION FLUSH MOUNT



DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
2		Clayey	SC	Brown to black clayey sand with	SM	--	1	6		
		sand		cinders and gravel, no odor, slightly				3		
				moist.				4		
								9		
4		Sandy clay	CL	Brown sandy clay with some gravel	SM	3	2	2		SS
				and cinders, slightly moist.				3		
								4		
6								7		
7		Sand	SW	Black slighlty moist cinder sand	SM	2	3	7		SS
				with gravel. Some clay. Bottom 1'				18		
8		Sand		light brown, friable, poorly sorted				21		
9				sand, slightly silty, dry.				27		
12		Sand/clay	SC	Brownish black, clayey, gravelly	D	5.5	4	13	80	SS
13				sand. Bottom 1' light brown, friable,				41		
				poorly sorted sand with small gravel,				23		
14				dry.				40		
17		Sand	SP	Top 4" wet, black, clayey sand.	W	7	5	10	70	SS
				Bottom 1' wet, light brown, poorly				12		
				sorted coarse sand with small gravel				14		
				overall from 8' to 19' seemed to				31		
19				coarsen downward slighlty.						
22		Sand	SP	Dark gray, poorly sorted, coarse	W		6	9		SS
				sand to gravel, wet.				13		
								31		
24								57		
				Well TD at 24'						
				Set screen 13-23'						

mw3

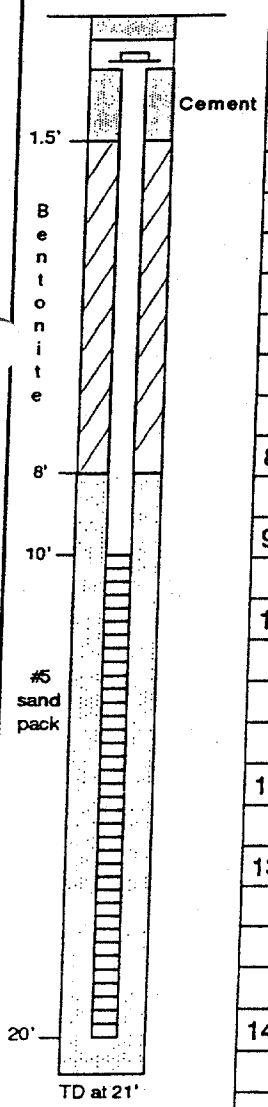
JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant 2	MW-4	1 of 2

DRILLING METHOD Rotary Hollow Stem Auger	SAMPLING METHOD Hand Auger (2-4') Split Spoon continuous from 4 ft
DRILLING START 15:08 6/2/92 FINISH 16:46 6/2/92	DEVELOPMENT 6/8/92
STATIC DTW 14.18 DATE 6/18/92 DTO	DRILLED BY ETC
ELEVATION TOC 722.81 GL 723.10	LOGGED BY Steve Owens

Well Construction Information:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold™
- Cement: Sackrete 4000 - concrete mix

WELL CONSTRUCTION FLUSH MOUNT



DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
2		Clayey/	SC	Brown, very clay rich, medium to	M	7.5	1		100	HA
		sand		coarse sand, moist. Hand auger.						
4		Sand	SC	As above.	M	9.8	2	3	60	SS
								4		
								3		
								4		
6		Sand	SC	Top 3". As above. Bottom 1'	M	5.7	3	4	60	SS
			SP	light brown, poorly sorted coarse	D			17		
7				sand. Hit some cobbles, but got				32		
				through (approximately 7") dry, some				28		
				small gravel.						
8		Sand	SC	Top 6" dark brown clayey sand,	M	5.6	3	5	60	SS
			SP	moist, bottom 8" light brown to tan,	D			31		
9				poorly sorted, coarse sand with				21		
				some gravel.				34		
10				Stone prevented recovery.	D	5	4	29	5	SS
								30		
								36		
								50		
12		Sand	SP	Spoon looks damp (bottom 6").	M	100	5	14	55	SS
				Driller noted cobbles at approxim-				27		
13		Sand	SP	ately 12.5'. Top 8" as above,	W			35		
				(HNu up to 100). Bottom 6" wet,				15		
		Clay	CL	very fine, sandy clay, dark grey,						
				some black staining, odor.						
14		Sand	SW	Moderately sorted, medium grained	W	9	6	7	25	SS
				sand, wet.				7		
								22		
								26		

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant 2	MW-4	2 of 2

DRILLING METHOD Rotary Hollow Stem Auger	SAMPLING METHOD Hand Auger (2-4') Split Spoon continuous from 4 ft
DRILLING START 15:08 6/2/92 FINISH 16:46 6/2/92	DEVELOPMENT 6/8/92
STATIC DTW 14.18 DATE 6/18/92 DTO	DRILLED BY ETC
ELEVATION TOC 722.81 GL 723.10	LOGGED BY Steve Owens

Well Construction Information:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold™
- Cement: Sackrete 4000 - concrete mix

DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
16		Sand	SW	Top 5" wet/soupy, gray, silty, very	W	4	7	50	50	SS
				fine to medium sand with some				70		
				gravel. Odor, bottom 3" black, coarse				49		
				sand and gravel, cinder like, faint				55		
				odor, possibly stained.						
18		Sand/gravel	SP	Top 7" wet, gray, medium to coarse	W	2	8	11	100	SS
				sand. Bottom 17' dark gray, stained				20		
				looking, poorly sorted, coarse sand				24		
				and gravel, faint odor.				40		
20										
21				TD sampling at 20'. Drill to 21' for						
				casing clearance.						
				Set screen 10'-20'						

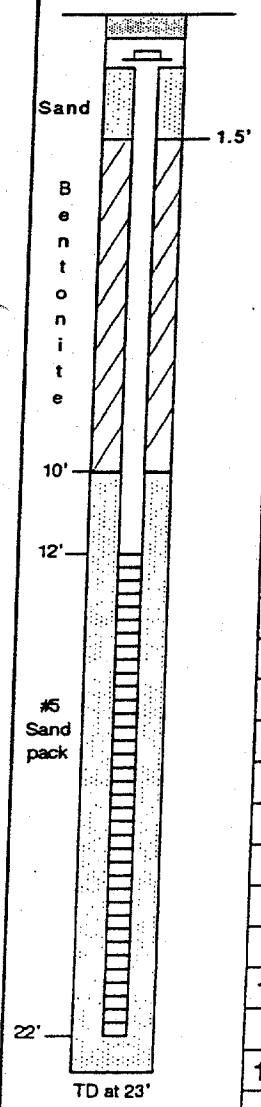
JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant #2	MW-5	1 of 2

DRILLING METHOD: Rotary Hollow Stem Auger	SAMPLING METHOD: Hand Auger (2-4') Split Spoon continuous from 4 ft.
DRILLING START 15:55 6/3/92 FINISH 17:32 6/3/92	DEVELOPMENT 6/8/92
STATIC DTW 15.10 DATE 6/18/92 DTO	DRILLED BY ETC
ELEVATION TOC 723.41 GL 723.79	LOGGED BY Steve Owens

Well Construction Information:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainles steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold™
- Cement: Sackrete 4000 - concrete mix

WELL CONSTRUCTION FLUSH MOUNT



DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
.5				Concrete	D					
2		Sand	SC	Brown clayey sand with gravel,	M	7.2	1		100	HA
				medium grain, no odor, moist, some						
3				cinders (fill?).						
4		Sand	SP	As above, with less clay (top 4")	M	3.4	2	3	55	SS
				bottom 6" same, but very moist to				2		
				wet, no odor.				3		
								4		
6		Sand	SC	Brown, clayey, gravelly, fine to	M	72	3	3	50	SS
				medium sand. Top 6" very moist,				1		
				bottom 8" wet, no odor.	W			1		
								2		
8		Sand	SP	As above, top 8". Bottom 6" reddish	W	9.0	4	2	50	SS
				brown, poorly sorted, gravelly,				3		
				coarse sand, wet.				5		
								8		
10		Sand	SP	As above, slightly moist.	M	8.5	5	4	55	SS
								12		
								30		
								40		
12		Sand	SP	As above, slightly moist.	M	5	6	7	50	SS
								25		
								30		
								25		
14		Sand	SW	Reddish brown, gravelly, coarse	M	6	7	22	65	SS
				sand. Bottom 6" coarse with				24		
15				abundant fine gravel, also more				22		
				oxidized looking (oranger) bottom	W			22		
16				6" appear wet.						

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant #2	MW-5	2 of 2

DRILLING METHOD: Rotary Hollow Stem Auger	SAMPLING METHOD: Hand Auger (2-4') Split Spoon continuous from 4 ft.
DRILLING START 15:55 6/3/92 FINISH 17:30 6/3/92	DEVELOPMENT 6/8/92
STATIC DTW 15.10 DATE 6/18/92 DTO	DRILLED BY ETC
ELEVATION TOC 723.41 GL 723.79	LOGGED BY Steve Owens

Well Construction Information:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainles steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold™
- Cement: Sackrete 4000 - concrete mix

DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
16		Sand	SW	Wet, gray, coarse sand with gravel	W	14	8	20	60	SS
				top 6". Next 5" medium sand with no				17		
				gravel (gray), wet, bottom 3" coarse				25		
				sand with gravel.				25		
18		Sand	SW	Spoon wet, with sheen, HNu up to 4	W	4	9	12	80	SS
				ppm, saturated, gray coarse sand				18		
				with gravel.				27		
								30		
20		Sand	SW	As above.	W	--	10	7	90	SS
								14		
								40		
								50		
22				End sampling at 22'						
23				Set screen 12-22'						
				Drilled to 23' for casing clearance						

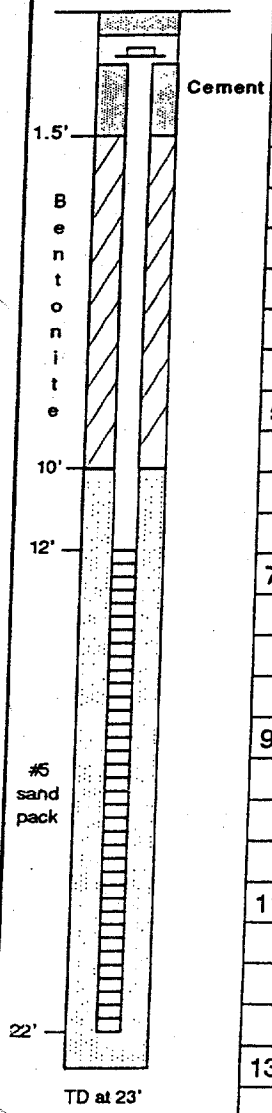
JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant #2	MW-6	1 of 2

DRILLING METHOD: Rotary Hollow Stem Auger	SAMPLING METHOD: Hand Auger (1-3') Split Spoon continuous from 3 ft
DRILLING START 8:54 6/3/92 FINISH Restart 11:22 12:10 6/3/92	DEVELOPMENT 6/9/92
STATIC DTW 15.39 DATE 6/18/92 DTO	DRILLED BY ETC
ELEVATION TOC 724.11 GL 724.44	LOGGED BY Steve Owens

Well Construction Information:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold™
- Cement: Sackrete 4000 - concrete mix

WELL CONSTRUCTION FLUSH MOUNT



DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
8"				Concrete with blacktop veueer.	D					
2		Sand/gravel	SP	Brown, poorly sorted, gravelly,	SM	8	1		100	HA
				medium to coarse grained sand with						
				minor clay. Gravel abundant in hole						
				up to 2", slightly moist, no odor						
				(fill?).						
3		Sand/gravel	SP	As above, poor recovery due to	SM	9.7	2	6	10	SS
				encountering rocks.				10		
								10		
								10		
5				No recovery due to rocks.			3	9	0	SS
								8		
								6		
								8		
7		Sand/gravel	SP	Cobbles at 7.5'. As above.	SM	5.2	4	5	40	SS
								19		
								11		
								14		
9		Sand/gravel	SP	As above, a bit more moisture. A	M	8	5	11	50	SS
				few thin, clay rich sand layers				9		
				approxiamtely 1" thick, slightly damp.				10		
								9		
11		Sand/gravel	SP	Tan, gravelly, coarse sand, gravel up	SM	11	6	17	45	SS
				to 1-1/2". No clay, no odor, very				22		
				slightly moist. Drillers reported				18		
				cobbles at 11.5'.				22		
13		Sand/gravel	SP	As above, slighlty whiter, (powered	SM	16.5	7	30	30	SS
				rock?).				25		
								45		
								--		

mw6

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant #2	MW-6	2 of 2

DRILLING METHOD Rotary Hollow Stem Auger	SAMPLING METHOD Hand Auger (1-3') Split Spoon continuous from 3 ft
DRILLING START 8:54 6/3/92 FINISH Restart 11:22 12:10 6/3/92	DEVELOPMENT 6/9/92
STATIC DTW 15.39 DATE 6/18/92 DTO	DRILLED BY ETC
ELEVATION TOC 724.11 GL 724.44	LOGGED BY Steve Owens

Well Construction Information:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold ™
- Cement: Sackrete 4000 - concrete mix

DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
				Rock prevented getting last 6" of						
15				pentration. Unable to pentrate past						
				rock. Abandon well and respud 5'						
				west. Last 8' of well in new hole.						
14		Sand	SP	Top 6" tan, medium to coarse	W	16	8	27	40	SS
				grained sand with abundant fine to				37		
				medium gravel. (Bottom of this zone				44		
				is wet). Odor, bottom 4" gray silty				16		
		Clay	ML	clay with gravel. Some black						
				staining, odor, plastic and moist.						
16		Clay	ML	Soft, moist, silty clay (as above), top	W	10	9	10	30	SS
				5". Bottom 4" coarse sand with				4		
		Sand	SP	gravel, wet, no odor.				10		
								23		
18		Sand	SW	Gray, coarse gravelly sand, slightly	W	11	10	10	60	SS
				finer at base.				13		
								20		
								35		
				Drill out to 23'						
20										
				Well TD at 23'						
23				Set screen 12-22'						

mw6

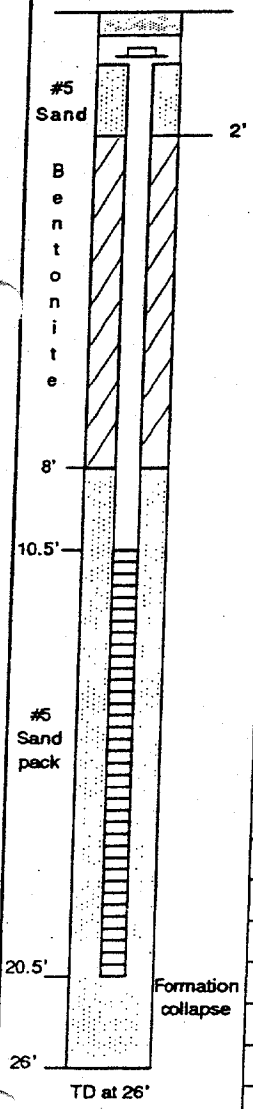
JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant #12	MW-7	1 of 2

DRILLING METHOD: Rotary Hollow Stem Auger	SAMPLING METHOD: Split Spoon
DRILLING START 6/2/92 7:20 am FINISH 6/2/92 11:20 am	DEVELOPMENT 6/10/92
STATIC DTW 12.10 DATE 6/18/92 DTO	DRILLED BY Reynolds
ELEVATION TOC 715.29 GL 715.56	LOGGED BY Tim Northam

Well Construction Information:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steeel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold ™
- Cement: Sackrete 4000 - concrete mix

WELL CONSTRUCTION FLUSH MOUNT



DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
				Top 6", asphalt						
2		Clay/silt/	ML	Top 6" 10YR4/1 dark gray, silt 50	SM	0.0	1	7	60	SS
		with gravel		percent , clay 30 percent,gravel 20				17		
				percent, soft, slight loose, fill gravel,				22		
				slightly moist to moist, no odor, 0				18		
4		Sand/gravel	GM	ppm in spoon. Become 10YR4/4,						
				dark yellow brown, sand 70						
				percent, gravel 30 percent, trace						
				silt, sand very fine to medium						
				grained, round to subround, poorly						
				sorted, gravel very fine to fine,						
				slighty cohesive to loose, no odor,						
				0 ppm in spoon.						
7		Sandy/clay	ML	2.5Y2/0 black ,silt 40 percent, clay	SM	4.5	2	6	30	SS
		silt		30 percent, sand 30 percent, gravel				12		
				trace, soft, cohesive, slight loose,				28		
9				13.0 ppm in spoon, sand very fine				17		
				to fine grain.						
12		Sand/gravel	SP	2.5Y3/2, very dark gray brown, sand	VM	NA	3	20	30	SS
				90 percent, gravel 10%, sand fine to						
				coarse grain, round, moderately						
				sorted, gravel fine, loose, no odor, 1	W					
14				ppm in spoon, not enough sample						
				to fill but 1 bottle. Wet at 13.5'						
17		Sand	SW	Top 12" 10YR5/2 sand 90 percent,	W	5.5	4	6	90	SS
				gravel 10 percent, sand fine to very				13		
				coarse grain, round, well sorted,				14		
				grading from top to bottom, fine to				19		
19				very coarse, gravel very fine, loose,						
				becoming sand, very fine to fine						

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant #12	MW-7	2 of 2

DRILLING METHOD Rotary Hollow Stem Auger	SAMPLING METHOD Split Spoon
DRILLING START 6/2/92 7:20 am FINISH 6/2/92 11:20 am	DEVELOPMENT 6/10/92
STATIC DTW 12.10 DATE 6/18/92 DTO	DRILLED BY Reynolds
ELEVATION TOC 715:29 GL 715.56	LOGGED BY Tim Northam

Well Construction Information:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold™
- Cement: Sackrete 4000 - concrete mix

DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
				grain round, very well sorted, loose,						
				no odor, 0.5 ppm in spoon.						
21				TD at 21 feet 8:20 am, Water level						
				inside augers, 16.5' below ground						
				level. Resume drilling at						
				9:05 am.						
22				No recovery, trace sand as above	W	NA	5	12	0	SS
				wet.				26		
								35		
								37		
24		Sand/	SW	10YR4/2 dark grey brown, sand 75	W	6.0	6	6	60	SS
		gravel		percent, gravel 25% sand very fine				24		
				grading to very coarse grain, fine				50		
				gravel predomimant at 25.5-26'				R		
				loose, no odor, 0 ppm in spoon.						
26										
				TD well at 26'						
				Formation collapse in bottom of well						
				Set screen 10.5 to 20.5'						

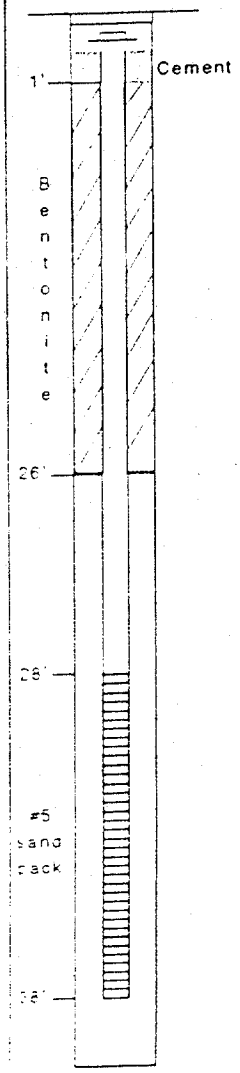
JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant 12	MW-8	1 of 3

DRILLING METHOD: Rotary Hollow Stem Auger	SAMPLING METHOD: Split Spoon continuous 8 ft
DRILLING START 12:20 10-Jun-92 FINISH 19:90 11-Jun-92	DEVELOPMENT 6/15/92
STATIC DTW 17.27 DATE 6/18/92 DTO	DRILLED BY Earth Exploration
ELEVATION TOC 719.41 GL 719.70	LOGGED BY Bruce Evans

Well Construction Information:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold™
- Cement: Sackrete 4000 - concrete mix

WELL CONSTRUCTION FLUSH MOUNT



DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
0		Silt/clay	ML	Silt/clay, dark brown, fine, dry.	D					
2		Silt/sand/	CL	Silt becoming more sandy, brown.						
		gravel		gravel and pebbles common						
3		Clay	CL	Clay, pink brown, firm to slightly	D	140	1	3	60	SS
				plastic, some stain? abundant	M			7		
				gravel and pebble inclusions, 10%				6		
				No odor. (10 ppm in spoon)				12		
4.2		Sand	SP	4.2' contact sand tan to brown, fine						
				grain, abundant pebbles and gravel.						
5		Sand	SP	As above, abundant pebbles.						
6				Drilled, no recovery.						
8		Clay	CL	2" clay, dark brown, as above.	D	1200	2	4	60	SS
		Sand	SP	Contact at 9' with sand, medium to				6		
				fine grain tan to rust, well graded,				8		
				well sorted increasing gravel and				12		
				pebbles with depth, no stain, odor,						
				(50 ppm in spoon).						
10		Sand	SM	As above, grading medium to fine	D	200	3	6	80	SS
				grain with pebble layers , tan , 11'				9		
		Sand/gravel	SP	black stain horizion, 19.5' increasing				18		
		Clay	CL	clay, rust stain 11.7' black stained				35		
				sand, fine grain 11.9' contact clay,						
				rusty brown, moist, with abundant						
				inbedded gravel, very dense in						
				spoon barrel, very firm.	M					
12		Clay	CL	Clay, rust brown, as above, with peb-	D	150	4	20	100	SS
				bles,12.7 contact clay, dark gray, ex-				28		
12.7		Clay	CL	tremely dense, brittle, homogenous,	D			38		
				with gravel and pebble inclusions.				44		
				No odor, stain, 20% silt.						

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant 12	MW-8	2 of 3

DRILLING METHOD: Rotary Hollow Stem Auger	SAMPLING METHOD: Split Spoon continuous 8 ft
DRILLING START 12:20 10-Jun-92 FINISH 19:90 11-Jun-92	DEVELOPMENT 6/15/92
STATIC DTW 17.27 DATE 6/18/92 DTO	DRILLED BY Earth Exploration
ELEVATION TOC 719.41 GL 719.70	LOGGED BY Bruce Evans

Well Construction Information:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold™
- Cement: Sackrete 4000 - concrete mix

DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
14		Clay/silt	CL	Clay, dark gray, as above, extremely	D	50	5	50	40	SS
				hard, dense, gravel inclusions, no	M			68		
				stain, odor.				39		
								40		
16		Clay/silt	CL	As above.				13		SS
								22		
								23		
				Kelly chain broke while drilling at 16'.				30		
18		Clay/silt	CL	Clay, silty, 20% gravel and pebbles,	D	--	6	14	100	SS
				as above.				18		
								22		
								25		
20		Clay/silt	CL	As above, angular-subround gravel.	D	--	7	11	100	SS
								18		
								19		
								23		
22		Clay/silt	CH	As above, at 23' high % clay, plastic,	D	--	8	5	100	SS
				less gravel, contact at	M			6		
				23.5' w/sand, medium to fine grain,				10		
23.5		Sand/clay	SM	gravel, gray. No odor, wet.	W			17		
24		Clay	CH	As above, plastic, moist. Contact at	M	--	9	5	100	SS
25				25' silt, as above, gray, dense,				12		
				hard, brittle. Gravel inclusions 2%.				15		
								22		
26		Clay/silt	CL	As above, dense, hard, at 27.5' sand	M	--	10	4	100	SS
				pocket in clay, wet, sand on 1 side of				16		
				core, clay on other. Sand coarse				21		
27.5		Sand/clay	CL	grain, gravel, 3" and back to silty				25		
				clay, gray, as above.						

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant 12	MW-8	3 of 3

DRILLING METHOD: Rotary Hollow Stem Auger	SAMPLING METHOD: Split Spoon continuous 8 ft
DRILLING START 12:20 10-Jun-92 FINISH 19:90 11-Jun-92	DEVELOPMENT 6/15/92
STATIC DTW 17.27 DATE 6/18/92 DTO	DRILLED BY Earth Exploration
ELEVATION TOC 719.41 GL 719.70	LOGGED BY Bruce Evans

Well Construction Information:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold™
- Cement: Sackrete 4000 - concrete mix

DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
28		Silt/clay	CL	Gray, as above.	M	--	11	6	40	SS
								14		
								50+		
30		Silt/clay	CL	Gray, as above. Contact at 31.5'	W		12	5	95	SS
				with sand, very fine grain,				5		
31.5		Sand	SW	well sorted, gray, no odor/stain	W			9		
				2" grade into sand, medium to				10		
				coarse grain, gray, some pebbles.						
32		Sand	SW	Sand, medium to fine grain, clean,	W	--	13	4	100	SS
				well sorted, gray, no visible,				6		
				pebbles, wet				11		
								17		
34		Sand	SW	As above.	W	--				
				Drilled to 39'. No returns						
				Set screen 38-28'						
39										

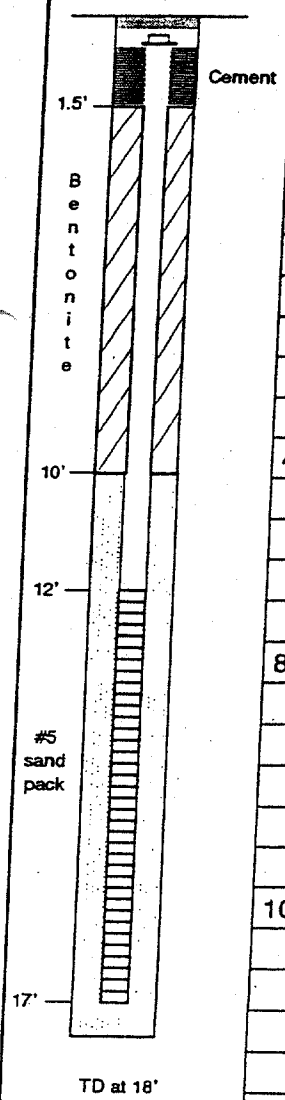
JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant 3	MW-9	1 of 2

DRILLING METHOD: Rotary Hollow Stem Auger	SAMPLING METHOD: Split Spoon continuous from 2 ft.
DRILLING START 6/4/92 5:15 pm FINISH 6/4/92 8:55 pm	DEVELOPMENT 6/9/92
STATIC DTW 12.24 DATE 6/18/92 DTO _	DRILLED BY Reynolds
ELEVATION TOC 722.17 GL 722.58	LOGGED BY Tim Northam

Well Construciton Information:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold TM
- Cement: Sackrete 4000 - concrete mix

WELL CONSTRUCTION FLUSH MOUNT



DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
2		Fill		Top 6" 10YR4/3 sand and gravel fill.	M	18	1	8	70	SS
		Clay/silt	CL	Become 10YR3/1, very dark gray not				5		
				black. Silt 40%, clay 40%, sand				5		
				15%, gravel 5% slight to				61		
				moderate firm, cohesive, 0 ppm						
				in spoon, no odor. Become						
				(bottom 4") 10YR4/3,						
		Silty clay	CL	brown clay 60%, silt 30%,	M					
				coarse sand to very fine gravel						
				10%, firm to very firm dense,						
				0 ppm in spoon, no odor.						
4		Silty sand	SM	Top 6" as above, become 10YR4/3,	M	0	2	6	100	SS
				sand 70%, silt 30%, trace clay,				4		
				soft to loose, sand fine grain,				4		
				round, well sorted, 0 ppm in				3		
				spoon, no odor.						
8		Silty sand	SM	Top 7" as above, become 10YR5/3,	M	0	3	4	70	SS
		Sand/gravel	GP	brown, sand 80%, gravel 20%	SM			10		
				sand fine to coarse grain, gravel,				11		
				very fine, round to subrounded				16		
				sand, moderate sorted, 0 ppm						
				in spoon, no odor, loose.						
10		Sand/gravel	GP	10YR5/2, gray, brown, sand 70%	M	200	4	13	70	SS
				gravel 30%, sand fine to coarse				19		
				grain, round to subround, moderately				20		
				sorted, gravel fine to medium,				15		
				loose, strong odor, 150 ppm						
				in spoon.						
12		Sand/gravel	GP	As above, become wet at 13' with	M	220	5	4	60	SS
				black stain, strong odor, as above,	W			8		

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant 3	MW-9	2 of 2

DRILLING METHOD Rotary Hollow Stem Auger	SAMPLING METHOD Split Spoon continuous from 2 ft
DRILLING START 6/4/92 5:15 pm FINISH 6/4/92 8:55 pm	DEVELOPMENT 6/9/92
STATIC DTW 12.24 DATE 6/18/92 DTO _	DRILLED BY Reynolds
ELEVATION TOC 722.17 GL 722.58	LOGGED BY Tim Northam

Well Construciton Information:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold TM
- Cement: Sackrete 4000 - concrete mix

DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
				200 ppm in spoon. At 13.5 - 10YR4/				7		
				1, dark gray clay 90%, silt 10%,				8		
		Clay	CL	trace fine sand, dense,	M					
				moderate firm, slight plastic, 25 ppm						
				in spoon.						
15		Clay	CL	5Y4/1, dark gray, as above, 10 ppm	SM	0	6	6	60	SS
				in spoon, no odor.				5		
								9		
								7		
17										
18				TD sampling at 17' 7:30 pm. Drill						
				out to 18' for casing clearance.						
				Set screen at 17'-12'						

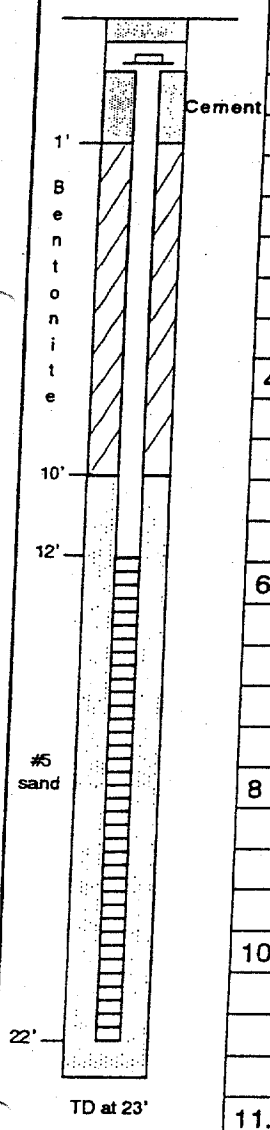
JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant 12	MW-10	1 of 2

DRILLING METHOD: Rotary Hollow Stem Auger	SAMPLING METHOD: Split Spoon continuous from 2 ft
DRILLING START 10:15 9-Jun-92 FINISH 17:15 9-Jun-92	DEVELOPMENT 6/15/92
STATIC DTW 16.13 DATE 6/18/92 DTO	DRILLED BY Earth Exploration
ELEVATION TOC 719.50 GL 719.97	LOGGED BY Bruce Evans

Well Construction Information:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold™
- Cement: Sackrete 4000 - concrete mix

WELL CONSTRUCTION FLUSH MOUNT



DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
0		Concrete		Surface concrete, background .9 ppm	D					
1		Sand/silt	SP	Sand poorly sorted with gravels and	D					
		Gravel		pebbles. Light olive brown, some						
				silt, dry.						
2		Sand/gravel	SP	Sand poorly sorted with gravel and	D	200	1	17	70	SS
				pebbles, up to 1". Brown to olive				32		
				brown, dry, crumbly, possible stain				30		
				50 percent sand, 10 percent silt, 20				22		
				percent gravel. 30 ppm in spoon.						
4		Sand/clay	SM	Sand, as above, with higher percent	D	200	2	12	80	SS
		Sand		clay, dark brown first 6" grading to				23		
			SP	sand, as above. Bottom 2" clay, moist				17		
				maulable, dark brown, slight olive with				19		
		Clay	CL	gravel inclusions, odor. 300 ppm						
6		Sand/gravel	SP	Sand, as above, olive brown, poorly	D	80	3	9	100	SS
				sorted, gravel, pebbles < 10 percent	M			13		
				clay. Pebbles to 1/2", medium to				9		
				fine grain sand. Odor, possible				9		
				stain. 400 ppm in spoon.						
8		Sand	SP	Sand, as above. 9.8' contact with	D	18	4	5	40	SS
				clay, gray to brown gray, rust stains,	M			3		
				homogenous, slight silt, firm, slighty				2		
		Clay	CL	plastic, crumbly, odor.				4		
10		Clay/silt	ML	Clay, very silty with fine grain sand,	M	17	5	3	90	SS
				crumbly, slightly maulable,				3		
				homogenous, very little gravel,				3		
				odor. 11.8' contact				10		
11.8		Sand/clay	SM	with sand, brown, as above, with						
				gravel.						

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant 12	MW-10	2 of 2

DRILLING METHOD Rotary Hollow Stem Auger	SAMPLING METHOD Split Spoon continuous from 2 ft
DRILLING START 10:15 9-Jun-92 FINISH 17:15 9-Jun-92	DEVELOPMENT 6/15/92
STATIC DTW 16.13 DATE 6/18/92 DTO	DRILLED BY Earth Exploration
ELEVATION TOC 719.50 GL 719.97	LOGGED BY Bruce Evans

Well Construction Information:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold™
- Cement: Sackrete 4000 - concrete mix

DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
12		Clay	CL	As above. 12.8' contact with sand,	D	30	6	7	95	SS
		Sand	SP	as above, very gravely, pebbles to				7		
				1", interlayered clay. At bottom,				9		
				very poorly sorted, mixed, no				10		
		Sand/clay	SC	odor, black inclusions.						
14		Sand	SP	Clay/sand contact at 14.2'. Sand,	M	30	7	11	25	SS
				as above, olive brown, moist, abund-				11		
				ant pebbles to 1". Becoming more				10		
				gravelly with coarse grain sand.				8		
15.5		Sand	SP	Water contact approximately 15.5',	W					
				wet below. No odor, some clay.						
16		Sand		As above. No sample, drilled.	W					
18		Sand		As above, very poorly sorted. Brown	W	25	8	7	90	SS
				to olive brown, with gravel, medium				10		
				grain sand stringers at 19' grades				9		
				back to gravely sand. 50 percent				10		
				sand, 30 percent gravel, 10 percent						
				silt/clay.						
20				Drill to 23' to set casing.						
				No recovery.						
				Well TD at 23'						
23				Set screen 12 - 22'						

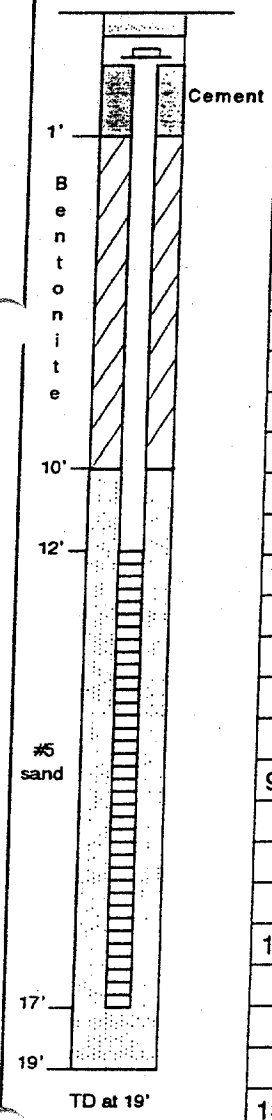
JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant #3	MW-11	1 of 2

DRILLING METHOD: Rotary Hollow Stem Auger	SAMPLING METHOD: Hand Auger to 3 ft. Split Spoon continuous from 3 ft
DRILLING START 12:25 4-Jun-92 FINISH 14:55 4-Jun-92	DEVELOPMENT 6/9/92
STATIC DTW 13.00 DATE 6/18/92 DTO	DRILLED BY ETC
ELEVATION TOC 721.01 GL 721.4	LOGGED BY Bruce Evans

Well Construction Information:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold™
- Cement: Sackrete 4000 - concrete mix

WELL CONSTRUCTION FLUSH MOUNT



DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
.5		Soil/sand	SC	Surface soil, sandy, brown to dark	D			--		
				brown, dry, minor clay with						
				abundant pebbles, granular particles,						
				gravel.						
2		Silty/sand	SM	Brown, dry, slight clay with gravel,	D	1	1		100	HA
				silty sand, cobbles.						
3		Clay	CL	Clay, silty, brown, no gravel, homo-	D	1.4	2	9	50	SS
				genous. Dry, slight moist, slight				9		
				color change, reddish brown.				8		
								14		
5		Clay	CL	Clay, brown to reddish brown, firm,	D	1	3	3		
				dry, slight moist, silty, 2% gravel				3	50	
				granulars, occasional pebble, earthy				10		
				odor.				11		
7		Clay	CL	Clay, reddish brown, firm, slightly	D	.9	4	24	50	SS
				moist, plastic, silty.				15		
				8' piece wood particle. 8.5'				16		
		Sand/clay	SC	becoming sandy with occasional				14		
				pebbles.						
9		Clay	CL	Very poor recovery due to rock	D	.8	5	50+	5	SS
				obstruction, pebble/gravel return,				NA		
				clay, as above.				NA		
								NA		
11		Sand	SP	Sand, medium to coarse, tan to tan	D	.5	6	40	50	SS
				brown. Dry, abundant gravel and				40		
				pebbles, poorly sorted, very faint				80		
				odor, pebbles up to 1.5 diameter.				50		
13		Sand	SP	7" sand coarse, poorly sorted, rusty	W	1	7	8	60	SS
				brown, pebbles and gravel up to 1.5"				26		
				in diameter, some clay, wet at 14'.				38		

sba

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant #3	MW-11	2 of 2

DRILLING METHOD: Rotary Hollow Stem Auger	SAMPLING METHOD: Hand Auger to 3 ft. Split Spoon continuous from 3 ft
DRILLING START 12:25 4-Jun-92 FINISH 14:55 4-Jun-92	DEVELOPMENT 6/9/92
STATIC DTW 13.00 DATE 6/18/92 DTO	DRILLED BY ETC
ELEVATION TOC 721.01 GL 721.4	LOGGED BY Bruce Evans

Well Construction Information:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold™
- Cement: Sackrete 4000 - concrete mix

DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
				becoming sandy clay, tan to gray,				50		
				medium sand, bottom clay,						
		Silty clay	ML	silty, gray, some stain, no odor,						
				dense, firm, 30-40% silt.						
15		Silty clay	CL	Clay, reddish brown, plastic, silty,	W	2	8	7	80	SS
		Sand	SP	wet, sand stringers, light tan, olive,				30		
		Clay	CL	poorly consolidated with gravel and				28		
				pebbles, 16' contact silty clay,				21		
				gray. Black stain, grade to clay, plas-						
				tic, with occasional gravel, pebbles.						
17		Clay/silt	ML	Clay, very silty, gray, firm, with	W	--	9	23	80	SS
				gravel inclusions, some pebbles,				24		
				uniform over core. No odor, no				17		
				stain.				37		
19										
				Well TD at 19'						
				Fill back to 17'						
				Set screen 12' to 17'						

sba

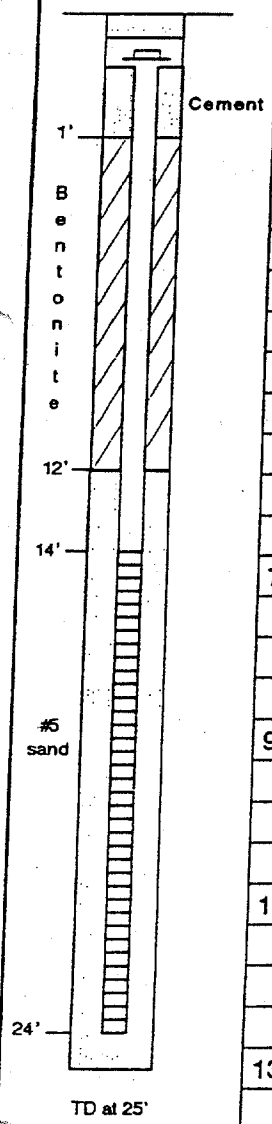
JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant 3	MW-12	1 of 2

DRILLING METHOD: Rotary Hollow Stem Auger	SAMPLING METHOD: Split Spoon continuous from 1 ft
DRILLING START 10:30 6/12/92 FINISH 15:00 6/12/92	DEVELOPMENT 6/12/92
STATIC DTW 18.47 DATE 6/18/92 DTO 18.07	DRILLED BY Earth Exploration
ELEVATION TOC 722.24 GL 722.46	LOGGED BY M. Keeley

Well Construction Inforamtion:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite* Medium chips - Pure Gold ™
- Cement: Sackrete 4000 - concrete mix

WELL CONSTRUCTION FLUSH MOUNT



DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	OVA (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
0		Cement		0-1, approximately 6", cement floor,	D					
				6" fill.						
1		Sand	SM	Loose, brown, sand, fine to medium	D	1	1	6	50	SS
				grained, trace silt, trace gravel, trace				18		
				cobbles, poorly sorted, dry.				5		
								7		
3		Sand	SM	As above.	D	3	2	2	25	SS
								3		
								3		
								3		
5		Sand	SC	Loose, brown, sand, fine grained,	D	2	3	7	75	SS
				with silt and clay, trace gravel, dry.				7		
								5		
								5		
7		Sand	SP	Loose, brown sand, fine to coarse	D	1	4	10	50	SS
				grained, trace gravel, trace cobbles,				10		
				poorly sorted, dry.				10		
								4		
9		Sand	SP	As above.	D	2	5	9	75	SS
								12		
								14		
								12		
11		Sand	SP	As above.	D	1	6	5	75	SS
								11		
								12		
								15		
13		Sand	SP	Loose, brown changing to gray,	D	25	7	6	75	SS
				fine to coarse grained, some gravel				11		
				and cobbles, poorly sorted,dry.				13		
								14		

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant 3	MW-12	2 of 2

DRILLING METHOD Rotary Hollow Stem Auger	SAMPLING METHOD Split Spoon continuous from 1 ft
DRILLING START 10:30 6/12/92 FINISH 15:00 6/12/92	DEVELOPMENT 6/12/92
STATIC DTW 18.47 DATE 6/18/92 DTO 18.07	DRILLED BY Earth Exploration
ELEVATION TOC 722.24 GL 722.46	LOGGED BY M. Keeley

Well Construction Inforamtion:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite" Medium chips - Pure Gold TM
- Cement: Sackrete 4000 - concrete mix

DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	OVA (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
15		Sand	SP	Medium, dense, gray to brown sand,	D	70	8	10	75	SS
				fine to coarse grained, with gravel	W			15		
				and trace cobbles, poorly sorted,				15		
				dry, (wet at top), odor.				17		
17		Sand	SP	Medium dense, gray to brown sand,	W	80	9	13	75	SS
		Silt	ML	coarse with gravel, poorly sorted,				16		
				subangular grains, saturated (Top				17		
				1/2 ft.) medium dense, gray silt, with				27		
				very fine sand, saturated,						
				odor.						
19		Silt	ML	Medium dense, gray, silt, changing	W	100	10	17	100	SS
20		Sand	SP	to gray sand, fine to coarse at app-				20		
		Silt	ML	roxiamtely 20-20-1/2 ft. then back to				21		
				silt, saturated, odor,				31		
21				HNu = 77 ppm and varying in						
				breathing zone, shut down rig,						
				vapors increase as augers spin.						
				Drillers go to level C, MCK has						
				"escape" mask.						
25				Drill to 25' no recovery						
				End of boring, water at 17'						
				Set screen 14-24'						

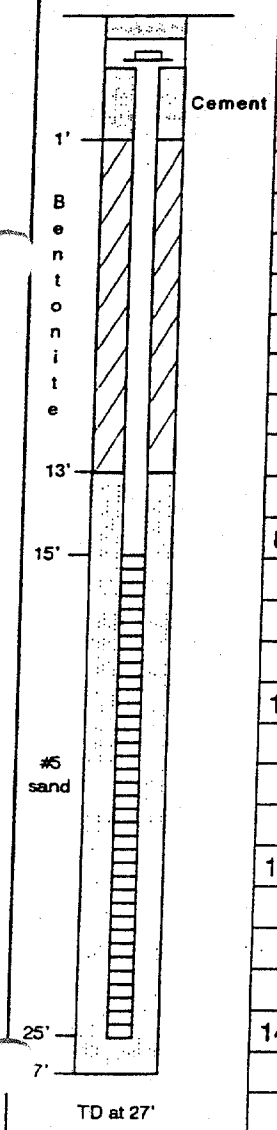
JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission SW corner of Plant 7	MW-13	1 of 2

DRILLING METHOD: Rotary Hollow Stem Auger	SAMPLING METHOD: Split Spoon continuous from 2 ft
DRILLING START 16:00 6-5-92 FINISH 17:35 6-5-92	DEVELOPMENT 6/9/92
STATIC DTW 19.60 DATE 6/18/92 DTO	DRILLED BY ETC
ELEVATION TOC 722.18 GL 722.60	LOGGED BY Steve Owens

Well Construction Information:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold ™
- Cement: Sackrete 4000 - concrete mix

WELL CONSTRUCTION FLUSH MOUNT



DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
				Surface crushed limestone to 2"	D					
2		Clay	GC	Brown, gravelly clay, grading to	D	1.8	1	4	30	SS
		Clayey sand	SC	clayey gravelly sand, no odor.				4		
								4		
								4		
4		Gravel/sand	SP	Tan, slightly silty, gravelly, fine to	D	4.0	2	5	50	SS
				medium sand, no odor.				15		
								12		
								20		
6		Gravel/sand	SP	As above, but slightly coarser	D	2.6	3	17	50	SS
				sand, medium to coarse, no odor.				28		
								22		
								22		
8		Gravel/sand	SP	As above.	D	4.7	4	10	55	SS
								25		
								25		
								37		
10		Gravel/sand		As above, local reddish orange	D	4.7	5	10	60	SS
				silt layer (approximately 1/2")				30		
								40		
								50		
12		Gravel/sand	SP	As above, top 4" slightly moist.	D	2.1	6	5	55	SS
								29		
								25		
								45		
14		Gravel/sand	SP	As above, with less gravel.	D	3.3	7	10	55	SS
								23		
								23		
								43		

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission SE corner of Plant 7	MW-13	2 of 2

DRILLING METHOD: Rotary Hollow Stem Auger	SAMPLING METHOD: Split Spoon continuous from 2 ft
DRILLING START 16:00 6-5-92 FINISH 17:35 6-5-92	DEVELOPMENT 6/9/92
STATIC DTW 19.60 DATE 6/18/92 DTO	DRILLED BY ETC
ELEVATION TOC 722.18 GL 722.60	LOGGED BY Steve Owens

Well Construction Information:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold™
- Cement: Sackrete 4000 - concrete mix

DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
16		Gravel/sand	SP	As above, local reddish orange	D	4.4	8	22	70	SS
				staining (minor).				28		
								40		
								40		
18		Sand/gravel	SP	As above, with approximately	D	3.7	9	26	75	SS
				15 percent gravel. Bottom 10" moist	M			25		
19				slighlty silty.				25		
								60		
20		Sand	SP	As above, slightly silty, gravelly,	W	5.7	10	10		SS
				medium to coarse sand, wet.				36		
								50		
								52		
22		Sand	SP	As above, wet.	W	--	11	10		SS
								23		
								24		
								50		
24		Sand/gravel	SP	As above, with approximately 25	W	--	12	15		SS
				percent gravel, coarse sand and				25		
				granules.				30		
								40		
26										
27				End well at 27'						
				Set screen 15-25'						

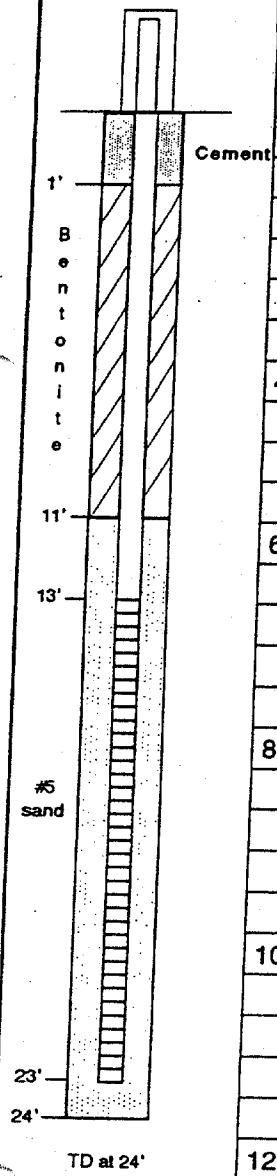
JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Baseball diamond	MW-14	1 of 2

DRILLING METHOD Rotary Hollow Stem Auger	SAMPLING METHOD Split Spoon continuous from 2 ft
DRILLING START 18:12 6-4-92 FINISH 19:45 6-4-92	DEVELOPMENT 6/5/92
STATIC DTW 20.12 DATE 6/18/92 DTO	DRILLED BY ETC
ELEVATION TOC 724.09 GL 721.10	LOGGED BY Bruce Evans

Well Construction Information:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold ™
- Cement: Sackrete 4000 - concrete mix

WELL CONSTRUCTION



DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
.5				Surface soil, dark brown, sandy,	M					
				some clay with abundant gravel and						
				pebbles.						
2		Clay	ML	Brown, silty clay, some sand, gravel	D	2.2	1	5	60	SS
				and pebbles. At 3' silt black staining,				12		
3		Silt	OL	mottled with olive. Pebbles to				34		
				1" diameter, organic, dry to slight				44+		
				moist, some clay and sand content.						
4		Silt/rock	ML	Silt, black stain, as above, with	D	--	2	12	10	SS
				rock chips and fragments from cut-				80+		
				tings. Dry, rock to 1" diameter, green				--		
				chips. Fill.				--		
6		Rock/		Rock powder, concrete chips and	D	.5	3	21	10	SS
		concrete		pieces up to 1". Gray white, dusty,				25		
				minor sand, green stain,				32		
				Appears mostly fill material,				35		
				wood & nails, recovered in cuttings.						
8		Rock		Rock chips, concrete to 1" diameter	D	--	4	52	15	SS
		powder		dry powder, sandy, gray white. Silt,				52		
		Silt	ML	black, as above, sandy, dry with				24		
				gravel and subangular pebbles,				--		
				concrete chips (fill).						
10		Rock/		Powdered concrete, light gray,	D	--	5	50	20	SS
		concrete		sugary minor sand, concrete chips/				20		
				plugs 1" diameter - 11.8' silt, black				15		
				stained sand and gravel, poorly				11		
		Silt		sorted, trace clay, dark brown, slight						
12		Silt		odor, cinder? Silt, black, sandy,	D	2	6	15	25	SS
		Concrete		slight odor, slightly moist, rock chips,	M			20		
				concrete, sandy rock granules,				7		

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Baseball diamond	MW-14	2 of 2

DRILLING METHOD Rotary Hollow Stem Auger	SAMPLING METHOD Split Spoon continuous from 2 ft
DRILLING START 18:12 6-4-92 FINISH 19:45 6-4-92	DEVELOPMENT 6/5/92
STATIC DTW 20.12 DATE 6/18/92 DTO	DRILLED BY ETC
ELEVATION TOC 724.09 GL 721.10	LOGGED BY Bruce Evans

Well Construction Information:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold™
- Cement: Sackrete 4000 - concrete mix

DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
		Sand/rock	SM	sugary, green with consolidated				70		
				pieces, fused sand? Glassy grains,						
				coarse, angular (fill).						
14		Rock/sand	SM	Sandy green granules, as above,	D	.5	7	10	25	SS
				intermixed with brown and tan sandy	M			15		
				material, minor silt, concrete chips,				18		
				black speck wood fragments, slight				30		
				odor, dry to slight moist (fill).						
16		Rock frags	GP	Sandy, light tan, sugary, powdery,	D	2.4	8	66	20	SS
17		Sandy		dry with concrete chips and rounded				81		
				pebbles, sandy, rock chips and	M			43		
				gravel. Becoming dark grey to black,	W			30		
17.8		Silty		wet at 17.8 silty, slight odor (fill).						
18		Rock frags		Rock fragments, concrete, in sandy	W	--	9	59	20	SS
		Sand glass		mud (rock powder) wet, pebbles,				17		
				green sandy consolidated granular				9		
				rock fragments, slight odor,				8		
				fill.						
20				No returns	--	--				
				Drill to 24'						
24				Set screen 13-23'						

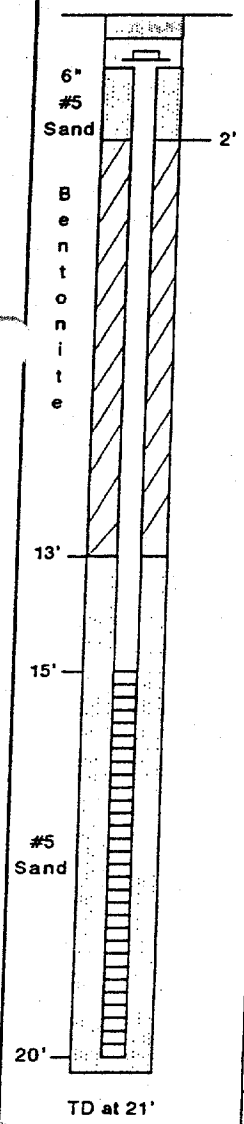
JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant #3	MW-15	1 of 2

DRILLING METHOD Rotary Hollow Stem Auger	SAMPLING METHOD Split Spoon continuous from 2 ft
DRILLING START 6/4/92 8:00 am FINISH 6/4/92 11:20 am	DEVELOPMENT 6/10/92
STATIC DTW 15.44 DATE 6/18/92 DTO _	DRILLED BY Reynolds
ELEVATION TOC 721.89 GL 722.50	LOGGED BY Tim Northam

Well Construction Informatin:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold™
- Cement: Sackrete 4000 - concrete mix

WELL CONSTRUCTION FLUSH MOUNT



DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
2				Hit pipe (1-1/2") at 36" runs east and	---	--	1	--	--	
				west. Move rig 2' north of present						
				location.						
2				No recovery.			2	2	0	SS
								11		
								15		
								12		
4		Silty/sandy	CL	10YR3/4 dark yellow brown, clay 50	M	2	3	5	60	SS
		clay		percent, silt 30 percent, sand 20				3		
				percent, trace fine gravel, soft.				4		
				Cohesive, slight plastic, sand very				5		
				fine to coarse grain, round to sub-						
				round, poorly sorted. 0 ppm in						
				spoon, no odor.						
6		Silty/sandy/	CL	Top 6" as above, becoming 10YR4/3	M	4.5	4	6	40	SS
		clay		brown, sand 60 percent, gravel 40	D			5		
		Sand/gravel	GC	percent, sand very fine to coarse				8		
				grained, round to subround, poorly				12		
8				sorted, gravel fine, trace silt clay,						
				loose to slightly cohesive, 0 ppm in						
				spoon, no odor.						
10		Sand/gravel	GC	10YR5/3 sand 60 percent, gravel 30	D	55	5	10	60	SS
				percent, silt 10 percent, trace clay,				18		
				sand very fine to coarse grain, round				15		
				to subround, poorly sorted gravel				18		
				very fine to fine, loose, 0 ppm in						
				spoon, no odor.						
12		Sand/gravel	SP	Top 6" as above, becoming 10YR5/3	D	2	6	15	70	SS
				brown, sand 60 percent, gravel 40				20		
				percent, sand fine to coarse grain,				23		

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant #3	MW-15	2 of 2

DRILLING METHOD: Rotary Hollow Stem Auger	SAMPLING METHOD: Split Spoon continuous from 2 ft
DRILLING START 6/4/92 8:00 am FINISH 6/4/92 11:20 am	DEVELOPMENT 6/10/92
STATIC DTW 15.44 DATE 6/18/92 DTO _	DRILLED BY Reynolds
ELEVATION TOC 721.89 GL 722.50	LOGGED BY Tim Northam

Well Construction Informatin:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold™
- Cement: Sackrete 4000 - concrete mix

DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
				round to subround, moderately	S			21		
				sorted, clean loose, gravel, very fine	M					
				to fine. 0 ppm in spoon,						
				odor.						
14		Sand/gravel	SW	Top 1' as above, 15'3" sand and	M	60	7	13	70	SS
				gravel, stained black. Sand very fine				22		
				to medium grain. Coarse to very				17		
				coarse grain, round to subround,				4		
				graded bedding, strong odor,						
				wet at bottom, 0 ppm in spoon.						
16		Sand/gravel	SW	Top 8" as above, with some fine	W	65	8	24	70	SS
				gravel and possible cobbles, strong				26		
				odor becoming at 17' 10YR4/1,				22		
				dark gray,sand 40 percent, silt				22		
		Silty sand	ML	30 percent, clay 30 percent, sand						
				very fine grain, round, moderately						
				sorted, cohesive, strong odor, wet,						
				grading to 10YR4/1, dark gray, clay						
		Clay	CL	80 percent, silt 20 percent, trace fine						
				gravel, very firm, dense, 0 ppm in						
				spoon.						
18				No recovery, oily sheen in water on	W	--	9	16	0	SS
				spoon, measure water with interface				100		
				probe in augers, no product layer,						
				water at 2" of bottom of augers.						
21										
				TD at 18'						
				At 3:00 pm rig up to set well, drilled						
				to 21'.						
				New TD - 21'. Set screen 15-20'						

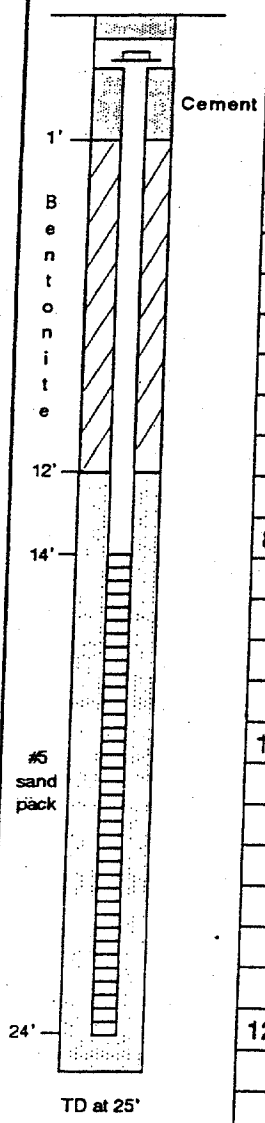
JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant 3	MW-16	1 of 3

DRILLING METHOD: Rotary Hollow Stem Auger	SAMPLING METHOD: Hand auger to 4 ft Split Spoon continuous from 4 ft
DRILLING START 7:30 6/4/92 FINISH 9:50 6/4/92	DEVELOPMENT 6/10/92
STATIC DTW 22.02 DATE 6/18/92 DTO	DRILLED BY ETC
ELEVATION TOC 720.20 GL 720.50	LOGGED BY Steve Owens

Well Construction Information:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold™
- Cement: Sackrete 4000 - concrete mix

WELL CONSTRUCTION FLUSH MOUNT



DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	TYPE SAMPLE
.5			GC	Top soil and grass, brown, clayey	M					
				coarse sand with abundant gravel,						
				slightly moist, no odor.						
2		Clay/sand	SC	As above.	M	--	1		100	HA
4		Sandy clay	SC	Brown, slightly sandy clay with some	M	4	2	2	25	SS
				gravel, moist, no odor.				2		
								3		
								5		
6		Sandy clay	ML	As above, soft, very moist,	M	1.8	3	2	50	SS
				sandier toward base.				1		
								1		
								2		
8		Clay/sand	ML	Brown sandy clay with some gravel	M	3	4	2	55	SS
				grading to clayey sand with gravel				1		
		Clay/sand	ML	at base very moist, no odor. Bottom				1		
				3" black (stained ?) clayey silt with				3		
				gravel, very moist, odor (3 ppm)						
10		Clay/silt	ML	Top 3" black, clay silt with some	M	2	5	6	50	SS
				gravel, odor, very moist. Underlain				3		
				by approximately 9" brown slightly,				2		
		Clay/sand	SC	clayey sand with gravel,				7		
		Sand/gravel	SP	grading to coarse sand with minor						
				clay and abundant gravel. Bottom						
				2" medium grain sand.						
12		Clay/sand	SM	Brown clayey medium to coarse	M	4	6	20	5	SS
		Sand		sand with minor gravel, no odor,				20		
				slightly moist.				25		
								40		

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant 3	MW-16	2 of 3

DRILLING METHOD Rotary Hollow Stem Auger	SAMPLING METHOD Hand auger to 4 ft Split Spoon continuous from 4 ft
DRILLING START 7:30 6/4/92 FINISH 9:50 6/4/92	DEVELOPMENT 6/10/92
STATIC DTW 22.02 DATE 6/18/92 DTO	DRILLED BY ETC
ELEVATION TOC 720.20 GL 720.50	LOGGED BY Steve Owens

Well Construction Information:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold™
- Cement: Sackrete 4000 - concrete mix

DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
14		Sand	SM	Tan, slightly gravelly, medium to	M	4	7	20	65	SS
				coarse grain, moderately moist,				20		
				minor clay, no odor.				20		
								40		
16		Sand	SW	Top 6" as above. Next 6" gray, well	M	15	8	21	60	SS
				graded medium sand with dark gray				30		
				stained zone approxiamtely 1-1/2"				40		
				thick, odor (faint). Bottom 3" gray				59		
				gravelly coarse sand, moderately				28		
				moist. Just above bottom 3" green-						
				ish gray well graded sand 1-1/2".						
18		Sand	SP	Top 4" light brown coarse sand with	M	80	9	40	75	SS
				gravel, odor, moist, 11" dark gray,	W			70		
				gravelly coarse sand, sandier at				105		
				base (2.5")strong odor, wet. Next 5"				--		
				light brown, slightly clayey, gravelly						
				coarse sand, wet, strong odor.						
				Next 5" fine to medium sand,						
				grey, top 1" black stained, strong						
				odor, minor gravel and clay.						
20		Sand	SP	Saturated, brownish gray, some	W	60	10	40	80	SS
				clay, gravel, coarse sand, strong				50		
				odor. Approximately 1" clay				63		
				layer at approximately 21'.				60		
22										

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant 3	MW-16	3 of 3

DRILLING METHOD Rotary Hollow Stem Auger	SAMPLING METHOD Hand auger to 4 ft Split Spoon continuous from 4 ft
DRILLING START 7:30 6/3/92 FINISH 9:50 6/3/92	DEVELOPMENT 6/10/92
STATIC DTW 22.02 DATE 6/18/92 DTO	DRILLED BY ETC
ELEVATION TOC 720.20 GL 720.50	LOGGED BY Steve Owens

Well Construction Information:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold™
- Cement: Sackrete 4000 - concrete mix

DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
22		Sand	SP	Brownish gray gravelly sand (top 6")	W	60	11	25	65	SS
				3" dark gray (stained?) as above.				35		
				Bottom 10" slightly clayey, coarse				70		
				sand with abundant gravel up to				120		
				1.5". Odor throughout.						
24										
25										
				Sampling TD at 24'						
				Set screen 12-24'						
				Drill to 25' for casing clearance						

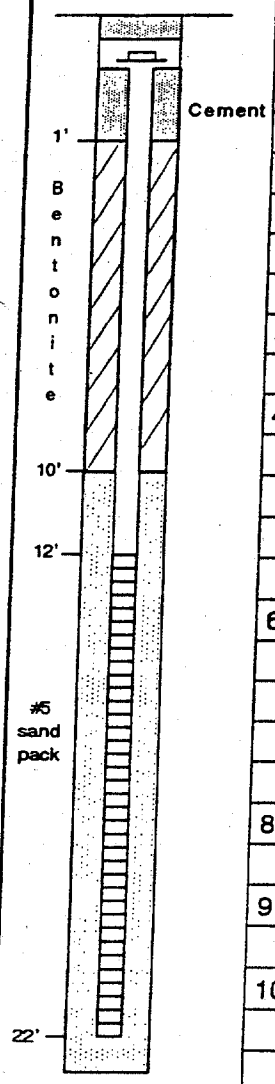
JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission Plant 2	MW-17	1 of 2

DRILLING METHOD: Rotary Hollow Stem Auger	SAMPLING METHOD: Split Spoon continuous from 2 ft
DRILLING START 11:12 12-Jun-92 FINISH 14:11 12-Jun-92	DEVELOPMENT 6/16/92
STATIC DTW 14.16 DATE 6/18/92 DTO	DRILLED BY Earth Exploration
ELEVATION TOC 725.14 GL 725.55	LOGGED BY Bruce Evans

Well Construction Inforamtion:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold™
- Cement: Sackrete 4000 - concrete mix

WELL CONSTRUCTION FLUSH MOUNT



DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
0		Concrete		Surface concrete (.6 ppm back-	D	--				
				ground)						
1		Sand/silt	SM	Silty sand, brown to olive brown,	M					
				medium to fine grain, pebbles with						
				gravel, no odor, dark brown at 2'.						
2		Silt/clay	ML	Black silty clay, fine grain, somewhat	M	2	1	8	50	SS
				plastic, no odor, no pebbles.				4		
				Contact 3' with sand/clay.				4		
3		Sand/gravel	SC	As above, moist, rust like stains				5		
				interbedded pebbles/gravel.						
4		Sand	SP	Sand, olive brown, as above, more	M	4	2	4	40	SS
				pebbles/gravel 30%. Black stain 4.3'				4		
		Silt/clay	ML	contact at 5.3' with clay/silt, olive				3		
				brown, very few pebbles and gravel,				3		
				silty. Becoming dark brown w/depth.						
6		Silt	ML	Dark brown, as above. Becoming	M	3	3	4	50	SS
				sandy at 7.6', very few pebbles				4		
		Sand/silt	SM	contact at 7.9' with silty clay, olive				5		
		Clay/silt	ML	brown to dark brown, possible stains,				6		
				sand grains.						
8		Silt/clay	ML	As above, dark brown at 9' becoming	M	3	4	3	50	SS
				olive brown, silty, minor <10% gravel				4		
9		Silt/clay	ML	inclusions, no pebbles, sand grains,				4		
				some clay layering.				6		
10		Silt	ML	Silt, sandy, dark brown to black. 2	M	3	5	4	50	SS
				large pebbles 1.5" in diameter				2		
				11' contact with silty sand, very				3		
				poorly sorted.				7		
11		Sand/silt	SM	Medium to coarse grained, gravel 20	MD					
				% some pebbles, olive brown,						

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14801	General Motors	Allison Transmission	MW-17	2 of 2

DRILLING METHOD Rotary Hollow Stem Auger	SAMPLING METHOD Split Spoon continuous from 2 ft
DRILLING START 11:12 12-Jun-92 FINISH 14:11 12-Jun-92	DEVELOPMENT 6/16/92
STATIC DTW 14.16 DATE 6/18/92 DTO	DRILLED BY Earth Exploration
ELEVATION TOC 725.14 GL 725.55	LOGGED BY Bruce Evans

Well Construction Inforamtion:

- 8.5" diameter hole
- 2" stainless steel casing, Johnson Filtration Type 316
- 2" stainless steel screen #10 .010 slot, Johnson Filtration Type 304
- Sand: #5 fine silica
- Bentonite: Medium chips - Pure Gold™
- Cement: Sackrete 4000 - concrete mix

DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	HNU (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
				slight odor.						
12		Sand	SP	Sand, olive brown, very coarse	DM	4	6	3	45	SS
				grained, poorly sorted, 30 percent				4		
				gravel, pebbles 10 percent,				8		
				little silt or clay, sucrosic				12		
14		Sand	SP	Very coarse grain, becoming gray to	M	4	7	1	40	SS
				black, very pebbly with gravel.				3		
		Gravel/	GP	Contact at 15.5' with gravel, sandy,	W			6		
		sand		some silt 80/30/10 percent, wet at				8		
		Gravel	GP	15.6'. Gravel, dark gray to black.	W					
				Multiple colored pebbles, no odor/						
				stain.						
16		Sand	SP	Medium grain, gray, poorly sorted,	W	4	8	1	40	SS
				1 percent gravel, occasional pebble,				3		
				quartz grains subrounded. No				48		
				odor/stain.				50+		
17		Boulder		Large rock, some chips from spoon						
18				indicate granite ,white, with high						
				percent biotite						
				Move location 5' north and drill						
				to 23' TD						
23				No recovery						
				Set screen 12'-22'						

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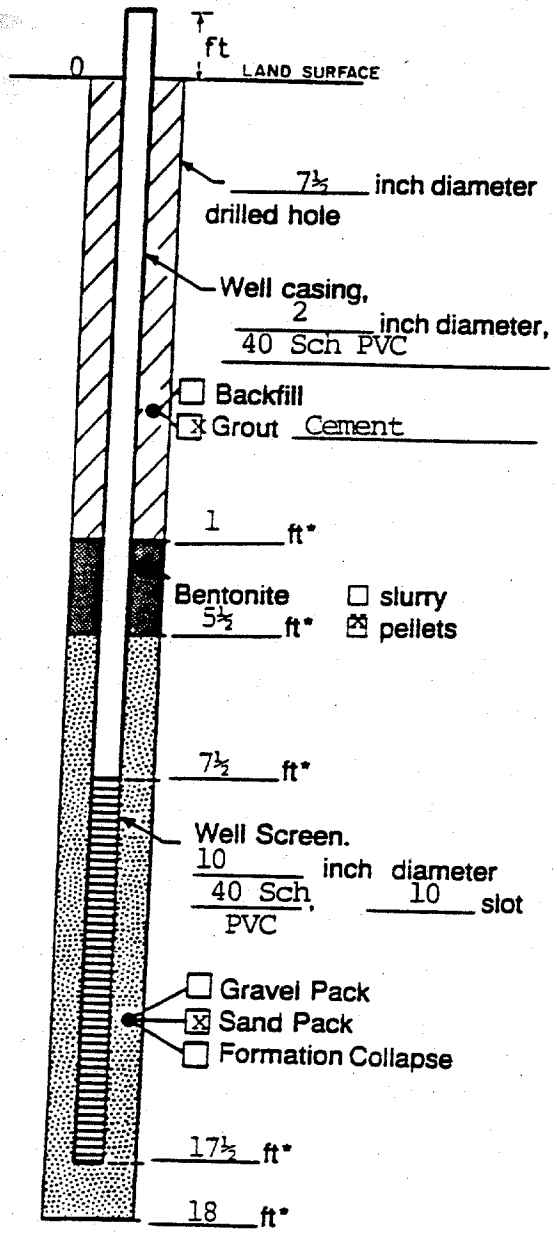
Environmental Services

WELL CONSTRUCTION LOG
(UNCONSOLIDATED)



Measuring Point is Top of Well Casing Unless Otherwise Noted.

*Depth Below Land Surface

Project IN14801 Well MW-~~3~~3-1
Town/City Speedway
County _____ State Indiana
Permit No. _____
Land-Surface Elevation and Datum _____ feet ☐ Surveyed ☐ Estimated
Installation Date(s) 07/07/92
Drilling Method Hollow Stem Auger
Drilling Contractor Earth Exploration
Drilling Fluid None

Development Technique(s) and Date(s)
Disposable polyehtylene bailer 07/08/92

Fluid Loss During Drilling _____ gallons
Water Removed During Development 9 gallons
Static Depth to Water 13.60 (7/9) feet below M.P.
Pumping Depth to Water _____ feet below M.P.
Pumping Duration _____ hours
Yield _____ gpm Date _____
Specific Capacity _____ gpm/ft
Well Purpose Monitoring Well

Remarks

Prepared by M. Keeley

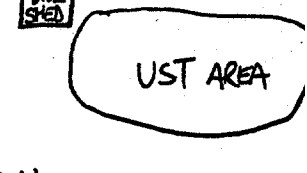
GM Form 05-12-88

Southwest 90/0070

Job Number	Client	Location	Well No.	Page 1 of 1
IN148.02	Allison Transmission	Speedway, Indiana	MW-13-1	

Drilling Method Hollow Stem Auger	**Sampling Method** 2" x 2' Split Spoon
Drilling Start 19:15 Finish 10:00 07/08/92	**Devel.** Start Finish
Static DTW DTO Time Date	**Drilled by** Earth Exploration
Elevation TOC GL	**Logged by** M. Keeley

Well Location Sketch



Well Construction	Depth Feet	Sample Interval	Name	Class	Descriptions Color, Density Gradation, Secondary Character, Odor, Plasticity, Remarks	Moisture Content	PID/FID (PPM)	Sample No.	Blows	Recovery %	Sample Type
	0-5		Clayey, Sandy-Silt		0'-5' 1/2 feet, asphalt, soft black, clayey, sandy silt						Grab
	5-7	2	Sand	SP	Loose brown sand, fine to coarse, grained poorly sorted, dry	D	0	1	1 3 4 6	60	SS
	7-9	2	Sand	SP	Same as above	D	1	2	3 8 10 26	80	SS
	9-11	2	Sand	SP	Loose brown sand, medium grained to coarse, poorly sorted, trace gravel, trace, cobbles	D	2	3	9 24 15 15	80	SS
	11-13	2	Sand	SP	Same as above,	D	8	4	5 26 18 26	80	SS
	13-15		Sand Clay	SP CL	Loose, grey-brown sand, medium to coarse grained, poorly sorted, gravelly, wet, 14'-15, medium stiff brown clay, trace small cobbles, dry	W D	1 1/2	5	6 10 15 24	90	SS
	15-17	2	Clay	CL	Very stiff brown clay, dry becoming softer and silty toward tip and slightly moist	D	1/2	6	6 16 24 25	80	SS
	17 1/2				End of Boring at 18 feet, completed as monitoring well.						

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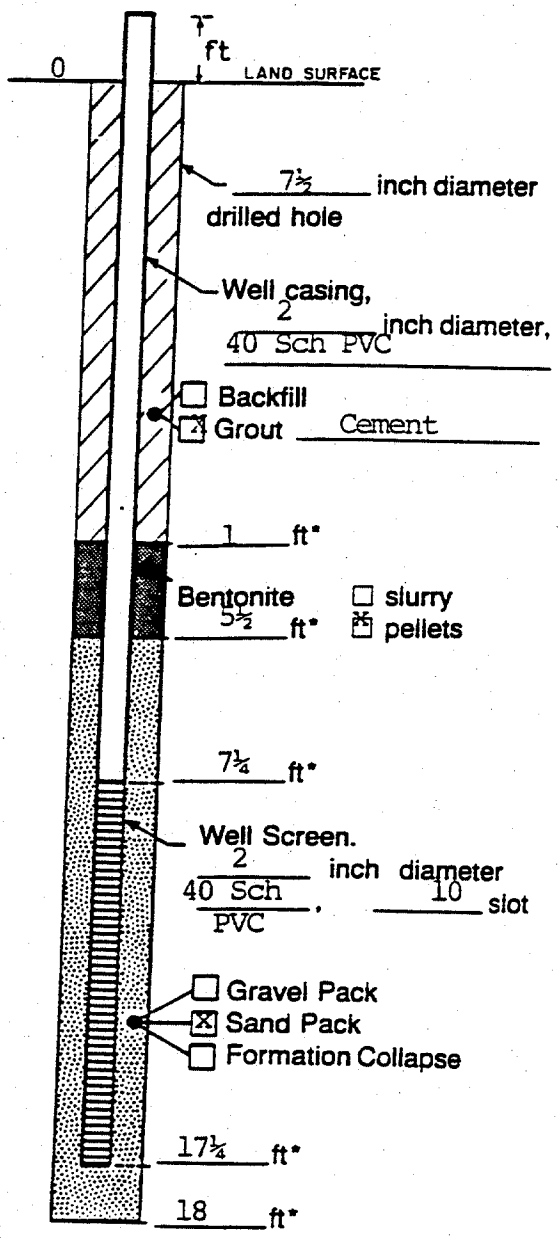
Environmental Services

WELL CONSTRUCTION LOG
(UNCONSOLIDATED)



Measuring Point is
Top of Well Casing
Unless Otherwise Noted.

*Depth Below Land Surface

Project IN14801 Well MW-~~2~~ 3-2
Town/City Speedway
County _____ State Indiana
Permit No. _____
Land-Surface Elevation
and Datum _____ feet ☐ Surveyed
☐ Estimated
Installation Date(s) 07/07/92 - 07/08/92
Drilling Method Hollow Stem Auger
Drilling Contractor Earth Exploration
Drilling Fluid None

Development Technique(s) and Date(s)
07/08/92, Disposable polyethylene bailer

Fluid Loss During Drilling _____ gallons
Water Removed During Development 8 gallons
Static Depth to Water 12.57 (7/9) feet below M.P.
Pumping Depth to Water _____ feet below M.P.
Pumping Duration _____ hours
Yield _____ gpm Date _____
Specific Capacity _____ gpm/ft
Well Purpose Monitoring Well

Remarks

Prepared by M. Keeley

G&M Form 05 12-88

Southborne 89-0978

Job Number	Client	Location	Well No.	Page
IN148.02	Allison Transmission	Speedway, Indiana	MW-3-2	1 of 1

Drilling Method: Hollow Stem Auger

Sampling Method: 2" x 2' Split Spoon

Drilling Start 11:45 Finish 12:15 07/07/92

Devel. Start Finish

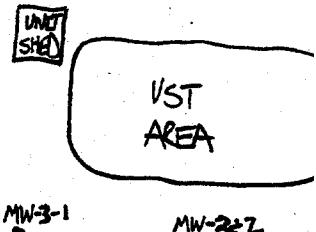
Static DTW DTO Time Date

Drilled by: Earth Exploration

Elevation TOC GL

Logged by: M. Keeley

Well Location Sketch



Well Construction	Depth Feet	Sample Interval	Name	Class	Descriptions Color, Density Gradation, Secondary Character, Odor, Plasticity, Remarks	Moisture Content	PID/FID (PPM)	Sample No.	Blows	Recovery %	Sample Type
	0-5		Silty, Sandy Clay		0'-5' 1/2 feet of asphalt pad, loose, black, silty sandy clay, trace gravel, slightly moist	S/M					Grab
	5-7		Sand	SP	Loose brown sand, fine to coarse, grained poorly sorted, gravelly trace cobbles, dry	D	30	1	4 6 7 9	NR	SS
	7-9		Sand	SP	Same as above	D	50	2	4 7 10 12	NR	SS
	9-11		Sand	SP	Loose brown sand, fine to coarse grained, moderately sorted, trace gravel, trace cobbles, dry (fine grain dominant)	D	40	3	4 8 15 15	NR	SS
	11-13		Sand	SP	Loose brown sand, fine to coarse grained, poorly sorted, gravelly, trace cobbles, dry	D	110	4	4 12 15 17	NR	SS
	13-15		Sand	SP	Same as above, wet at tip	D W	115	5	5 15 15 15	NR	SS
	15-17		Sand Clay	SP CL	Same as above to 16 feet, then very stiff grey mottled brown clay, trace cobbles, (sand above saturated 14-16 feet)	W	25	6	6 10 17 35	NR	SS
	18				End of Boring at 18 feet, completed as monitoring well.						

NR - Not reported

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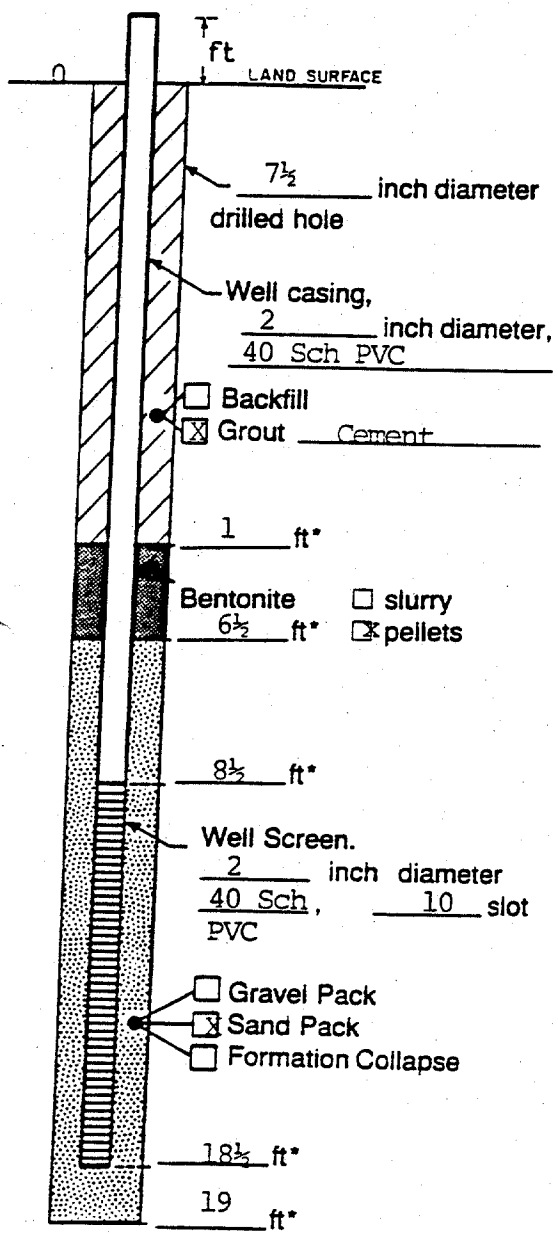
Environmental Services

WELL CONSTRUCTION LOG
(UNCONSOLIDATED)



Measuring Point is
Top of Well Casing
Unless Otherwise Noted.

*Depth Below Land Surface

Project IN14801 Well MW-3-3
Town/City Speedway
County _____ State Indiana
Permit No. _____
Land-Surface Elevation
and Datum _____ feet ☐ Surveyed
☐ Estimated
Installation Date(s) 07/08/92
Drilling Method Hollow Stem Auger
Drilling Contractor Earth Exploration
Drilling Fluid None

Development Technique(s) and Date(s)
Disposal polyethylene bailer, 07/08/92

Fluid Loss During Drilling none gallons
Water Removed During Development 8 gallons
Static Depth to Water 14.62 (7/9) feet below M.P.
Pumping Depth to Water _____ feet below M.P.
Pumping Duration _____ hours
Yield _____ gpm Date _____
Specific Capacity _____ gpm/ft
Well Purpose Monitoring Well

Remarks

Prepared by M. Keeley

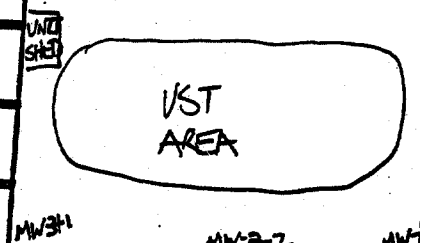
G&M Form 05-12-88

Southern 89-0978

Job Number	Client	Location	Well No.	Page
IN148.02	Allison Transmission	Speedway, Indiana	MW-3-3	1 of 1

Drilling Method Hollow Stem Auger	**Sampling Method** 2" x 2' Split Spoon
Drilling Start 8:15 Finish 9:00 07/08/92	**Devel.** Start Finish
Static DTW DTO Time Date	**Drilled by** Earth Exploration
Elevation TOC GL	**Logged by** M. Keeley

Well Location Sketch



Well Construction	Depth Feet	Sample Interval	Name	Class	Descriptions Color, Density Gradation, Secondary Character, Odor, Plasticity, Remarks	Moisture Content	PID/FID (PPM)	Sample No.	Blows	Recovery %	Sample Type
	0-5		Silty, Sandy Clay		0'-5' 1/2 feet of asphalt pad, loose, black, silty sandy clay, trace gravel, slightly moist plastic, then loose brown silty clay sand, with gravel and cobbles, very poorly sorted, slightly moist	S/M					Grab
	5-7		Sand	SP	Loose brown sand, fine to coarse grained (fine grained dominant), moderately sorted, trace gravel, dry	D	0	1	4 10 14 16	70	SS
	7-9		Sand	SP	Same as above, slightly moist.	S/M	1	2	4 9 11 10	80	SS
	9-11		Sand	SP	Loose, brown sand, fine to coarse, poorly sorted, gravelly, trace cobbles, slightly moist,	S/M	5	3	9 10 19 14	75	SS
	11-13		Sand	SP	Loose, grey-brown sand, fine to medium grained, well sorted, slightly moist, hydrocarbon odor,	S/M	100	4	13 10 9 15	75	SS
	13-15		Sand	SP	Loose, grey-brown sand, fine to coarse, poorly sorted, trace gravel, trace cobbles, trace silt, trace clay, moist	M	40	5	6 12 19 21	75	SS
	15-17		Sand	SP	Loose brown sand, fine to coarse, poorly sorted, gravelly, trace, cobbles, saturated, hydrocarbon odor and black staining 16 1/2 feet to near tip (staining not at tip)	W		6	4 10 19 19	75	SS
	17-19		Sand Clay	SP CL	Loose, brown sand, same as above, 17-17 1.2 feet, saturated, medium dense brown clay, trace gravel, 17 1/2 - 18 1/2 feet, dense, grey clay, trace gravel (18-19 feet) dry, hydrocarbon odor in sand	W D	4,000	7	6 19 12 33	90	SS
	19				End of boring at 19 feet. Completed as monitoring well.						

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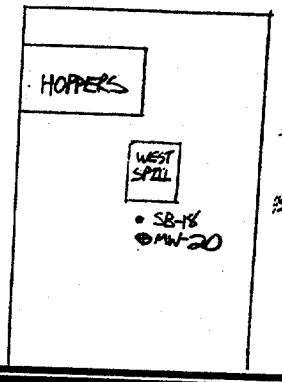
JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14806	ALLISON TRANSMISSION	INDIANAPOLIS, IN	MW-20 = SB-18	1/2

DRILLING METHOD 3¼ HSA	SAMPLING METHOD 2 FT SPLIT SPOON
DRILLING START 8AM FINISH 8:40AM 6-24-93	DEVEL. START FINISH —
STATIC DTW DTO TIME DATE	DRILLED BY EARTH EXPLORATION MARK JIM
ELEVATION TOC GL	LOGGED BY RUSS SCHLUKEBIR

WELL LOCATION SKETCH



WELL CONST. FLUSH MOUNT	DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY, GRAIN SIZE, ODOR, PLASTICITY STAINING, REMARKS	MOISTURE CONTENT	OVA (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
			CONCRETE	*	0-7 CONCRETE	DRY	—	—	—	—	HA
		1	SANDY CLAY	*	7"-2.6' 10YR 5/3 SANDY CLAY - 10% F-CR	MS					
					SAND & SM GRAVEL, CONSOLIDATED, PLASTIC						
		2			SOFT						
							0	1	1	40	SS
		3	SAND & GRAVEL	*	2.6'-4' 10YR 5/3 F-CR SAND & SM-MED				1		
					GRAVEL 90%, CLAY 10%, LOOSE				1		
		4							1		
				*	4-6 NO RECOVERY - SPLIT-SPOON INTO SEWER		0	2	2	30	SS
		5			PIPE. ABANDONED HOLE. MOVED HOLE 2FT				6		
					WEST. 4'-6' SAME AS 2.6"-4' CONSOLIDATED				5		
		6							3		
				*	6-6.6 SAME AS 2'6"-4' CONSOLIDATED / PLASTIC		.2	3	1	50	SS
		7		*	6.6-7.6 F-CR SAND & SM-LG GRAVEL LOOSE				1		
			SANDY CLAY	*	7.6-8 SANDY CLAY WITH SM-LG GRAVEL CONSOLIDATED				1		
		8			PLASTIC	MS/WET			1		
				*	8-9.8' SANDY CLAY (10YR 4/3) - 80% SAND (F-CR) & GRAVEL (SM-LG)	MS	.1	4	1	60	SS
		9			20% CLAY CONSOLIDATED PLASTIC				2		
				*	9.8-10 SAND (F-CR) & GRAVEL (SM-LG) LOOSE VARIOUS				1		
		10	SAND & GRAVEL		BROWNS/TANS				2		
				*	10-10.10 SAME AS 9.8'-10'		.2	5	2	40	SS
		11		*	10'10"-11'4" MED GRAVEL LAYER WELL SORTED				4		
				*	11.4-12' SAME AS 9.8'-10'				4		
		12							5		
				*	12-12.8" VARIOUS BROWNS SAND & GRAVEL - ALOT OF LG GRAVEL LOOSE		.3	6	3	60	SS
		13		*	12.8-14 VARIOUS BROWNS/TANS/GREYS F-CR SAND				13		
					& SM-LG GRAVEL LOOSE				11		
		14							14		
				*	14'-15.2" SAME AS 12.8-14 BUT WET	WET	.2	7	2	30	SS
		15		*	15.2-16 SAME AS 12.8-14 BUT STAINED				12		
					DEEP BLACK. ON TOP OF A LARGE ROCK				22/3		
		16									
					E.O.H 16'						

LAB SAMPLE

ABBREVIATIONS: C - COARSE, M - MEDIUM, F - FINE ... DRY, BR - BROWN, GY - GRAY

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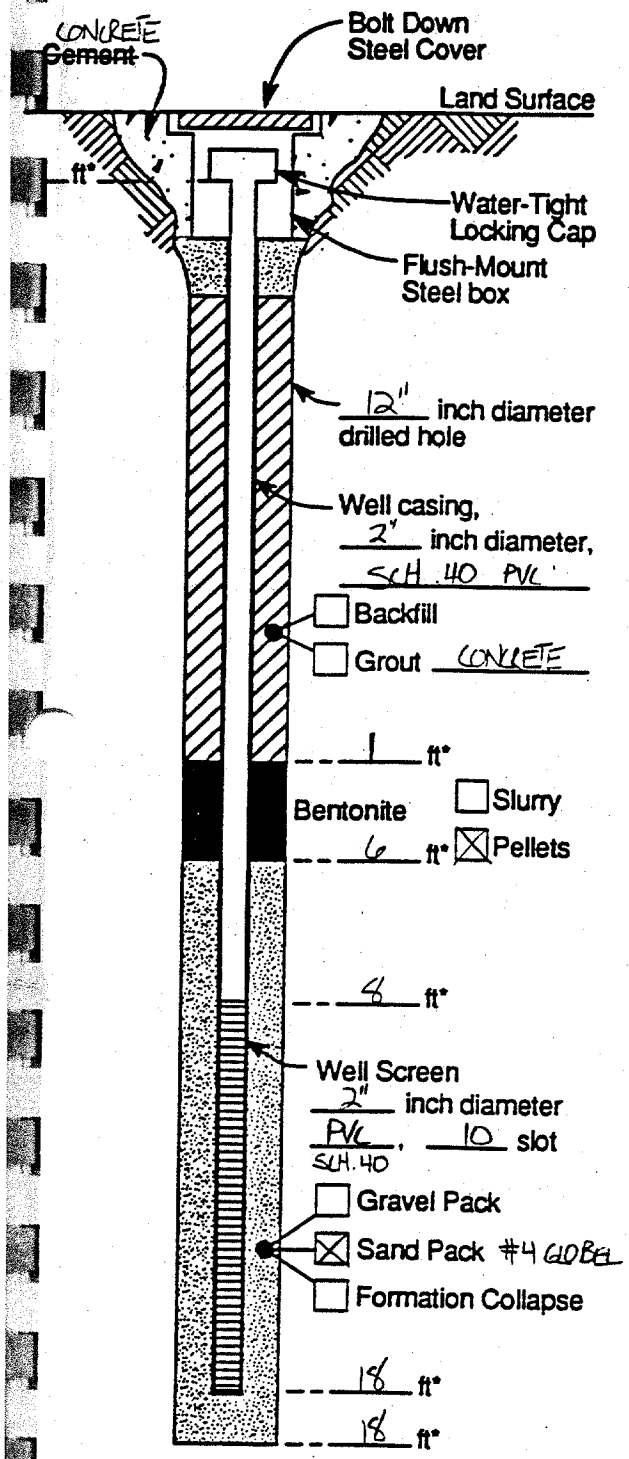
WELL CONSTRUCTION LOG
(UNCONSOLIDATED)



Measuring Point is Top of Well Casing Unless Otherwise Noted

*Depth Below Land Surface

Project IN14806 ALLISON TRANS. Well MW-~~#~~ 3-4
Town/City INDIANAPOLIS
County MARION State IN
Permit No. N/A
Land-Surface Elevation and Datum _____ feet ☐ Surveyed ☐ Estimated
Installation Date(s) 6-29-93
Drilling Method 4 1/4 HSA
Drilling Contractor EARTH EXPLORATION MARK ~~&~~ JIM
Drilling Fluid NONE

Development Technique(s) and Date(s)

Fluid Loss During Drilling NONE gallons
Water Removed During Development _____ gallons
Static Depth to Water _____ feet below M.P.
Pumping Depth to Water _____ feet below M.P.
Pumping Duration _____ hours
Yield _____ gpm Date _____
Specific Capacity _____ gpm/ft
Well Purpose MONITORING

Remarks

Prepared by RUSS SCHUKEBIR

G&M Form 05 12-88

Southprint 89-0978

Job Number	Client	Location	Boring No.	Page
IN14806	Allison Transmission	Indianapolis, Indiana	MW-43-4	1 of 1

Drilling Method
4 1/4 Hollow Stem Auger

Sampling Method
2 ft Split Spoon

Drilling Start 4:00 p.m.
Finish 5:30 p.m. 06/29/93

Devel. Start
Finish

Static DTW Time
DTO Date

Drilled by
Earth Exploration, Mark and Jim

Elevation TOC
GL

Logged by
Russ Schlukebir

Well Location Sketch

Well Construction	Depth Feet	Sample Interval	Name	Class	Descriptions: Color, Density Gradation, Secondary Character, Odor, Plasticity, Remarks	Moisture Content	PID/FID (PPM)	Sample No.	Blows	Recovery %	Sample Type
	0-2		Asphalt Cinder material		0"-2" asphalt 2"-1.2' black cinder like material	D					
	2		Sandy clay		2'-2.5' 10yr 4/2 sandy clay	MS	.2	1	-	-	HA
	3		Sandy clay		3'-3.5' same as 2'-2.5'	MS	.1	2	-	-	HA
	4-6		Sand clay Fine to medium sand Sand and gravel		4'-4.8' black sandy clay same as 2'-2.5' 4.8'-4.10' 10yr 6/8 fine to medium sand, loose, well sorted 4.10'-6' 10yr 7/2 fine to coarse sand and small to large gravel, loose	MS	2.9	3	6 9 11 9	80	SS
	6-8		Sand and gravel		6'-8' same as 4.10'-6'	MS	.1	4	3 7 11 15	70	SS
	8-10		Sand and gravel Medium sand Sand and gravel		8'-8.10' same as 4.10'-6 8.10'-9.2' well sorted, medium sand, same color 9.2'-10' same as 4.10'-6'	MS	.1	5	6 8 10 11	80	SS
	10-12		Sand and gravel		10'-12' same as 4.10'-6'	VMS	.1	6	3 5 14 27	50	SS
	12-14		Sand and gravel		12'-14' large boulder in front of auger - no recovery	VMS	-		-	0	SS
	14-16		Sand and gravel		14'-16' same 4.10'-6'	MS VMS MS	43	7	49 18 25 27	70	SS
	16-18		Silty clay		16'-18' 10yr 6/1 and 2.5y N4/ * silty clay, consolidated, fine to coarse sand and small to large gravel	MS	.2	8	21 25 28 34	80	SS
					E.O.H at 18 ft						

GERAGHTY & MILLER, INC.
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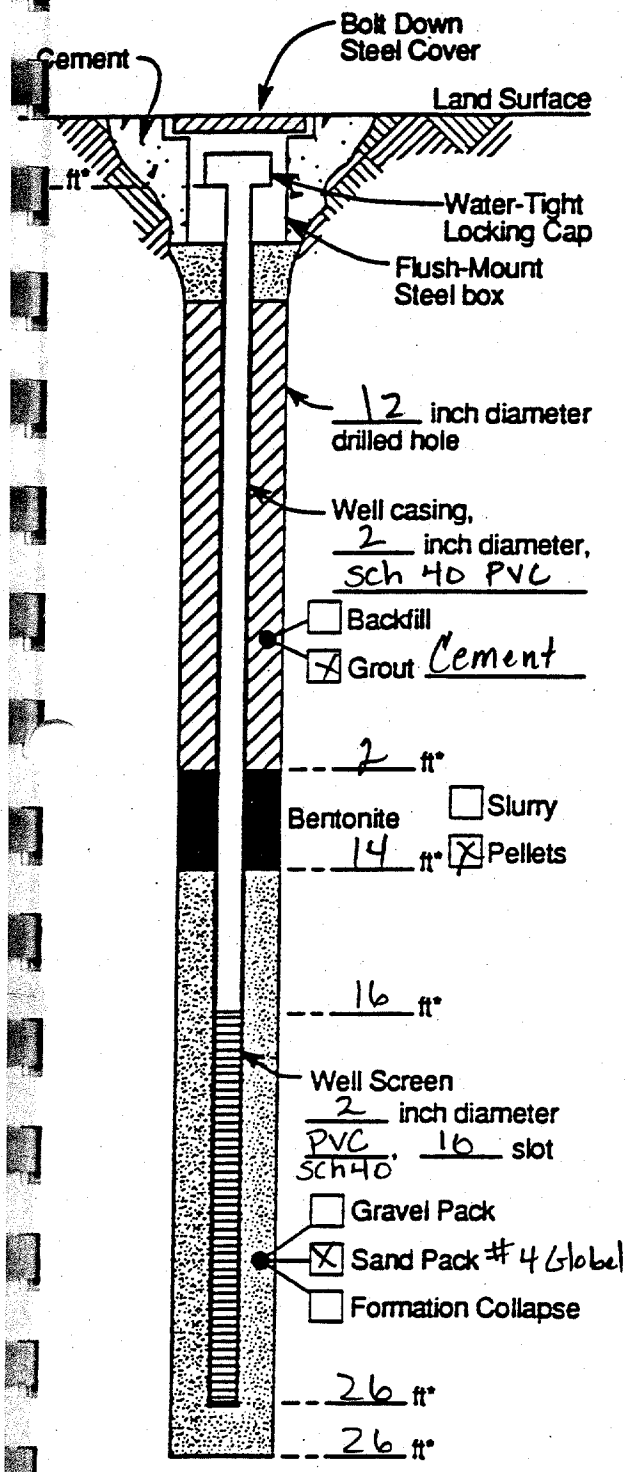
WELL CONSTRUCTION LOG
(UNCONSOLIDATED)



Measuring Point is Top of Well Casing Unless Otherwise Noted

*Depth Below Land Surface

Project IN0148.006 Well MW-3-5
Town/City Indianapolis
County Marion State In
Permit No. NA
Land-Surface Elevation
and Datum _____ feet ☐ Surveyed
☐ Estimated
Installation Date(s) 7/2/93
Drilling Method 4¼ HSA
Drilling Contractor Earth Exploration Mark & Jim
Drilling Fluid None

Development Technique(s) and Date(s)

Fluid Loss During Drilling NONE gallons
Water Removed During Development _____ gallons
Static Depth to Water _____ feet below M.P.
Pumping Depth to Water _____ feet below M.P.
Pumping Duration _____ hours
Yield _____ gpm Date _____
Specific Capacity _____ gpm/ft
Well Purpose MONITORING

Remarks

Prepared by Russ Schlukebir

G&M Form 05 12-88

Southprint 89-0978

Job Number	Client	Location	Boring No.	Page 1 of 1
IN14806	Allison Transmission	Indianapolis, Indiana	MW-B3-5	

Drilling Method Hollow Stem Auguer	**Sampling Method** Split Spoon
Drilling Start 9:59 a.m. 07/02/93 Finish	**Devel.** Start Finish
Static DTW Time DTO Date	**Drilled by** Earth Exploration, Inc.
Elevation TOC GL	**Logged by** Steve Owens

Well Location Sketch

Well Construction	Depth Feet	Sample Interval	Name	Class	Description: Color, Density Gradiation, Secondary Character, Odor, Plasticity, Remarks	Moisture Content	PID/FID (PPM)	Sample No.	Blows	Recovery %	Sample Type
	0-2				Asphalt						
	2-3.5				Medium firm, brown, sandy clay with gravel and minor green staining, slight odor						
	3.5-14				Blind Drill						
	14-16				14'-15' medium soft, tan to brown, medium to very coarse grained quartz sand with fine to coarse gravel (25%), moist, odor		3.8		3 7 16 16		
	16-18				No recovery (rock in end of split spoon)				20 22 15 18		
	18-20				18'-19.6' medium soft, tan and brown, medium to very coarse grained quartz sand with fine to coarse gravel (35$), very moist at top (upper 5") to moist at base, faint odor		2.2		6 12 14 18		
	20-22				20'-21.6' medium soft, light gray, medium to very coarse grained quartz sand with fine to coarse gravel (25%), very moist, faint odor		4.6		7 13 17 18		
	22.5-24				Light grey, medium to very coarse sand with medium to coarse gravel, moist		1.5		12 22 15		
	24-26				0-6' light grey, medium to coarse gravel, wet, 6"-16", red stained brown color, wet, 50% fine to coarse sand, 23% clay, slight odor, 16"-20", grayish brown, no odor, 20% clay, 10% sand, no odor		10		3 14 23 20		
					E.O.H. at 26 feet						

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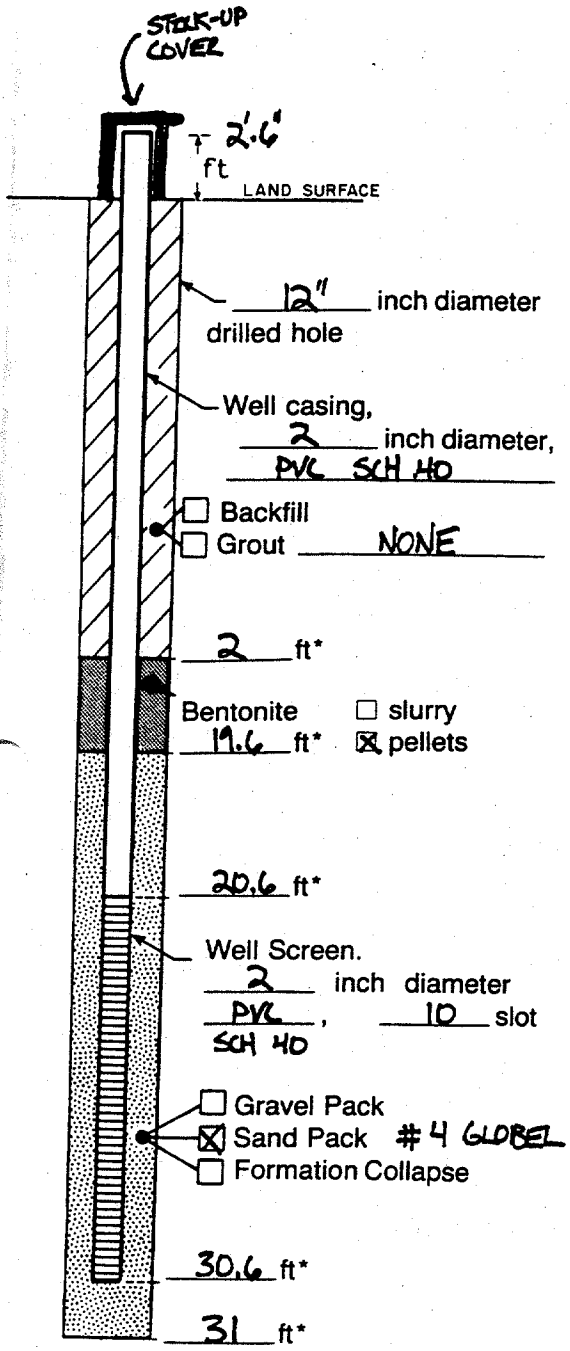
Environmental Services

WELL CONSTRUCTION LOG
(UNCONSOLIDATED)



Measuring Point is
Top of Well Casing
Unless Otherwise Noted.

*Depth Below Land Surface

Project IN0148006 ALLISON TRANS Well MW-3-6
Town/City INDIANAPOLIS
County MARION State IN
Permit No. N/A
Land-Surface Elevation
and Datum _____ feet ☐ Surveyed
_____ ☐ Estimated
Installation Date(s) 7-16-93
Drilling Method 4 1/4 HSA
Drilling Contractor EARTH EXPLORATION ERNIE & MIKE
Drilling Fluid N/A

Development Technique(s) and Date(s)

Fluid Loss During Drilling N/A gallons
Water Removed During Development _____ gallons
Static Depth to Water _____ feet below M.P.
Pumping Depth to Water _____ feet below M.P.
Pumping Duration _____ hours
Yield _____ gpm Date _____
Specific Capacity _____ gpm/ft
Well Purpose MONITORING WELL

Remarks

Prepared by RUSS SCHLUEBER

G&M Form 05 12-88

Southprint 89-0978

Job Number	Client	Location	Boring No.	Page
IN14806	Allison Transmission	Indianapolis, Indiana	MW-6 3-6	1 of 2

Drilling Method 4 1/4 Hollow Stem Auger	**Sampling Method** 2 ft Split Spoon
Drilling Start 9:50 a.m. Finish 12:00 p.m. 07/16/93	**Devel.** Start Finish
Static DTW DTO Time Date	**Drilled by** Earth Exploration, Ernie and Mike
Elevation TOC GL	**Logged by** Russ Schlukebir

Well Location Sketch

Well Construction	Depth Feet	Sample Interval	Name	Class	Descriptions: Color, Density Gradiation, Secondary Character, Odor, Plasticity, Remarks	Moisture Content	PID/FID (PPM)	Sample No.	Blows	Recovery %	Sample Type
	0-4				0"-4' no samples taken						
	4-6				4'-4.5' 10yr 3/1 silty clay 4.5'-4.7' 2.5yr 5/8 fine to coarse sand and small to large gravel, loose 4.7'-6' same as 4.5'-4.7' but brown/tans	MS VMS MS	23	1	7 10 11 13	60	SS
	6-8				6'-7' same as 4.7'-6' 7'-7.2' 10yr 5/8 clay lens - wet above 7.2'-8' same as 4.7'-6	MS WT/ MS	14	2	6 9 9 12	60	SS
	8-10				8'-10' various browns/tans, fine to coarse sand and small to medium gravel, loose 9.8' rust staining	WT/ MS	20	3	6 9 10 13	60	SS
	10-12				10'-12' same as 8'-10' but dry at 11'	MS/ WT D	25	4	9 21 10 8	50	SS
	12-14				12'-14' no recovery	-	-	5	50/4 - - -	0	SS
	14-16				14'-14.8' Well sorted, medium sand 14.8-15.10 same as 8'-10' 15.10-16' medium gravel	MS	29	6	6 9 6 11	90	SS
	16-18				16'-18' same as 15.10'-16' Wet at 17'-17.3'	MS WT/ MS	21	7	7 10 10 15	70	SS
	18-20				18'-20' same as 15.10'-16'	WT/ MS	23	8	7 10 4 14	60	SS
	20-22				20'-22' same as 15.10'-16'	WT/ MS	28	9	12 16 17 13	60	SS
	22-24				22'-24' same as 15.10'-16'	VMS	21	10	8 22 23 24	70	SS

Job Number	Client	Location	Boring No.	Page 2 of 2
IN14806	Allison Transmission	Indianapolis, Indiana	MW-03-6	

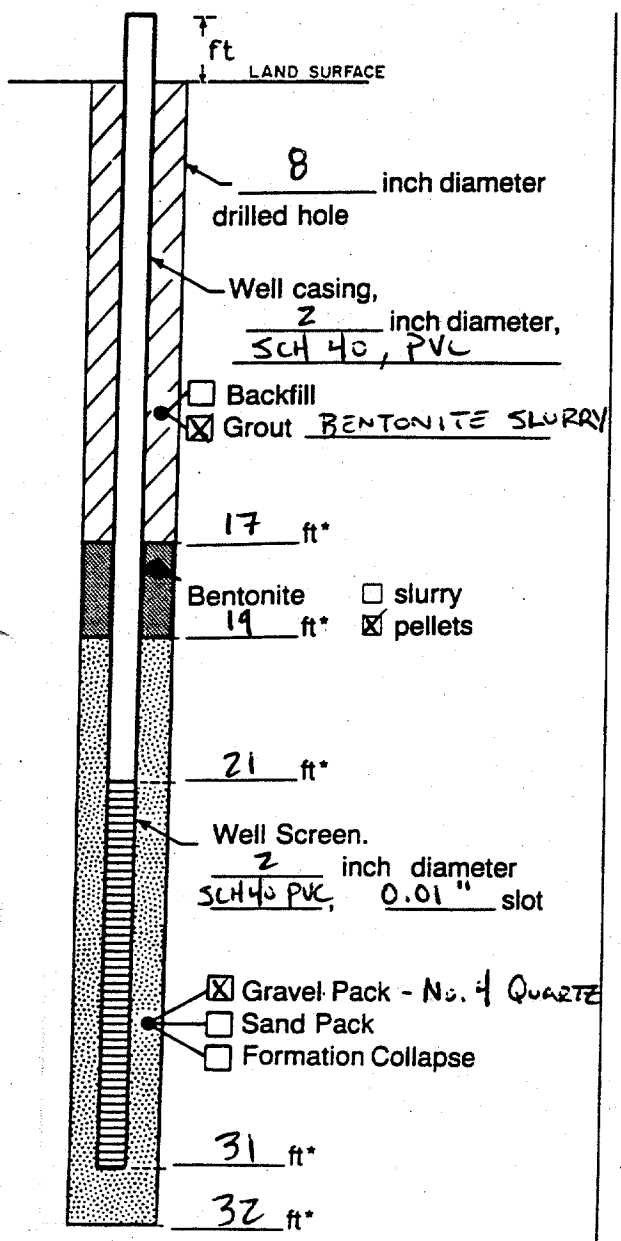
Drilling Method 4 1/4 Hollow Stem Auger	**Sampling Method** 2 ft Split Spoon
Drilling Start 9:50 a.m. Finish 12:00 p.m. 07/16/93	**Devel.** Start Finish
Static DTW Time DTO Date	**Drilled by** Earth Exploration, Ernie and Mike
Elevation TOC GL	**Logged by** Russ Schlukebir

Well Location Sketch

Well Construction	Depth Feet	Sample Interval	Name	Class	Descriptions Color, Density Gradiation, Secondary Character, Odor, Plasticity, Remarks	Moisture Content	PID/FID (PPM)	Sample No.	Blows	Recovery %	Sample Type
	24-26				Same as 15.10'-16' rust staining and wet layer at 24.8 wet at 25.6'-26'	VMS WT	36	11	11 26 44 30	60	SS
	26-28				26'-28' same as 15.01'-16' but wet	WT	68	12	15 23 50/3 -	20	SS
	28-30				28'-30' no recovery	WT	-	13	22 23 15 50/4	0	SS
					E.O.H. at 31 ft						

GERAGHTY & MILLER, INC.
Environmental Services

WELL CONSTRUCTION LOG
(UNCONSOLIDATED)



Measuring Point is
Top of Well Casing
Unless Otherwise Noted.

*Depth Below Land Surface

Project ALLISON TRANSMISSION Well MW-~~7~~3-7
Town/City SPEEDWAY
County MARION State IN
Permit No. —
Land-Surface Elevation
and Datum — feet ☐ Surveyed ☐ Estimated
Installation Date(s) 6-9-94
Drilling Method HOLLOW STEM AUGER
Drilling Contractor EARTH EXPLORATION
Drilling Fluid N/A

Development Technique(s) and Date(s)
SURGE BLOCK & BAIL

Fluid Loss During Drilling NONE gallons
Water Removed During Development ~5 gallons
Static Depth to Water 27.5' BLS @ INSTALL. feet below M.P.
Pumping Depth to Water N/A feet below M.P.
Pumping Duration N/A hours
Yield N/A gpm Date
Specific Capacity gpm/ft
Well Purpose GROUND WATER MONITORING

Remarks

Prepared by BOB REYNOLDS

G&M Form 05 12-88

Southprint 89-0978

JOB No. IN0291.001	CLIENT Allison Transmission	LOCATION Indianapolis	WELL NO. MW-7 3-7	PAGE 1 OF 2	WELL LOCATION SKETCH
DRILLING METHOD	HSA CME-55	SAMPLING METHOD	2/2 Split spoon		
DRILLING START 9:30am DATE 6/9/94		DRILLED BY	Earth Explorations, Inc.		
FINISH 12:30pm DATE 6/9/94			Richard & Matt		
STATIC DTW TIME		LOGGED BY	Bob Reynolds		
DTP DATE					

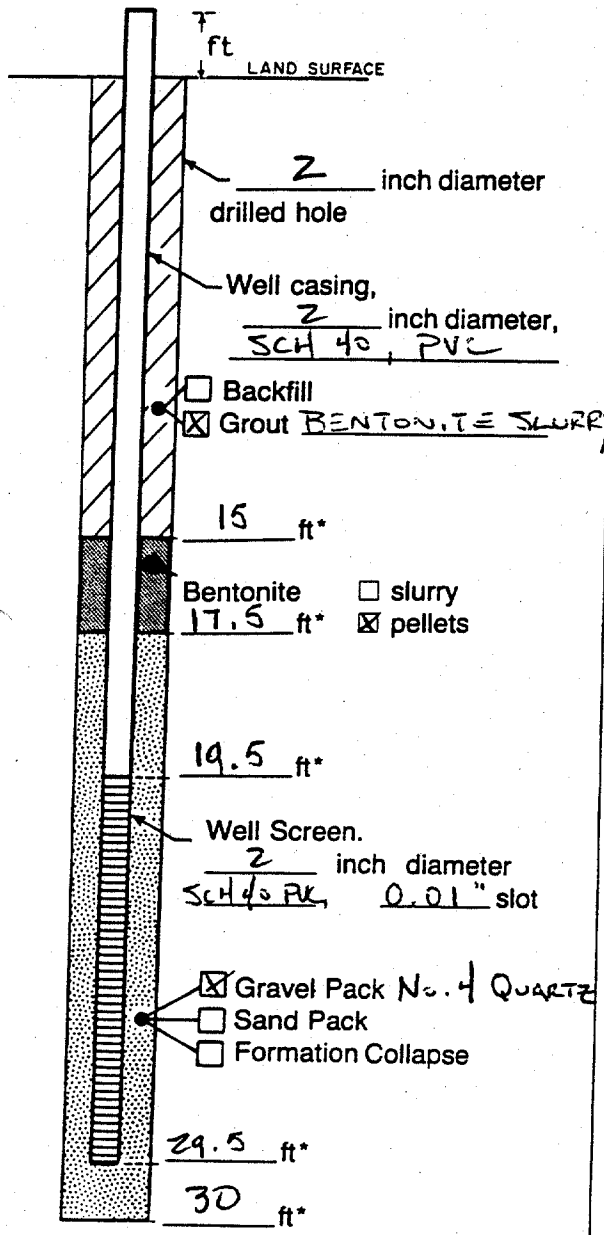
WELL CONSTRUCTION	DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY, GRAIN SIZE, ODOR, PLASTICITY, STAINING, REMARKS	MOISTURE CONTENT	OVA (PPM)	SAMPLE NUMBER	BLOWS	RECOVERY
	1				* OVA would not ignite					
	2									
	3									
			Sandy Silt		10 YR ¾ brown sandy silt 10% black sand grading to sandy	D		1	3	7
	4				(30%) clayey (30%) silt, massive, cohesive				2	
									2	
	5		Sandy clayey silt						2	
	6									
	7									
	8									
					As above to 9 feet	D		2	6	70
	9								7	
			Sand & gravel		Abrupt change to medium-coarse sand w/20% fine-med gravel	D			8	
	10				angular to subangular				10	
	11									
	12									
	13									
					Sand & gravel w/increasing gravel content (to 40%)	D		3	7	60 S
	14				medium-coarse gravel				12	
	15								13	
									24	
	16									

JOB No. IN0291.001	CLIENT Allison Transmission	LOCATION Indianapolis	WELL NO. MW-~~2~~3-7	PAGE 2 OF 2	WELL LOCATION SKETCH
DRILLING METHOD	HSA CME-55	SAMPLING METHOD	2/2 Split spoon		
DRILLING START 9:30am	DATE 6/9/94	DRILLED BY	Earth Explorations, Inc.		
FINISH 12:30pm	DATE 6/9/94		Richard & Matt		
STATIC DTW	TIME	LOGGED BY	Bob Reynolds		
DTP	DATE				

WELL CONSTRUCTION	DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR,DENSITY, GRAIN SIZE, ODOR, PLASTICITY, STAINING, REMARKS	MOISTURE CONTENT	OVA (PPM)	SAMPLE NUMBER	BLOWS	RECOVERY
	17									
	18									
			Sand & gravel		Sand & gravel as above - gravel becoming coarser - more	D		4	10	7
	19				rounded				10	
					At 19.5 - becoming siltier				10	
	20								15	
	21									
	22									
	23									
						M		5		0
	24				No recovery					
	25									
			Sandy silt		25-26: gray sandy silt w/light & dark bands, no odor	M		6	17	80
	26								17	
			Sand & gravel		26-27: brown sand & gravel w/large cobbles				18	
	27								18	
			Sandy silt		27-27.5: gray sandy silt	M		7	21	60
	28		Sand & gravel		27.5-28.5: Medium well sorted sand w/cobbles and rock fragments	W			16	
									9	
	29		Sandy clayey silt		28.5-29: gray sandy clayey silt till	D			14	
								8	7	90
	30				As above				11	
									15	
	31								18	
					EOB 31 feet bls					
					0.010 inch slot screen from 21-31					
					above ground protective cover					

GERAGHTY & MILLER, INC.
Environmental Services

WELL CONSTRUCTION LOG
(UNCONSOLIDATED)



Measuring Point is
Top of Well Casing
Unless Otherwise Noted.

*Depth Below Land Surface

Project ALLISON TRANSMISSION Well MW-~~8~~ 3-8
Town/City SPEEDWAY
County MARION State IN
Permit No. —
Land-Surface Elevation
and Datum — feet ☐ Surveyed
☐ Estimated
Installation Date(s) 6-9-94
Drilling Method HOLLOW STEM AUGER
Drilling Contractor EARTH EXPLORATION
Drilling Fluid N/A

Development Technique(s) and Date(s)
SURGE BLOCK & BAIL

Fluid Loss During Drilling N/A gallons
Water Removed During Development ~5 gallons
Static Depth to Water ~25 FEET BLS DURING INSTALLATION ~~feet below M.P.~~
Pumping Depth to Water N/A feet below M.P.
Pumping Duration N/A hours
Yield N/A gpm Date
Specific Capacity N/A gpm/ft
Well Purpose
GROUNDWATER MONITORING

Remarks

Prepared by BOB REYNOLDS

G&M Form 05 12-88

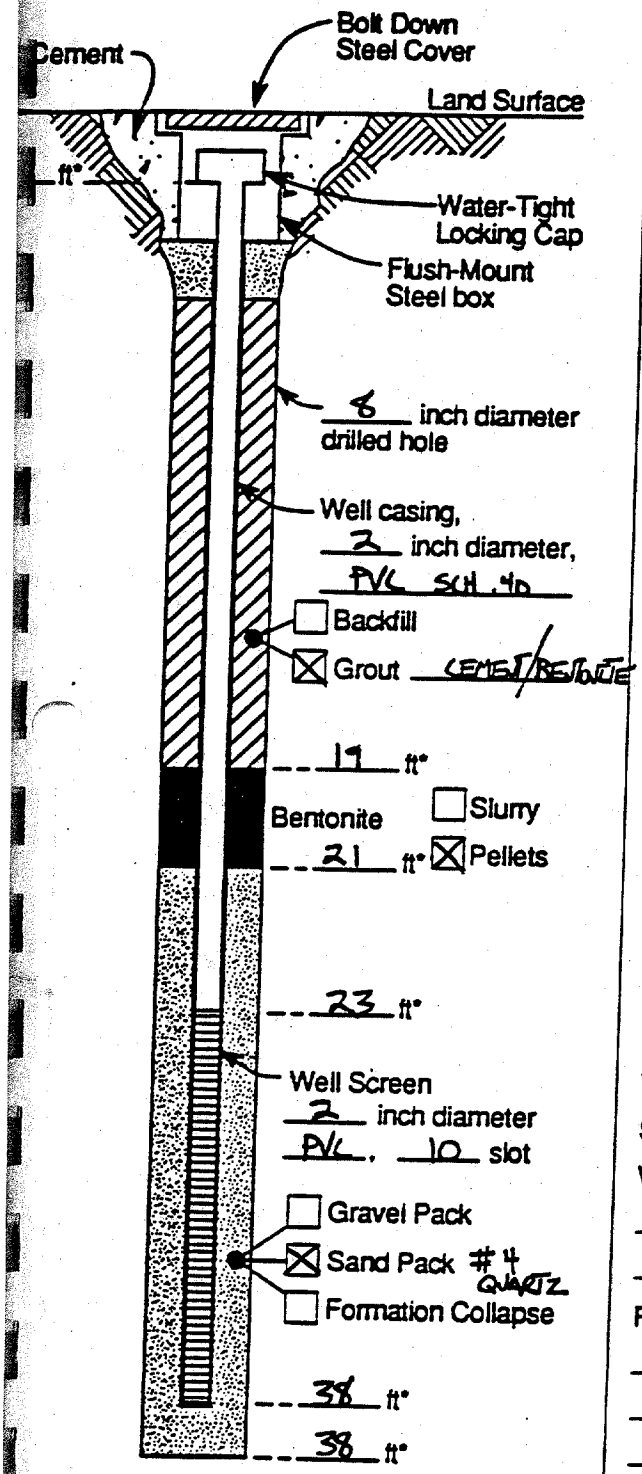
Southprint 89-0978

JOB No. IN0291.001	CLIENT Allison Transmission	LOCATION Indianapolis	WELL NO. MW-8 3-8	PAGE 1 OF 1	WELL LOCATION SKETCH
DRILLING METHOD	HSA CME-55	SAMPLING METHOD	2/2 Split spoon		
DRILLING START 3:00pm DATE 6/9/94		DRILLED BY	Earth Explorations, Inc.		
FINISH 5:30pm DATE 6/9/94			Richard & Matt		
STATIC DTW TIME		LOGGED BY	Bob Reynolds		
DTP DATE					

WELL CONSTRUCTION	DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR,DENSITY, GRAIN SIZE, ODOR, PLASTICITY, STAINING, REMARKS	MOISTURE CONTENT	OVA (PPM)	SAMPLE NUMBER	BLOWS	
	1				* OVA would not ignite					
	2				Blank drill to 22 feet bls					
	22									
			Sandy silt		22-23: brown to gray sandy silt, 10% sand 20% clay			1	12	9
	23								18	
			Sand & gravel		23-24: Abrupt change to sand & gravel, 30% fine-medium angular gravel				25	
	24								31	
					24-25: Brown fine-medium sand w/some gravel			2	10	90
	25								22	
					25-26: Sand & gravel w/cobbles. One inch black stain at 25 feet.				28	
	26				Slight odor.				33	
	27									
	28									
	29									
	30									
					EOB 30 feet bls					
					MW-8 d=29.6 fet bls					
					0.010 2" PVC screen from 29.5-19.5					
					#4 Global sandpack to 17 feet					
					Bentonite chips to 15 feet					
					Cement/bentonite slurry to 2 feet					
					Concrete & flush mount cover at surface.					

GERAGHTY & MILLER, INC.
Environmental Services

WELL CONSTRUCTION LOG
(UNCONSOLIDATED)



Measuring Point is Top of Well Casing Unless Otherwise Noted

*Depth Below Land Surface

Project IN0291.001 ALLISON TRANSMISSION Well MW-3-9
Town/City INDIANAPOLIS
County MARION State IN
Permit No. NA
Land-Surface Elevation and Datum _____ feet ☐ Surveyed ☐ Estimated
Installation Date(s) 6-2-95
Drilling Method 4¼ HSA
Drilling Contractor EARTH EXPLORATION - RICHARD & MARK
Drilling Fluid NA

Development Technique(s) and Date(s)
6-2-95 - 2" GRUNFOS PUMP

Fluid Loss During Drilling NA gallons
Water Removed During Development 55 gallons
Static Depth to Water _____ feet below M.P.
Pumping Depth to Water 34 feet below M.P.
Pumping Duration 2½ hours
Yield _____ gpm Date _____
Specific Capacity _____ gpm/ft
Well Purpose MONITORING WELL

Remarks

Prepared by RUSS SCHLUEBER

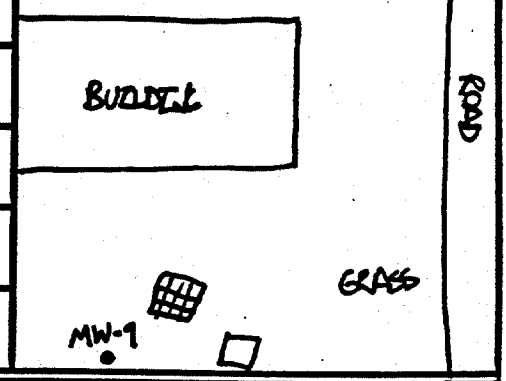
M Form 05 12-88

GERAGHTY & MILLER, INC.
Environmental Services

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN0291.001	ALLISON TRANSMISSION	INDIANAPOLIS	MW-3-9	1/3

DRILLING METHOD: 4 1/4 HSA	SAMPLING METHOD: 2 FT SPLIT-SPOON
DRILLING START: 8AM 6-2-95 FINISH: 6-2-95	DEVEL. START: 1PM 6-2-95 FINISH: 3:30PM 6-2-95
STATIC DTW / DTO — TIME / DATE	DRILLED BY: EARTH EXPLORATION — RICHARD, MARK
ELEVATION TOC / GL	LOGGED BY: RUSSELL J. SCHUKEBIR

WELL LOCATION SKETCH



WELL CONST.	DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY, GRAIN SIZE, ODOR, PLASTICITY STAINING, REMARKS	MOISTURE CONTENT	OVA (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
	1										
	2										
	3										
	4										
	5				BLANK DRILL TO 24 FT.						
	6										
	7										
	8										
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										

ABBREVIATIONS: C – COARSE, M – MEDIUM, F – FINE, GRVL – GRAVEL, SND – SAND, SLT – SILT, CLY – CLAY

GERAGHTY & MILLER, INC.
Environmental Services

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN0291.001	ALLISON TRANSMISSION	INDIANAPOLIS	MW-3-9	2/3

WELL LOCATION SKETCH

DRILLING METHOD: 4 1/4 HSA	SAMPLING METHOD: 2 FT SPLIT-SPOON
DRILLING START 8AM 6-2-95 FINISH 12:30PM 6-2-95	DEVEL. START 1PM 6-2-95 FINISH 3:30PM 6-2-95
STATIC DTW / DTO — TIME / DATE	DRILLED BY: EARTH EXPLORATION — RICHARD MARK
ELEVATION TOC / GL	LOGGED BY: RUSSELL J. SCHLUKEBER

WELL CONST.	DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY, GRAIN SIZE, ODOR, PLASTICITY STAINING, REMARKS	MOISTURE CONTENT	OVA (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
	17										
	18										
	19										
	20										
	21										
	22										
	23										
	24										
		X			24-26 FINE - COURSE SAND & SM-16 GRAVEL - LOOSE, GREY & BROWN	MS		1	5	50	SS
	25	X							26		
		X				DRY			45		
	26	X				MS			37		
		X			26-28 - SAME AS 24'-26'	WT		2	33	70	SS
	27	X				MS			44		
		X							37		
	28	X				WT			38		
		X			28-30 - SAME AS 24'-26'			3	60	75	SS
	29	X							31		
		X							28		
	30	X							29		
		X			30-32 - SAME AS 24'-26'			4	19	80	SS
	31	X							22		
		X							19		
	32	X							12		
		X			32-34 - SAME AS 24'-26'			5	39	80	SS
	33	X							31		

ABBREVIATIONS: C - COARSE, M - MEDIUM, F - FINE, GRVL - GRAVEL, SND - SAND, SLT - SILT, CLY - CLAY

GERAGHTY & MILLER, INC.
Environmental Services

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN0291.001	ALLISON TRANSMISSION	INDIANAPOLIS	MW-3-9	3/3

WELL LOCATION SKETCH

DRILLING METHOD: 4 1/4 HSA	SAMPLING METHOD: 2 FT SPLIT-SPOON
DRILLING START: 8AM 6-2-95 FINISH: 12:30PM 6-2-95	DEVEL. START: 1PM 6-2-95 FINISH: 3:30PM 6-2-95
STATIC DTW / DTO / TIME / DATE	DRILLED BY: EARTH EXPLORATION RICHARD MARK
ELEVATION TOC / GL	LOGGED BY: RUSSELL J. SCHUKEBER

WELL CONST.	DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY, GRAIN SIZE, ODOR, PLASTICITY STAINING, REMARKS	MOISTURE CONTENT	OVA (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
	34	X							29		
		X			34'-36' SAND F-CR, LOOSE, BROWN			6	21	80	SS
	35	X							12		
		X							16		
	36	X							32		
		X			36-37.10 SAME AS 34'-36'			7	8	80	SS
	37	X			37.10-38 - DK GREY SILTY CLAY, CONSOLIDATED				16		
		X			HARD				13		
	38	X				MS			12		
					E.O.B. 38 FT						
					SET WELL AT 38 FT						

ABBREVIATIONS: C - COARSE, M - MEDIUM, F - FINE, GRVL - GRAVEL, SND - SAND, SLT - SILT, CLY - CLAY

& MILLER, INC.
Environmental Services

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN14806	ALLISON TRANSMISSION	INDIANAPOLIS, IN	MW-20	2/2

WELL LOCATION SKETCH: LOOK AT PAGE #1

DRILLING METHOD: HSA	SAMPLING METHOD: 2 FT SPLIT SPOON
DRILLING START / FINISH	DEVEL. START / FINISH
STATIC DTW / DTO — TIME / DATE	DRILLED BY: EARTH EXPLORATION — MARK, JIM
ELEVATION TOC / GL	LOGGED BY: RUSS SCHLUKEBIR

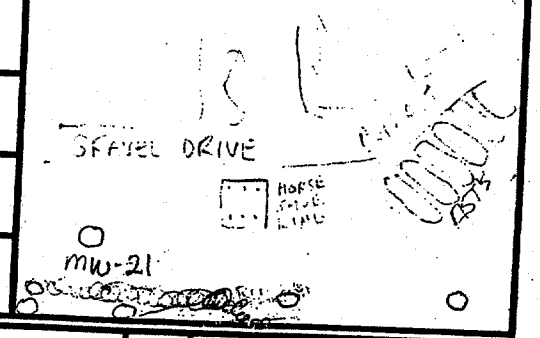
WELL CONST.	DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY, GRAIN SIZE, ODOR, PLASTICITY STAINING, REMARKS	MOISTURE CONTENT	OVA (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
		17				MS					
					*MW-20 WAS DRILLED 2FT SOUTH OF						
		18			SB-18. FOR THE GEOLOGY OF MW-						
					REFER TO SB-18 WELL LOG & SOIL SAMPLING						
		19			LOG						
		20									
					* 21 FT E.O.H						
		21			* DRILLED WITH 4 1/4 HSA						
					* STARTED DRILLING MW-20 AT 8:30AM						
					-12N 6-29-93						
					* DRILL INTO SILTY CLAY-BUT NOT SURE						
					AT WHAT DEPTH?						

ABBREVIATIONS: C = COARSE, M = MEDIUM, F = FINE, ... CLAY

GERAGHTY & MILLER, INC.
Environmental Services

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN0148 007	ALLISON TRANSMISSION	10TH. COSSELC INDIANAPOLIS	MW-21	1 -

WELL LOCATION SKETCH

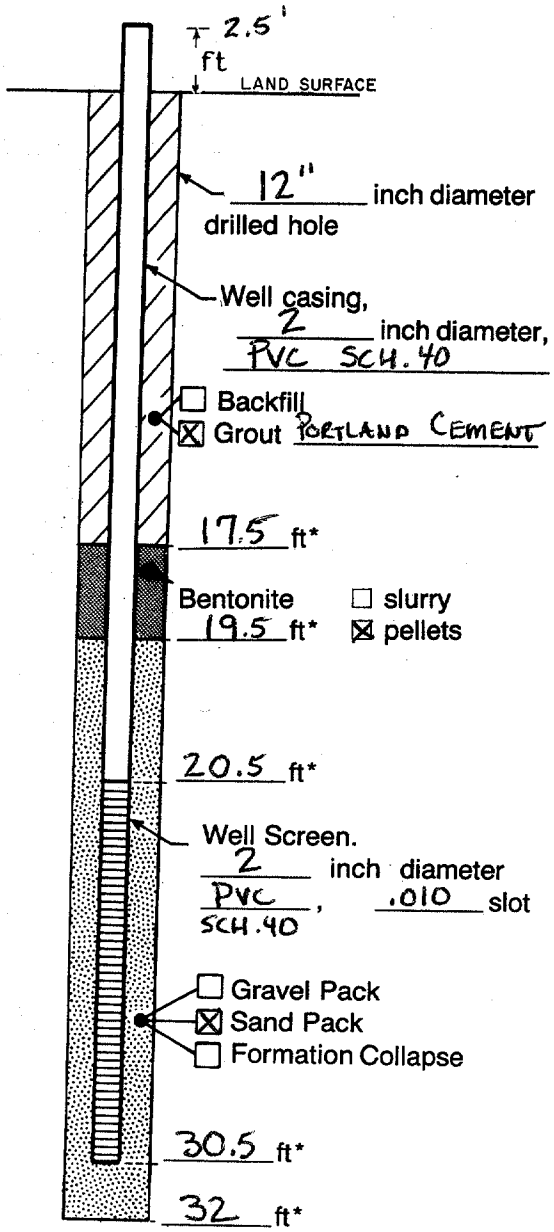


DRILLING METHOD: 4 1/4 HSA	SAMPLING METHOD: 2 FT SPLIT SPOON
DRILLING START / FINISH: 8:30 AM / 8-7-95	DEVEL. START / FINISH:
STATIC DTW / DTO: TIME / DATE:	DRILLED BY: EARTH EXPLORATION MARK EDWARD
ELEVATION TOC / GL:	LOGGED BY: BLAKE FAHL

WELL CONSTRUCTION	DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY 10yr 5/8 Yellowish Brown REMARKS	MOISTURE CONTENT	OVA (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
					0-.1' BROWN SILT 75%, SAND 20%	MS	0	1	2	75	SS
		1	Sandy Silt		(FILL) GRAVEL 5% F-C SAND				2		
			(FILL)		GRAVEL LOOSE 1-2' DK Br to BLACK				4		
		2							6		
					2-4' SAME AS 1-2'	MS	10.0	2	4	75	SS
		3							6		
									5		
		4	sandy Silt						4		
					5.0-5.5' Gray 70% SAND, 30% SILT	MS	2.5	3	4	75	SS
		5	Silty Sand		5.5-6.0' Gray SILT 70% SAND 30%				4		
			FILL		Gravel loose				6		
		6			6-8' Gray 60% silt stiff plastic				4		
					20% sand 20% clay	MS	110	4	2	75	SS
		7							1		
									2		
		8			8-9' Brown 70% silt 30% F-C SAND				4		
			(FILL)		9-10' BLACK 80% silt 20% F-C SAND	MS	>1000	5	6	75	SS
		9			BLACK STAINING UNDESCRIBABLE ODOR				8		
					7.5yr 2.0 BLACK				12		
		10							7		
					10.5-11.0 BROWN 60% Silt, 35% F-C SAND	MS	>1000	6	8	80	SS
		11	FILL		(FILL) 5% CLAY				3		
					11.0-12' Black stained 75% Silt 10% CLAY				4		
		12			15% F-C SAND ODOR				4	~~85~~	~~SS~~
					12-14' SAME AS 11.0-12'	MS	>1000	7	4	75	SS
		13							4		
									6		
		14							8		
			CLAYEY SILT		DK Gray 70% SILT 25% CLAY, 5%	DRY	>1000	8	6	75	SS
		15	NATIVE		F-C SAND				6		
									8		
		16							12		

GERAGHTY & MILLER, INC.
Environmental Services

WELL CONSTRUCTION LOG
(UNCONSOLIDATED)



Measuring Point is
Top of Well Casing
Unless Otherwise Noted.

*Depth Below Land Surface

Project ALLISON TRANSMISSION Well MW-21
Town/City INDIANAPOLIS
County MARION State INDIANA
Permit No. N/A
Land-Surface Elevation
and Datum _____ feet ☐ Surveyed
☐ Estimated
Installation Date(s) 8-7-95
Drilling Method 4 1/4 HSA
Drilling Contractor EARTH EXPLORATION MARK + EDWARD
Drilling Fluid N/A

Development Technique(s) and Date(s)

Fluid Loss During Drilling _____ gallons
Water Removed During Development _____ gallons
Static Depth to Water _____ feet below M.P.
Pumping Depth to Water _____ feet below M.P.
Pumping Duration _____ hours
Yield _____ gpm Date _____
Specific Capacity _____ gpm/ft
Well Purpose

Remarks

Prepared by

G&M Form 05 12-88

Southprint 89-0978

GERAGHTY & MILLER, INC.
Environmental Services

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN0148 .007	ALLISON TRANSMISSION	10TH COSSELL INDIANAPOLIS	MW-21	2-

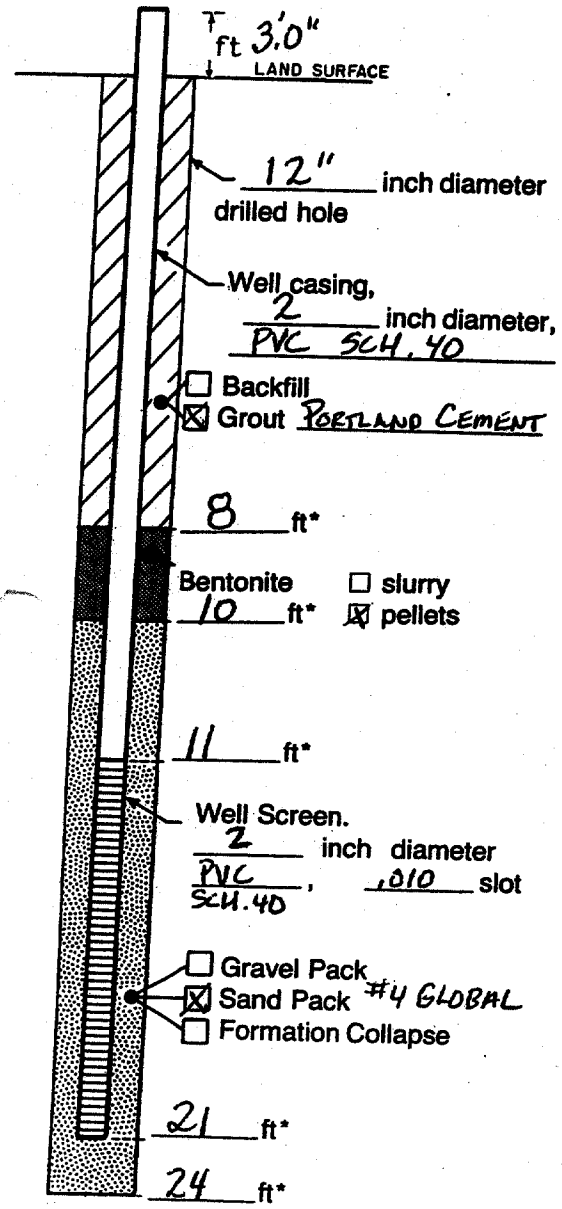
WELL LOCATION SKETCH: LOOK AT PAGE 1.

DRILLING METHOD: 4 1/4 HSA	SAMPLING METHOD: 2 FT SPLIT SPOON
DRILLING START 8:30 AM FINISH 8-7-95	DEVEL. START FINISH
STATIC DTW / DTO — TIME / DATE	DRILLED BY: EARTH EXPLORATION MARK EDWARD
ELEVATION TOC / GL	LOGGED BY: BLAKE FAHL

WELL CONSTRUCTION	DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	OVA (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
					10yr 5/8 Yellowish Brown						
			SILTY SAND		~~Brown~~ 16-18' BROWN 50% M-C SAND,	MS	71,000	9	6	50	SS
		17	AND GRAVEL		40% MED-SMALL GRAVEL, 10% SILT				9		
		18							12		
									18		
					18-20' GRAY 90% SILT, 5% F-C SAND, 5%	MS	420	10	23	50	SS
		19	CLAYEY SILT		SM COARSE GRAVEL 10yr 4/1 DK Gray				13		
									3		
		20			20-22' SAME AS 18-20' EXCEPT	MS	170		6	50	SS
					10yr 4/1 DK Gray			11	38		
		21							40		
									25		
		22							26		
					22-24' SAME AS 20-22' EXCEPT	DRY	80	12	12	80	SS
		23			VERY DRY				17		
									28		
		24							50		
								13	29	90	SS
		25			25.5-26' 10yr 4/1 DK GRAY 90% SAND	W	60		41		
					m-c AND 10% SM-med GRAVEL				49		
		26			WET AT 25.5'				50		
								14	6	90	SS
		27			26-28' SAME AS 25.5-26' WET	W	50		12		
									15		
		28							28		
					10yr 4/1 DK GRAY 90% SILT 5% F-C SAND	MS	40	15	48	25	SS
		29			5% SM-med GRAVEL				84		
					29-30' SAME AS 28-29'	MS	50	16	22	25	SS
		30							58		
					30-32' SAME AS 28-29'		50	17	21		
		31							39		
									67		
		32			E.O.H 32				96/3		
					SET WELL AT 30.5'						

GERAGHTY & MILLER, INC.
Environmental Services

WELL CONSTRUCTION LOG
(UNCONSOLIDATED)



Measuring Point is
Top of Well Casing
Unless Otherwise Noted.

*Depth Below Land Surface

Project ALLISON TRANSMISSION Well MW-22
Town/City INDIANAPOLIS
County MARION State INDIANA
Permit No. N/A
Land-Surface Elevation
and Datum _____ feet ☐ Surveyed
☐ Estimated
Installation Date(s) 8-7-95 / 8-8-95
Drilling Method 4 1/4 HSA
Drilling Contractor EARTH EXPLORATION MARK & EDWARD
Drilling Fluid _____

Development Technique(s) and Date(s) –
2" Submersible pump, 8/10/95

Fluid Loss During Drilling 0 gallons
Water Removed During Development 45 gallons
Static Depth to Water _____ feet below M.P.
Pumping Depth to Water _____ feet below M.P.
Pumping Duration _____ hours
Yield _____ gpm Date _____
Specific Capacity _____ gpm/ft
Well Purpose _____

Remarks _____

Prepared by _____

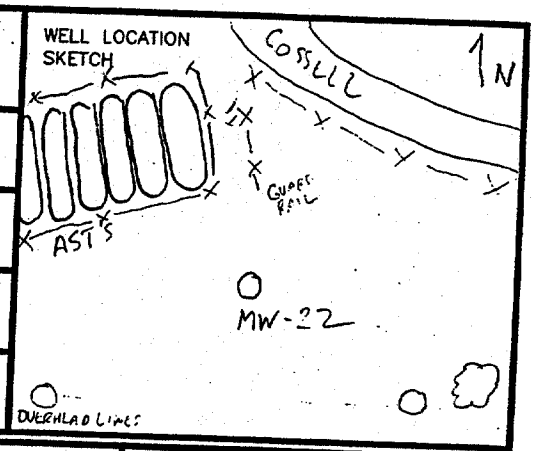
:M Form 05 12-88

Southprint 89-0978

GERAGHTY & MILLER, INC.
Environmental Services

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN0148.007	ALLISON TRANSMISSION	10TH-COSSELL INDIANAPOLIS	MW-22	1-2

WELL LOCATION SKETCH



DRILLING METHOD: 4 1/4 HSA	SAMPLING METHOD: 2 FT. SPLIT SPOON
DRILLING START 5:15PM 8-7-95 FINISH 11:00AM 8-8-95	DEVEL. START FINISH
STATIC DTW / DTO — TIME / DATE	DRILLED BY: EARTH EXPLORATION MARK EDWARD
ELEVATION TOC / GL	LOGGED BY: BLAKE FAHL

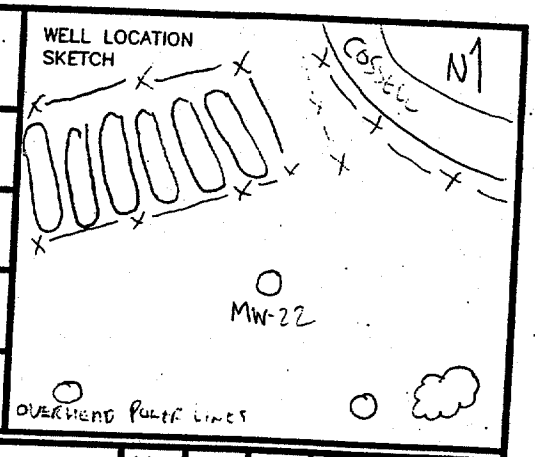
WELL CONSTRUCTION	DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	OVA (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
STICKUP CAPPED			Sandy Silt (Fill)	*	7.5yr 3/2 DK Brown Silt 75%, F-C Sand 20%,	MS	25	1	3	25	SS
		1			~~5%~~ Loose Gravel 5%				4		
BENTONITE									5		
	2	2		*	2-4' SAME AS 0-2'	MS	15		3		
								2	2	75	SS
	3	3							3		
									3		
	4	4							10		
				*	4-5.5' SAME AS 2-4'	MS	65	3	4	80	SS
		5			5.5-6.0' 7.5yr 2/0 BLACK SILT 80%,				6		
GROUT					F-C SAND 20%				7		
		6							11		
			Sand & Gravel	*	7.5yr 5/3 BROWN F-C SAND 90%,	DRY	25	4	4	80	SS
		7			~~Sm Loose~~ GRAVEL 10%				11		
									13		
		8							15		
				*	7.5yr 5/3 BROWN ~~M-C~~ GRAVEL 50%,		20	5	10	50	SS
		9			M-C SAND 50%				15		
									24		
		10							28		
				*	10-12' SAME AS 8-10'	DRY	30	6	37	75	SS
		11							45		
					AUGER REFUSAL AT 12'				16		
		12			OFFSET 5' NORTH, OFFSET 10' EAST				18		
					10yr 3/3 DK BROWN M-C SAND 95%,	DRY	10	7	12	25	SS
		13			Sm Loose GRAVEL 5%				27		
									28		
		14							10		
					10yr 4/1 DK Gray SILT 85%, F-C SAND 10%	W/MS	35	8	6	80	SS
		15			Loose GRAVEL 5%				11		
									20		
		16							20		

GERAGHTY & MILLER, INC.
Environmental Services

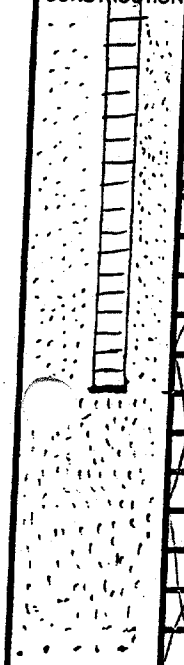
JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN6148 007	ALLISON TRANSMISSION	10TH - COSSELL INDIANAPOLIS	MW-22	2-2

DRILLING METHOD 4 1/4 HSA	SAMPLING METHOD 2 FT. SPLIT SPOONS
DRILLING START 5:15 PM FINISH 11:00 8-8-95 8-7-95	DEVEL. START FINISH
STATIC DTW DTO TIME DATE	DRILLED BY EARTH EXPLORATION MARK EDWARD
ELEVATION TOC GL	LOGGED BY RIAKE FAHL

WELL LOCATION SKETCH



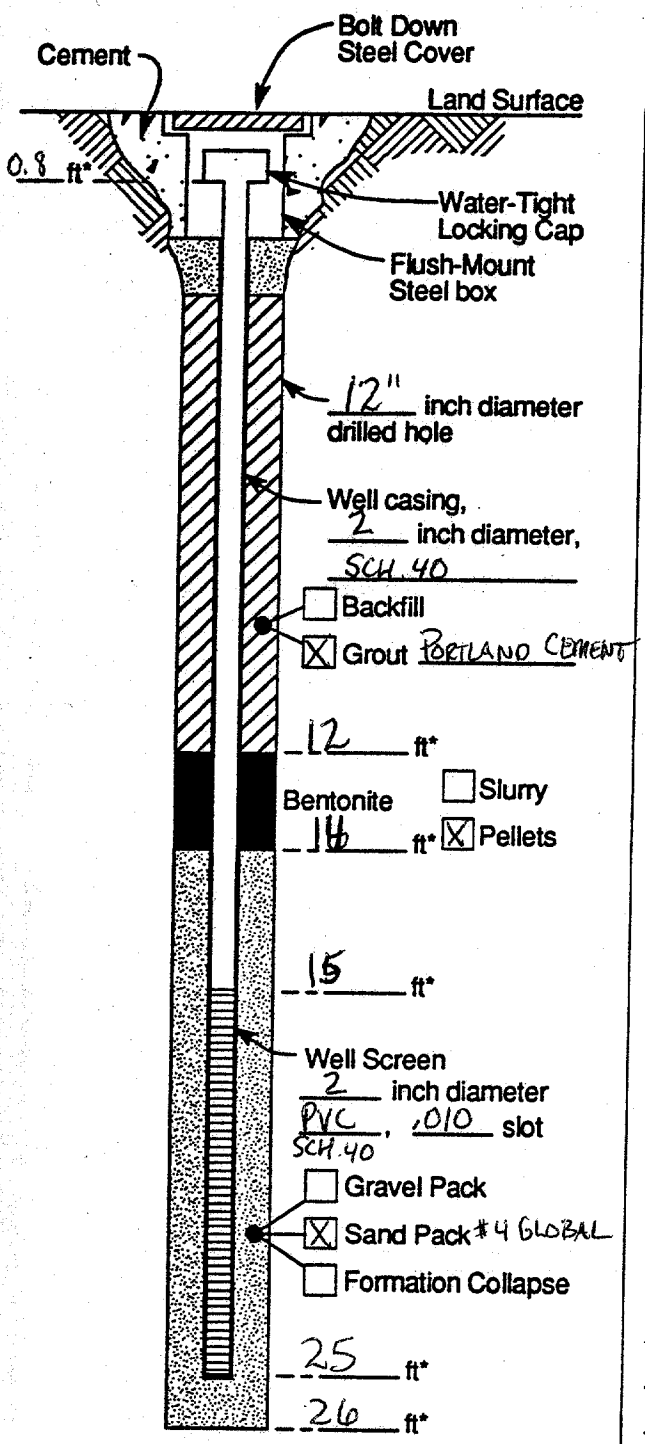
WELL CONSTRUCTION



DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	OVA (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
		Sand & Gravel		10yr 4/1 DK Gray M-C Sand 50%,	W	25	9	18	50	SS
	17			Sm-med Gravel 50%				26		
								25		
	18							23		
			X	18-20' SAME AS 16-18' EXCEPT 10yr 3/3	W	75	10	12	75	SS
	19			DK BROWN				18		
								16		
	20							15		
			X	20-22 SAME AS 18-20'	W	40	11	4	75	SS
	21							6		
	22							10		
			X	22-24' SAME AS 20-22'	W	15	12	13	75	SS
	23							11		
								10		
	24							12		
								14		
				E.O.W. 24'			13			
							14			

GERAGHTY & MILLER, INC.
Environmental Services

WELL CONSTRUCTION LOG
(UNCONSOLIDATED)



Measuring Point is Top of Well Casing Unless Otherwise Noted

*Depth Below Land Surface

Project ALLISON TRANSMISSION Well MW-23
Town/City INDIANAPOLIS
County MARION State INDIANA
Permit No. N/A
Land-Surface Elevation and Datum _____ feet ☐ Surveyed ☐ Estimated
Installation Date(s) 8-9-95
Drilling Method 4¼ HSA
Drilling Contractor EARTH EXPLORATION MARK + EDWARD
Drilling Fluid _____

Development Technique(s) and Date(s)
8-20-95, 2" GRUNFOS PUMP

Fluid Loss During Drilling _____ gallons
Water Removed During Development 25 gallons
Static Depth to Water _____ feet below M.P.
Pumping Depth to Water _____ feet below M.P.
Pumping Duration 30min. hours
Yield _____ gpm Date _____
Specific Capacity _____ gpm/ft
Well Purpose MONITORING WELL

Remarks _____

Prepared by _____

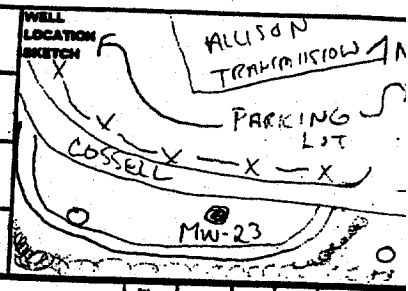
G&M Form 05 12-88

Southprint 89-0978

GERAGHTY & MILLER, INC.
Environmental Services

JOB No. IN0148.007	CLIENT ALLISON TRANSMISSION	LOCATION 10TH COSSELL INDIANAPOLIS	WELL NO. MW-23	PAGE 1 OF 1
DRILLING METHOD 4 1/4 HSA		SAMPLING METHOD 2 FT SPLIT SPOON		
DRILLING START 82:50 FINISH	DATE 8-9-91 DATE	DRILLED BY EARTH EXPLORATION MARK EDWARD		
STATIC DTW DTP	TIME DATE	LOGGED BY BLAKE FAHL		

WELL LOCATION SKETCH



WELL CONSTRUCTION	DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY, GRAIN SIZE, ODOR, PLASTICITY, STAINING, REMARKS	MOISTURE CONTENT	OVA (PPM)	SAMPLE NUMBER	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
			Silty Sd	SM	10yr 3/2 VERY DK BROWN SILT 75%,	MS	0	1	2	75	SS
	1				F-C SAND 20%, LOOSE GRAVEL 5%				5		
									5		
	2								5		
					2'-4' SAME AS 0'-2'	MS	0	2	3	75	SS
	3								2		
									2		
	4								2		
					4-6' SAME AS 2-4'	MS	0	3	2	80	SS
	5								3		
									2		
	6								2		
					6-8' SAME AS 4-6'	MS	0	4	2	80	SS
	7								2		
									3		
	8								3		
					8.0'-9.2' SAME AS 4-6'	MS	0	5	2		
	9				9.2-10' 10yr 3/1 very dk GRAY SILT 75%,				2		
				SC	CLAY 25% slightly cohesive slightly plastic				2		
	10								2		
				SM	10yr 2/2 Very DK Brown SILT 75%,	MS	0	6	0	75	SS
	11				F-C SAND 15% sm loose GRAVEL 5%				9		
									13		
	12								17		
					NO RECOVERY			7	12	0	
	13								17		
									13		
	14								10		
					NO RECOVERY LARGE ROCKS MAY BE			8	15	0	
	15				BLOCKING SAMPLING SPOON				18		
									34		
	16								20		
				SP	10yr 4/3 BROWN F-C SAND 80%,	MS	15	9	5	25	SS
	17				S-m GRAVEL 15% Silt 5%				5		
									3		
	18								4		
				SP	18.0-19.5 SAME AS 16-18'	MS	0	10	13		
	19				19.5-20.0' 10yr 3/1 VERY DK GRAY	W			11		
					F-C SAND 80% s-m GRAVEL 20%				13		
	20				ODOR (UNDESCRIBABLE)				16		

GERAGHTY & MILLER, INC.
Environmental Services

JOB No.	CLIENT	LOCATION	WELL NO.	PAGE OF
IN0148.007	ALLISON TRANSMISSION	10TH COSSEIC + INDIANAPOLIS	MW-23	2-2

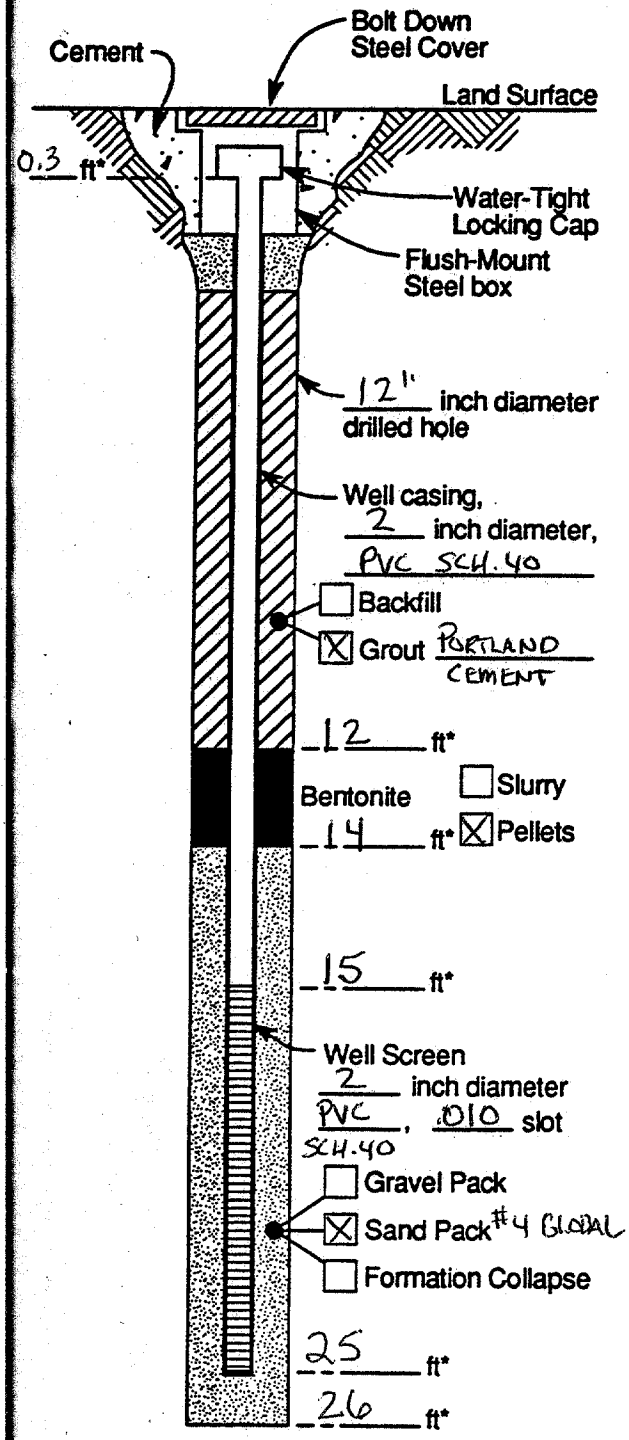
WELL LOCATION SKETCH

DRILLING METHOD	4 1/4 HSA
SAMPLING METHOD	2FT SPLIT SPOON
DRILLING START / FINISH	DATE / DATE
DRILLED BY	EARTH EXPLORATION MARK EDWARD
STATIC DTW / DTP	TIME / DATE
LOGGED BY	BLAKE FAHL

WELL CONSTRUCTION	DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY, GRAIN SIZE, ODOR, PLASTICITY, STAINING, REMARKS	MOISTURE CONTENT	OVA (PPM)	SAMPLE NUMBER	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
				SP	20-22' SAME AS 19.5-20'	W	15	11	6	50	SS
	21				WET FROM 20-22'				8		
									12		
	22								17		
				SP	22-24 SAME AS 19.5-20'	W	20	12	3	80	SS
	23								7		
									9		
	24								13		
					SAME AS 22-24'	W	15	13	7	80	SS
	25								8		
									8		
	26								17		
					EOW 26'						
	27										
	28										
	29										
	30										
	31										
	32										
	33										
	34										
	35										
	36										
	37										
	38										
	39										
	40										

GERAGHTY & MILLER, INC.
Environmental Services

WELL CONSTRUCTION LOG
(UNCONSOLIDATED)



Measuring Point is Top of Well Casing Unless Otherwise Noted

*Depth Below Land Surface

Project ALLISON TRANSMISSION Well MW-24
Town/City INDIANAPOLIS
County MARION State INDIANA
Permit No. N/A
Land-Surface Elevation
and Datum _____ feet ☐ Surveyed
☐ Estimated
Installation Date(s) 8-8-95 / 8-9-95
Drilling Method 4 1/4 HSA
Drilling Contractor EARTH EXPLORATION MARK & EDWARD
Drilling Fluid _____

Development Technique(s) and Date(s)
8-10-95 2" GRUNFOS PUMP

Fluid Loss During Drilling NA gallons
Water Removed During Development 30 gallons
Static Depth to Water _____ feet below M.P.
Pumping Depth to Water _____ feet below M.P.
Pumping Duration 35 min. hours
Yield _____ gpm Date _____
Specific Capacity _____ gpm/ft
Well Purpose MONITORING WELL

Remarks _____

Prepared by _____

G&M Form 05 12-88

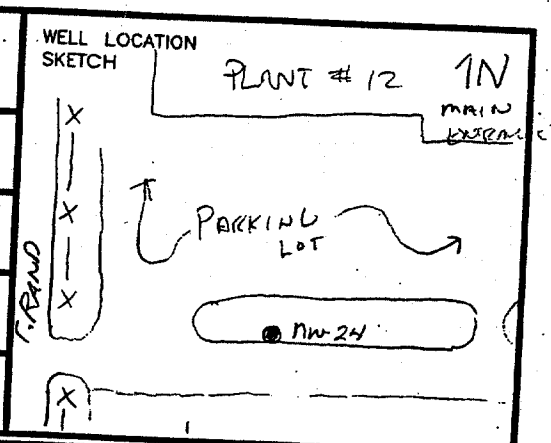
Southprint 89-0978

GERAGHTY & MILLER, INC.
Environmental Services

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN0148 007	ALLISON TRANSMISSION	10TH. COSSELL INDIANAPOLIS	MW-24	1-2

DRILLING METHOD: 4 1/4 HSA	SAMPLING METHOD: 2 FT SPLIT SPOON
DRILLING START 1:15pm 8-8-95 FINISH 6:30pm	DEVEL. START FINISH
STATIC DTW / DTO — TIME / DATE	DRILLED BY: EARTH EXPLORATION MARK EDWARD
ELEVATION TOC / GL	LOGGED BY: BLAKE FAHL

WELL LOCATION SKETCH



WELL CONSTRUCTION	DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	OVA (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
			sand, silt	Sm	10yr 3/3 DK Brown Silt 95%, Gravel 5%	ms	0	1	2	75	SS
		1			.5-2.0' Silt 90%, F-C Sand 10%				4		
									5		
		2			2'-4 Same as .5-2.0' Except				5		
					S-Loose Gravel 5%	Dry	15	2	5	80	SS
		3							8		
									12		
		4							12		
				SP	10yr 3/2 Very DK Grayish Brown F-C	Dry	5	3	6	50	SS
		5	Sand + gravel		Sand 80%, S-m Loose Gravel 20%				8		
		6							23		
				Sm	10yr 4/3 Brown 90% Silt, S-L Gravel	Dry	10	4	16		
		7	Silt + Gravel		10%				11	75	SS
									12		
		8		SP	10yr 4/2 DK Grayish Brown Sand 80%,	Dry	0		15		
					S-m Gravel 20%				23	50	SS
		9						5	4		
									9		
		10		SP	10-11.5 Same as 8-10'				16		
					11.5-12.0' LG Crushed Rock (Rounded)	Dry			19		
		11					0	6	11	75	SS
									19		
		12							106		
				SP	12-14' Same as 10-11.5'				9		
		13				Dry	0	7	6	75	SS
									12		
		14							20		
				Sm	14.0-14.8 10YR 3/3 DK Brown Silt 80%				18		
		15			CLAY 20%	Dry	2.0	8	7	50	SS
				SP	14.8-16.0 10yr 4/2 DK Grayish Brown				11		
		16			Sand 80% S-m Gravel 20%				13		
									18		

GERAGHTY & MILLER, INC.
Environmental Services

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IND148 007	ALLISON TRANSMISSION	10TH - GRANDE INDIANAPOLIS	MW-24	2-2

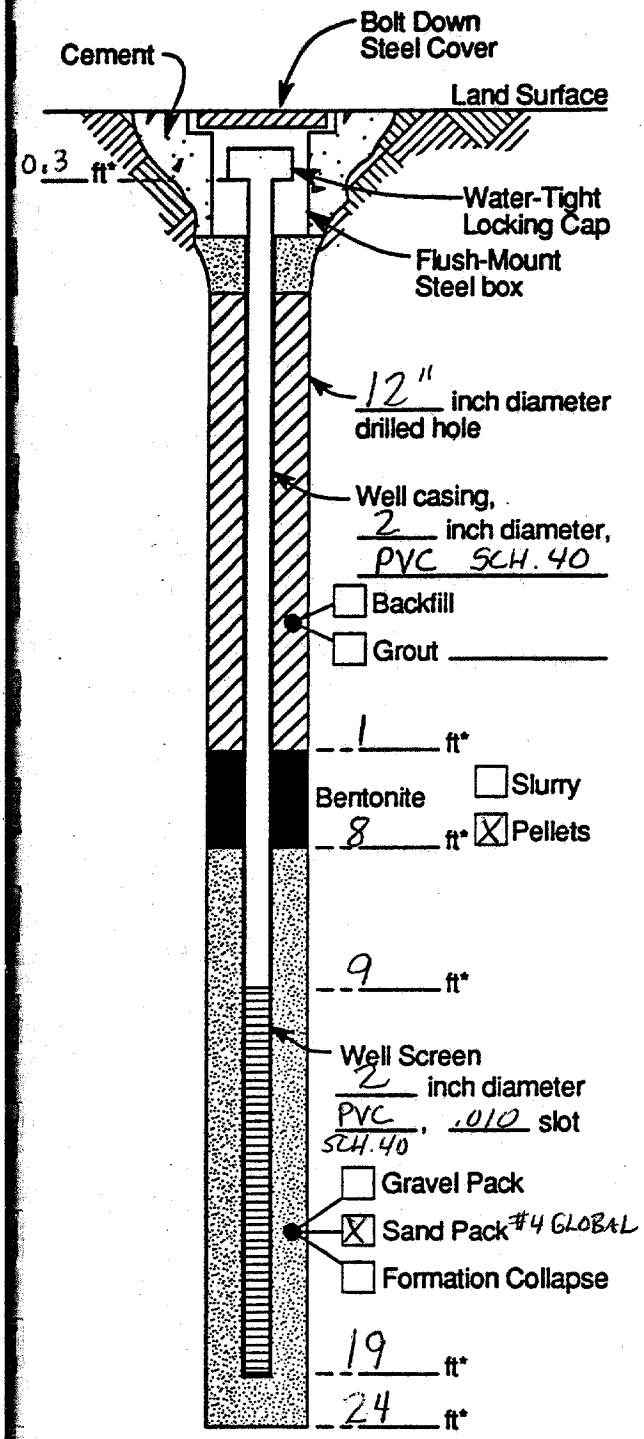
WELL LOCATION SKETCH

DRILLING METHOD: 4 1/4 HSA	SAMPLING METHOD: 2FT SPLIT SPOON
DRILLING START 1:15 PM FINISH 6:30 PM 8-8-95	DEVEL. START FINISH
STATIC DTW / DTO — TIME / DATE	DRILLED BY: EARTH EXPLORATION MARK EDWARDS
ELEVATION TOC / GL	LOGGED BY: BLAKE FAHL

WELL CONSTRUCTION	DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	OVA (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
				SP	16-18' SAME AS 14.8-16.0 EXCEPT DK GRAY	MS	10	9	11	75	SS
		17			HC ODOR				15		
									16		
		18		SM	18-18.5 10YR 4/3 BROWN 90% SILT,				15		
					10% CLAY	MS	50	10	7	50	SS
		19			18.5-20' SAME AS 14.8-16.0				5		
									10		
		20		SP	20-22' SAME AS 14.8-16.0				12		
					WET FROM 20-22'	W	120	11	12	75	SS *
		21							11		
									12		
		22							15		
				SP	22-24' SAME AS 20-22'	W	115	12	9	25	SS
		23							13		
									11		
		24							17		
				SP	24-26' SAME AS 22-24'	W	120	13	29	50	SS
		25							20		
									22		
		26							26		
					END 26'						
					* COLLECTED SOIL SAMPLE						

GERAGHTY & MILLER, INC.
Environmental Services

WELL CONSTRUCTION LOG
(UNCONSOLIDATED)



Measuring Point is Top of Well Casing Unless Otherwise Noted

*Depth Below Land Surface

Project ALLISON TRANSMISSION Well MW-25
Town/City INDIANAPOLIS
County MARION State INDIANA
Permit No. N/A
Land-Surface Elevation
and Datum _____ feet ☐ Surveyed
☐ Estimated
Installation Date(s) 8-9-95
Drilling Method 4¼ HSA
Drilling Contractor EARTH EXPLORATION MARK & EDWARD
Drilling Fluid _____

Development Technique(s) and Date(s)

Fluid Loss During Drilling _____ gallons
Water Removed During Development _____ gallons
Static Depth to Water _____ feet below M.P.
Pumping Depth to Water _____ feet below M.P.
Pumping Duration _____ hours
Yield _____ gpm Date _____
Specific Capacity _____ gpm/ft
Well Purpose _____

Remarks _____

Prepared by _____

G&M Form 05 12-88

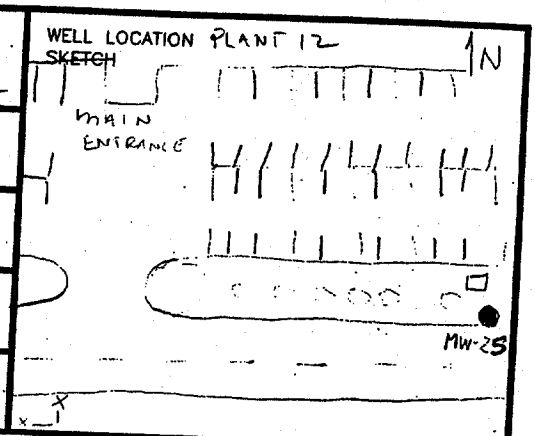
Southprint 89-0978

GERAGHTY & MILLER, INC.
Environmental Services

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN0148 .007	ALLISON TRANSMISSION	10TH. GRANDE ST. INDIANAPOLIS	MW-25	1-2

DRILLING METHOD 4 1/4 HSA	SAMPLING METHOD 2 FT SPLIT SPOON
DRILLING START 8:20 8-9-95 FINISH 11:45 8-9-95	DEVEL. START FINISH
STATIC DTW DTO TIME DATE	DRILLED BY EARTH EXPLORATION MARK EDWARD
ELEVATION TOC GL	LOGGED BY BLAKE FAHL

WELL LOCATION SKETCH



WELL CONSTRUCTION	DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	OVA (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
				Sm	10yr 3/2 VERY DK GRAYISH BROWN SILT 75%	MC		1	2	90	SS
		1			F-C SAND 20% LOOSE GRAVEL 5%				4		
									5		
		2							4		
				Sm	2-4' SAME AS 0-2' EXCEPT 10yr 4/1	DMS		2	2	25	SS
		3			DK BROWN				2		
									7		
		4							10		
				Sm	10yr 4/3 BROWN SILT 80% F-C SAND 15%	DRY	5	3	7	80	SS
		5			S-m LOOSE GRAVEL 5%				9		
									16		
		6							14		
					6-8' SAME AS 4-6'	DRY	4	4	6	75	SS
		7							15		
									15		
		8							15		
				Sm	8-10' SAME AS 6-8'	DRY	5	5	8	75	SS
		9							13		
									10		
		10							18		
				Sm	10yr 3/1 V/DK GRAY SILT 90% S-GRAVEL	DRY	2	6	10	80	SS
		11			10%				14		
									15		
		12							20		
					12-13.7' SAME AS 10-12'	DRY	5	7	13	90	SS
		13			13.7-14.0' 10yr 4/3 BROWN F-C SAND 80%	WET			15		
					S-m GRAVEL 20% WET				16		
		14							22		
					14-15.2' 10yr 3/1 VERY DK GRAY SAND 50%	W	6	8	16	80	SS
		15			S-m GRAVEL 50%				19		
					15.2-16.0' 10yr 3/1 VERY DK GRAY	DRY			21		
		16			90% SILT CLAY 10% VERY HARD				53		

GERAGHTY & MILLER, INC.
Environmental Services

JOB NUMBER	CLIENT	LOCATION	WELL NO.	PAGE OF
IN0148.007	ALLISON TRANSMISSION	10TH GRANDE INDIANAPOLIS	MW-25	2-2

WELL LOCATION SKETCH: SEE 1ST PAGE

DRILLING METHOD: 4 1/4 HSA	SAMPLING METHOD: 2FT SPLIT SPOON
DRILLING START 8:20 8-9-95 FINISH 11:45 - 8-9-95	DEVEL START FINISH
STATIC DTW / DTO / TIME / DATE	DRILLED BY: EARTH EXPLORATION MARK EDLNED
ELEVATION TOC / GL	LOGGED BY: BLAKE FAHL

WELL CONSTRUCTION	DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY GRADATION, SECONDARY CHARACTER, ODOR, PLASTICITY REMARKS	MOISTURE CONTENT	OVA (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
					10YR 4/1 DK GRAY SILT 90%, CLAY 10%	DRY	0	9	9	75	SS
		17			VERY HARD				14		
									18		
		18							30		
					SAME AS 16-18'	DRY	0	10	6	75	SS
		19							14		
									18		
		20							23		
					NO RECOVERY			11	15		
		21							22		
									23		
		22							32		
					22-24' SAME AS 16-18'	DRY	0	12	9		
		23							13		
									22		
		24							30		
					EOW 24			13			

WELL LOG

BORING NO: MW2-1

PROJECT NO: IN000473.0005T9

PROJECT NAME: Allison Transmission

CLIENT: Allison Transmission

PROJECT LOCATION: Indianapolis, IN

DRILLING CONTRACTOR: Boart Longyear

DRILLING MTHD: 4 1/4 HSA

SAMPLE MTHD: 2' Split Spoon

TIME STARTED: 9:40

TIME FINISHED: 11:20

DATE: 4-12-00

GEOLOGIST: S. Fisher

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	WELL CONST	REMARKS
0.0						Asphalt (FILL)		
	1	5, 5, 5, 7	0			Dark Brown Clay Loam (coarse sand) firm, moist, cohesive (noted from soil cuttings) (SC)		
	2	4, 4, 5, 5	0					
5.0	3	4, 12, 20, 20	40			Dark Brown Loam (medium - coarse sand), firm, moist, cohesive (SM)		
	4	9, 5, 10, 15	20					
10.0	5	10, 12, 20, 28	50			Light Brown Coarse Sand and Gravel, friable, dry, non-cohesive (SP) Below 14.5 feet - Light greyish brown very coarse sand and some gravel, wet		
	6	32, 44, 40, 22	20					
	7	4, 12, 21, 18	100					
15.0	8	7, 11, 15, 20	100				Initial water level	
	9	5, 8, 14, 17	100					
20.0	10	5, 15, 28, 39	100					
	11	5, 15, 28, 40	100					
25.0								
30.0								

BOTTOM OF TEST BORING: 23.00'

SPT = STANDARD PENETRATION TEST

REC = SAMPLE RECOVERY

ND = NON-DETECTABLE

FID = FLAME IONIZATION DETECTOR

PID = PHOTO-IONIZATION DETECTOR

WELL CONSTRUCTION

WELL DIAM.: 2 in

CASING MATERIAL: PVC

SCREEN MATERIAL: PVC

SLOT SIZE: 0.01

METHOD: 4 1/4 HSA

MONITORING WELL INSTALLED UPON COMPLETION

CASING

GROUT

BENTONITE

SAND

SCREEN

WELL LOG

BORING NO: MW2-2

PROJECT NO: In000473.0005T9

PROJECT NAME: Allison Transmission

CLIENT: Allison Transmission

PROJECT LOCATION: Indianapolis, IN

DRILLING CONTRACTOR: Boart Longyear

DRILLING MTHD: 4 1/4 HSA

SAMPLE MTHD: 2' Split Spoon

TIME STARTED: 11:30

TIME FINISHED: 13:15

DATE: 4-12-00

GEOLOGIST: S. Fisher

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	WELL CONST	REMARKS
0.0						Asphalt (FILL)		
	1	3, 4, 5, 10	90			Dark Reddish Brown Sandy Clay Loam, Firm, moist, cohesive, medium-coarse sand (SC)		
	2	5, 4, 4, 4	100					
5.0	3	3, 2, 3, 5	50			Dark Reddish Brown Loam, Firm, moist, cohesive (SM)		
	4	2, 5, 15, 21	100			Light Brown Sand, dry, friable, non-cohesive (SP) Below 13 feet - Grayish brown sand and gravel, dry Below 16.5 feet - Gray sand and wet At 17 feet - Approximately 4 inch layer of clay with fine sand Below 18 feet - Gray coarse sand and grabel and wet		
10.0	5	7, 15, 27, 34	50					
	6	22, 25, 26, 24	75					
	7	11, 15, 20, 20	70					
15.0	8	7, 9, 11, 13	80					
	9	15, 25, 15, 15	80					Initial water level
20.0	10	10, 10, 10, 14	80					
	11	7, 18, 14, 12	50					
	12	8, 10, 14, 27	80					
25.0								
30.0								

BOTTOM OF TEST BORING: 25.00'

SPT = STANDARD PENETRATION TEST
REC = SAMPLE RECOVERY
ND = NON-DETECTABLE
FID = FLAME IONIZATION DETECTOR
PID = PHOTO-IONIZATION DETECTOR

WELL CONSTRUCTION

WELL DIAM.: 2"
CASING MATERIAL: PVC
SCREEN MATERIAL: PVC
SLOT SIZE: 0.01
METHOD: 4 1/4" HSA
MONITORING WELL INSTALLED UPON COMPLETION

CASING
GROUT
BENTONITE
SAND
SCREEN

WELL LOG

BORING NO: MW2-3

PROJECT NO: IN000473.0005T9

PROJECT NAME: Allison Transmission

CLIENT: Allison Transmission

PROJECT LOCATION: Indianapolis, IN

DRILLING CONTRACTOR: Boart Longyear

DRILLING MTHD: 4 1/4 HSA

SAMPLE MTHD: 2' Split Spoon

TIME STARTED: 14:00

TIME FINISHED: 15:00

DATE: 4/12/00

GEOLOGIST: S. Fisher

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	WELL CONST	REMARKS
0.0						Asphalt (FILL)		
	1	5, 7, 7, 5	50			Reddish Brown Loam, friable, moist, non-cohesive (SM) Below 9 Feet - Reddish brown sandy loam, some coarse sand and gravel Below 11 Feet - Brown loamy sand		
	2	4, 3, 6, 6	40					
5.0	3	5, 5, 5, 5	0					
	4	4, 4, 5, 5	0					
10.0	5	7, 4, 4, 3	90					
	6	5, 4, 3, 12	75					
	7	9, 17, 23, 27	50			Light Brown Coarse Sand and Gravel, friable, loose, dry, non-cohesive (SP)		
15.0	8	35, 25, 26, 17	40					
						Light Brown Loamy Sand (fine sand), moist, friable, non-cohesive (SM)		
	9	19, 41, 33, 31	0			Brown Sand and Gravel, wet, friable, non-cohesive (SP) At 19 Feet - Approximately 4 inch area of black coarse sand and gravel Below 19 Feet - Gray sand (fine - medium sand)	Initial water level	
20.0	10	10, 25, 30, 35	80					
	11	12, 10, 16, 24	80					
	12	21, 20, 23, 29	80					
25.0								
30.0								

BOTTOM OF TEST BORING: 25.00'

SPT = STANDARD PENETRATION TEST

REC = SAMPLE RECOVERY

ND = NON-DETECTABLE

FID = FLAME IONIZATION DETECTOR

PID = PHOTO-IONIZATION DETECTOR

WELL CONSTRUCTION

WELL DIAM.: 2"

CASING MATERIAL: PVC

SCREEN MATERIAL: PVC

SLOT SIZE: 0.01

METHOD: 4 1/4 HSA

MONITORING WELL INSTALLED UPON COMPLETION

CASING

GROUT

BENTONITE

SAND

SCREEN

WELL LOG

BORING NO: MW2-4

PROJECT NO: IN000473.0005T9

PROJECT NAME: Allison Transmission

CLIENT: Allison Transmission

PROJECT LOCATION: Indianapolis, IN

DRILLING CONTRACTOR: Boart Longyear

DRILLING MTHD: 4 1/4 HSA

SAMPLE MTHD: 2' Split Spoon

TIME STARTED: 16:00

TIME FINISHED: 17:00

DATE: 4/12/00

GEOLOGIST: S. Fisher

SURFACE ELEVATION: NA

DEPTH (FT)	SAMPLE	SPT BLOWS PER 6"	REC (%)	PID (ppm)	PROFILE	LITHOLOGIC DESCRIPTION	WELL CONST	REMARKS
0.0						Asphalt (FILL)		
	1	5, 8, 7, 6	50			Reddish Brown Sandy Clay Loam, moist, Firm, cohesive (SC)		
	2	6, 5, 3, 3	50					
5.0	3	6, 10, 19, 21	80					
	4	27, 3, 17, 27	80			Light Brown Sand and Gravel, dry, friable, non-cohesive (SP) At 8-9 feet - Light brown ine sand Below 12 feet - Light brown sand (medium grained), moist Below 14 feet - Brown coarse sand Below 16 feet - Gray/Black coarse sand, wet		
10.0	5	18, 12, 14, 19	100					
	6	14, 10, 12, 17	80					
	7	16, 11, 17, 23	50					
15.0	8	34, 11, 23, 19	80					Initial water level
	9	20, 17, 20, 23	80					
20.0	10	25, 8, 15, 31	80					
	11	34, 21, 51, 57	80			Gray Silty Clay, extremely Firm, moist, cohesive (ML)		
25.0								
30.0								

BOTTOM OF TEST BORING: 23.00'

SPT = STANDARD PENETRATION TEST

REC = SAMPLE RECOVERY

ND = NON-DETECTABLE

FID = FLAME IONIZATION DETECTOR

PID = PHOTO-IONIZATION DETECTOR

WELL CONSTRUCTION

WELL DIAM.: 2"

CASING MATERIAL: PVC

SCREEN MATERIAL: PVC

SLOT SIZE: 0.01

METHOD: 4 1/4 HSA

MONITORING WELL INSTALLED UPON COMPLETION

CASING

GROUT

BENTONITE

SAND

SCREEN

WELL CONSTRUCTION LOG

ARCADIS

WELL NO.: **MW0101**

TOTAL DEPTH: **34.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**

SITE LOCATION: **Speedway, Indiana**

LOGGED BY: **JS**

DATE STARTED: **4/23/2001**

DATE COMPLETED: **4/23/2001**

DRILLING INFORMATION

DRILLING CO.: **Midway Services**

DRILLER: **John Grider**

DRILLING METHOD: **Hollow Stem Auger**

COORDINATES:

Northing: N/A

Easting: N/A

Elevation: **718.76**

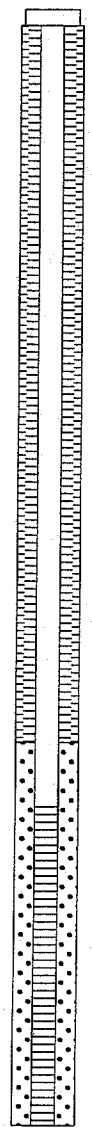
DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CLAY: Silty clay, 10YR3/4 dark yellowish brown, dry, slightly plastic, slightly sticky, firm, trace sand and gravel	No samples were collected	NA	steel
					concrete
				0	
5				0	
					pvc sch 40
		SAND: Sand and gravel, 10YR5/4 yellowish borwn, dry, loose, fine to very coarse		0	
				0	
10				0	bentonite-pellets
				0	
15		CLAY: Silty clay, 10YR5/1 gray, dry, slightly plastic, frim, trace sand and gravel		22	
		SAND: Sand and gravel, 10YR5/4 yellowish brown, wet, loose, fine to very coarse. Water at 18 feet.		20	
		CLAY: Clay, 10YR4/1 dark gray, dry, sticky, plastic, very firm, trace sand and gravel		24	
20				0	
				0	
					sand pack
25				0	
					pvc sch 40
				0	
				0	
30		SAND: Sand and gravel, 10YR4/4 dark yellowish brown, wet, loose, fine to very coarse. Water at 29.5 feet.		0	
		CLAY: Clay, 10YR4/1 dark gray, dry, sticky, plastic, very firm, trace sand and gravel		0	
		SAND: Sand and gravel, 10YR4/4 dark yellowish brown, wet, loose, fine to very coarse			

ARCADIS
GERAGHTY & MILLER

Well Construction Log: MW-0102

Project Name: Allison Transmission Division Date: 4/24/01 Logger: MJ
Project Number: IN000473.0009 Editor:

Depth (feet)	Graphic Log	Well Construction Diagram	Well Construction Details



PROTECTIVE COVER TYPE:
flush mount manhole

SURFACE SEAL
Type: 2' X 2' concrete pad
Total Depth: .5'

ANNULAR SEAL
Type:
Top Depth:
Bottom Depth:

CASING
Inside Diameter: 2"
Length: 25'
Material: PVC

SEAL
Type: bentonite
Top Depth: .5'
Bottom Depth: 23'

SCREEN
Type PVC
Inside Diameter: 2"
Slot Size: .010"
Top Depth: 25'
Bottom Depth: 35'

FILTER PACK
Material: sand
Top Depth: 23'
Bottom Depth: 35'

Drilling Co.: Midway Services
Driller: John Grider
Drilling Method: HSA
Drilling Fluid: none

Filter Placement Method: gravity pour
Seal Placement Method: gravity pour
Total Depth (TOC): 35'
Water Level Finish:

MW-0102

ARCADIS
GERAGHTY & MILLER

Boring Log: ~~MW-101~~

Project Name: Allison Transmission Division | Time Started: 0830 | Logger: JS
Project Number: IN000473.0009 | Time Completed: 1135 | Date: 04/23/01

Depth (feet)	Blows (/6 in.)	Recovery (inches)	Sample	PID (PPM)	Graphic Log	Soil Class.	Description
0						FILL	FILL SAND AND GRAVEL: 10YR 4/4 dark yellowish brown, slightly moist, soft, sligtly moist, clayey
		24		0		CL-ML	SILTY CLAY LOAM: 10YR 4/3 brown, slightly moist, slightly plastic, slightly cohesive, firm, trace sand and gravel
		24		0		SM	SAND: 10YR 4/4 dark yellowish brown,slightly moist, loose, fine to medium grained, slightly cohesive
6		19		0			
		19		0		GP-SP	SAND AND GRAVEL: 10YR 5/4 yellowish brown, slightly moist, loose, non-plastic, non-cohesive, fine to very coarse
		5		0			
12		22		0			
		24		0			
		24		0		CL-ML	SILTY CLAY LOAM: 10YR 4/3 brown, dry, slightly plastic, slightly cohesive, trace sand and gravel
18		24		0		GP-SP	SAND AND GRAVEL: 10YR 5/4 yellowish brown, slightly moist, loose, non-plastic, non-cohesive, fine to very
		24		0			
		22		0			water
24		23		0			
		23		0			
		22		0			
30		23		0		CL-ML	SILTY CLAY LOAM: 10YR 4/4 dark yellowish brown, wet, slightly plastic, slightly cohesive, firm
		24		0			
36							

☒ Composite Sample to Lab ■ Grab Sample to Lab ▥ Sample Not Analyzed

Drilling Co.: Midway Services | Sampling Method: macrocore
Driller: John Grider | Sampling Interval: 4'
Drilling Method: Geoprobe | Water Level Start:
Drilling Fluid: none | Water Level Finish:

BORING LOG

ARCADIS

BORING LOG: **MW0102**

TOTAL DEPTH: **32.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Midway Services**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**John Grider**
LOGGED BY:	**JS**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**4/23/2001**	**COORDINATES**	
DATE COMPLETED:	**4/23/2001**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		FILL: Fill sand and gravel, 10YR4/4 dark yellowish brown, slightly moist, soft, slightly moist, clayey	M	No samples collected	NA
		LOAM: Silty clay loam, 10YR4/3 brown, slightly moist, slightly plastic, slightly cohesive, firm, trace sand and gravel	M		0
-5		SAND: Sand, 10YR4/4 dark yellowish brown, slightly moist, loose, fine to medium grained, slightly cohesive	M		0
					0
-10		SAND: Sand and gravel, 10YR5/4 yellowish brown, slightly moist, loose, non-plastic, non-cohesive, fine to very coarse	M		0
					0
-15					0
		LOAM: Silty clay loam, 10YR4/3 brown, dry, slightly plastic, slightly cohesive, trace sand and gravel	D		0
-20		SAND: Sand and gravel, 10Yr5/4 yellowish brown, slightly moist, loose, non-plastic, non-cohesive, fine to very coarse. Water at 22.5 feet.	M		0
					0
-25					0
					0
-30		LOAM: Silty clay loam, 10YR4/4 dark yellowish brown, wet, slightly plastic, slightly cohesive, firm	W		0
					0

ARCADIS

WELL CONSTRUCTION LOG

WELL NO.: **MW0103**

TOTAL DEPTH: **16.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**

SITE LOCATION: **Speedway, Indiana**

LOGGED BY: **MJ**

DATE STARTED: **4/23/2001**

DATE COMPLETED: **4/23/2001**

DRILLING INFORMATION

DRILLING CO.: **Midway Services**

DRILLER: **Greg**

DRILLING METHOD: **Hollow Stem Auger**

COORDINATES:

Northing: **5276.4**

Easting: **4905**

Elevation: **722.04**

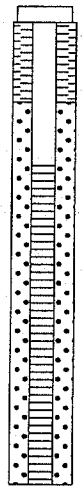
DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		FILL: Concrete and gravel fill		0	steel concrete pvc sch 40
				7.1	bentonite-pellets
		CLAY: Silty clay, 10YR3/3 dark brown, moist, soft, plastic, slightly cohesive		4	sand pack
5				1	
		SAND: Sand and gravel, backfill material, 10YR36/ dark yellowish brown, loose, dry, non-cohesive, fine to medium grained	GP124 (8-10)	8	
10				1	pvc sch 40
			GP124 (12-14)	3	
		SAND: Sand and gravel, 10YR3/4 dark yellowish brown, moist to wet, loose, slight odor			
15		LOAM: Silty clay loam, 10YR4/6 dark yellowish brown, dry, slightly plastic, changes to color 10YR4/1 dark gray at base of spoon		41	

MW-0103

ARCADIS
GERAGHTY & MILLER

Well Construction Log: ~~MW-103~~

Project Name: Allison Transmission Division Date: 4/25/01 Logger: MJ
Project Number: IN000473.0009 Editor:

Depth (feet)	Graphic Log	Well Construction Diagram	Well Construction Details
0, 6, 12, 18, 24, 30, 36			

PROTECTIVE COVER TYPE:
flush mount manhole

SURFACE SEAL
Type: 2' X 2' concrete pad
Total Depth: .5'

ANNULAR SEAL
Type:
Top Depth:
Bottom Depth:

CASING
Inside Diameter: 2"
Length: 5'
Material: PVC

SEAL
Type: bentonite
Top Depth: .5'
Bottom Depth: 3'

SCREEN
Type PVC
Inside Diameter: 2"
Slot Size: .010"
Top Depth: 5'
Bottom Depth: 15'

FILTER PACK
Material: sand
Top Depth: 3'
Bottom Depth: 15'

Drilling Co.: Midway Services
Driller: John Grider
Drilling Method: HSA
Drilling Fluid: none

Filter Placement Method: gravity pour
Seal Placement Method: gravity pour
Total Depth (TOC): 15'
Water Level Finish:

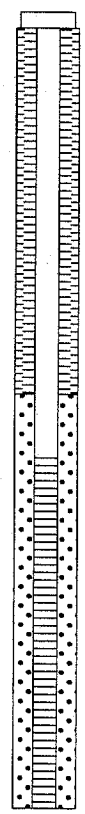
MW-0104

ARCADIS
GERAGHTY & MILLER

Well Construction Log: ~~MW-104~~

Project Name: Allison Transmission Division
Date: 4/26/01
Logger: MJ
Project Number: IN000473.0009
Editor:

Depth (feet)	Graphic Log	Well Construction Diagram	Well Construction Details



PROTECTIVE COVER TYPE:
flush mount manhole

SURFACE SEAL
Type: 2' X 2' concrete pad
Total Depth: .5'

ANNULAR SEAL
Type:
Top Depth:
Bottom Depth:

CASING
Inside Diameter: 2"
Length: 14'
Material: PVC

SEAL
Type: bentonite
Top Depth: .5'
Bottom Depth: 12'

SCREEN
Type PVC
Inside Diameter: 2"
Slot Size: .010"
Top Depth: 14'
Bottom Depth: 25'

FILTER PACK
Material: sand
Top Depth: 12'
Bottom Depth: 25'

Drilling Co.: Midway Services
Driller: John Grider
Drilling Method: HSA/Geoprobe
Drilling Fluid: none

Filter Placement Method: gravity pour
Seal Placement Method: gravity pour
Total Depth (TOC): 25'
Water Level Finish:

MW-0104

ARCADIS
GERAGHTY & MILLER

Boring Log: ~~MW-104~~

Project Name: Allison Transmission Division
Project Number: IN000473.0009
Date Started: 4/26/01
Date Completed: 1135
Logger: MJ
Editor:

Depth (feet)	Blows (/6 in.)	Recovery (inches)	Sample	PID (PPM)	Graphic Log	Soil Class.	Description
0		19		0		FILL	concrete and fill gravel
		24		0		CL-ML	SILTY SANDY CLAY: 10YR 3/1 very dark gray, moist, slightly plastic, slightly sticky, soft
		19		4.2		CL-ML	SILTY SANDY CLAY: 10YR 4/6, dark yellowish brown, moist, slightly plastic, slightly sticky, soft
6		24		1			
		24		2		GP-SP	SAND AND GRAVEL: 10YR 4/6 dark yellowish brown, dry, loose, medium to coarse
		24		0			
12		14		0			
		24		29			odor and staining
		19		0		GP-SP	SAND AND GRAVEL: 10YR 4/6 dark yellowish brown, dry, loose, medium to coarse
18		24		30			
		24		48			water, black staining, odor
		24		51			
24							
30							
36							

☒ Composite Sample to Lab ■ Grab Sample to Lab ▥ Sample Not Analyzed

Drilling Co.: Midway Services
Driller: John Grider
Drilling Method: Geoprobe
Drilling Fluid: none
Sampling Method: macrocore
Sampling Interval: 4'
Water Level Start:
Water Level Finish:

WELL CONSTRUCTION LOG

ARCADIS

WELL NO.: **MW0105**

TOTAL DEPTH: **29.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Midway Services**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**John Grider**
LOGGED BY:	**MJ**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**4/26/2001**	COORDINATES:	
DATE COMPLETED:	**4/26/2001**	**Northing:**	N/A
		Easting:	N/A
		Elevation:	**721.49**

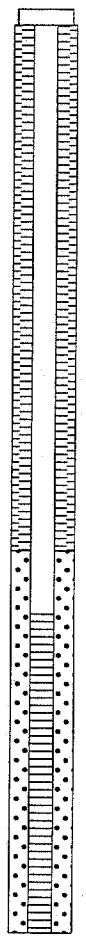
DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		No soil description provided	No samples were collected	No readings taken	steel
					concrete
					bentonite-pellets
5					pvc sch 40
10					
15					sand pack
20					pvc sch 40
25					

MW-0105

ARCADIS
GERAGHTY & MILLER

Well Construction Log: ~~MW-105~~

Project Name:	Allison Transmission Division	Date:	4/26/01	Logger:	MJ
Project Number:	IN000473.0009			Editor:	

Depth (feet)	Graphic Log	Well Construction Diagram	Well Construction Details
0, 6, 12, 18, 24, 30, 36			

PROTECTIVE COVER TYPE:
flush mount manhole

SURFACE SEAL
Type: 2' X 2' concrete pad
Total Depth: .5'

ANNULAR SEAL
Type:
Top Depth:
Bottom Depth:

CASING
Inside Diameter: 2"
Length: 19'
Material: PVC

SEAL
Type: bentonite
Top Depth: .5'
Bottom Depth: 17'

SCREEN
Type PVC
Inside Diameter: 2"
Slot Size: .010"
Top Depth: 19'
Bottom Depth: 29'

FILTER PACK
Material: sand
Top Depth: 17'
Bottom Depth: 29'

Drilling Co.:	Midway Services	Filter Placement Method:	gravity pour
Driller:	John Grider	Seal Placement Method:	gravity pour
Drilling Method:	HSA	Total Depth (TOC):	29'
Drilling Fluid:	none	Water Level Finish:	

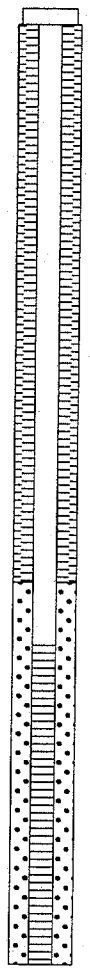
MW-0106

ARCADIS
GERAGHTY & MILLER

Well Construction Log: ~~MW-106~~

Project Name: Allison Transmission Division
Date: 4/30/01
Logger: MJ
Project Number: IN000473.0009
Editor:

Depth (feet)	Graphic Log	Well Construction Diagram	Well Construction Details



PROTECTIVE COVER TYPE:
flush mount manhole

SURFACE SEAL
Type: 2' X 2' concrete pad
Total Depth: .5'

ANNULAR SEAL
Type:
Top Depth:
Bottom Depth:

CASING
Inside Diameter: 2"
Length: 20'
Material: PVC

SEAL
Type: bentonite
Top Depth: .5'
Bottom Depth: 18'

SCREEN
Type PVC
Inside Diameter: 2"
Slot Size: .010"
Top Depth: 20'
Bottom Depth: 30'

FILTER PACK
Material: sand
Top Depth: 18'
Bottom Depth: 30'

Drilling Co.: Midway Services
Driller: John Grider
Drilling Method: HSA
Drilling Fluid: none

Filter Placement Method: gravity pour
Seal Placement Method: gravity pour
Total Depth (TOC): 30'
Water Level Finish:

MW-0106

ARCADIS
GERAGHTY & MILLER

Boring Log: ~~MW-106~~

Project Name: Allison Transmission Division | Time Started: 0830 | Logger: MJ
Project Number: IN000473.0009 | Time Completed: 1115 | Date: 4/30/01

Depth (feet)	Blows (/6 in.)	Recovery (inches)	Sample	PID (PPM)	Graphic Log	Soil Class.	Description
0		24		0		FILL	asphalt and fill sand
		24		0		CL-ML	SILTY SANDY CLAY: 10YR 3/1 very dark gray, moist, slightly plastic, slightly sticky, soft
		19		4.2		SC	CLAYEY SAND: 10YR 3/6, dark yellowish brown, moist, slightly plastic, slightly cohesive, slightly sticky, soft
6		24		0			
		19		0		GP-SP	SAND AND GRAVEL: 10YR 5/4 yellowish brown, moist, loose, medium to coarse
		24		0			
12		24		0			
		24		0			
		24		0			
18		24		0			
		24		0			
		24		0			
24							water, clayey at 28'
30							
36							

☒ Composite Sample to Lab ■ Grab Sample to Lab ▥ Sample Not Analyzed

Drilling Co.: Midway Services
Driller: John Grider
Drilling Method: Geoprobe
Drilling Fluid: none

Sampling Method: macrocore
Sampling Interval: 4'
Water Level Start:
Water Level Finish:

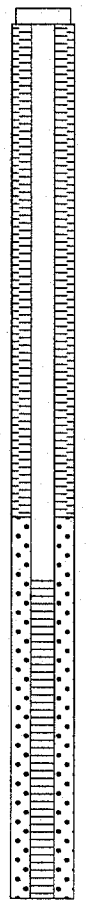
MW-0107

ARCADIS
GERAGHTY & MILLER

Well Construction Log: ~~MW-107~~

Project Name: Allison Transmission Division Date: 4/30/01 Logger: MJ
Project Number: IN000473.0009 Editor:

Depth (feet)	Graphic Log	Well Construction Diagram	Well Construction Details



PROTECTIVE COVER TYPE:
flush mount manhole

SURFACE SEAL
Type: 2' X 2' concrete pad
Total Depth: .5'

ANNULAR SEAL
Type:
Top Depth:
Bottom Depth:

CASING
Inside Diameter: 2"
Length: 18'
Material: PVC

SEAL
Type: bentonite
Top Depth: .5'
Bottom Depth: 16'

SCREEN
Type PVC
Inside Diameter: 2"
Slot Size: .010'
Top Depth: 18'
Bottom Depth: 28'

FILTER PACK
Material: sand
Top Depth: 16
Bottom Depth: 28

Drilling Co.: Midway Services
Driller: John Grider
Drilling Method: HSA
Drilling Fluid: none

Filter Placement Method: gravit
Seal Placement Method: gravi
Total Depth (TOC): 28
Water Level Finish:

MW-0107

ARCADIS
GERAGHTY & MILLER

Boring Log: ~~MW-107~~

Project Name: Allison Transmission Division | Time Started: 0945 | Logger: MJ
Project Number: IN000473.0009 | Time Completed: 1230 | Date: 4/30/01

Depth (feet)	Blows (/6 in.)	Recovery (inches)	Sample	PID (PPM)	Graphic Log	Soil Class.	Description
0		24		0		CL-ML	SILTY SANDY CLAY: 10YR 3/4 dark yellowish brown, moist, slightly plastic, slightly sticky, soft
		24		1.1			
		0				GP-SP	SAND AND GRAVEL: 10YR 5/4 yellowish brown, moist, loose, medium to coarse
6		24		1.3			
		24		1			
		24		1			
12		24		0			
		24		.5			
		19		1.3			
18		19		48			
		19		98			odor and staining
		24		100			
24		24		0			water, clayey at 24'
30							
36							

☒ Composite Sample to Lab ■ Grab Sample to Lab ▥ Sample Not Analyzed

Drilling Co.: Midway Services | Sampling Method: macrocore
Driller: John Grider | Sampling Interval: 4'
Drilling Method: Geoprobe | Water Level Start:
Drilling Fluid: none | Water Level Finish:

WELL CONSTRUCTION LOG

ARCADIS

WELL NO.: **MW0108**

TOTAL DEPTH: **38.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**

SITE LOCATION: **Speedway, Indiana**

LOGGED BY: **Matt Johnston**

DATE STARTED: **9/13/2001**

DATE COMPLETED: **9/13/2001**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Dan Harrison**

DRILLING METHOD: **Hollow Stem Auger**

COORDINATES:

Northing: **4819.1**

Easting: **5282.4**

Elevation: **719.60**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		SAND: Sand with silt and clay, trace gravel, dry, slightly plastic, stiff, 10YR 4/3	SB0103 (0-2)	0	steel concrete
		SAND: Sand with gravel, dry, loose		0	pvc sch 40 bent-cement grout
5					
		SAND: Fine sand, trace gravel, loose, 10YR 4/4	SB0103 (8-10)	38	
10				60	
			SB0103 (12-14)	80	
15				5	
		CLAY: Silty clay, stiff, dry, slightly plastic, trace gravel		2	
				1	
20				0	
				0	
25				0	bentonite-pellets
				.5	sand pack
				0	pvc sch 40
30					
		SAND: Fine to medium sand, well sorted, wet, loose		30	
				50	

WELL CONSTRUCTION LOG

ARCADIS

WELL NO.: **MW0109**

TOTAL DEPTH: **38.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**

SITE LOCATION: **Speedway, Indiana**

LOGGED BY: **Matt Johnston**

DATE STARTED: **9/14/2001**

DATE COMPLETED: **9/14/2001**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Dan Harrison**

DRILLING METHOD: **Hollow Stem Auger**

COORDINATES:

Northing: **4807.5**

Easting: **5470.2**

Elevation: **719.70**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		SAND: Clayey sands with silt, dry, slightly plastic, trace gravel, 10YR 4/3	SB0104 (0-2)	.5	steel concrete
5				60	
		SAND: Gravelly sand, loose, dry, 10YR 4/4		70	pvc sch 40
			SB0104 (8-10)	40	
10				45	bent-cement grout
15				20	
		CLAY: Silty clay, stiff, dry, slightly plastic		0	
				0	
20		SAND: Medium sand, wet, (sand seam)			
		CLAY: Silty clay, stiff, dry, slightly plastic	SB0104 (22-24)	0	
25					bentonite-pellets
				0	sand pack
			SB0104 (28-30)	0	pvc sch 40
30				0	
				0	
				0	
		SAND: Fine sand, wet, loose		0	

WELL CONSTRUCTION LOG

ARCADIS

WELL NO.: **MW0201S**

TOTAL DEPTH: **28.50**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Dan Harrison**
LOGGED BY:	**Bryant Griggs**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**3/5/2002**	COORDINATES:	
DATE COMPLETED:	**3/6/2002**	**Northing:**	
		Easting:	
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		BLANK: Blank drill			steel concrete
5					2-inch PVC sch 40
10					bentonite slurry
15					
20					bentonite-pellets
		CLAY: Sandy clay, very moist- wet			
25					sand pack 0.010-slot 2-inch PVC sch 40
		SAND: Wet, clay in bottom of spoon			

WELL CONSTRUCTION LOG

ARCADIS

WELL NO.: **MW0201D**

TOTAL DEPTH: **56.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Allison Transmission Division	DRILLING CO.:	Boart Longyear
SITE LOCATION:	Speedway, Indiana	DRILLER:	Dan Harrison
LOGGED BY:	Bryant Griggs	DRILLING METHOD:	Hollow Stem Auger
DATE STARTED:	3/5/2002	COORDINATES:	
DATE COMPLETED:	3/6/2002	Northing:	
		Easting:	
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: Grass backfill, sandy clay soil mix, debris, 10YR 4/3			steel concrete
5		CLAY: Clayey sand and gravel, 10YR 4/4, moist			2-inch PVC sch 40
		SAND: Poorly graded sand (same size), 10YR 4/4, moist, trace gravel	MW0201D (8-10)	0	
10		SAND: Sand and trace fine gravel, 10YR 4/4, moist			
		CLAY: Silty clay, trace gravel, slighty moist, 10YR 4/1			
15		BLANK: Refusal/No Recovery			
		CLAY: Silty clay, firm, slightly moist, slighty plastic, 10YR 4/1	MW0201 (16-18)	0	
20		BLANK: No recovery (sluff only) Rock in spoon.			bentonite slurry
		SAND: Slightly silty clayey sand, trace gravel, wet, 10YR 4/2			
25		SAND: Medium-fine sand, trace gravel, saturated, 10 YR 4/2			
		CLAY: Silty clay, soft, plastic, moist, 10YR 4/2			
		BLANK: Refusal/No Recovery			
30		CLAY: Silty clay, firm, slightly plastic, 10YR 4/1			

WELL CONSTRUCTION LOG

WELL NO.: **MW0201D**

TOTAL DEPTH: **56.00**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
35					
40					
45					bentonite-pellets
		CLAY: Sandy clay, firm, non-plastic, trace gravel, moist, 7.5 YR			
		SAND: Medium-fine sand, poorly graded, loose, saturated			0.010-slot 2-inch PVC sch 40
55		CLAY: Silty clay, firm, slightly plastic, 10YR 4/1			sand pack

WELL CONSTRUCTION LOG

ARCADIS

WELL NO.: **MW0202S**

TOTAL DEPTH: **24.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**

SITE LOCATION: **Speedway, Indiana**

LOGGED BY: **Bryant Griggs**

DATE STARTED: **3/6/2002**

DATE COMPLETED: **3/6/2002**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Randy**

DRILLING METHOD: **Hollow Stem Auger**

COORDINATES:

Northing:

Easting:

Elevation:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: Sandy clay soil mix			steel concrete
		SAND: Sand and gravel mix			
5		SAND: Sand, same size, slightly moist, 10YR 4/4, chunks of rock at 4.5 feet			2-inch PVC sch 40
		SAND: Fine, clean sand (same size), moist, 10YR 5/3	MW0202S (6-10)	0	bentonite slurry
10		SAND: Medium-fine sand (similar size), trace gravel, moist, 10YR 4/4, small orange stain at 9.5 feet (1/4' thick)	MW0202S (10-14)	0	bentonite-pellets
15		BLANK: No recovery due to rock in the spoon, 1"" sand in bottom of spoon			sand pack
		SAND: Medium-fine sand (similar size), trace gravel, very moist, sticky 10YR 4/1, black strong odor			0.010-slot 2-inch PVC sch 40
		SAND: Coarse sand and gravel, saturated, black, strong odor	MW0202 (18-20)	0	
20		SAND: Coarse sand and gravel, not much recovery, silty, wet	MW0202 (22-24)	0	
		CLAY: Silty clay, firm, slightly moist, 10YR 4/1			

BORING LOG

BORING LOG: **MW-0202M**

TOTAL DEPTH: **40.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**HSA/Geoprobe/Rotosonic**
DATE STARTED:	**10/15/2004**	**COORDINATES**	
DATE COMPLETED:	**10/15/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CLAY: Silty sandy clay, soft, dry, 10YR4/3, Brown	D		1.3
					2.0
-5		SAND: Sand & Gravel, loose, dry, 10YR4/6, dark yellowish Brown	D		3.1
					3.3
					4.1
-10			D		2.3
					2.8
-15					3.4
		CLAY: Stiff Silty Clay Till, dry,slightly plastic, trace gravel, 10YR2/1, dark gray	D		35.5
		SAND: Sand & Gravel,, loose, dry, 10YR4/6, dark yellowish brown		MW-0202M (18-20)	107
-20					19
		SAND: Still Sand & Gravel, stained, dark gray to black, odor	W		
		CLAY: Silty clay, stiff, dry, 10YR4/3, brown, trace gravel	W		102
-25		SAND: Wet Sand & Gravel, some clay, slighly cohesive, Poorly sorted, well graded	D W		6
					2.1
		SAND: Wet Sand & Gravel, stained black, odor, loose	D		1.3
-30		CLAY: Stiff Silty Clay Till, dry, slightly plastic, trace gravel, 10YR2/1, dark gray	W		5.5
		SAND: Wet Sand & Gravel, loose, medium to coarse, 10YR4/6, dark yellowish brown	W		3.8
-35					2.7
		CLAY: stiff silty clay till, dry to slightly moist, slightly plastic, trace gravel, dark gray	D		5.8
		SAND: wet Sand & Gravel, loose, well graded 10YR4/3, brown			1.9
-40		SAND: Still Sand, less gravel, wet, more medium grained			
		CLAY: stiff silty clay till, dry , slightly plastic, trace gravel, dark gray			

WELL CONSTRUCTION LOG

ARCADIS

WELL NO.: **MW0202D**

TOTAL DEPTH: **56.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**

SITE LOCATION: **Speedway, Indiana**

LOGGED BY: **Bryant Griggs**

DATE STARTED: **3/7/2002**

DATE COMPLETED: **3/7/2002**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Randy**

DRILLING METHOD: **Hollow Stem Auger**

COORDINATES:

Northing:

Easting:

Elevation:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: Sandy clay soil mix			steel concrete
		SAND: Sand and gravel mix			
5		SAND: Sand, same size, slightly moist, 10YR 4/4, chunks of rock at 4.5 feet			
		SAND: Fine, clean sand (same size), moist, 10YR 5/3			
10		SAND: Medium-fine sand (similar size), trace gravel, moist, 10YR 4/4, small orange stain at 9.5 feet (1/4' thick)			2-inch PVC sch 40
15		BLANK: No recovery			
		SAND: Poorly graded sand, black, strong odor, loose, very moist			
20		CLAY: Clay, very firm, black, odor, moist, slightly plastic			
		SAND: Poorly graded sand, black, strong odor, loose, very moist			
		SAND: Poorly graded sand, black, strong odor, loose, very moist, saturated			
25		CLAY: Clay, firm, trace sand and gravel, 7.5YR 4/1			bentonite slurry
		CLAY: Very firm clay, trace sand and gravel, saturated, 7.5YR 4/1.			
30		CLAY: Soft clay, moist, plastic, silt with trace gravel, 7.5YR 4/1			

WELL CONSTRUCTION LOG

WELL NO.: **MW0202D**

TOTAL DEPTH: **56.00**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
35		SAND: Medium to coarse sand, loose, saturated, 7.5YR 4/1			
40		CLAY: Very firm clay, plastic, silty with trace gravel	MW0202 (40-42)		
45		CLAY: Silty clay, low plasticity, moist, trace fine gravel, firm, sand at 45'			
		SAND: Sand fine to coarse, wet, poorly graded, loose			bentonite-pellets
		SAND: Fine-coarse sand, poorly graded, wet, light brown with trace silt, loose			sand pack 0.010-slot 2-inch PVC sch 40
55		CLAY: Firm silty clay, trace sand and gravel, damp, low plasticity, poorly graded			

WELL CONSTRUCTION LOG

ARCADIS

WELL NO.: **MW0203**

TOTAL DEPTH: **37.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Chris Harrison**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:		COORDINATES:	
DATE COMPLETED:		**Northing:**	
		Easting:	
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE	MW0203 (0-2)	24	steel concrete
		SAND: Dark yellowish brown fine to medium sand and gravel, dry, 10YR 4/4			
5		CLAY: Dark brown silty sandy clay, slightly cohesive, slightly sticky, slightly moist, 10YR 3/3			2-inch PVC sch 40
		SAND: Light yellowish brown fine to medium sand with trace gravel, dry, 10YR 5/4			bentonite slurry
			MW0203 (8-10)	18	
10		SAND: Light yellowish brown fine to medium sand with trace gravel, dry, at 12 feet sand looks wet, feels greasy, strong odor, 10YR 4/3			
			MW0203 (12-14)	3	
15		CLAY: Brown clay, cohesive, plastic, nonsticky, moist, strong odor, greasy, 10YR 4/3			
		CLAY: Dark gray silty clay, cohesive, plastic, slightly sticky, moist, greasy, strong odor, saturated with oil or transmission fluid at 17 feet, dry with no odor, no greasiness at 22.5 feet, 10YR 3/1			
			MW0203 (18-20)	13.8	
20					
					bentonite-pellets
25					
30		SAND: Light grayish brown fine to medium sand with trace silts and clays, wet, 10YR 5/2			sand pack 0.010-slot 2-inch PVC sch 40

WELL CONSTRUCTION LOG

ARCADIS

WELL NO.: **MW0204**

TOTAL DEPTH: **34.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Chris Harrison**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**3/11/2002**	COORDINATES:	
DATE COMPLETED:	**3/12/2002**	**Northing:**	
		Easting:	
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE			steel concrete
		SAND: Dark brown fine to medium sand wtih gravel, dry, 10YR 4/3			
5		CLAY: Very dark gray silty sandy clay with trace gravel, plastic, cohesive, slightly sticky, moist, 10YR 3/1			2-inch PVC sch 40 bentonite slurry
		CLAY: Brown silty sandy clay, plastic, cohesive, slightly sticky, moist, 10YR 4/3			
10		SAND: Light grayish brown fine to medium sand and gravel, dry, 10YR 5/2			
15		CLAY: Light brown silty sandy clay, cohesive, non-plastic, non-sticky, dry, 10YR 4/3			
		CLAY: Dark gray silty clay, cohesive, non-plastic, non-sticky, dry, 10YR 4/1			
20					
25					bentonite-pellets
					sand pack
30					0.010-slot 2-inch PVC sch 40
		CLAY: Dark gray, silty clay, cohesive, plastic, sticky, wet, 10YR 4/1			
		CLAY: Dark gray silty clay, cohesive, non-plastic, non-sticky, dry, 10YR 4/1			

WELL CONSTRUCTION LOG

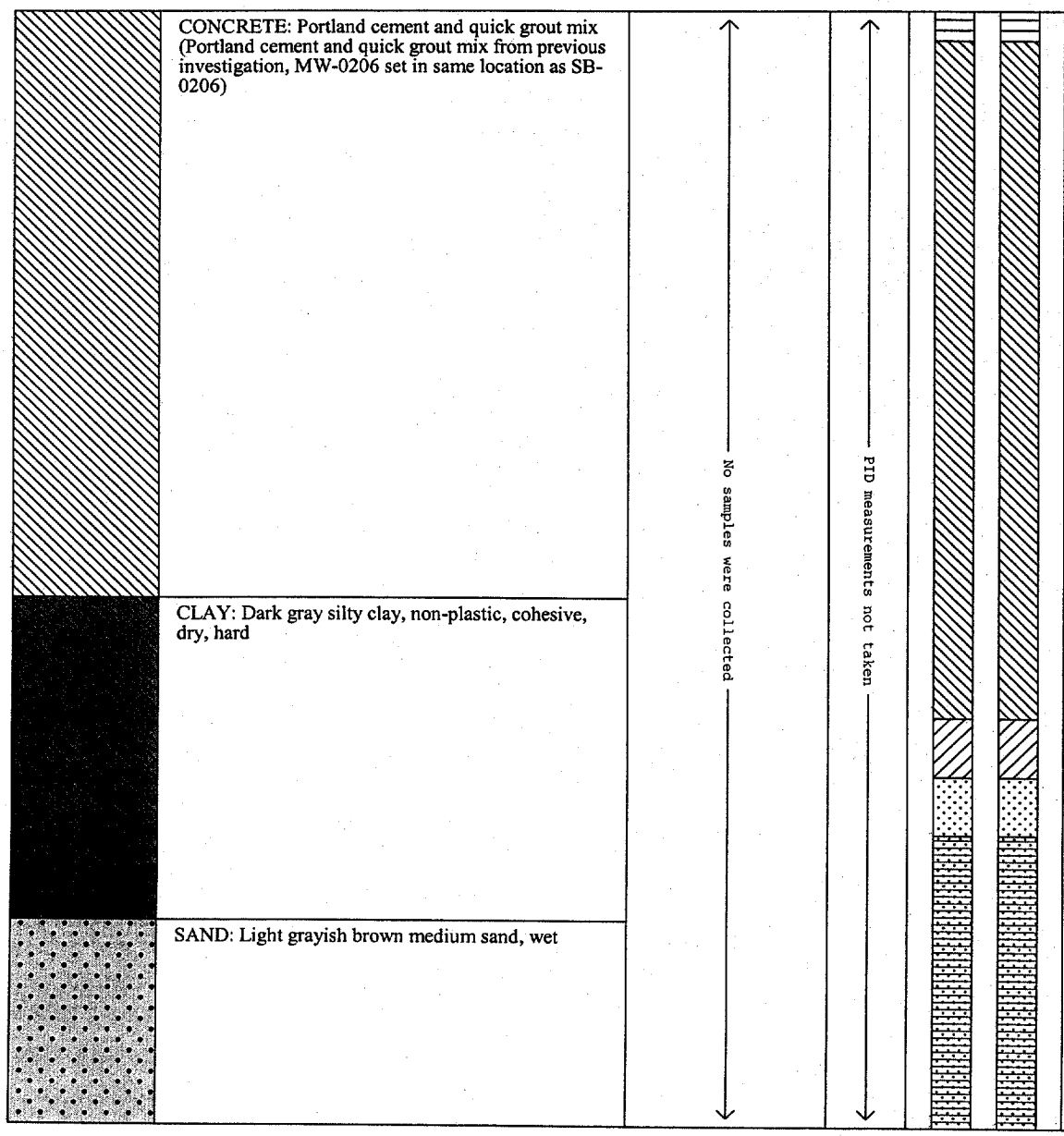
ARCADIS

WELL NO.: **MW0206**

TOTAL DEPTH: **38.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Alan Thomas**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**5/9/2002**	**COORDINATES:**	
DATE COMPLETED:	**5/10/2002**	**Northing:**	N/A
		Easting:	N/A
		Elevation:	**719.97**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: Portland cement and quick grout mix (Portland cement and quick grout mix from previous investigation, MW-0206 set in same location as SB-0206)	No samples were collected	PID measurements not taken	steel; concrete; pvc sch 40; bent-cement grout
20		CLAY: Dark gray silty clay, non-plastic, cohesive, dry, hard			bentonite-pellets; pvc sch 40
30		SAND: Light grayish brown medium sand, wet			sand pack



WELL CONSTRUCTION LOG

ARCADIS

WELL NO.: **MW0207**

TOTAL DEPTH: **38.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**

SITE LOCATION: **Speedway, Indiana**

LOGGED BY: **Tim Yates**

DATE STARTED: **5/8/2002**

DATE COMPLETED: **5/8/2002**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Alan Thomas**

DRILLING METHOD: **Hollow Stem Auger**

COORDINATES:

Northing: N/A

Easting: N/A

Elevation: **719.95**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: Concrete	MW0207 (0-2)	8.2	steel; concrete
		SAND: Dark yellowish brown medium sand and gravel, 10YR 4/6		7	
5		CLAY: Dark brown silty sandy clay with gravel, slightly plastic, slightly cohesive, slightly moist		6.6	pvc sch 40
		CLAY: Brown silty sandy clay with trace gravel, slightly plastic, slightly cohesive,moist		5.4	
		SAND: Light gray brown fine to medium sand with trace gravel, dry	MW0207 (8-10)	8.6	
10		SAND: Grayish brown medium sand with gravel, slight odor, greasy look	MW0207 (10-10.5)	10	
		CLAY: Brown silty sandy clay, plastic, cohesive, wet, slight odor	MW0207 (12.5-13)	10.2	bent-cement grout
15		CLAY: Dark gray hard silty clay, non-plastic, cohesive, dry, moist at 17 feet		4.2	
				3.4	
			MW0207 (18-20)	8.6	
20				11	
				6.2	
25				11.4	bentonite-pellets
				8.6	pvc sch 40
				7.8	sand pack
30				8.0	
				7.2	
				6.8	
				5.2	

Sand 8/6

WELL CONSTRUCTION LOG

ARCADIS

WELL NO.: **MW0208**

TOTAL DEPTH: **37.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**

SITE LOCATION: **Speedway, Indiana**

LOGGED BY: **Tim Yates**

DATE STARTED: **5/13/2002**

DATE COMPLETED: **5/13/2002**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Alan Thomas**

DRILLING METHOD: **Hollow Stem Auger**

COORDINATES:

Northing: N/A

Easting: N/A

Elevation: **719.95**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: Concrete	MW0208 (0-2)	PID malfunction, readings not taken	steel; concrete
		SAND: Dark yellowish brown medium sand and gravel, dry, 10YR 4/6			pvc sch 40
5		CLAY: Dark brown silty sandy clay, slightly plastic, cohesive, moist	MW0208 (4-6)		
		CLAY: Very dark brown silty sand clay, plastic, cohesive, moist, trace gravel, odor (non-transmission fluid or petro product smell: fecal?)	MW0208 (8-10)		
10		CLAY: Dark brown silty sandy clay, slightly plastic, cohesive, moist			
		SAND: Dark yellowish brown fine to medium sand with gravel, dry, 10YR4/6			bent-cement grout
15		CLAY: Light brown silty sandy clay, plastic, cohesive, moist			
		CLAY: Dark gray silty clay, plastic, cohesive, slightly moist			
20		CLAY: Dark gray, silty clay, plastic, cohesive, dry	MW0208(18-20)		
25					bentonite-pellets
					pvc sch 40
30		SAND: Light grayish brown fine to medium sand, wet			sand pack

WELL CONSTRUCTION LOG

ARCADIS

WELL NO.: **MW0209**

TOTAL DEPTH: **38.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**

SITE LOCATION: **Speedway, Indiana**

LOGGED BY: **Mark Fisherkeller**

DATE STARTED: **6/5/2002**

DATE COMPLETED: **6/5/2002**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Dan Harrison**

DRILLING METHOD: **Hollow Stem Auger**

COORDINATES:

Northing: N/A

Easting: N/A

Elevation: **719.71**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		SILT: Sandy silt, top soil, non-plastic, moist, 10YR3/4	MW0209 (0-2)	2.5	steel concrete
		SAND: Course to fine sand, loose, dry, 10YR 7/4		8.2	pvc sch 40
5				60	
		SAND: Medium sand, moist, loose, 10YR5/4		62	
			MW0209 (8-10)	70	
10				20	
				NM	bent-cement grout
15		CLAY: Very stiff clay, trace sand and gravel, slightly plastic, slightly moist, 7.5Y4/1		0	
				0	
			MW0209 (18-20)	0	
20				0	
				0	
		SAND: Medium to coarse sand with gravel, moist, loose, 7.5Y4/1		0	
25		CLAY: Very stiff clay, trace sand and gravel, slightly plastic, slightly moist, 7.5Y4/1	MW0209 (26-28.5)	0	
				0	
		SILT: Sandy silt, trace gravel, loose, saturated			
30		CLAY: Very stiff clay, trace sand and gravel, slightly plastic, slightly moist, 7.5Y4/1	MW0209 (30-31.5)	0	
			MW0209 (32-32.5)	0	bentonite-pellets
		SILT: Sandy silt, trace gravel, loose, saturated, 7.5Y4/1		0	pvc sch 40 sand pack
35				0	
		CLAY: Very stiff clay, trace sand and gravel, slightly plastic, slightly moist, 7.5Y4/1			
		SAND: Medium sand, saturated, loose, 7.5Y4/1			
		CLAY: Clay, trace sand and gravel, plastic, slightly moist, 7.5Y4/1			
		SAND: Fine to coarse sand, trace gravel, loose, saturated, 7.5Y4/1			
		CLAY: Very stiff clay, trace sand and gravel, slightly plastic, slightly moist, 7.5Y4/1			

WELL CONSTRUCTION LOG

ARCADIS

WELL NO.: **MW0210**

TOTAL DEPTH: **60.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**

SITE LOCATION: **Speedway, Indiana**

LOGGED BY: **Galvin Kauffman**

DATE STARTED: **5/9/2002**

DATE COMPLETED: **5/9/2002**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Dan Harrison**

DRILLING METHOD: **Hollow Stem Auger**

COORDINATES:

Northing: N/A

Easting: N/A

Elevation: **718.88**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: Asphalt and gravel fill	MW0210 (0-2)	0	steel concrete
		CLAY: Very dark grey, sandy clay, trace gravel, slightly cohesive when wet, dry, 10YR4/3		13	
5				10	pvc sch 40
		CLAY: Dark yellow brown, sandy clay, trace gravel, slightly plastic, cohesive, 10YR4/3		8	
			MW0210 (8-10)	14	
10		SAND: Yellow brown fine-medium sand, trace gravel, loose, moist, 10YR 5/4, at 10' sand and gravel, turns wet at 12-14'		15	
			MW0210 (12-14)	25	
		CLAY: Dark grey brown, silty clay, non-plastic when wet, dry, hard, trace gravel, 2.5Y4/2. At 20' turns 2.5Y4/1 dark grey.		25	
				0	
				NR	
20				0	bent-cement grout
				0	
25			MW0210 (24-26)	3	
				0	
				0	
30		SAND: Dark grey, fine coarse sand and gravel, loose, wet, 2.5Y4/1		0	
			MW0210 (32-34)	0	
35				0	
				0	
		SILT: Dark grey, silt and clay mix, trace gravel, dry, hard, non-plastic when wet, sticky when wet 2.5Y4/1. Possible sand fine-medium, wet, loose at 42'		0	
40				0	bentonite-pellets
				0	pvc sch 40
45				0	sand pack
		SAND: 2.5Y4/1 Dark Grey sand seam and gravel, loose, wet		0	
				0	
50		CLAY: 2.5Y4/1 Sandy clay, moist, cohesive, slightly plastic, sticky	MW0210 (50-52)	0	
				0	
		SAND: 2.5Y4/1 Dark grey, fine-coarse sand and gravel, loose, wet		0	
55				0	
		CLAY: 7.5YR4/2 Brown, mottled 7.5YR4/1 Dark Grey, silty clay, trace gravel, hard,dry, non-plastic when wet. At 58', 1-2" sand seam fine-medium grain sand		0	
60					

WELL CONSTRUCTION LOG

ARCADIS

WELL NO.: **MW0211**

TOTAL DEPTH: **18.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**

SITE LOCATION: **Speedway, Indiana**

LOGGED BY: **Galvin Kauffman**

DATE STARTED: **5/13/2002**

DATE COMPLETED: **5/13/2002**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Dan Harrison**

DRILLING METHOD: **Hollow Stem Auger**

COORDINATES:

Northing: N/A

Easting: N/A

Elevation: **722.37**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		SAND: 10YR7/1 Light grey, sand and gravel fill, loose, dry, wet at 8'	No samples were collected	PID measurements not taken	steel; concrete; pvc sch 40; bent-cement grout; bentonite-pellets; pvc sch 40; sand pack
5					
10		SAND: 10YR5/1 Grey fine-medium sand, loose, wet, odor at 11.5' - Dark			
		SAND: 10YR7/1 Sand and gravel fill - could be trash			
15		CONCRETE: Concrete pad 2' thick			
		SAND: 2.5Y5/2 Grey brown sand and gravel, loose, wet, odor			
		CLAY: 2.5Y4/1 Dark grey, silty clay, slightly plastic, hard, dry, trace gravel			

WELL CONSTRUCTION LOG

ARCADIS

WELL NO.: **MW0212**

TOTAL DEPTH: **18.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**

SITE LOCATION: **Speedway, Indiana**

LOGGED BY: **Galvin Kauffman**

DATE STARTED: **5/13/2002**

DATE COMPLETED: **5/13/2002**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Dan Harrison**

DRILLING METHOD: **Hollow Stem Auger**

COORDINATES:

Northing: N/A

Easting: N/A

Elevation: **722.44**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		SAND: 10YR7/1 Light grey sand and gravel fill, loose, dry, wet at 9.5'	No samples were collected	PID measurements not taken	steel; concrete; bent-cement grout; pvc sch 40; bentonite-pellets; pvc sch 40; sand pack
5					
10		CLAY: 10YR 4/1 Dark grey, silty clay, trace gravel, dry, hard			
		SAND: 10YR4/3 Brown sand and gravel, wet, loose, slight odor on dark spot			
15		CONCRETE: Concrete 2' thick			
		SAND: 2.5Y4/3 Brown sand and gravel, wet, loose			
		SAND: 2.5Y5/1 Grey sand and gravel, wet, odor. At 17.1' 2.5Y2/1 Black, odor, sand and gravel			
		CLAY: 2.5Y 4/1 Dark grey, silty clay, trace gravel, hard, dry			

WELL CONSTRUCTION LOG

WELL NO.: **MW-0401-S2A**

TOTAL DEPTH: **40.00**

PROJECT INFORMATION

PROJECT: **GM/ENCORE (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **Tim Yates**

DATE STARTED: **2/9/2004**

DATE COMPLETED: **2/11/2004**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Mike Magnin**

DRILLING METHOD: **Geoprobe**

COORDINATES:

Northing: **1649956.7**

Easting: **169057**

TOC Elevation: **719.76**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: Concrete	MW0401 (0-2)		0	bentonite-slurry
		SAND: Dark yellowish brown medium to coarse sand and gravel, poorly graded, sub-angular, dry	MW0401 (2-4)		0	PVC sch 40
			MW0401 (4-6)		0	Flush Mount-Concrete
5			MW0401 (6-8)		0	
		SAND: Dark grayish brown med to coarse sand and gravel, poorly graded, sub-angular, dry	MW0401 (8-10)		0	
10			MW0401 (10-12)		0	
			MW0401 (12-14)		0	
		SILT: Dark gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard, trace gravel, friable at 12.5-13 ft., increasing moisture at 25.5 ft.	MW0401 (14-16)		0	
15			MW0401 (16-18)		0	
			MW0401 (18-20)		0	
20			MW0401 (20-22)		0	
			MW0401 (22-24)		0	
			MW0401 (24-26)		0	
25			MW0401 (26-28)		0	sand pack
			MW0401 (28-30)		0	PVC sch 40
30			MW0401 (30-32)		0	
		SAND: Dark grayish brown fine to med sand, poorly graded, sub-angular, wet	MW0401 (32-34)		0	
		SAND: Dark grayish brown med to coarse sand and gravel, poorly graded, sub-angular, wet	MW0401 (34-36)		0	
35			MW0401 (36-38)		0	
		SILT: Dark gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard, trace gravel	MW0401 (38-40)		0	
40						

WELL CONSTRUCTION LOG

ARCADIS

WELL NO.: **MW-0402D**

TOTAL DEPTH: **52.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Shannon**
LOGGED BY:	**Matt Johnston**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**12/30/2004**	**COORDINATES:**	
DATE COMPLETED:	**12/30/2004**	**Northing:**	N/A
		Easting:	N/A
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: Concrete	MW-0402D (0-2)		steel concrete
		SAND: SW- fine to coarse graded sand with gravel, dry,loose, well graded, firm	MW-0402D (2-4)		
5		CLAY: Brown silty clay, stiff, SM, SP, trace gravel, gets softer with depth	MW-0402D (4-6)		
			MW-0402D (6-8)		
10		SAND: SW- fine to coarse graded sand with less gravel, dry,loose, well graded, firm, odor at 12 feet	MW-0402D (8-10)		
			MW-0402D (10-12)		
15		CLAY: Stiff gray silty clay, trace sand and gravel, SM, SP, slight odor at 12 feet, clay is friable and is breaking up in the sampling core, strong odor at 14 feet	MW-0402D (12-14)		
			MW-0402D (14-16)		pvc sch 40
			MW-0402D (16-18)		
20			MW-0402D (18-20)		
			MW-0402D (20-22)		bentonite-slurry
			MW-0402D (22-24)		
25		SAND: Dark gray medium to coarse sand with trace gravel, wet, odor	MW-0402D (24-26)		
			MW-0402D (26-28)		
30		CLAY: Stiff gray silty clay, trace sand and gravel, SM, SP, slight odor at 12 feet, strong odor	MW-0402D (28-30)		
			MW-0402D (30-32)		
35		SAND: Dark gray medium to coarse sand with trace gravel, wet	MW-0402D (32-34)		
			MW-0402D (34-36)		
40		SAND: Dark gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard, trace gravel	MW-0402D (36-38)		
			MW-0402D (38-40)		
			MW-0402D (40-42)		
			MW-0402D (42-44)		sand pack
45		SAND: Very dark gray to black, medium to coarse sand and gravel, wet	MW-0402D (44-46)		pvc sch 40
			MW-0402D (46-48)		
50		SAND: Dark gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard, trace gravel	MW-0402D (48-50)		
			MW-0402D (50-52)		
		SAND: Gray fine to medium sand, wet			

WELL CONSTRUCTION LOG

WELL NO.: **MW-0402-S2B**

TOTAL DEPTH: **40.00**

PROJECT INFORMATION

PROJECT: **GM/ENCORE (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **Tim Yates**

DATE STARTED: **2/11/2004**

DATE COMPLETED: **2/16/2004**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Mike Magnin**

DRILLING METHOD: **Geoprobe**

COORDINATES:

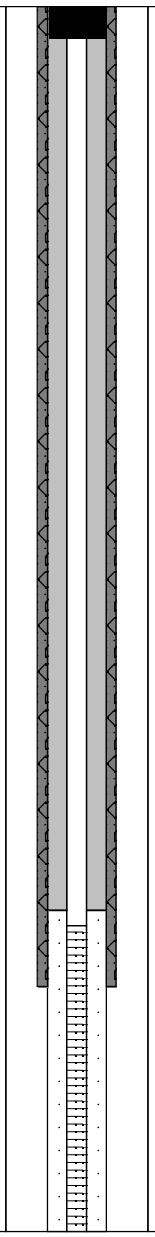
Northing: **1650010.2**

Easting: **168862.8**

TOC Elevation: **719.61**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)
0		CONCRETE: Concrete	MW-0402-S2B (0-2)		5.4
		SAND: Brown med to coarse sand and gravel, sub-angular, poorly graded, dry	MW-0402-S2B (2-4)		17.2
			MW-0402-S2B (4-6)		24
5		CLAY: Brown silty sandy clay, slightly plastic, very slightly cohesive, non-sticky, slightly moist, firm	MW-0402-S2B (6-8)		26
		SAND: Light yellowish brown med to coarse sand with trace gravel, sub-angular, poorly graded, dry	MW-0402-S2B (8-10)		48
10		SILT: Dark gray clayey silt, non-plastic, cohesive, non-sticky, trace gravel, hard, slightly moist, slight odor, increasing moisture at 16 ft	MW-0402-S2B (10-12)		52
			MW-0402-S2B (12-14)		142
15			MW-0402-S2B (14-16)		178
			MW-0402-S2B (16-18)		78
			MW-0402-S2B (18-20)		82
20			MW-0402-S2B (20-22)		54
			MW-0402-S2B (22-24)		40
25			MW-0402-S2B (24-26)		76
		SAND: Dark gray medium to coarse sand and gravel, wet, sub-angular, poorly graded, strong odor	MW-0402-S2B (26-28)		182
			MW-0402-S2B (28-30)		220
30		SILT: Dark gray clayey silt, nonplastic, cohesive, non-sticky, trace gravel, slightly moist, hard	MW-0402-S2B (30-32)		50
		SAND: Gray fine to medium sand, wet, sub-angular, poorly graded	MW-0402-S2B (32-34)		16.8
35		SAND: Gray coarse sand and gravel, wet, sub-angular, poorly graded	MW-0402-S2B (34-36)		18.4
			MW-0402-S2B (36-38)		22
		SAND: Gray fine to medium sand, wet, sub-angular, poorly graded	MW-0402-S2B (38-40)		2.6
40		SILT: Dark gray clayey silt, nonplastic, cohesive,			

WELL CONSTRUCTION DETAILS



bentonite-slurry

PVC sch 40

Flush Mount-Concrete

Grout

sand pack

PVC sch 40

WELL CONSTRUCTION LOG

WELL NO.: **MW-0402-S2B**

TOTAL DEPTH: **40.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/ENCORE (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Mike Magnin**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**2/11/2004**	**COORDINATES:**	
DATE COMPLETED:	**2/16/2004**	**Northing:**	**1650010.2**
		Easting:	**168862.8**
		TOC Elevation:	**719.61**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
40		non-sticky, trace gravel, hard, slightly moist				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0402-S3**

TOTAL DEPTH: **52.00**

PROJECT INFORMATION

PROJECT: **GM/ENCORE (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **Matt Johnston**

DATE STARTED: **12/30/2004**

DATE COMPLETED: **12/30/2004**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Shannon**

DRILLING METHOD: **Hollow Stem Auger**

COORDINATES:

Northing: **1650013.62**

Easting: **168862.87**

TOC Elevation: **719.61**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: Concrete	MW-0402D (0-2)			bentonite slurry concrete steel PVC sch 40
		SAND: SW- fine to coarse graded SAND with gravel, dry,loose, well graded, firm	MW-0402D (2-4)			
5		CLAY: Brown silty CLAY, stiff, SM, SP, trace gravel, gets softer with depth	MW-0402D (4-6)			
		SAND: SW- fine to coarse graded SAND with less gravel, dry,loose, well graded, firm, odor at 12 feet	MW-0402D (6-8)			
10		CLAY: Stiff gray silty CLAY, trace sand and gravel, SM, SP, slight odor at 12 feet, clay is friable and is breaking up in the sampling core, strong odor at 14 feet	MW-0402D (8-10)			
			MW-0402D (10-12)			
			MW-0402D (12-14)			
15			MW-0402D (14-16)			
			MW-0402D (16-18)			
			MW-0402D (18-20)			
20			MW-0402D (20-22)			
			MW-0402D (22-24)			
			MW-0402D (24-26)			
25		SAND: Dark gray medium to coarse SAND with trace gravel, wet, odor	MW-0402D (26-28)			
			MW-0402D (28-30)			
30		CLAY: Stiff gray silty CLAY, trace sand and gravel, SM, SP, slight odor at 12 feet, strong odor	MW-0402D (30-32)			
			MW-0402D (32-34)			
35		SAND: Dark gray medium to coarse SAND with trace gravel, wet	MW-0402D (34-36)			
			MW-0402D (36-38)			
		SAND: Dark gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard, trace gravel	MW-0402D (38-40)			
40			MW-0402D (40-42)			
			MW-0402D (42-44)			sand pack
45		SAND: Very dark gray to black, medium to coarse SAND and gravel, wet	MW-0402D (44-46)			PVC sch 40
			MW-0402D (46-48)			
		SAND: Dark gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard, trace gravel	MW-0402D (48-50)			
50		SAND: Gray fine to medium SAND, wet.	MW-0402D (50-52)			

WELL CONSTRUCTION LOG

WELL NO.: **MW-0402-S3**

TOTAL DEPTH: **52.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/ENCORE (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon**
LOGGED BY:	**Matt Johnston**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**12/30/2004**	**COORDINATES:**	
DATE COMPLETED:	**12/30/2004**	**Northing:**	**1650013.62**
		Easting:	**168862.87**
		TOC Elevation:	**719.61**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS

WELL CONSTRUCTION LOG

WELL NO.: **MW-0403-S2B**

TOTAL DEPTH: **38.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/ENCORE (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Bill Condin**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**2/18/2004**	**COORDINATES:**	
DATE COMPLETED:	**2/18/2004**	**Northing:**	**1649878.1**
		Easting:	**168742.9**
		TOC Elevation:	**719.13**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: Topsoil	MW0403 (0-2)		0	bentonite-slurry
		CLAY: Brown silty sandy clay, slightly plastic, cohesive, sticky, moist	MW0403 (2-4)		18.8	PVC sch 40
			MW0403 (4-6)		22	Flush Mount-Concrete
5		SAND: Brown clayey sand, nonplastic, slightly cohesive, slightly sticky, moist	MW0403 (6-8)		28	
		SAND: Brown fine to medium sand, sub-angular, poorly graded, dry	MW0403 (8-10)		16.6	
10		SAND: Dark yellowish brown fine to medium sand, sub-angular, poorly graded, dry; odor at 10 to 14 ft	MW0403 (10-12)		44	
		SAND: Dark yellowish brown medium to coarse sand and gravel, poorly graded, sub-angular, dry	MW0403 (12-14)		52	
15		SILT: Dark yellowish brown clayey silt, nonplastic, cohesive, nonsticky, dry, trace gravel, hard, dark gray at 15.5 ft, friable 16-18 ft	MW0403 (14-16)		12.2	
			MW0403 (16-18)		10	
			MW0403 (18-20)		3	
20			MW0403 (20-22)		0	
			MW0403 (22-24)		1.2	
25			MW0403 (24-26)		0.8	
			MW0403 (26-28)		0	
			MW0403 (28-30)		0.2	
30			MW0403 (30-32)		3.4	sand pack
		SAND: Dark gray fine to medium sand, poorly graded, sub-angular, wet	MW0403 (32-34)		2.8	PVC sch 40
35			MW0403 (34-36)		2.6	
		SILT: Dark gray clayey silt, nonplastic, cohesive, non-sticky, dry, hard	MW0403 (36-38)		1.4	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0404-S2B**

TOTAL DEPTH: **38.00**

PROJECT INFORMATION

PROJECT: **GM/ENCORE (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **Tim Yates**

DATE STARTED: **2/17/2004**

DATE COMPLETED: **2/17/2004**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Bill Condin**

DRILLING METHOD: **Hollow Stem Auger**

COORDINATES:

Northing: **1649877.2**

Easting: **168864.8**

TOC Elevation: **719.21**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: Topsoil	MW0404 (0-2)		0	bentonite-slurry
		CLAY: Brown silty sandy clay, slightly plastic, cohesive, sticky, moist, trace gravel	MW0404 (2-4)		0	PVC sch 40
			MW0404 (4-6)		18.6	Flush Mount-Concrete
5		SAND: Light yellowish brown fine to medium sand, dry, sub-angular, poorly graded	MW0404 (6-8)		28	
		SAND: Dark yellowish brown fine to medium sand, sub-angular, poorly graded, dry	MW0404 (8-10)		14.2	
10			MW0404 (10-12)		30	
			MW0404 (12-14)		2.6	
		SILT: Dark yellowish brown clayey silt, nonplastic, cohesive, nonsticky, slightly moist, trace gravel, hard	MW0404 (14-16)		3.2	
15			MW0404 (16-18)		3	
		SAND: Dark gray fine to medium sand, slightly wet, poorly graded, sub-angular	MW0404 (18-20)		4	
20		SILT: Dark gray clayey silt, nonplastic, cohesive, nonsticky, slightly moist, trace gravel, hard	MW0404 (20-22)		3.4	
			MW0404 (22-24)		3.2	
			MW0404 (24-26)		4.4	
25			MW0404 (26-28)		3.8	sand pack
						natural sand
			MW0404 (28-30)		3.6	PVC sch 40
30			MW0404 (30-32)		3.4	
		SAND: Dark gray fine to medium sand, wet, sub-angular, poorly graded	MW0404 (32-34)		7.6	sand pack
			MW0404 (34-36)		8.6	
35		SAND: Dark gray medium to coarse sand and gravel, wet, sub-angular, poorly graded	MW0404 (36-38)		7.2	
		SILT: Dark gray clayey silt, nonplastic, cohesive,				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0404-S2B**

TOTAL DEPTH: **38.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/ENCORE (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Bill Condin**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**2/17/2004**	**COORDINATES:**	
DATE COMPLETED:	**2/17/2004**	**Northing:**	**1649877.2**
		Easting:	**168864.8**
		TOC Elevation:	**719.21**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
		nonsticky, slightly moist, trace gravel, hard				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0406-S2B**

TOTAL DEPTH: **40.00**

PROJECT INFORMATION

PROJECT: **GM/ENCORE (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **Tim Yates**

DATE STARTED: **2/19/2004**

DATE COMPLETED: **2/19/2004**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Bill Condin**

DRILLING METHOD: **Hollow Stem Auger/Geoprobe**

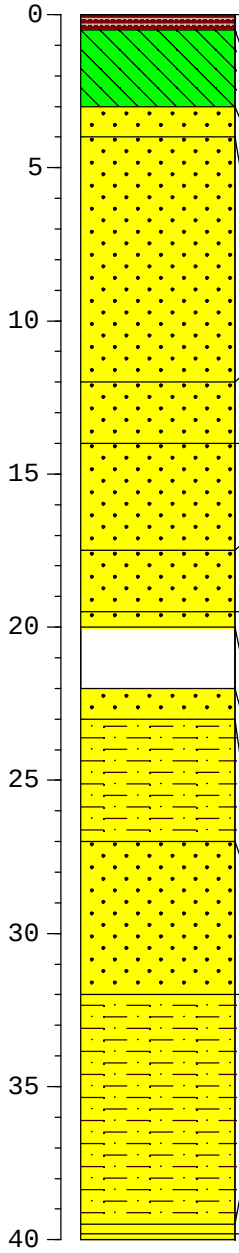
COORDINATES:

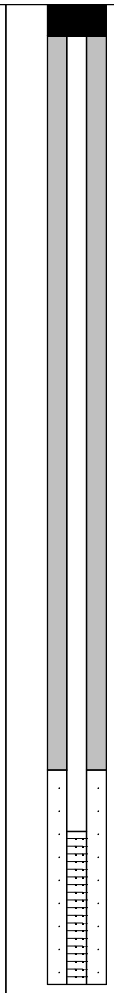
Northing: **1649736.6**

Easting: **168824.9**

TOC Elevation: **717.73**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)
		ASPHALT: Asphalt	MW0406 (0-2)		0
		CLAY: Brown silty sandy clay, cohesive, sticky, moist, trace gravel	MW0406 (2-4)		0
		SAND: Dark yellowish brown medium to coarse sand and gravel, poorly graded, sub-angular, dry	MW0406 (4-6)		0.8
		SAND: Dark yellowish brown fine to medium sand, poorly graded, sub-angular, dry	MW0406 (6-8)		0.8
			MW0406 (8-10)		2.6
			MW0406 (10-12)		2
		SAND: Dark yellowish brown medium to coarse sand and gravel, poorly graded, sub-angular, dry	MW0406 (12-14)		1.8
		SAND: Dark yellowish brown fine to medium sand, poorly graded, sub-angular, moist	MW0406 (14-16)		2.2
			MW0406 (16-18)		1.6
		SAND: Dark yellowish brown clayey sand, slightly plastic, slightly cohesive, slightly sticky, wet	MW0406 (18-20)		1.4
		SAND: Dark yellowish brown fine sand, sub-angular, poorly graded, wet	MW0406 (20-22)		N/A
		BLANK: No recovery	MW0406 (22-24)		0
		SAND: Dark yellowish brown fine to medium sand, poorly graded, sub-angular, wet	MW0406 (24-26)		0
		SILT: Dark gray clayey silt, nonplastic, cohesive, non-sticky, dry, hard	MW0406 (26-28)		0
		SAND: Dark yellowish brown fine to medium sand, poorly graded, sub-angular, wet	MW0406 (28-30)		0
			MW0406 (30-32)		0
		SILT: Dark gray clayey silt, nonplastic, cohesive, non-sticky, dry, hard	MW0406 (32-34)		0
			MW0406 (34-36)		0
			MW0406 (36-38)		0
		SILT: Gray silt, slightly plastic, slightly cohesive, slightly sticky, slightly firm, wet	MW0406 (38-40)		0





WELL CONSTRUCTION LOG

WELL NO.: **MW-0406-S2B**

TOTAL DEPTH: **40.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/ENCORE (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Bill Condin**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Hollow Stem Auger/Geoprobe**
DATE STARTED:	**2/19/2004**	**COORDINATES:**	
DATE COMPLETED:	**2/19/2004**	**Northing:**	**1649736.6**
		Easting:	**168824.9**
		TOC Elevation:	**717.73**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
40		SAND: Gray fine to medium sand, wet, sub-angular, poorly graded				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0407**

TOTAL DEPTH: **35.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/ENCORE (Allison Transmission)**	DRILLING CO.:	
SITE LOCATION:	**Speedway, IN**	DRILLER:	**C. Mason**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**4/29/2004 7:42:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**4/29/2004 3:25:00 PM**	**Northing:**	
		Easting:	
		TOC Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CEMENT: CONCRETE	MW-0407-01		0.0	
		SAND AND GRAVEL: Dark yellowish brown med to coarse SAND AND GRAVEL, subrounded, poorly graded, dry.	MW-0407-02		0.0	
			MW-0407-03		0.0	
5			MW-0407-04		0.0	
			MW-0407-05		0.0	
10		SANDY CLAY: Dark yellowish brown silty SANDY CLAY, plastic, cohesive, sticky, moist, trace gravel, firm.	MW-0407-06		0.0	
			MW-0407-07		0.0	
		SAND: Gray fine to medium SAND, subangular, poorly graded, wet.	MW-0407-08		0.0	
15		SILT: Dark gray clayey SILT, nonplastic, cohesive, non-sticky, moist, hard, trace gravel.	MW-0407-09		0.0	
			MW-0407-10		0.0	
20			MW-0407-11		0.0	
		SAND: Gray clayey SAND, nonplastic, noncohesive, sticky, wet.	MW-0407-12		0.0	
		SILT: Dark gray clayey SILT, nonplastic, cohesive, non-sticky, moist, hard, trace gravel.	MW-0407-13		0.0	
25			MW-0407-14		0.0	
		SAND AND GRAVEL: Gray medium to coarse SAND AND GRAVEL, sub-rounded, poorly graded, wet.	MW-0407-15		0.0	
30			MW-0407-16		0.0	
			MW-0407-17		0.0	
		SILT: Dark gray clayey SILT, nonplastic, cohesive, non-sticky, moist, hard, trace gravel.	MW-0407-18		0.0	
35						

WELL CONSTRUCTION LOG

WELL NO.: **MW-0407**

TOTAL DEPTH: **35.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/ENCORE (Allison Transmission)**	DRILLING CO.:	
SITE LOCATION:	**Speedway, IN**	DRILLER:	**C. Mason**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**4/29/2004 7:42:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**4/29/2004 3:25:00 PM**	**Northing:**	
		Easting:	
		TOC Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
35 –		SAND: Gray fine to medium SAND, subangular, poorly graded, wet.				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0408-S2**

TOTAL DEPTH: **24.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/ENCORE (Allison Transmission)**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Cameron Mason**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**5/3/2004**	**COORDINATES:**	
DATE COMPLETED:	**5/5/2004**	**Northing:**	**1650132**
		Easting:	**165387.2**
		TOC Elevation:	**719.8**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: Topsoil	MW0408 (0-2)		0	
		SAND: Dark yellowish brown medium to coarse sand and gravel, dry	MW0408 (2-4)		0	bentonite-slurry PVC sch 40 Flush Mount-Concrete
		SAND: Light gray fine to medium sand, dry	MW0408 (4-6)		0	
5			MW0408 (6-8)		0	
			MW0408 (8-10)		0	
10			MW0408 (10-12)		0	
			MW0408 (12-14)		0	
			MW0408 (14-16)		0	
15			MW0408 (16-18)		0	sand pack
		CLAY: Brown silty sandy clay, plastic, cohesive, sticky, moist, trace gravel				PVC sch 40
		SAND: Dark yellowish brown medium to coarse sand and gravel, wet	MW0408 (18-20)		0	
20			MW0408 (20-22)		0	
		SILT: Gray clayey silt, nonplastic, cohesive, non-sticky, slightly moist, trace gravel				
		SAND: Light gray fine to medium sand, wet	MW0408 (22-24)		0	
		SILT: Gray clayey silt, nonplastic, cohesive, non-sticky, slightly moist, trace gravel				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0408-S2**

TOTAL DEPTH: **24.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/ENCORE (Allison Transmission)**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Cameron Mason**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**5/3/2004**	**COORDINATES:**	
DATE COMPLETED:	**5/5/2004**	**Northing:**	**1650132**
		Easting:	**165387.2**
		TOC Elevation:	**719.8**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS

WELL CONSTRUCTION LOG

WELL NO.: **MW-0409D**

TOTAL DEPTH: **56.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**

SITE LOCATION: **Speedway, Indiana**

LOGGED BY: **Tim Yates**

DATE STARTED: **1/7/2005**

DATE COMPLETED: **1/7/2005**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Jim Robinson**

DRILLING METHOD: **Hollow Stem Auger**

COORDINATES:

Northing: N/A

Easting: N/A

Elevation:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: Topsoil	MW-0409D (0-2)		steel
		CLAY: Brown silty sandy clay, plastic, cohesive, sticky, moist, trace gravel	MW-0409D (2-4)		concrete
5			MW-0409D (4-6)		
			MW-0409D (6-8)		
		SAND: Dark yellowish brown medium to coarse sand and gravel, dry	MW-0409D (8-10)		
10			MW-0409D (10-12)		
			MW-0409D (12-14)		
15			MW-0409D (14-16)		pvc sch 40
			MW-0409D (16-18)		
		CLAY: Gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, trace gravel, hard	MW-0409D (18-20)		
20			MW-0409D (20-22)		bentonite-slurry
		SAND: Dark yellowish brown medium to coarse sand and gravel, wet	MW-0409D (22-24)		
25		CLAY: Gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, trace gravel, hard	MW-0409D (24-26)		
			MW-0409D (26-28)		
			MW-0409D (28-30)		
30			MW-0409D (30-32)		
		SAND: Light gray medium to coarse sand and gravel, wet	MW-0409D (32-34)		
35			MW-0409D (34-36)		
		CLAY: Gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, trace gravel, hard	MW-0409D (36-38)		
			MW-0409D (38-40)		
40			MW-0409D (40-42)		
			MW-0409D (42-44)		sand pack
45			MW-0409D (44-46)		pvc sch 40
		SAND: Light gray medium to coarse sand and gravel, wet	MW-0409D (46-48)		
			MW-0409D (48-50)		
50		CLAY: Gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, trace gravel, hard	MW-0409D (50-52)		
			MW-0409D (52-54)		
55			MW-0409D (54-56)		

WELL CONSTRUCTION LOG

WELL NO.: **MW-0409-S2B**

TOTAL DEPTH: **37.00**

PROJECT INFORMATION

PROJECT: **GM/ENCORE (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **Tim Yates**

DATE STARTED: **5/4/2004**

DATE COMPLETED: **5/5/2004**

DRILLING INFORMATION

DRILLING CO.: **EFS**

DRILLER: **Jay McFall**

DRILLING METHOD: **Geoprobe**

COORDINATES:

Northing: **1649817.7**

Easting: **168742.6**

TOC Elevation: **718.59**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: Topsoil	MW0409 (0-2)		0	bentonite-slurry
		CLAY: Brown silty sandy clay, plastic, cohesive, sticky, moist, trace gravel	MW0409 (2-4)		0	PVC sch 40
			MW0409 (4-6)		0	Flush Mount-Concrete
5		SAND: Dark yellowish brown medium to fine sand, dry	MW0409 (6-8)		0	
		SAND: Dark yellowish brown medium to coarse sand and gravel, dry	MW0409 (8-10)		0	
10		SAND: Dark yellowish brown medium to fine sand, dry	MW0409 (10-12)		0	
		SAND: Dark yellowish brown medium to coarse sand and gravel, wet 13.9-14 ft	MW0409 (12-14)		0	
		SILT: Gray clayey silt, nonplastic, cohesive, non-sticky, slightly moist, hard, trace gravel	MW0409 (14-16)		0	
15		SAND: Dark yellowish brown fine sand, wet	MW0409 (16-18)		0	
		SILT: Gray clayey silt, nonplastic, cohesive, non-sticky, slightly moist, hard, trace gravel	MW0409 (18-20)		0	
20			MW0409 (20-22)		0	
			MW0409 (22-24)		0	
			MW0409 (24-26)		0	sand pack
25			MW0409 (26-28)		0	PVC sch 40
			MW0409 (28-30)		0	
30		SAND: Dark yellowish brown fine to medium sand, wet	MW0409 (30-32)		0	
		SAND: Gray fine to medium sand, wet	MW0409 (32-34)		0	
			MW0409 (34-36)		0	
35		SILT: Gray clayey silt, nonplastic, cohesive, non-sticky, slightly moist, hard, trace gravel	MW0409 (36-37)		0	

WELL CONSTRUCTION LOG

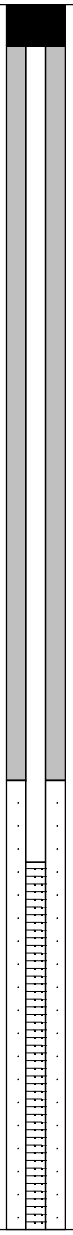
WELL NO.: **MW-0410-S2**

TOTAL DEPTH: **30.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/ENCORE (Allison Transmission)**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Cameron Mason**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**5/4/2004**	**COORDINATES:**	
DATE COMPLETED:	**5/6/2004**	**Northing:**	**1649824.1**
		Easting:	**168062.4**
		TOC Elevation:	**721.85**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)
0		CONCRETE: Concrete	MW0410 (0-2)		24
		SAND: Gray medium to coarse sand and gravel, dry	MW0410 (2-4)		18.8
		CLAY: Dark gray silty sandy clay, plastic, cohesive, sticky, moist, trace gravel	MW0410 (4-6)		12.4
5		CLAY: Dark yellowish brown silty sandy clay, plastic, cohesive, sticky, moist, trace gravel	MW0410 (6-8)		2.2
		SAND: Dark yellowish brown medium to coarse sand and gravel, dry	MW0410 (8-10)		0
10			MW0410 (10-12)		0
			MW0410 (12-14)		0
			MW0410 (14-16)		0
15		SAND: Dark yellowish brown fine to medium sand, slightly wet			
		SILT: Gray clayey silt, nonplastic, cohesive, non-sticky, moist, trace gravel, hard	MW0410 (16-18)		0
			MW0410 (18-20)		0
20			MW0410 (20-22)		0
			MW0410 (22-24)		86
		SAND: Gray medium to coarse sand and gravel, wet, odor	MW0410 (24-26)		110
25		SILT: Gray clayey silt, nonplastic, cohesive, non-sticky, moist, trace gravel, hard	MW0410 (26-28)		114
			MW0410 (28-30)		92
30					

WELL CONSTRUCTION DETAILS



bentonite-slurry

PVC sch 40

Flush Mount-Concrete

sand pack

PVC sch 40

WELL CONSTRUCTION LOG

WELL NO.: **MW-0411-S2**

TOTAL DEPTH: **28.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/ENCORE (Allison Transmission)**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Josh Dutton**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**5/7/2004**	**COORDINATES:**	
DATE COMPLETED:	**5/7/2004**	**Northing:**	**1649790.7**
		Easting:	**168319.9**
		TOC Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: Concrete	MW0411 (0-2)		28	
		SAND: Brown medium to coarse sand and gravel, dry	MW0411 (2-4)		36	bentonite-slurry; PVC sch 40; Flush Mount-Concrete
		SAND: Black medium to coarse sand and gravel, dry, odor, stained	MW0411 (4-6)		54	
5		SAND: Gray medium to coarse sand and gravel, moist, odor, stained	MW0411 (6-8)		12.4	
		CLAY: Brown silty sandy clay, plastic, cohesive, sticky, moist, trace gravel	MW0411 (8-10)		4.2	
10			MW0411 (10-12)		1.4	
		SAND: Dark yellowish brown medium to coarse sand and gravel, dry, wet at 16 feet	MW0411 (12-14)		0	
			MW0411 (14-16)		0	
15			MW0411 (16-18)		0	
		SILT: Gray clayey silt, nonplastic, cohesive, non-sticky, slightly moist, hard, trace gravel	MW0411 (18-20)		0	
20			MW0411 (20-22)		0	
			MW0411 (22-24)		54	sand pack; PVC sch 40
		SAND: Gray fine to medium sand, wet, slight odor, stained	MW0411 (24-26)		72	
25			MW0411 (26-28)		48	
		SILT: Gray clayey silt, nonplastic, cohesive, non-sticky, slightly moist, hard, trace gravel				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0412-S2**

TOTAL DEPTH: **30.00**

PROJECT INFORMATION

PROJECT: **GM/ENCORE (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **Tim Yates**

DATE STARTED: **5/4/2004**

DATE COMPLETED: **5/7/2004**

DRILLING INFORMATION

DRILLING CO.: **EFS**

DRILLER: **Cameron Mason**

DRILLING METHOD: **Geoprobe**

COORDINATES:

Northing: **1649814.1**

Easting: **168204.5**

TOC Elevation: **721.85**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: Concrete	MW0412 (0-2)		182	bentonite-slurry
		SAND: Dark gray medium to coarse sand and gravel, very moist, strong odor, stained	MW0412 (2-4)		56	PVC sch 40
						Flush Mount-Concrete
		CLAY: Dark gray silty sandy clay, plastic, cohesive, sticky, moist, trace gravel, slight odor	MW0412 (4-6)		12.4	
5		CLAY: Dark yellowish brown silty sandy clay, plastic, cohesive, sticky, moist, with gravel	MW0412 (6-8)		3.2	
		SAND: Dark yellowish brown medium to coarse sand and gravel, dry	MW0412 (8-10)		2.6	
10			MW0412 (10-12)		0.4	
			MW0412 (12-14)		0	
		SAND: Dark yellowish brown fine to medium sand, slightly wet	MW0412 (14-16)		0	
15		SAND: Dark yellowish brown medium to coarse sand and gravel, wet	MW0412 (16-18)		0	
		SILT: Gray clayey silt, nonplastic, cohesive, non-sticky, slightly moist, trace gravel	MW0412 (18-20)		0	sand pack
20			MW0412 (20-22)		0	PVC sch 40
			MW0412 (22-24)		56	
		SAND: Dark gray medium to coarse sand and gravel, wet, odor, stained	MW0412 (24-26)		98	
25			MW0412 (26-28)		102	
			MW0412 (28-30)		88	
30		SILT: Gray clayey silt, nonplastic, cohesive, non-sticky, slightly moist, trace gravel				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0413-S2**

TOTAL DEPTH: **24.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/ENCORE (Allison Transmission)**	DRILLING CO.:	**EFS**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Josh Dutton**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**5/5/2004**	**COORDINATES:**	
DATE COMPLETED:	**5/7/2004**	**Northing:**	**1650277.4**
		Easting:	**167611.5**
		TOC Elevation:	**720.44**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: Concrete	MW0413 (0-2)		0	bentonite-slurry
		SAND: Dark yellowish brown medium to coarse sand and gravel, dry	MW0413 (2-4)		0	PVC sch 40
						Flush Mount-Concrete
			MW0413 (4-6)		0	
5			MW0413 (6-8)		0	
			MW0413 (8-10)		0	
10			MW0413 (10-12)		0	sand pack
			MW0413 (12-14)		18.8	PVC sch 40
		SAND: Black medium to coarse sand and gravel, dry, odor, stained	MW0413 (14-16)		126	
15		SAND: Black fine to medium sand, moist, odor, stained	MW0413 (16-18)		82	
		SAND: Gray fine to medium sand, moist, odor, greasy feel	MW0413 (18-20)		60	
20		SAND: Gray medium to coarse sand and gravel, wet, odor	MW0413 (20-22)		58	
		SILT: Gray clayey silt, nonplastic, cohesive, non-sticky, slightly moist, trace gravel	MW0413 (22-24)		0	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0414-S2A**

TOTAL DEPTH: **40.00**

PROJECT INFORMATION

PROJECT: **GM/ENCORE (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **Tim Yates**

DATE STARTED: **12/27/2004**

DATE COMPLETED: **12/29/2004**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Jim Robinson**

DRILLING METHOD: **HOLLOW STEM AUGER**

COORDINATES:

Northing: **1649988.6**

Easting: **168934.1**

TOC Elevation: **719.67**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE	MW-0414-S2A-01		53.9	PVC sch 40 Flush Mount-Concrete
		SAND AND GRAVEL: dark yellowish brown medium to coarse SAND and GRAVEL, dry sub-rounded, poorly graded	MW-0414-S2A-02		42.3	bentonite-slurry
			MW-0414-S2A-03		37.5	
5		CLAY: brown silty sandy CLAY, slightly plastic, slightly cohesive, slightly sticky, moist trace gravel	MW-0414-S2A-04		7.8	
		SAND AND GRAVEL: dark yellowish brown medium to coarse SAND and GRAVEL, dry sub-rounded, poorly graded	MW-0414-S2A-05		22.2	
10			MW-0414-S2A-06		4.5	
		CLAY AND SILT: dark gray CLAYEY SILT, non-plastic, cohesive, non-sticky, hard, dry, trace gravel	MW-0414-S2A-07		4.3	
			MW-0414-S2A-08		7.1	
15			MW-0414-S2A-09		1.2	
			MW-0414-S2A-10		0.8	
20		SAND AND GRAVEL: light grayish brown medium to coarse SAND and GRAVEL, wet strong odor from 36-38'	MW-0414-S2A-11		1.9	
			MW-0414-S2A-12		1.6	
			MW-0414-S2A-17		6.5	
			MW-0414-S2A-13		2.5	
25			MW-0414-S2A-14		0.9	bentonite-pellets
			MW-0414-S2A-15		1.3	sand pack
30			MW-0414-S2A-16		0.6	PVC sch 40
			MW-0414-S2A-18		10.1	
35			MW-0414-S2A-19		318	
		CLAYEY SILT: dark gray clayey SILT, non-plastic, cohesive, non-sticky, hard dry, trace gravel	MW-0414-S2A-20		44.7	
40						

WELL CONSTRUCTION LOG

WELL NO.: **MW-0414-S3**

TOTAL DEPTH: **43.00**

PROJECT INFORMATION

PROJECT: **GM/ENCORE (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **Tim Yates**

DATE STARTED: **12/27/2004**

DATE COMPLETED: **12/29/2004**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Jim Robinson**

DRILLING METHOD: **HOLLOW STEM AUGER**

COORDINATES:

Northing: **1649986.7**

Easting: **168934.1**

TOC Elevation: **719.58**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE	MW-0414-S3-01		53.9	Flush Mount-Concrete PVC sch 40 bentonite-slurry
		SAND AND GRAVEL: dark yellowish brown medium to coarse SAND and GRAVEL, dry sub-rounded, poorly graded	MW-0414-S3-02		42.3	
5			MW-0414-S3-03		37.5	
		CLAY: brown silty sandy CLAY, slightly plastic, slightly cohesive, slightly sticky, moist, trace gravel	MW-0414-S3-04		7.8	
			MW-0414-S3-05		22.2	
10		SAND AND GRAVEL: dark yellowish brown medium to coarse SAND and GRAVEL, dry sub-rounded, poorly graded	MW-0414-S3-06		4.5	
			MW-0414-S3-07		4.3	
		CLAYEY SILT: dark gray clayey SILT, non-plastic, cohesive non-sticky, hard, trace gravel	MW-0414-S3-08		7.1	
15			MW-0414-S3-09		1.2	
			MW-0414-S3-10		0.8	
20		SAND AND GRAVEL: light grayish brown medium to coarse SAND and GRAVEL, wet strong odor from 36-38'	MW-0414-S3-11		1.9	
			MW-0414-S3-12		1.6	
25			MW-0414-S3-13		2.5	
			MW-0414-S3-14		0.9	
			MW-0414-S3-15		1.3	
30		SAND AND GRAVEL: light grayish brown medium to coarse SAND and GRAVEL, wet, (negative Sudan IV)	MW-0414-S3-16		0	
			MW-0414-S3-17		0	
		SILTY CLAY: dark gray SILTY CLAY, very firm, cohesive, non-plastic, not sticky, dry	MW-0414-S3-18		0	
35		SAND: light gray fine to medium SAND	MW-0414-S3-19		54	
		SILTY CLAY: light gray SILTY CLAY	MW-0414-S3-20		NM	
40		SAND: light gray medium to coarse SAND	MW-0414-S3-21		492.8	
		SILTY CLAY: light gray SILTY CLAY with coarse sand, moist, extremely firm				
		SAND AND GRAVEL: coarse SAND and GRAVEL, large gravel				
		SILTY CLAY: gray SILTY CLAY, DNAPL on top of clay, (positive Sudan IV)				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0416-S2A**

TOTAL DEPTH: **30.00**

PROJECT INFORMATION

PROJECT: **GM/ENCORE (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **Matt Johnston**

DATE STARTED: **12/30/2004**

DATE COMPLETED: **12/30/2004**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Shannon**

DRILLING METHOD: **HOLLOW STEM AUGER**

COORDINATES:

Northing: **1650025**

Easting: **168702.4**

TOC Elevation: **719.71**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE	MW-0416-S2A-01		0	Flush Mount-Concrete
		SAND: SAND (SW), poorly sorted sand and gravel, loose, dry	MW-0416-S2A-02		7.7	PVC bentonite-slurry
5		CLAY: dark brown silty sandy CLAY with trace gravel, slightly moist, slightly plastic, soft to slightly stiff	MW-0416-S2A-03		3.1	
			MW-0416-S2A-04		1.6	
		SAND: SAND (SW), poorly sorted sand with some gravel, loose, dry	MW-0416-S2A-05		1.0	
10			MW-0416-S2A-06		11.0	
		SILTY CLAY: gray stiff SILTY CLAY with trace sand and gravel, slightly moist, slightly plastic	MW-0416-S2A-07		0	
			MW-0416-S2A-08		0	
15			MW-0416-S2A-09		0	bentonite-pellets
			MW-0416-S2A-10		11.3	sand pack
		SAND AND GRAVEL: wet SAND and GRAVEL, loose poorly sorted, fine to coarse grained				
20			MW-0416-S2A-11		0	PVC sch 40
			MW-0416-S2A-12		0	
			MW-0416-S2A-13		0	
25			MW-0416-S2A-14		0	
		SILTY CLAY: gray, stiff SILTY CLAY, with trace sand and gravel, slightly plastic, slightly moist	MW-0416-S2A-15		0	
30						

WELL CONSTRUCTION LOG

WELL NO.: **MW-0417-S3**

TOTAL DEPTH: **54.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/ENCORE (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**not listed**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**HOLLOW STEM AUGER**
DATE STARTED:	**10/15/2004**	**COORDINATES:**	
DATE COMPLETED:	**10/15/2004**	**Northing:**	**1649926.6**
		Easting:	**168755.7**
		TOC Elevation:	**719.47**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CLAY: sandy silty CLAY, soft, friable, trace gravel, 10 YR 4/3, brown				Flush Mount-Concrete; PVC sch 40; galvanized steel; bentonite-slurry
5						
10		SAND AND GRAVEL: SAND and GRAVEL, loose, dry well graded, 10 YR4/6, dark yellowish brown (small 2" wet seam @13')				
15		SILTY CLAY: SILTY CLAY, friable, dry, varying amounts of silt and clay, trace gravel				
20		SILTY CLAY: stiff SILTY CLAY till, dry slightly plastic, trace gravel (very stiff)				
25						
30						
35		SAND: gray medium to coarse SAND with gravel, wet				
40		CLAYEY SILT: dark gray CLAYEY SILT, non-plastic, cohesive, non-sticky, moist, hard				bentonite-pellets; sand pack
45		SAND: dark gray medium to coarse SAND with gravel, wet				PVC sch 40
50		CLAYEY SILT: dark gray CLAYEY SILT, non-plastic, cohesive, non-sticky, moist, hard				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0417-S4**

TOTAL DEPTH: **110.00**

PROJECT INFORMATION

PROJECT: **GM/ENCORE (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **Tim Yates**

DATE STARTED: **1/12/2005**

DATE COMPLETED: **1/14/2005**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Jim Robinson**

DRILLING METHOD: **HOLLOW STEM AUGER**

COORDINATES:

Northing: **1649923.3**

Easting: **168757**

TOC Elevation: **719.01**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: TOPSOIL	MW-0417-S4-01		0	Flush Mount-Concrete
5		CLAY: brown silty sandy CLAY, plastic, cohesive, sticky, moist, trace gravel	MW-0417-S4-02		4.2	PVC sch 40
			MW-0417-S4-03		6.1	bentonite-slurry
10		SAND: dark yellowish brown fine to medium SAND, dry	MW-0417-S4-04		21.4	
			MW-0417-S4-05		29.9	
			MW-0417-S4-06		41.8	
15			MW-0417-S4-08		62.4	
			MW-0417-S4-09		76.5	
20		CLAYEY SILT: gray CLAYEY SILT, non-plastic, cohesive, non-sticky, slightly moist, hard, trace gravel	MW-0417-S4-10		10.1	
			MW-0417-S4-11		4.6	
			MW-0417-S4-12	2.1		
25			MW-0417-S4-13		1.8	
			MW-0417-S4-14		0.6	
30			MW-0417-S4-15		0.7	
			MW-0417-S4-16		1.1	
35		SAND AND GRAVEL: gray medium to coarse, SAND and GRAVEL, wet	MW-0417-S4-17		22.7	
			MW-0417-S4-18		47.1	
			MW-0417-S4-19		62.3	
40		CLAYEY SILT: gray CLAYEY SILT, non-plastic, cohesive, non-sticky, slightly moist, hard, trace gravel	MW-0417-S4-20		4.7	
			MW-0417-S4-21		6.8	
			MW-0417-S4-23		**2.8**	
45						
50		SAND AND GRAVEL: gray medium to coarse SAND and GRAVEL, wet	MW-0417-S4-24		31.7	
			MW-0417-S4-25		47.5	
			MW-0417-S4-26		7.6	
55		CLAYEY SILT: gray CLAYEY SILT, non-plastic, cohesive, non-sticky, slightly moist, hard, trace gravel	MW-0417-S4-27		NM	
			MW-0417-S4-28		NM	
			MW-0417-S4-29		NM	
60			MW-0417-S4-30		0.3	
			MW-0417-S4-31		0.4	
			MW-0417-S4-33		**0.1**	
65						
			MW-0417-S4-34		0.2	
70			MW-0417-S4-35		0.4	
			MW-0417-S4-36		1.7	
75			MW-0417-S4-37		0.6	
			MW-0417-S4-38		0.4	
			MW-0417-S4-39		0.1	
80			MW-0417-S4-40		0.2	
			MW-0417-S4-41		0.4	
85			MW-0417-S4-42		1.3	
			MW-0417-S4-43		1.5	
			MW-0417-S4-44		0.1	
90			MW-0417-S4-45		0	
			MW-0417-S4-46		0	
			MW-0417-S4-47		2.8	
95		SAND: gray fine to medium SAND, wet	**MW-0417-S4-49**		**2016**	sand pack
			MW-0417-S4-50		12.4	PVC sch 40
100		CLAYEY SILT: gray CLAYEY SILT, non-plastic, non-cohesive, non-sticky, dry, friable	MW-0417-S4-51		8.9	
			MW-0417-S4-52		7.1	
105			MW-0417-S4-53		6.9	
			MW-0417-S4-54		5.4	
110			MW-0417-S4-55		0.2	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0418-S2A**

TOTAL DEPTH: **29.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/ENCORE (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Bill Condon**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**HOLLOW STEM AUGER**
DATE STARTED:	**10/22/2004**	**COORDINATES:**	
DATE COMPLETED:	**10/22/2004**	**Northing:**	**1649941.3**
		Easting:	**168860.4**
		TOC Elevation:	**718.66**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: TOPSOIL				Flush Mount-Concrete
		CLAY: brown silty sandy CLAY, slightly plastic, slightly sticky, slightly moist, trace gravel				PVC sch 40 bentonite-pellets
5		SAND AND GRAVEL: grayish brown medium to coarse SAND and GRAVEL, dry				
10		CLAYEY SILT: gray CLAYEY SILT, non-plastic, cohesive, non-sticky, very slightly moist, hard				
15						sand pack
20						PVC
25		SAND: gray fine to medium SAND, wet				
		CLAYEY SILT: gray CLAYEY SILT, non-plastic, cohesive, non-sticky, very slightly moist, hard				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0418-S3**

TOTAL DEPTH: **52.00**

PROJECT INFORMATION

PROJECT: **GM/ENCORE (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **Tim Yates**

DATE STARTED: **1/11/2005**

DATE COMPLETED: **1/12/2005**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Jim Robinson**

DRILLING METHOD: **HOLLOW STEM AUGER**

COORDINATES:

Northing: **1649939.7**

Easting: **168872.4**

TOC Elevation: **719.17**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: TOPSOIL	MW-0418-S3-01		0	Flush Mount-Concrete
		CLAY: brown silty sandy CLAY, plastic, cohesive, sticky, moist, trace gravel	MW-0418-S3-02		1.2	PVC sch 40 bentonite-slurry
5			MW-0418-S3-03		1.3	
		SAND: dark yellowish brown fine to medium SAND, dry	MW-0418-S3-04		12.4	
			MW-0418-S3-05		17.8	
10		SAND AND GRAVEL: dark yellowish brown medium to coarse SAND and GRAVEL, dry	MW-0418-S3-06		21.4	
			MW-0418-S3-07		18.6	
		CLAYEY SILT: gray CLAYEY SILT, non-plastic, cohesive, non-sticky, slightly moist, trace gravel, hard	MW-0418-S3-08		3.7	
15			MW-0418-S3-09		4.3	
			MW-0418-S3-10		2.6	
20			MW-0418-S3-11		1.3	
			MW-0418-S3-12		5.9	
		SAND: gray fine to medium SAND, wet	MW-0418-S3-13		28.9	
25			MW-0418-S3-14		6.8	
		CLAYEY SILT: gray CLAYEY SILT, non-plastic, cohesive, non-sticky, slightly moist, trace gravel, hard	MW-0418-S3-15		7.1	
30			MW-0418-S3-16		4.2	
			MW-0418-S3-17		5.3	
		SAND AND GRAVEL: gray medium to coarse SAND and GRAVEL, wet	MW-0418-S3-18		32.1	
35			MW-0418-S3-19		10.4	
		CLAYEY SILT: gray CLAYEY SILT, non-plastic, cohesive, non-sticky, slightly moist, trace gravel, hard	MW-0418-S3-20		4.7	
40			MW-0418-S3-21		7.9	
		SAND AND GRAVEL: gray medium to coarse SAND and GRAVEL, wet	MW-0418-S3-22		19.6	sand pack
		CLAYEY SILT: gray CLAYEY SILT, non-plastic, cohesive, non-sticky, slightly moist, trace gravel, hard	MW-0418-S3-23		32.6	
45			MW-0418-S3-24		45.4	PVC sch 40
		SAND AND GRAVEL: gray medium to coarse SAND and GRAVEL, wet	MW-0418-S3-25		52.1	
50			MW-0418-S3-26		7.3	
		CLAYEY SILT: gray CLAYEY SILT, non-plastic, cohesive, non-sticky, slightly moist, trace gravel, hard				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0419-S2B**

TOTAL DEPTH: **40.00**

PROJECT INFORMATION

PROJECT: **GM/ENCORE (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **Tim Yates**

DATE STARTED: **1/10/2005**

DATE COMPLETED: **1/10/2005**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Jim Robinson**

DRILLING METHOD: **HOLLOW STEM AUGER**

COORDINATES:

Northing: **1649632.6**

Easting: **168653.2**

TOC Elevation: **719.31**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: TOPSOIL	MW-0419-S2B-01		0	Flush Mount-Concrete
		CLAY: brown silty sandy CLAY, plastic, cohesive, sticky, moist, trace gravel	MW-0419-S2B-02		2.1	PVC sch 40 bentonite-slurry
5			MW-0419-S2B-03		0.8	
			MW-0419-S2B-04		1.3	
		SAND AND GRAVEL: dark yellowish brown medium to coarse SAND and GRAVEL, dry, very moist to slightly wet @16'	MW-0419-S2B-05		3.6	
10			MW-0419-S2B-06		18.4	
			MW-0419-S2B-07		17.9	
15			MW-0419-S2B-08		12.4	
			MW-0419-S2B-09		27.2	
		SAND AND GRAVEL: gray medium to coarse SAND and GRAVEL, wet odor and staining (hydrocarbon)	MW-0419-S2B-10		128	
20			MW-0419-S2B-11		118	
			MW-0419-S2B-12		104	
25			MW-0419-S2B-13		89.1	
		CLAYEY SILT: gray CLAYEY SILT, non-plastic, cohesive, non-sticky, slightly moist, trace gravel, hard	MW-0419-S2B-14		12.6	
			MW-0419-S2B-15		3.1	
30			MW-0419-S2B-16		4.2	sand pack
						PVC sch 40
			MW-0419-S2B-17		21.6	
		SAND: dark yellowish brown fine to medium SAND, wet	MW-0419-S2B-18		18.5	
35		CLAYEY SILT: gray CLAYEY SILT, non-plastic, cohesive, non-sticky, slightly moist, trace gravel, hard	MW-0419-S2B-19		7.2	
			MW-0419-S2B-20		1.7	
40						

WELL CONSTRUCTION LOG

WELL NO.: **MW-0419-S3**

TOTAL DEPTH: **56.00**

PROJECT INFORMATION

PROJECT: **GM/ENCORE (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **Tim Yates**

DATE STARTED: **10/12/2004**

DATE COMPLETED: **10/12/2004**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **not listed**

DRILLING METHOD: **HOLLOW STEM AUGER**

COORDINATES:

Northing: **1649633**

Easting: **168659.7**

TOC Elevation: **719.14**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		SAND AND GRAVEL: clayey SAND and GRAVEL, not plastic, 10 YR4/3, brown, slightly moist, with gravel	MW-0419-S3-01		0.9	Flush Mount-Concrete
			MW-0419-S3-02		0.8	PVC sch 40 bentonite-slurry
5			MW-0419-S3-03		3.3	
			MW-0419-S3-04		4.4	
		SAND AND GRAVEL: SAND and GRAVEL, 10 YR4/3, brown, loose, well graded, dry (more fines @10')	MW-0419-S3-05		3.7	
10			MW-0419-S3-06		4.9	
			MW-0419-S3-07		5.4	
15			MW-0419-S3-08		3.5	
		SAND AND GRAVEL: SAND and GRAVEL, 10 YR4/3, brown, loose, well graded, gray staining and odors, slightly more clay content, slightly moist	MW-0419-S3-09		3.5	
			MW-0419-S3-10		65.4	
20		SAND AND GRAVEL: SAND and GRAVEL, 10 YR4/3, brown, loose, well graded, dry	MW-0419-S3-11		46.3	
			MW-0419-S3-12		202	
25		SAND AND GRAVEL: SAND and GRAVEL, 10 YR4/3, brown, lose, well graded, dry, odor and staining wet @23'	MW-0419-S3-13		28.9	
			MW-0419-S3-14		3	
		SAND: SAND fine to medium grained, 10 YR5/6 dark yellowish brown, loose, wet, poorly graded	MW-0419-S3-15		4	
30			MW-0419-S3-16		5.1	
		SILTY CLAY: SILTY CLAY, slightly plastic, stiff, dry, till, trace gravel	MW-0419-S3-17		5.0	
35		SAND: fine to medium SAND, loose, wet, 10 YR4/6, dark yellowish brown	MW-0419-S3-18		3.4	
			MW-0419-S3-19		3.0	
		SAND: fine to medium sand, loose, wet, 10 YR4/6, dark yellowish brown, increased clay content, still sandy	MW-0419-S3-20		3.2	
40			MW-0419-S3-21		2.3	bentonite-pellets
		SAND: SAND, fine to medium, loose, very moist, 10 YR4/2	MW-0419-S3-22		1.9	PVC sand pack
45			MW-0419-S3-23		2.3	
		SILTY CLAY: SILTY CLAY till, stiff, slightly plastic, dry, trace gravel	MW-0419-S3-24		1.6	
			MW-0419-S3-25		5.6	
50		SAND: fine to medium sand loose, wet @ 45', 10 YR4/1, dark gray, poorly graded	MW-0419-S3-26		2.8	
		SAND AND GRAVEL: coarse SAND and GRAVEL, loose, wet, 10 YR 4/6, dark yellowish brown, well graded	MW-0419-S3-27		3.1	
55			MW-0419-S3-28		3.5	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0419-S3**

TOTAL DEPTH: **56.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/ENCORE (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**not listed**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**HOLLOW STEM AUGER**
DATE STARTED:	**10/12/2004**	**COORDINATES:**	
DATE COMPLETED:	**10/12/2004**	**Northing:**	**1649633**
		Easting:	**168659.7**
		TOC Elevation:	**719.14**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
		SILTY CLAY: SILTY CLAY till, stiff, slightly plastic, dry, trace gravel				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0420-S3**

TOTAL DEPTH: **56.00**

PROJECT INFORMATION

PROJECT: **GM/ENCORE (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **Tim Yates**

DATE STARTED: **10/13/2004**

DATE COMPLETED: **10/13/2004**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Allen Thomas**

DRILLING METHOD: **HOLLOW STEM AUGER**

COORDINATES:

Northing: **1649633.2**

Easting: **168727.6**

TOC Elevation: **718.81**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CLAY: sandy silty CLAY, soft 10 YR4/3, brown, SP, trace gravel	MW-0420-S3-01		3.2	Flush Mount-Concrete
			MW-0420-S3-02		4.2	PVC sch 40 bentonite-slurry
5			MW-0420-S3-03		3.7	
			MW-0420-S3-04		5.0	
		SAND AND GRAVEL: SAND and GRAVEL, loose, well graded, fine to coarse, dry (very moist to wet @ 19.5')	MW-0420-S3-05		4.9	
10			MW-0420-S3-06		3.2	
			MW-0420-S3-07		5.0	
15			MW-0420-S3-08		3.9	
			MW-0420-S3-09		2.2	
			MW-0420-S3-10		3.4	
20		SAND AND GRAVEL: SAND and GRAVEL, some gray to green staining with odor (wet @ 23')	MW-0420-S3-11		73.1	
			MW-0420-S3-12		73.4	
25		SAND AND GRAVEL: SAND and GRAVEL, loose, wet 10 YR4/6, dark yellowish brown, well graded	MW-0420-S3-13		4.1	
			MW-0420-S3-14		3.7	
		SILTY CLAY: 10 YR4/6, stiff SILTY CLAY till, dry trace sand and gravel	MW-0420-S3-15		4.0	
30			MW-0420-S3-16		1.1	
		SILTY CLAY: stiff SILTY CLAY till, dry, 10 YR4/1 dark gray	MW-0420-S3-17		3.6	
35			MW-0420-S3-18		3.1	
		SAND: fine to medium SAND, loose wet, 10 YR4/6, dark yellowish brown, poorly graded	MW-0420-S3-19		4.4	
			MW-0420-S3-20		6.4	
40		SILTY CLAY: stiff SILTY CLAY till, slightly moist, 10 YR4/1, dark gray, trace gravel	MW-0420-S3-21		5.4	bentonite-pellets
		SAND: loose fine to medium SAND, very moist to wet, poorly graded, 10 YR4/1, dark gray	MW-0420-S3-22		5.3	sand pack
45			MW-0420-S3-23		16.5	PVC sch 40
			MW-0420-S3-24		27.4	
			MW-0420-S3-25		19.3	
50		SILTY CLAY: stiff SILTY CLAY till, slightly moist, 10 YR4/1, dark gray , trace gravel	MW-0420-S3-26		18.9	
			MW-0420-S3-27		6.8	
		SAND: dark yellowish brown, medium to coarse SAND, wet	MW-0420-S3-28		3.9	
55						
		SILTY CLAY: stiff SILTY CLAY till, slightly moist, 10 YR4/1, dark gray, trace gravel				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0421-S3**

TOTAL DEPTH: **56.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/ENCORE (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**not listed**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**HOLLOW STEM AUGER**
DATE STARTED:	**10/14/2004**	**COORDINATES:**	
DATE COMPLETED:	**10/14/2004**	**Northing:**	**1649634.4**
		Easting:	**168814.4**
		TOC Elevation:	**718**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CLAY: sandy silty CLAY, soft slightly moist, 10 YR4/3, brown, trace gravel	MW-0421-S3-01		3.2	Flush Mount-Concrete
			MW-0421-S3-02		2.3	PVC sch 40 bentonite-slurry
5			MW-0421-S3-03		3.1	
			MW-0421-S3-04		1.3	
		CLAYEY SAND: CLAYEY SAND, slightly cohesive, slightly moist, fine to medium graded	MW-0421-S3-05		3.2	
10			MW-0421-S3-06		2.7	
		SAND AND GRAVEL: SAND and GRAVEL, loose, dry, well graded, 10 YR4/6, dark yellowish brown	MW-0421-S3-07		3.7	
			MW-0421-S3-08		4.1	
15			MW-0421-S3-09		4.7	
		SILTY SAND: SILTY SAND, fine sand, wet slightly cohesive, 10 YR4/6, dark yellowish brown	MW-0421-S3-10		3.9	
20			MW-0421-S3-11		6.9	
		SAND AND GRAVEL: SAND and GRAVEL, loose, dry, poorly graded 10 YR4/6, dark yellowish brown	MW-0421-S3-12		53.8	
		SAND AND GRAVEL: SAND and GRAVEL, some staining @ 22.5 - 23', odor, loose, still dark yellowish brown under staining, wet	MW-0421-S3-13		13.4	
25			MW-0421-S3-14		5.7	
			MW-0421-S3-15		7.3	
30			MW-0421-S3-16		7.3	
			MW-0421-S3-17		5.5	
35			MW-0421-S3-18		1.9	
		SILTY CLAY: stiff SILTY CLAY till, dry slightly plastic, 10 YR2/1 dark gray	MW-0421-S3-19		4.2	
			MW-0421-S3-20		4.1	
40			MW-0421-S3-21		4.2	bentonite-pellets
			MW-0421-S3-22		3.9	sand pack
45		SAND: fine to medium SAND, wet, loose, 10 YR4/6 dark yellowish brown	MW-0421-S3-23		3.1	PVC sch 40
			MW-0421-S3-24		4.5	
			MW-0421-S3-25		8.7	
50			MW-0421-S3-26		5.2	
			MW-0421-S3-27		6.8	
55		SILTY CLAY: stiff SILTY CLAY till, dry, slightly plastic, 10 YR2/1 dark gray	MW-0421-S3-28		1.5	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0423-S2A**

TOTAL DEPTH: **30.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/ENCORE (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon**
LOGGED BY:	**Matt Johnston**	DRILLING METHOD:	**HOLLOW STEM AUGER**
DATE STARTED:	**12/29/2004**	**COORDINATES:**	
DATE COMPLETED:	**12/30/2004**	**Northing:**	**1650185.2**
		Easting:	**168738.9**
		TOC Elevation:	**719.67**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE	MW-0423-S2A-01		4	Flush Mount-Concrete bentonite-slurry PVC sch 40
		SAND: SW-fine to coarse grained loose SAND, dry, with gravel	MW-0423-S2A-02		4.6	
			MW-0423-S2A-03		13.3	
5		CLAY: dark brown to gray silty sandy CLAY with trace gravel. SM, SP	MW-0423-S2A-04		0	
		SAND: SW-fine to coarse gained loose SAND, dry with more gravel	MW-0423-S2A-05		23.7	
10			MW-0423-S2A-06		23.5	
		SILTY CLAY: dark brown SILTY CLAY, SM, soft turns gray and very hard @ 12'	MW-0423-S2A-07		0	
			MW-0423-S2A-08		0	bentonite-pellets
15			MW-0423-S2A-09		0	sand pack PVC sch 40
			MW-0423-S2A-10		0	
20			MW-0423-S2A-11		0	
		SAND: gray fine to coarse SAND with trace gravel, wet, loose, some clay, slightly cohesive in places	MW-0423-S2A-12		0	
		SILTY CLAY: stiff gray SILTY CLAY, SM, SP, trace gravel	MW-0423-S2A-13		0	
25		SAND: fine to coarse SAND, wet, with trace gravel				
		SILTY CLAY: stiff gray SILTY CLAY, SM, SP, trace gravel	MW-0423-S2A-14		0	
			MW-0423-S2A-15		0	
30						

WELL CONSTRUCTION LOG

WELL NO.: **MW-0424-S2A**

TOTAL DEPTH: **32.00**

PROJECT INFORMATION

PROJECT: **GM/ENCORE (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **Mark Fisherkeller**

DATE STARTED: **12/29/2004**

DATE COMPLETED: **12/29/2004**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Jim Robinson**

DRILLING METHOD: **HOLLOW STEM AUGER**

COORDINATES:

Northing: **1650203.5**

Easting: **168856.5**

TOC Elevation: **719.71**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE	MW-0424-S2A-01		2.5	Flush Mount-Concrete PVC sch 40 bentonite-slurry
		SAND: SW-fine to coarse SAND, loose, with gravel, brown	MW-0424-S2A-02		0.2	
		CLAY: brown sandy silty CLAY, trace gravel, hard to firm	MW-0424-S2A-03		2.3	
5		SAND AND GRAVEL: SAND and GRAVEL, brown, loose, trace fines, dry	MW-0424-S2A-04		2.5	
			MW-0424-S2A-05		10	
10		SILTY CLAY: brown SILTY CLAY, moist, trace sand and gravel, SP, soft to firm, @13.5' becomes gray and very hard	MW-0424-S2A-06		6.3	
			MW-0424-S2A-07		0	
			MW-0424-S2A-08		0	
15						bentonite-pellets
			MW-0424-S2A-09		0	
			MW-0424-S2A-10		0	natural formation
20			MW-0424-S2A-11		0	
						PVC sch 40
			MW-0424-S2A-12		0	
		CLAYEY SAND: gray CLAYEY SAND, wet slightly cohesive, fine to coarse	MW-0424-S2A-13		0	
25		SILTY CLAY: gray SILTY CLAY, SM, trace sand and gravel, SP	MW-0424-S2A-14		0	
		CLAYEY SAND: gray CLAYEY SAND, wet, slightly cohesive, fine to coarse	MW-0424-S2A-15		0	
30		SILTY CLAY: gray SILTY CLAY, SM, trace sand and gravel, SP				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0425-S2B**

TOTAL DEPTH: **30.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/ENCORE (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**HOLLOW STEM AUGER**
DATE STARTED:	**12/29/2004**	**COORDINATES:**	
DATE COMPLETED:	**12/20/2004**	**Northing:**	**1650111.9**
		Easting:	**169002.3**
		TOC Elevation:	**719.79**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE	MW-0425-S2B-01		0	Flush Mount
		SAND AND GRAVEL: dark yellowish brown medium to coarse SAND and GRAVEL	MW-0425-S2B-02		0	PVC sch 40 bentonite-slurry
			MW-0425-S2B-03		0.6	
5			MW-0425-S2B-04		1.5	
		CLAY: brown silty sandy CLAY, plastic, cohesive, sticky, moist, trace gravel	MW-0425-S2B-05		1.2	
		SAND AND GRAVEL: dark yellowish brown medium to coarse SAND and GRAVEL				
10		SILTY CLAY	MW-0425-S2B-06		0	
			MW-0425-S2B-07		0	
			MW-0425-S2B-08		0	
15			MW-0425-S2B-09		0	
			MW-0425-S2B-10		0	sand pack PVC sch 40
20		SAND: well graded SAND with silt, trace clay and gravel, gray, saturated, loose (SM)	MW-0425-S2B-11		0	
		SAND: SAND, increased gravel - 10%, still well graded material	MW-0425-S2B-12		0	
		SAND: SAND increase in silt and clay (trace silt and clay after 23')	MW-0425-S2B-13		0	
25		SAND AND GRAVEL: well graded SAND and GRAVEL	MW-0425-S2B-14		0	
		SILTY CLAY: gray SILTY CLAY, extremely hard, non-plastic, trace gravel	MW-0425-S2B-15		0	
30						

WELL CONSTRUCTION LOG

WELL NO.: **MW-0426-S2A**

TOTAL DEPTH: **40.00**

PROJECT INFORMATION

PROJECT: **GM/ENCORE (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **Tim Yates**

DATE STARTED: **1/10/2005**

DATE COMPLETED: **1/10/2005**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Jim Robinson**

DRILLING METHOD: **HOLLOW STEM AUGER**

COORDINATES:

Northing: **1649933.8**

Easting: **168953**

TOC Elevation: **719.27**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: TOPSOIL	MW-0426-S2A-01		0	Flush Mount-Concrete; PVC sch 40
		CLAY: brown silty sandy CLAY, plastic, cohesive, sticky, moist, trace gravel	MW-0426-S2A-02		0.6	bentonite-slurry
5		SAND AND GRAVEL: dark yellowish brown medium to coarse SAND and GRAVEL, dry	MW-0426-S2A-03		11.2	
			MW-0426-S2A-04		18.1	
			MW-0426-S2A-05		22.7	
10		CLAYEY SILT: gray CLAYEY SILT, non-plastic, cohesive, non-sticky, slightly moist, trace gravel, hard	MW-0426-S2A-06		8.3	
			MW-0426-S2A-07		5.2	
15			MW-0426-S2A-08		2.1	
			MW-0426-S2A-09		1.4	
			MW-0426-S2A-10		1.7	
20			MW-0426-S2A-11		0.6	
			MW-0426-S2A-12		0.2	
25			MW-0426-S2A-13		1.1	
			MW-0426-S2A-14		1.9	
			MW-0426-S2A-15		4.3	
30			MW-0426-S2A-16		5.2	sand pack
		SAND AND GRAVEL: light gray medium to coarse SAND and GRAVEL, wet	MW-0426-S2A-17		35.7	PVC sch 40
35			MW-0426-S2A-18		52.6	
		CLAYEY SILT: gray CLAYEY SILT, non-plastic, cohesive, non-sticky, slightly moist, trace gravel, hard	MW-0426-S2A-19		12.2	
			MW-0426-S2A-20		4.8	
40						

WELL CONSTRUCTION LOG

WELL NO.: **MW-0427-S2B**

TOTAL DEPTH: **39.00**

PROJECT INFORMATION

PROJECT: **GM/ENCORE (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **Tim Yates**

DATE STARTED: **1/4/2005**

DATE COMPLETED: **1/4/2005**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Jim Robinson**

DRILLING METHOD: **HOLLOW STEM AUGER**

COORDINATES:

Northing: **1649831**

Easting: **168807.7**

TOC Elevation: **718.47**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: TOPSOIL	MW-0427-S2B-01		0	Flush Mount-Concrete; PVC sch 40
		CLAY: brown silty sandy CLAY, slightly plastic, cohesive, slightly sticky, moist, trace gravel	MW-0427-S2B-02		1.2	bentonite-slurry
			MW-0427-S2B-03		0.9	
5		SAND AND GRAVEL: dark yellowish brown medium to coarse SAND and GRAVEL, dry	MW-0427-S2B-04		12.4	
			MW-0427-S2B-05		14.1	
10			MW-0427-S2B-06		21.7	
			MW-0427-S2B-07		22.4	
			MW-0427-S2B-08		18.3	
15		CLAYEY SILT: gray CLAYEY SILT, non-plastic, cohesive, non-sticky, slightly moist, hard	MW-0427-S2B-09		31.2	
			MW-0427-S2B-10		2.1	
20			MW-0427-S2B-11		0.6	
			MW-0427-S2B-12		1.1	
			MW-0427-S2B-13		1.8	
25			MW-0427-S2B-14		2.4	sand pack
			MW-0427-S2B-15		0.5	PVC sch 40
30		SAND: light gay medium to coarse SAND with trace gravel, wet	MW-0427-S2B-16		37.6	
			MW-0427-S2B-17		42.5	
35			MW-0427-S2B-18		39.1	
		CLAYEY SILT: gray CLAYEY SILT, non-plastic, cohesive, non-sticky, slightly moist, hard	MW-0427-S2B-19		5.2	
			MW-0427-S2B-20		3.3	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0522-S2A**

TOTAL DEPTH: **28.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Mini-Sonic**
DATE STARTED:	**10/26/2005 8:30:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**10/26/2005 8:30:00 AM**	**Northing:**	**1648579.3**
		Easting:	**169207.9**
		TOC Elevation:	**720.74**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: Topsoil/Asphalt/Gravel	MW-0522-S2A-01		3.6	Unknown bent-cement grout PVC sch 40
		CLAY: Brown, silty, sandy CLAY, plastic, coh., moist, tr. gravel	MW-0522-S2A-02		2.9	
			MW-0522-S2A-03		3.1	
5		SAND: SAND dark yellowish brown fine-med sand grains w/ tr. gravel and tr. pebbles, dry subrounded, poorly graded,	MW-0522-S2A-04		3.4	
			MW-0522-S2A-05		3.4	
10			MW-0522-S2A-06		3.9	
			MW-0522-S2A-07		3.6	
			MW-0522-S2A-08		3.7	
15			MW-0522-S2A-09		6.7	sand pack
			MW-0522-S2A-10		5.4	PVC sch 40
20			MW-0522-S2A-11		4.9	
			MW-0522-S2A-12		5.4	
			MW-0522-S2A-13		5.6	
25			MW-0522-S2A-14		6.1	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0522-S2B**

TOTAL DEPTH: **44.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**M. Griles**	DRILLING METHOD:	**Mini-Sonic**
DATE STARTED:	**10/25/2005**	**COORDINATES:**	
DATE COMPLETED:	**10/25/2005**	**Northing:**	**1648581**
		Easting:	**169203.2**
		TOC Elevation:	**719.95**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: Topsoil/Asphalt/Gravel	MW-0522-S2B-01		3.6	PVC sch 40
		CLAY: Brown, silty, sandy CLAY, plastic, coh., moist, tr. gravel	MW-0522-S2B-02		2.9	bent-cement grout
5		SAND: SAND dark yellowish brown fine-med sand grains w/ tr. gravel and tr. pebbles, dry subrounded, poorly graded,	MW-0522-S2B-03		3.1	
			MW-0522-S2B-04		3.4	
			MW-0522-S2B-05		3.4	
10			MW-0522-S2B-06		3.9	
			MW-0522-S2B-07		3.6	
15			MW-0522-S2B-08		3.7	
			MW-0522-S2B-09		6.7	
			MW-0522-S2B-10		5.4	
20			MW-0522-S2B-11		4.9	
			MW-0522-S2B-12		5.4	
25			MW-0522-S2B-13		5.6	
			MW-0522-S2B-14		6.1	
			MW-0522-S2B-15		5.6	
30		CLAY: Gray, silty sandy CLAY TILL w/ trace gravel, pebbles, & sand, coh., competent, non-plastic	MW-0522-S2B-16		5.9	bentonite-pellets
			MW-0522-S2B-17		5.7	sand pack
35		SAND: SAND dark yellowish brown med-coarse w/ an internal of find sand @ 40.5-42.0 wet, poorly graded	MW-0522-S2B-18		4.2	PVC sch 40
			MW-0522-S2B-19		5.7	
			MW-0522-S2B-20		5.6	
40			MW-0522-S2B-21		6.4	
		CLAY: Gray silty sandy CLAY till w/ tr. gravel pebbles & sand, coh., competent, non-plastic	MW-0522-S2B-22		5.7	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0523-S2**

TOTAL DEPTH: **44.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Mini-Sonic**
DATE STARTED:	**10/26/2005 11:33:00 AM**	**COORDINATES:**	
DATE COMPLETED:		**Northing:**	**1648358.9**
		Easting:	**168558**
		TOC Elevation:	**721.87**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: TOPSOIL	MW-0523-S2-01		0.0	Unknown
		CLAY: Brown silty sandy CLAY, sl. plastic, coh., sl. sticky, moist	MW-0523-S2-02		0.0	PVC sch 40
			MW-0523-S2-03		0.0	bent-cement grout
5		SAND: Dark yellowish brown med. to coarse SAND & gravel, subrounded, poorly graded	MW-0523-S2-04		1.1	
			MW-0523-S2-05		2.3	
10			MW-0523-S2-06		0.4	
			MW-0523-S2-07		4.6	
15			MW-0523-S2-08		5.2	
			MW-0523-S2-09		3.9	
			MW-0523-S2-10		0.8	
20			MW-0523-S2-11		1.9	
			MW-0523-S2-12		12.4	
25			MW-0523-S2-13		16.7	sand pack
			MW-0523-S2-14		13.2	PVC sch 40
			MW-0523-S2-15		14.1	
30		SAND: Dark yellowish brown med. to coarse SAND & gravel, wet	MW-0523-S2-16		8.7	
			MW-0523-S2-17		10.8	
35			MW-0523-S2-18		19.7	
			MW-0523-S2-19		25.6	
			MW-0523-S2-20		20.9	
40		SILT: Gray clayey SILT, nonplastic, coh., non-sticky, moist, trace gravel, hard	MW-0523-S2-21		5.2	
			MW-0523-S2-22		6.1	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0524-S2A**

TOTAL DEPTH: **27.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**M. Griles**	DRILLING METHOD:	
DATE STARTED:	**10/20/2005 2:20:00 PM**	**COORDINATES:**	
DATE COMPLETED:	**10/20/2005 4:50:00 PM**	**Northing:**	**1648799.6**
		Easting:	**169304.5**
		TOC Elevation:	**720.09**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: TOPSOIL/Slag/Gravel	MW-0524-S2A-01		4.9	PVC sch 40
		CLAY: Brown silty sandy CLAY sl. moist, coh., tr. gravel				bent-cement grout
			MW-0524-S2A-02		2.7	
			MW-0524-S2A-03		2.1	
5		SAND: Dark yellowish brown, med-coarse SAND & gravel dry, subrounded, poorly graded, @ 14.5-15.5 interval of increased grain size (i.e. cobbles), increasingly well graded w/ water @ 23.0 DNAPL neg	MW-0524-S2A-04		3.1	
			MW-0524-S2A-05		4.1	
10			MW-0524-S2A-06		11.6	
			MW-0524-S2A-07		3.4	
			MW-0524-S2A-08		9.3	
15						sand pack
			MW-0524-S2A-09		12.3	
						PVC sch 40
			MW-0524-S2A-10		5.6	
20			MW-0524-S2A-11		0.0	
			MW-0524-S2A-12		0.0	
			MW-0524-S2A-13		3.4	
25		CLAY: Gray, silty, sand CLAY w/ tr. gravel, sand & pebbles., coh., competent, compact				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0524-S2B**

TOTAL DEPTH: **42.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**M. Griles**	DRILLING METHOD:	
DATE STARTED:	**10/20/2005 11:30:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**10/20/2005**	**Northing:**	**1648796.8**
		Easting:	**169306.9**
		TOC Elevation:	**720.02**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: TOPSOIL/Slag/Gravel	MW-0524-S2B-01		4.9	PVC sch 40 bentonite-pellets
		CLAY: Brown silty sandy CLAY sl. moist, coh., tr. gravel	MW-0524-S2B-02		2.7	
			MW-0524-S2B-03		2.1	
5		SAND: Dark yellowish brown, med-coarse SAND & gravel dry, subrounded, poorly graded, @ 14.5-15.5 interval of increased grain size (i.e. cobbles), increasingly well graded w/ water @ 23.0 DNAPL neg	MW-0524-S2B-04		3.1	
			MW-0524-S2B-05		4.1	
10			MW-0524-S2B-06		11.6	
			MW-0524-S2B-07		3.4	
15			MW-0524-S2B-08		9.3	
			MW-0524-S2B-09		12.3	
			MW-0524-S2B-10		5.6	
20			MW-0524-S2B-11		0.0	
			MW-0524-S2B-12		0.0	
25			MW-0524-S2B-13		3.4	
		CLAY: Gray, silty, sand CLAY w/ tr. gravel, sand & pebbles., coh., competent, compact	MW-0524-S2B-14		3.1	
			MW-0524-S2B-15		3.1	
30			MW-0524-S2B-16		3.6	sand pack
			MW-0524-S2B-17		2.1	PVC sch 40
35			MW-0524-S2B-18		2.8	
		SAND: Dark yellowish brown, med-coarse SAND & gravel, moist-wet	MW-0524-S2B-19		3.1	
			MW-0524-S2B-20		6.2	
40		CLAY: Gray silty sandy CLAY w/ tr. gravel, sand & pebbles, coh., competent, non-plastic	MW-0524-S2B-21		3.0	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0525-S2**

TOTAL DEPTH: **40.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Mini-Sonic**
DATE STARTED:	**10/27/2005 8:51:00 AM**	**COORDINATES:**	
DATE COMPLETED:		**Northing:**	**1649101.2**
		Easting:	**168843.3**
		TOC Elevation:	**719.95**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: TOPSOIL	MW-0525-S2-01		0.0	Unknown
		CLAY: Dark brown silty sandy CLAY, sl. plastic, coh., sl. sticky, moist, trace gravel	MW-0525-S2-02		0.1	PVC sch 40
			MW-0525-S2-03		1.2	bent-cement grout
5		SAND: Dark yellowish brown med. to coarse SAND & gravel, dry, sub-rounded, poorly graded, sl. moist @25.0 ft	MW-0525-S2-04		0.8	
			MW-0525-S2-05		0.7	
10			MW-0525-S2-06		2.1	
			MW-0525-S2-07		2.3	
			MW-0525-S2-08		1.4	
15			MW-0525-S2-09		1.1	sand pack
			MW-0525-S2-10		0.9	PVC sch 40
20			MW-0525-S2-11		1.8	
			MW-0525-S2-12		2.2	
			MW-0525-S2-13		2.7	
25		SILT: Gray clayey SILT, nonplastic, coh., non-sticky, moist, firm, trace gravel	MW-0525-S2-14		1.8	
		SAND: Gray find to med., SAND, wet; sand coarser @33.0 ft - med. to coarse w/ gravel	MW-0525-S2-15		3.4	
30			MW-0525-S2-16		3.6	
			MW-0525-S2-17		3.9	
			MW-0525-S2-18		0.4	
35		SILT: Gray clayey SILT	MW-0525-S2-19		2.4	
			MW-0525-S2-20		1.2	
40						

WELL CONSTRUCTION LOG

WELL NO.: **MW-0526-S2A**

TOTAL DEPTH: **31.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**M. Griles**	DRILLING METHOD:	**Mini-Sonic**
DATE STARTED:	**10/25/2005 7:45:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**10/25/2005 9:04:00 AM**	**Northing:**	
		Easting:	
		TOC Elevation: 720.11	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: TOPSOIL	MW-0526-S2A-01		5.4	PVC sch 40
		CLAY: CLAY Brown silty sandy, plastic, coh., sticky, moist, tr. gravel				bent-cement grout
			MW-0526-S2A-02		6.4	
			MW-0526-S2A-03		6.6	
5						
		SAND: Dark yellowish brown med-coarse SAND, pebbles, & gravel, dry, subrounded, well graded	MW-0526-S2A-04		7.6	
			MW-0526-S2A-05		5.4	
10			MW-0526-S2A-06		3.6	
			MW-0526-S2A-07		3.4	
			MW-0526-S2A-08		3.1	
15						
			MW-0526-S2A-09		3.1	
			MW-0526-S2A-10		3.2	
						sand pack
20			MW-0526-S2A-11		4.1	
						PVC sch 40
			MW-0526-S2A-12		217	
		SAND: Gray med-coarse grained SAND well graded dry-sl. moist, odor & staining DNAPL pos., water @ 27.0 ft	MW-0526-S2A-13		340	
25			MW-0526-S2A-14		362	
			MW-0526-S2A-15		533	
30		CLAY: Gray silty sandy CLAY till w/ tr. gravel, pebbles, & sand, coh., competent, non-plastic				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0526-S2B**

TOTAL DEPTH: **44.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Justin**
LOGGED BY:	**M. Griles**	DRILLING METHOD:	**Mini-Sonic**
DATE STARTED:	**10/21/2005 10:30:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**10/24/2005**	**Northing:**	**1648704.2**
		Easting:	**168590.9**
		TOC Elevation:	**720.74**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: TOPSOIL	MW-0526-S2B-01		5.4	PVC sch 40
		CLAY: CLAY Brown silty sandy, plastic, coh., sticky, moist, tr. gravel	MW-0526-S2B-02		6.4	bent-cement grout
5			MW-0526-S2B-03		6.6	
		SAND: Dark yellowish brown med-coarse SAND, pebbles, & gravel, dry, subrounded, well graded	MW-0526-S2B-04		7.6	
			MW-0526-S2B-05		5.4	
10			MW-0526-S2B-06		3.6	
			MW-0526-S2B-07		3.4	
15			MW-0526-S2B-08		3.1	
			MW-0526-S2B-09		3.1	
			MW-0526-S2B-10		3.2	
20			MW-0526-S2B-11		4.1	
			MW-0526-S2B-12		217	
25		SAND: Gray med-coarse grained SAND well graded dry-sl. moist, odor & staining DNAPL pos., water @ 27.0 ft	MW-0526-S2B-13		340	
			MW-0526-S2B-14		362	
			MW-0526-S2B-15		533	
30			MW-0526-S2B-16		35.2	bentonite-pellets
		CLAY: Gray silty sandy CLAY till w/ tr. gravel, pebbles, & sand, coh., competent, non-plastic	MW-0526-S2B-17		8.0	sand pack
		SAND: Dark yellowish brown med-fine grained SAND, poorly graded, wet				PVC sch 40
35			MW-0526-S2B-18		4.1	
			MW-0526-S2B-19		4.4	
			MW-0526-S2B-20		4.2	
40			MW-0526-S2B-21		4.1	
		CLAY: Gray silty sandy CLAY till w/ tr. gravel, pebbles, & sand, coh., competent, non-plastic	MW-0526-S2B-22		4.6	

WELL CONSTRUCTION LOG

WELL NO.: **MW-S2A-0501**

TOTAL DEPTH: **21.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**M. Griles**	DRILLING METHOD:	**minisonic**
DATE STARTED:	**8/31/2008**	**COORDINATES:**	
DATE COMPLETED:	**8/31/2008**	**Northing:**	
		Easting:	
		TOC Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT and gravel fill; 10 YR 4/2, Silty sandy CLAY, w/ tr. gravel				Unknown
		SP: 10 YR 4/6 SAND w/ pebbles, gravel, and cobbles, dry, poorly graded				PVC sch 40 bentonite slurry
5						
						sand pack
10						PVC sch 40
15						
		CL: 10 YR 5/1 CLAY, silty, hard, nonplastic, trace gravel in till matrix				
20						

WELL CONSTRUCTION LOG

WELL NO.: **MW-S2B-0501**

TOTAL DEPTH: **38.00**

PROJECT INFORMATION

PROJECT: **GM/REALM (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **M. Griles**

DATE STARTED: **8/30/2005**

DATE COMPLETED: **8/30/2005**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Jim Robinson**

DRILLING METHOD: **mini-sonic**

COORDINATES:

Northing: **1649753.98**

Easting: **168774.83**

TOC Elevation: **717.73**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT/fill	MW-S2B-0501-01		18.5	PVC sch 40
		SANDY CLAY: SILTY SANDY CLAY: trace gravel, dark grayish brown (10YR4/2)	MW-S2B-0501-02		13.9	bent-cement grout
		SAND: SAND: with pebbles, gravel, and cobbles, dry, poorly graded	MW-S2B-0501-03		19.9	
5			MW-S2B-0501-04		26.3	
			MW-S2B-0501-05		23.1	
10			MW-S2B-0501-06		33.3	
			MW-S2B-0501-07		28.6	
15			MW-S2B-0501-08		0.0	
			MW-S2B-0501-09		0.0	
			MW-S2B-0501-10		0.0	
20		CLAYEY SILT: CLAYEY SILT: non-plastic, cohesive, sticky, trace gravel, very hard, slightly moist	MW-S2B-0501-11		0.0	bentonite-chips
			MW-S2B-0501-12		0.0	sand pack
			MW-S2B-0501-13		0.0	
25			MW-S2B-0501-14		0.0	PVC sch 40
		SAND: SAND: fine to medium sand, trace gravel, yellowish brown, (10YR5/6), poorly graded	MW-S2B-0501-15		0.0	
30			MW-S2B-0501-16		0.0	
			MW-S2B-0501-17		0.0	
35		CLAYEY SILT: CLAYEY SILT: trace gravel, gray, (10YR5/1), non-plastic sticky, very hard, compact slightly moist, cohesive	MW-S2B-0501-18		0.0	
			MW-S2B-0501-19		0.0	

WELL CONSTRUCTION LOG

WELL NO.: **MW-S3-0501**

TOTAL DEPTH: **55.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**M. Griles**	DRILLING METHOD:	**mini-sonic**
DATE STARTED:	**8/31/2005**	**COORDINATES:**	
DATE COMPLETED:	**8/31/2005**	**Northing:**	**1649754.27**
		Easting:	**168779.79**
		TOC Elevation:	**717.64**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT/ fill	MW-S3-0501-01		7.1	PVC sch 40
		SANDY CLAY: SILTY SANDY CLAY: trace gravel and pebbles, dark brown, cohesive, non-plastic, slightly moist, (stone blocked core barrel unit ends between 5 and 10 feet below ground surface)	MW-S3-0501-02		9.6	bent-cement grout
5			MW-S3-0501-03		13.3	
			MW-S3-0501-04		--	
		SAND: SAND: medium to coarse sand, dark yellowish brown (10YR4/6) loose, trace organics, dry, (stone blocked core barrel unit starts between 5 and 10 feet below ground surface)	MW-S3-0501-05		--	
10			MW-S3-0501-06		9.8	
			MW-S3-0501-07		15.8	
15			MW-S3-0501-08		10.3	
			MW-S3-0501-09		10.4	
			MW-S3-0501-10		14.4	
20			MW-S3-0501-11		13.3	
		CLAYEY SILT: CLAYEY SILT: trace gravel, gray (10YR5/1), non-plastic, non-sticky, cohesive, competent, slightly moist	MW-S3-0501-12		13.0	
25			MW-S3-0501-13		8.2	
			MW-S3-0501-14		14.7	
			MW-S3-0501-15		15.8	
30		SAND: SAND: fine sand trace gravel, yellowish brown (10YR5/4), poorly graded, wet at 30 feet	MW-S3-0501-16		13.0	
			MW-S3-0501-17		16.2	
35		CLAYEY SILT: CLAYEY SILT: trace gravel, gray (10YR5/1), non-plastic, cohesive, slightly wet, sticky	MW-S3-0501-18		8.0	
			MW-S3-0501-19		14.3	
			MW-S3-0501-20		13.8	
40		SAND: SAND: fine sand, grayish brown (10YR5/2), poorly graded, loose	MW-S3-0501-21		6.9	bentonite-chips
			MW-S3-0501-22		7.6	sand pack
45			MW-S3-0501-23		5.8	PVC sch 40
			MW-S3-0501-24		9.6	
			MW-S3-0501-25		11.5	
50			MW-S3-0501-26		9.3	
		CLAYEY SILT: CLAYEY SILT: trace gravel (rounded clasts), non-plastic, cohesive, competent	MW-S3-0501-27		8.5	
55						

Layne NORTHERN COMPANY
A DIVISION OF LAYNE WESTERN CO.
INDIANAPOLIS

☐ TEST BW-1
☒ PERMANENT PRODUCTION WELL #1-B

Job No. NA-1603

WELL LOG No. 3 CITY Indianapolis County Marion

Owner DDAD Township

Section

Location State Indiana

From Land Description South of plant, adjacent to DDAD Well #1 Oil Skimmer

From Street or Road Corner of Grande

FORMATION FOUND — DESCRIBE FULLY	FROM NATURAL GROUND LEVEL			
	Depth to Top of Stratum	Depth to Bottom of Stratum	Thickness of Stratum	Static Water Level
Sandy clay	0	8	8	
Sand and small gravel	8	11	3	
Medium fine sand	11	13	2	
Sand and small gravel	13	20	7	
Fine sand	20	22	2	
Medium sand	22	30	8	
Fine sand	30	31	1	
Medium sand	31	35	4	
Clay	35	40	5	
Total Depth		40		

Hole 15 "Dia Drilled by: Cable Tool ____ Rotary X Jetting ____ Reverse Circ. ____ Bucket ____ Auger ____

Rotary Hole Grouted: Neat Cement ____ Drilling Mud X Other ____

Casing 10 "OD From ____ ~~above~~ ground to 40 feet below ground. Weight ____ Pounds per foot

Screen 10 " Set from 30 to 35 feet Make ____ Type fiberglass Slot 40

Pumping test ____ GPM drawdown to ____ feet after ____ hours pumping

Driller Artie Edwards

Layne NORTHERN COMPANY
A DIVISION OF LAYNE WESTERN CO.
INDIANAPOLIS

☐ TEST BW-2
☒ PERMANENT Production Well #2-B

Job No. NA-1603

WELL LOG No. 5 CITY Indianapolis County Marion

Owner DDAD Township

Section

State Indiana

Location

From Land Description South of plant along creek, adjacent to DDAD Well #2 Oil Skimmer

From Street or Road Corner of Cossell and Grande

FORMATION FOUND – DESCRIBE FULLY	FROM NATURAL GROUND LEVEL			
	Depth to Top of Stratum	Depth to Bottom of Stratum	Thickness of Stratum	Static Water Level
Sandy clay	0	9	9	
Medium coarse sand	9	11	2	
Coarse sand - fine gravel	11	12	1	
Medium coarse sand	12	19	7	
Coarse sand - fine gravel	19	25	6	
Medium coarse sand	25	31	5	
Clay	31	36	5	
Total Depth		36		

Hole 15 "Dia Drilled by: Cable Tool ____ Rotary X Jetting ____ Reverse Circ. ____ Bucket ____ Auger ____

Rotary Hole Grouted: Neat Cement ____ Drilling Mud X Other ____

Casing 10 "OD From ____ above ground to 36 feet below ground. Weight ____ Pounds per foot

Screen 10 " Set from 25 to 31 feet Make ____ Type fiberglass Slot ____

Pumping test ____ GPM drawdown to ____ feet after ____ hours pumping

Layne NORTHERN COMPANY
A DIVISION OF LAYNE WESTERN CO.
INDIANAPOLIS

☐ TEST Bw-3
☒ PERMANENT Production Well #3-B

Job No. NA-1603

WELL LOG No. 4 CITY Indianapolis

County Marion

Township

Owner

Section

State Indiana

Location

From Land Description South of plant adjacent to DDAD Well #3 Oil Skimmer

From Street or Road Corner of Grande

FORMATION FOUND – DESCRIBE FULLY	FROM NATURAL GROUND LEVEL			
	Depth to Top of Stratum	Depth to Bottom of Stratum	Thickness of Stratum	Static Water Level
Sandy clay	0	9	9	
Medium - coarse sand	9	15	6	
Coarse sand, fine gravel	15	19	4	
Medium coarse sand	19	30	11	
Clay	30	35	5	
Total depth		35		

Hole 15 "Dia Drilled by: Cable Tool ____ Rotary X Jetting ____ Reverse Circ. ____ Bucket ____ Auger ____

Rotary Hole Grouted: Neat Cement ____ Drilling Mud X Other ____

Casing 10 "OD From ____ ~~above~~ ground to 35 feet below ground. Weight ____ Pounds per foot

Screen 10 " Set from 25 to 30 feet Make ____ Type fiberglass Slot 40

Pumping test ____ GPM drawdown to ____ feet after ____ hours pumping

3-27-81 Driller Artie Edwards

MAY 20 '94 13:16 FROM MANUFACTURING ENGR

BORING LOG

BORING LOG: **BW-11**

TOTAL DEPTH: **34.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Mike Magmin**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**11/8/2004**	**COORDINATES**	
DATE COMPLETED:	**11/8/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		No samples were collected	0.4
		CLAY: Dark yellowish brown medium to coarse sand and gravel, dry	M		8.7
-5		SAND: Brown silty sandy clay, plastic, cohesive, sticky, moist, trace gravel	D		9.1
		SAND: Dark yellowish brown medium to coarse sand and gravel,dry	D		7.4
					6.3
-10					8.2
					9.8
-15					10.2
		CLAY: Dark gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard, trace gravel	M		2.1
					3.5
-20					4.6
					72.6
		SAND: Dark yellowish brown fine to medium sand, wet	W		289
-25		CLAY: Dark gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard, trace gravel	W		268
		SAND: Gray fine to medium sand, wet, very strong odor			271
-30		SAND: Gray coarse sand and gravel, wet, very strong odor	W		294
		CLAY: Dark gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard, trace gravel	M		10.2

BORING LOG

BORING LOG: **BW-12**

TOTAL DEPTH: **30.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Jim Robinson**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Mini-Sonic**
DATE STARTED:	**11/5/2004**	**COORDINATES**	
DATE COMPLETED:	**11/5/2004**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	PID (ppm)
0		CONCRETE: Concrete		No samples were collected	0
		SAND: Dark yellowish brown medium to coarse sand and gravel, dry	D		4.5
-5		CLAY: Brown silty sandy clay, plastic, cohesive, sticky, moist, trace gravel	M		2.1
					3.3
		SAND: Dark yellowish brown medium to coarse sand and gravel, dry	D		9.1
-10					7.8
					6.2
-15		CLAY: Dark gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard, strong odor at 23 feet, friable at 23 feet	M		8.5
					10.5
					13.1
-20					25.6
					310
-25					291
		SAND: Dark gray medium to coarse sand and gravel, wet, strong odor	W		304
		CLAY: Dark gray clayey silt, non-plastic, cohesive, non-sticky, slightly moist, hard, strong odor at 28 to 28.5 feet	M		71.2
-30					

ARCADIS G&M

Log of Boring: RW-0101

Allison Transmission Division

Depth (feet)	Blows (/6 in.)	Recovery (Percent)	OVA (PPM)	Sample	Graphic Log	Soil Class.	Description
0		0	0				Fill Material
6							
		9.6	0			SM-SC	CLAYEY SAND: trace gravel, dark brown, nonplastic, slightly cohesive, slightly sticky, moist
	24, 37, 24, 24	2.4	0.3			SW	SAND: fine to coarse sand trace gravel, dry
12	15, 15, 10, 20	12	1.0				
	10, 19, 30, 32	12	1.0				
	16, 18, 20, 23	14.4	53				
							wet
18	28, 32, 39, 30	2.4	96				Slight Odor
	39, 40, 47, 51	19.2	62			CH-MH	SITLY CLAY: dark grayish brown, nonplastic, cohesive, nonsticky, slightly moist
24							
30							
36							

☒ Composite Sample to Lab ■ Grab Sample to Lab ▥ Split-Spoon Not Analyzed

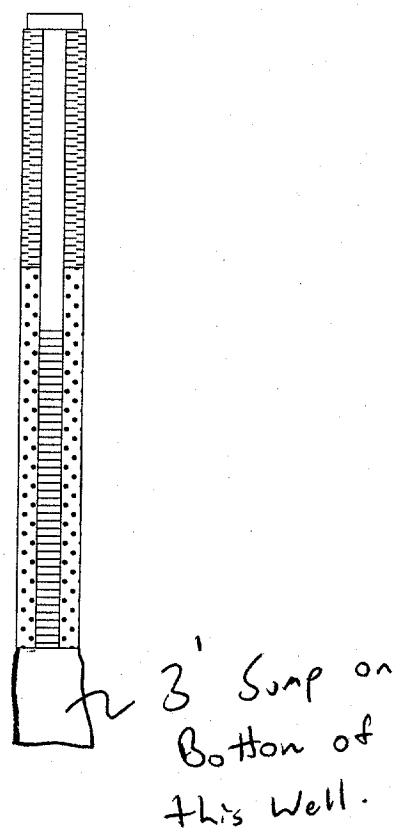
Drilling Co.: Boart Longyear
Geologist: TY
Date: 12/4/01
Driller: Dan Harrison
Total Depth: 22
Start Drilling: _____ End: 12/4/01
Drilling Method: Hollow Stem Auger
Surface Elev.: _____
Converted to Well: No RW-0101
Drilling Fluid: N/A
Datum: _____
Well Name: RW-0101
Remarks: _____
Project No.: IN000473.0009

ARCADIS
GERAGHTY & MILLER

Well Construction Log: RW-0101

Project Name: Allison Transmission Division Date: 4/30/01 Logger: TY
Project Number: IN000473.0009 Editor:

Depth (feet)	Graphic Log	Well Construction Diagram	Well Construction Details



PROTECTIVE COVER TYPE: flush mount manhole

SURFACE SEAL
Type: 2' X 2' concrete pad
Total Depth: .5'

ANNULAR SEAL
Type:
Top Depth:
Bottom Depth:

CASING
Inside Diameter: 6"
Length: 10'
Material: PVC

SEAL
Type: bentonite
Top Depth: .5'
Bottom Depth: 8'

SCREEN
Type PVC
Inside Diameter: 6"
Slot Size: .010'
Top Depth: 10'
Bottom Depth: 20'

FILTER PACK
Material: sand
Top Depth: 18
Bottom Depth: 23

Drilling Co.: Boart Longyear
Driller: Dan Harrison
Drilling Method: HSA
Drilling Fluid: none

Filter Placement Method: gravity pour
Seal Placement Method: gravity pour
Total Depth (TOC): 23'
Water Level Finish:

WELL CONSTRUCTION LOG

ARCADIS

WELL NO.: ~~RW0202~~ RW-0201

TOTAL DEPTH: 32.00

PROJECT INFORMATION

PROJECT: Allison Transmission Division

SITE LOCATION: Speedway, Indiana

LOGGED BY: Galvin Kauffman

DATE STARTED: 5/29/2002

DATE COMPLETED: 6/30/2002

DRILLING INFORMATION

DRILLING CO.: Boart Longyear

DRILLER: Chris Harrison

DRILLING METHOD: Hollow Stem Auger

COORDINATES:

Northing: N/A

Easting: N/A

Elevation: 719.81

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: Concrete	No samples were collected	8.9	steel; concrete
		SAND: Fine to medium sand, dark yellowish brown, dry, trace gravel		10.3	
5		CLAY: Sandy silty clay, slightly plastic, moist		6.7	pvc sch 40
				7.1	
		SAND: Clayey sand, non-plastic, dry, dark brown		12.5	bent-cement grout
10		SAND: Fine to medium sand, dark yellowish brown, dry, trace gravel			
		CLAY: Silty clay, nonplastic, dry, hard, trace gravel, dark gray		17.3	
15				12.4	
				13.6	bentonite-pellets
				9.2	pvc sch 40
20				8	sand pack
				10.7	
25				11.6	
				13.5	
				14.6	
30		SILT: Silt, saturated, loose		2.8	
		CLAY: Silty clay, nonplastic, dry, hard, trace gravel, dark gray			

ARCADIS

WELL CONSTRUCTION LOG

WELL NO.: ~~RW0201~~ RW-0202

TOTAL DEPTH: **32.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**

SITE LOCATION: **Speedway, Indiana**

LOGGED BY: **Tim Yates**

DATE STARTED: **5/13/2002**

DATE COMPLETED: **5/13/2002**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Alan Thomas**

DRILLING METHOD: **Hollow Stem Auger**

COORDINATES:

Northing: N/A

Easting: N/A

Elevation: **719.80**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: Concrete		5.5	steel; concrete
		SAND: Light yellowish brown medium sand and gravel, dry, slight odor		12.6	
5		SAND: Dark yellowish brown fine to medium sand and gravel, dry , odor, trace clays at 9-10.5' (increasing in depth)		9.9	pvc sch 40
				11.7	
				12.6	
10		CLAY: Light brown silty sandy clay, slightly plastic, slightly cohesive, slightly moist, odor			bent-cement grout
		CLAY: Dark brown silty sandy clay, nonplastic, cohesive, slightly moist, odor		92.3	
15		SAND: Dark yellowish brown fine to medium sand with trace gravel, stained, moist, strong odor		90.1	
		SAND: Dark yellowish brown fine to medium sand with trace clay, dry, odor		45	
				52.2	bentonite-pellets
20		CLAY: Very dark gray silty clay, nonplastic, slightly cohesive, dry, hard, odor		172	pvc sch 40
		CLAY: Light brown silty sandy clay, plastic, cohesive, moist, strong odor	RW0201 (22-24)	189	sand pack
25		CLAY: Very dark gray silty clay, plastic, cohesive, moist, strong odor		194	
				211	
		SAND: Dark gray to black medium sand and gravel wtih trace clay, wet with product, extremely strong odor		248	
30				284	
		CLAY: Very dark gray silty clay, plastic, cohesive, slightly moist, hard, odor			

WELL CONSTRUCTION LOG

ARCADIS

WELL NO.: **RW0203**

TOTAL DEPTH: **30.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**

SITE LOCATION: **Speedway, Indiana**

LOGGED BY: **Tim Yates**

DATE STARTED: **5/20/2002**

DATE COMPLETED: **5/20/2002**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Alan Thomas**

DRILLING METHOD: **Hollow Stem Auger**

COORDINATES:

Northing: N/A

Easting: N/A

Elevation: **719.81**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: Concrete	No samples were collected	12.5	steel
		SAND: Dark yellowish brown fine to medium sand with trace gravel, dry, odor		13.2	concrete
5		CLAY: Dark brown silty sandy clay, slightly plastic, cohesive, moist, odor		10.5	pvc sch 40
				11.6	
		SAND: Dark brown clayey sand, nonplastic, cohesive, dry, odor		17.4	bent-cement grout
10		SAND: Dark yellowish brown fine to medium sand wtih trace gravel, dry, odor		25.6	
		CLAY: Light brown silty sandy clay, plastic, cohesive, moist, odor		18.2	
15				16.8	
		CLAY: Dark gray silty clay, nonplastic, cohesive, dry, hard, odor		19.2	bentonite-pellets
				15.4	pvc sch 40
20				10.6	sand pack
		CLAY: Light brown silty sandy clay, plastic, cohesive, moist, odor		11.9	
25		CLAY: Dark gray silty clay, nonplastic, cohesive, dry, hard, odor		15.4	
				12.3	
30		SAND: Light grayish brown fine to medium sand with trace gravel, moist, very slight odor, no product		10.1	

ARCADIS

WELL CONSTRUCTION LOG

WELL NO.: **RW0204**

TOTAL DEPTH: **30.00**

PROJECT INFORMATION

PROJECT: **Allison Transmission Division**

SITE LOCATION: **Speedway, Indiana**

LOGGED BY: **Mark Fisherkeller**

DATE STARTED: **6/3/2002**

DATE COMPLETED: **6/4/2002**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Chris Harrison**

DRILLING METHOD: **Hollow Stem Auger**

COORDINATES:

Northing: N/A

Easting: N/A

Elevation: **719.81**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: Concrete	No samples were collected	5	steel
		SAND: Dark yellowish brown fine to medium sand with trace gravel, dry		4.6	concrete
5		CLAY: Dark brown silty sandy clay, plastic, cohesive, moist		3.3	pvc sch 40
		CLAY: Dark brown clayey sand, nonplastic, cohesive, slightly moist		8.9	
		SAND: Darky yellowish brown fine to medium sand with trace gravel, dry, odor		9.1	bent-cement grout
10				45.1	
		CLAY: Dark gray silty clay, nonplastic, cohesive, dry		21.1	
15				15.8	
				16.5	bentonite-pellets
				13.4	pvc sch 40
20				14.5	sand pack
		CLAY: Light brown silty sandy clay, plastic, cohesive, moist, slight odor		10.1	
		CLAY: Dark gray silty clay, nonplastic, cohesive, dry		16.3	
25				18.6	
		SAND: Light grayish brown fine to medium sand with trace gravel, very slight odor, moist, no product		20.9	
30					

WELL CONSTRUCTION LOG

WELL NO.: **RW-0501-S2B**

TOTAL DEPTH: **38.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**M. Griles**	DRILLING METHOD:	**mini-sonic**
DATE STARTED:	**9/1/2005**	**COORDINATES:**	
DATE COMPLETED:	**9/2/2005**	**Northing:**	**1649742.6**
		Easting:	**168806.2**
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT/fill	RW-0501-S2B-01		2.1	PVC sch 40
		SANDY CLAY: SILTY SANDY CLAY: 10YR4/3, dark brown silty sandy clay with gravel, pebbles (subrounded), non-plastic, slightly moist	RW-0501-S2B-02		0.0	bent-cement grout
			RW-0501-S2B-03		1.2	
5		SAND: SAND: 10YR4/6, dark yellowish brown, fine to medium sand with pebbles and trace gravel, dry, increased grading with depth	RW-0501-S2B-04		2.3	
			RW-0501-S2B-05		1.6	
10			RW-0501-S2B-06		1.5	
			RW-0501-S2B-07		1.9	
			RW-0501-S2B-08		2.7	
15			RW-0501-S2B-09		2.1	
			RW-0501-S2B-10		4.1	
20			RW-0501-S2B-11		258	
			RW-0501-S2B-12		12.3	
			RW-0501-S2B-13		0.5	bentonite-chips
25		CLAYEY SILT: CLAYEY SILT: 10YR5/1, gray clayey silt, non-plastic, cohesive, competent, trace gravel and pebbles, slightly moist (staining and odor at 21.0 feet)	RW-0501-S2B-14		2.3	sand pack
			RW-0501-S2B-15		0.0	PVC sch 40
30			RW-0501-S2B-16		0.8	
			RW-0501-S2B-17		0.0	
		SAND: SAND: 10YR5/4, yellowish brown sand, fine grained, poorly graded, saturated, trace gravel	RW-0501-S2B-18		1.1	
35		SILT: SILT: 10YR5/1, gray clayey silt, non-plastic, cohesive, competent, trace gravel and pebbles, slightly moist	RW-0501-S2B-19		0.4	

WELL CONSTRUCTION LOG

ARCADIS

WELL NO.: **RW-0501-S3**

TOTAL DEPTH: **53.50**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**M. Griles**	DRILLING METHOD:	**mini-sonic**
DATE STARTED:	**8/31/2005**	**COORDINATES:**	
DATE COMPLETED:	**9/1/2005**	**Northing:**	**1649746.2**
		Easting:	**168810.2**
		Elevation:	**717.58**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT/ fill	RW-0501-S3-01		5.1	PVC sch 40
		SANDY CLAY: SILTY SANDY CLAY: 10YR4/3, dark brown silty sandy clay, with gravel (subrounded), non-plastic, slightly moist	RW-0501-S3-02		6.0	bent-cement grout
5			RW-0501-S3-03		6.3	
		SAND: SAND: 10YR4/6, dark yellowish brown fine to medium sand with trace gravel and cobbles at the top of the interval, increase moisture, higher silt content towards 22-25 ft. @25.5 - large cobbles, moist - wet	RW-0501-S3-04		9.5	
			RW-0501-S3-05		9.3	
10			RW-0501-S3-06		7.0	
			RW-0501-S3-07		9.7	
15			RW-0501-S3-08		12.7	
			RW-0501-S3-09		10.3	
			RW-0501-S3-10		8.5	
20			RW-0501-S3-11		7.6	
			RW-0501-S3-12		7.2	
			RW-0501-S3-13		9.1	
25		SILT: SILT: 10YR5/1, gray clayey silt, non-plastic, cohesive, competent, trace gravel and pebbles, slightly moist	RW-0501-S3-14		0.8	
			RW-0501-S3-15		1.5	
30			RW-0501-S3-16		--	
			RW-0501-S3-17		--	
		SAND: SAND: 10YR5/4, yellowish brown sand, fine grained, poorly graded, trace gravel, wet (water at 33.0)	RW-0501-S3-18		0.0	
35			RW-0501-S3-19		0.0	
			RW-0501-S3-20		0.0	
		SILT: SILT: 10YR5/1, gray clayey silt, non-plastic, cohesive, competent	RW-0501-S3-21		0.0	bentonite-chips
40						sand pack
		SAND AND SILT: SAND and SILT: 10YR5/2, grayish brown sand and silt with high percent fines, poorly graded, non-cohesive towards the end of interval, cohesive at the beginning of interval	RW-0501-S3-22		0.0	PVC sch 40
45			RW-0501-S3-23		0.9	
			RW-0501-S3-24		0.0	
			RW-0501-S3-25		0.0	
50		SILT: SILT: 10YR5/1, gray clayey silt, non-plastic, cohesive, competent, trace gravel and pebbles, slightly moist	RW-0501-S3-26		0.0	

WELL CONSTRUCTION LOG

WELL NO.: **RW-0602-S2B**

TOTAL DEPTH: **35.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Kevin Smith**
LOGGED BY:	**M. Griles**	DRILLING METHOD:	**Sonic Rig**
DATE STARTED:	**10/4/2006 2:20:00 PM**	**COORDINATES:**	
DATE COMPLETED:		**Northing:**	**1649736.4**
		Easting:	**168719.1**
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT	RW-0602-S2B-01		5.4	PVC
		GRAVEL: Limestone GRAVEL fill.	RW-0602-S2B-02		6.7	
		CLAY: 10YR 3/3 dark brown, CL/CI Silty/sandy CLAY, with trace pebbles, some gravels, subrounded and med sized clasts w/in clay matrix. Firm, plastic, pliable, moist.	RW-0602-S2B-03		2.4	
5			RW-0602-S2B-04		5.2	
		SAND: 10YR 4/4 dark yellowish brown SW SAND, fine-coarse sand, well graded & poorly sorted, dry, loose. 16-17.5' zone of staining with odor.	RW-0602-S2B-05		3.5	
10			RW-0602-S2B-06		6.8	
			RW-0602-S2B-07		8.7	
			RW-0602-S2B-08		4.2	bentonite-chips
15			RW-0602-S2B-09	Pos.	117.0	sand pack
			RW-0602-S2B-10	Pos.	113.0	
20		SAND: SAND (but v. fine grained) with cobbles at 18.75'. At 19', wet with staining and odor until 21'.	RW-0602-S2B-11		72.3	stainless steel 304
		SAND AND GRAVEL: Returns to brown coarse-grained SAND and GRAVEL. At 24' interval (6") of v. coarse pebble grained sands, showing oxidation.	RW-0602-S2B-12		3.7	
25			RW-0602-S2B-13		6.4	
			RW-0602-S2B-14		2.8	
		SILTY CLAY: 10YR 4/1 dark gray, CL, SILTY CLAY w/ pebbles and gravel inbedded w/i hard competent dry, non-plastic till.	RW-0602-S2B-15		7.2	
30			RW-0602-S2B-16		5.8	
		SAND: 10YR 5/4 dark yellowish brown SW/SC silty SAND. V. dirty, interfingering of clays throughout, wet, with large gravel grains.	RW-0602-S2B-17	Neg.	3.1	
		SILTY CLAY: 10YR 4/1 dark gray, CL, SILTY CLAY w/ pebbles, hard, compact.				
35						

WELL CONSTRUCTION LOG

WELL NO.: **RW-0602-S2B**

TOTAL DEPTH: **35.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Kevin Smith**
LOGGED BY:	**M. Griles**	DRILLING METHOD:	**Sonic Rig**
DATE STARTED:	**10/4/2006 2:20:00 PM**	**COORDINATES:**	
DATE COMPLETED:		**Northing:**	**1649736.4**
		Easting:	**168719.1**
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
35						

WELL CONSTRUCTION LOG

WELL NO.: **RW-0602-S3**

TOTAL DEPTH: **54.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Kevin Smith**
LOGGED BY:	**Tai Hubbard**	DRILLING METHOD:	**Sonic**
DATE STARTED:	**10/2/2006 5:01:00 PM**	**COORDINATES:**	
DATE COMPLETED:	**10/4/2006 11:00:00 AM**	**Northing:**	**1649743.3**
		Easting:	**168719.1**
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT				PVC sch 40
		SANDY CLAY: CL very gravelly SANDY CLAY, very dark grayish brown (2.5YR 3/2) firm, plastic, non-sticky, moist.	RW-0602-S3-01		6.2	
			RW-0602-S3-02		1.8	
5			RW-0602-S3-03		3.3	
			RW-0602-S3-04		1.7	
		SAND AND GRAVEL: SW, fine-coarse SAND AND GRAVELs, dark yellowish brown (10YR 4/4), dry, loose, subrounded.	RW-0602-S3-05		1.3	
10			RW-0602-S3-06		2.2	
		SAND AND GRAVEL: SW-SM, fine-coarse SAND and GRAVEL with silt, dark yellowish brown (10YR 4/4), moist-dry, loose. Zones of graded bedding, every ~2'. I.e., areas of more gravel than sand or more sand than gravel, no clear sequence. Black staining 17-18', wet @ 19'.				
15			RW-0602-S3-07		1.8	
			RW-0602-S3-08		4.8	
			RW-0602-S3-09	Pos	179.0	
20		SAND: At 19', clear gradual contact to (SP) sand. SP, med-coarse SANDs with gravel, dark yellowish brown (10YR 4/6), wet, loose.	RW-0602-S3-10		6.2	
			RW-0602-S3-11		3.8	
			RW-0602-S3-12		4.6	
25		SILT: ML-CL, clayey SILT, w/ fine-med gravel and sand. Moist, very hard, non-plastic, non-sticky (glacial till). Dark grayish brown (2.5YR 4/2). Clear distinct contact at 29.5'.	RW-0602-S3-13	Neg	0.8	
			RW-0602-S3-14		0.4	
30		SAND: No retainage 29.5-31', inferred same as below: SM, med-coarse silty SANDs, little gravel, yellowish brown (10YR 5/4), wet, loose. With abrupt smooth contact at 32.5' to ML-CL.	RW-0602-S3-15	Neg	7.9	
			RW-0602-S3-16	Neg	13.6	
			RW-0602-S3-17	Neg	11.0	
			RW-0602-S3-18		5.5	
35		SILT: ML-CL, clayey SILT, w/ fine-med gravel and sand, dark gray (2.5YR 4/1), moist, very hard, non-plastic - slightly plastic (glacial till). Abrupt smooth contact at 41.5' to SM-SP.	RW-0602-S3-19		6.2	bentonite-chips
40		SAND: SM-SP, Silty poorly graded fine SANDs, moist-wet, gray (2.5YR 5/1), compact, w/ gradual contact at 42.5' to SP.	RW-0602-S3-20		8.0	sand pack
			RW-0602-S3-21		12.2	
			RW-0602-S3-22		11.0	stainless steel 304
45		SAND: SP, med-coarse SANDs w/ gravel, dark yellowish brown (10YR 4/4), loose, subrounded, wet. Abrupt smooth contact at 53' to ML-CL.	RW-0602-S3-23	Neg	7.1	
50		SILT: ML-CL, clayey SILT, w/ fine-med sands and gravel, dark gray (2.5YR 4/1), moist, very hard, slightly plastic (glacial till).	RW-0602-S3-24		12.1	
			RW-0602-S3-25	Neg	12.2	

WELL CONSTRUCTION LOG

WELL NO.: **RW-0603-S3**

TOTAL DEPTH: **55.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Kevin Smith**
LOGGED BY:	**M. Griles/T. Hubbard**	DRILLING METHOD:	**Sonic Rig**
DATE STARTED:	**10/6/2006 8:30:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**10/11/2006**	**Northing:**	
		Easting:	
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: TOPSOIL	RW-0603-S3-01		1.2	PVC sch 40
		SANDY CLAY: 10YR 3/3 dark brown CL/CI silty SANDY CLAY w/ pebbles and some gravels inbedded w/i a clay matrix that is at times sl. plastic and at times friable, firm, sl. moist.	RW-0603-S3-02		1.4	
5			RW-0603-S3-03		1.5	
			RW-0603-S3-04		1.8	
		SAND: 10YR 4/4 dark yellowish brown, SW, SANDs, well graded, med-coarse grained sands (w/ interval of fines at 11'), poorly sorted, moist at bottom of interval.	RW-0603-S3-05		1.6	
10			RW-0603-S3-06		7.4	
			RW-0603-S3-07	Neg.	117	
15		SILTY CLAY: 10YR 4/1 dark gray, CL-ML SILTY CLAY w/ pebbles and gravel (subrounded) w/i matrix/cement, hard, firm, compact, competent, friable, dry w/ moist strings at 21'.	RW-0603-S3-08		86.2	
			RW-0603-S3-09		1336	
			RW-0603-S3-10		663	
20			RW-0603-S3-11		287	
			RW-0603-S3-12		36.7	
25			RW-0603-S3-13		15.0	
			RW-0603-S3-14		13.1	
			RW-0603-S3-15		11.4	
30		SAND: 10YR 5/4 dark yellowish brown SW/SC silty SAND, loose, med-coarse grained, wet, subrounded grains, NAPL neg at 36'.	RW-0603-S3-16		5.8	
			RW-0603-S3-17		3.1	
35			RW-0603-S3-18		5.8	
			RW-0603-S3-19		6.3	
		SILTY CLAY: 10YR 4/1 dark gray CL/ML, SILTY CLAY with pebbles and gravel (subrounded) w/i matrix cement, hard, firm, competent, friable, dry.	RW-0603-S3-20		5.9	
40						bentonite-chips
						sand pack
		SAND: SW, fine-coarse SANDs w/ gravel, compact-loose, wet, w/ abrupt smooth contact at 53.5' to CL-ML.	RW-0603-S3-21		9.2	
45						stainless steel 304
50		SILTY CLAY: CL-ML, SILTY CLAY, with gravel, gray (10YR 4/1) low plasticity, non-sticky, moist, hard.	RW-0603-S3-22	Neg.	14.6	
55						

WELL CONSTRUCTION LOG

WELL NO.: **RW-0604-S2B**

TOTAL DEPTH: **35.00**

PROJECT INFORMATION

PROJECT: **GM/REALM (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **Tai Hubbard**

DATE STARTED: **9/29/2006 5:00:00 PM**

DATE COMPLETED: **10/2/2006 2:00:00 PM**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Kevin Smith**

DRILLING METHOD: **Sonic**

COORDINATES:

Northing: 1649737.9

Easting: 168898.8

Elevation:

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT	RW-0604-S2B-01		11.3	PVC sch 40
		GRAVEL: GRAVEL sub-base				
		SANDY CLAY: CL, very gravelly SANDY CLAY, dark brown (10YR 3/3) med. plasticity, very firm, moist.	RW-0604-S2B-02		16.2	
5			RW-0604-S2B-03		6.8	
		SAND: SW, fine-coarse SANDs and gravel, some cobbles, dark yellowish brown (10YR 4/4) dry, friable.	RW-0604-S2B-04		16.2	
10		SILT: ML, SILT, trace gravel, brown (10YR 4/3) non-plastic, moist, slightly sticky, friable.	RW-0604-S2B-05	Neg	6.6	
		SAND: SP-SM, poorly-graded silty fine-med SANDs, trace gravel, subrounded, loose. Gradual contact at 18.5' to ML.	RW-0604-S2B-06		5.6	
15			RW-0604-S2B-07		3.2	
		SILT: ML, SILT, trace gravel, brown (10YR 4/3), non-plastic, moist, friable. NOTE: driller believes contact of till is at 19', 15-20' sample had only a 3' recovery, driller believes bottom 6" of sample was not returned.	RW-0604-S2B-08	Neg	1.6	
20		SILT: ML-CL, clayey SILT, w/ fine-med gravel and sand, dark gray (10YR 4/1) moist, very hard, no to low plasticity, non-sticky (glacial till). Clear distinct contact at 28' to (SP).	RW-0604-S2B-09		1.9	bentonite-chips
25						sand pack
			RW-0604-S2B-11		2.6	
		SAND: SP, fine-med SANDs, trace gravel, olive brown (2.5YR 4/4), wet, friable, loose.	RW-0604-S2B-10	Neg	2.8	stainless steel 304
30		SAND: SP, fine-med SANDs, trace gravel, olive brown (2.5YR 4/4), wet, friable, loose. Color change at 31' to gray (5YR 6/1) and distinct clear contact at 32.0' to ML-CL	RW-0604-S2B-13		0.8	
			RW-0604-S2B-14	Neg	1.4	sand pack
35		SILT: ML-CL, clayey SILT, with fine-med gravel and sands, dark gray (10YR 4/1), moist, very hard,				

WELL CONSTRUCTION LOG

WELL NO.: **RW-0604-S2B**

TOTAL DEPTH: **35.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Kevin Smith**
LOGGED BY:	**Tai Hubbard**	DRILLING METHOD:	**Sonic**
DATE STARTED:	**9/29/2006 5:00:00 PM**	**COORDINATES:**	
DATE COMPLETED:	**10/2/2006 2:00:00 PM**	**Northing:**	**1649737.9**
		Easting:	**168898.8**
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
35		non-plastic, non-sticky (glacial till).				

WELL CONSTRUCTION LOG

WELL NO.: **RW-0604-S3**

TOTAL DEPTH: **53.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Kevin Smith**
LOGGED BY:	**Tai Hubbard**	DRILLING METHOD:	**Sonic Rig**
DATE STARTED:	**9/28/2006 11:00:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**9/29/2006**	**Northing:**	**1649747.5**
		Easting:	**168898.6**
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT.	RW-0604-S3-01		2.8	stainless steel 304
		GRAVEL: GRAVEL, limestone	RW-0604-S3-02		4.4	
5		SANDY CLAY: 10YR 3/3, dark grown, CI, silty and SANDY CLAY, w/ trace pebbles and gravels, subrounded/subangular grains, firm, plastic, pliable, cohesive, sl. moist.	RW-0604-S3-03		5.0	
			RW-0604-S3-04		7.5	
			RW-0604-S3-05		8.6	
10		SAND: 10YR 5/4, yellowish brown, SW, SANDs, w/ gravel and silts, cobbles in mix, subrounded grains, dry, loose/compact, med grained, native sands, increased (cobble) gravel-size grains from 11.5-12.0 ft.	RW-0604-S3-06		11.4	
			RW-0604-S3-07		7.8	
15		TILL: At 14.75', 2" seam of compact hard gray TILL, increasing moisture with depth. Sand is only slightly moist throughout material	RW-0604-S3-08		6.1	
			RW-0604-S3-09		8.3	
			RW-0604-S3-10		7.9	
20		SILTY CLAY: 10YR 4/1, dark gray, CL, SILTY CLAY w/ pebbles and gravel, (subrounded) imbedded within, hard, competent, dry, non-plastic, till.	RW-0604-S3-11		4.6	
			RW-0604-S3-12		5.3	
25			RW-0604-S3-13		5.9	
			RW-0604-S3-14		3.7	
		SAND: 10YR 5/1 gray SP SAND, w/ trace silt and pebbles, well sorted, poorly graded sands, med-coarse grained, wet/saturated.	RW-0604-S3-15		2.9	
30			RW-0604-S3-16		5.2	
			RW-0604-S3-17		3.6	
		SILTY CLAY: 10YR 4/1 dark gray, CL SILTY CLAY w/ pebbles and gravels (subrounded), hard, competent, dry/very slightly moist, non-plastic, friable at times, till.	RW-0604-S3-18		4.6	
35			RW-0604-S3-19		7.9	bentonite-chips
			RW-0604-S3-20		2.1	sand pack
40			RW-0604-S3-21		2.1	stainless steel 304
		SAND: 10YR 5/1 gray, SP SAND w/ trace silt and pebbles, med-coarse grained, poorly graded, well sorted, saturated.	RW-0604-S3-22		1.6	
45			RW-0604-S3-23		2.9	
			RW-0604-S3-24		81.3	
		SILTY CLAY: 10YR 4/1 dark gray, CL, SILTY CLAY w/ trace pebbles and some rounded gravels, hard, competent, compact, friable in locations, non-plastic, (till).	RW-0604-S3-25		2.2	
50			RW-0604-S3-26		3.1	

WELL CONSTRUCTION LOG

WELL NO.: **RW-0605-S3**

TOTAL DEPTH: **48.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Tommy Hill**
LOGGED BY:	**Tai Hubbard**	DRILLING METHOD:	**Mini-Sonic**
DATE STARTED:	**9/26/2006 2:15:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**9/27/2006 4:45:00 AM**	**Northing:**	**1649989.2**
		Easting:	**168931.8**
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE	RW-0605-S3-02		0.0	PVC sch 40
		SAND: SW Fine-Coarse SANDs w/ gravel, dark yellowish brown (10YR 4/4) dry, friable/loose, subrounded (fill).				
5		SANDY CLAY: CL, very gravelly SANDY CLAY, dark brown (10YR 3/3), medium plasticity, firm, moist.	RW-0605-S3-03		0.0	
10		SAND: SW-SM, fine-coarse silty SANDs w/ gravel, dark yellowish brown (10YR 4/6), dry, friable, subrounded (inferred from 8.3-11' due to recovery) Abrupt smooth contact at 12 ft to ML-CL.	RW-0605-S3-04	Neg	36.0	
			RW-0605-S3-05	Neg	60.0	
15		SILT: ML-CL clayey SILT w/ fine-med sand+gravel, dk gray (10 YR 4/1), dry, hard, low plasticity (glacial till). Abrupt smooth contact@19' to SM.	RW-0605-S3-06	Neg	215.0	
			RW-0605-S3-07	Neg	225.0	
		SAND: SM, fine-coarse silty SANDs w/ gravel, dark, subrounded, gray-brown (10YR 4/2) moist, friable/loose (poss. wet, not enough sample to verify).	RW-0605-S3-08	Neg	236.0	
20			RW-0605-S3-09	Neg	51.0	
		GRAVEL: GP, fine-med GRAVEL, little sands, light olive brown (2.5YR 5/3), saturated/wet, loose/friable, distinct clear contact to SW-SM at 23'.	RW-0605-S3-10	Neg	57.2	
			RW-0605-S3-11		26.7	
25		SAND: SW-SM, fine-coarse SAND with gravel, dark gray (2.5YR 4/1), moist, compact, (has appearance of a less hard, less clayey glacial till).	RW-0605-S3-12	Neg	53.0	
			RW-0605-S3-13		47.0	
30		SAND: SP med-coarse SAND w/ gravel, dark gray (2.5YR 4/1) wet, loose, subrounded with seams of alternating graded gravel and sand.	RW-0605-S3-14	Neg	46.7	
			RW-0605-S3-15	Neg	45.3	
		SILT: ML-CL, clayey SILT w/ fine-med sands and gravel, dark gray (2.5YR 4/1) (glacial till) interbedded (SW) sands and (GW) gravel, ~0.3' in thickness at 31.2-31.5 ft, 31.8-32.1', and 32.4-32.7'. Till is hard, low plasticity (water added), moist.	RW-0605-S3-16	Neg	48.1	
35			RW-0605-S3-17	Neg	30.1	
			RW-0605-S3-18	Neg	3.7	bentonite-chips
			RW-0605-S3-19	Neg	26.2	
40		SILT: ML-CL, clayey SILT w/ fine-med sands and gravel, dark gray (2.5YR 4/1), moist low plasticity (water added), hard, ~1.0' (SP) sand seam at 37-38'. Starting at 39', hard (SP) fine sand seams ~0.01' thickness every foot (horizontal bedding)Sudan @ bed planes	RW-0605-S3-20	Neg	62.0	sand pack
			RW-0605-S3-21	Neg	157.0	stainless steel 304
			RW-0605-S3-22	Pos	327.0	
			RW-0605-S3-23		>1000	
45		SAND: Abrupt smooth contact at 44.0 ft to (SP) fine sand. SP fine SANDs, trace silt and gravel, dark gray (2.5YR 4/1) wet, friable/loose, subrounded. Heavy				

WELL CONSTRUCTION LOG

WELL NO.: **RW-0605-S3**

TOTAL DEPTH: **48.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Tommy Hill**
LOGGED BY:	**Tai Hubbard**	DRILLING METHOD:	**Mini-Sonic**
DATE STARTED:	**9/26/2006 2:15:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**9/27/2006 4:45:00 AM**	**Northing:**	**1649989.2**
		Easting:	**168931.8**
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
		odor. No recovery from 45-47.5' inferred same as above. Contact at 47.5' according to driller.				
		SILT: ML-CL, clayey SILT w/ fine-med sand and gravel, dark gray (2.5YR 4/1), moist, low-plasticity (water added), hard. Sample was minimal; could have been left over from side of sampler. Stratigraphy matches adjacent boring (MW-0414D).				

WELL CONSTRUCTION LOG

WELL NO.: **SVE0301**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Mateco**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Greg Sawyer**
LOGGED BY:	**Mark Fisherkeller**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**6/23/2003**	**COORDINATES:**	
DATE COMPLETED:	**6/23/2003**	**Northing:**	
		Easting:	
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		Well was blank drilled	No samples were collected.	PID measurements not taken.	steel concrete pvc sch 40 bentonite seal sand pack pvc sch 40
5					
10					

WELL CONSTRUCTION LOG

WELL NO.: **SVE0302**

TOTAL DEPTH: **10.5**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Mateco**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Greg Sawyer**
LOGGED BY:	**Mark Fisherkeller**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**6/26/2003**	**COORDINATES:**	
DATE COMPLETED:	**6/26/2003**	**Northing:**	
		Easting:	
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		Well was blank drilled	No samples were collected	No PID measurements were taken	steel concrete bentonite seal sand pack pvc sch 40
5					
10					

WELL CONSTRUCTION LOG

WELL NO.: **SVE0303**

TOTAL DEPTH: **12.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Mateco**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Greg Sawyer**
LOGGED BY:	**Mark Fisherkeller**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**6/24/2003**	**COORDINATES:**	
DATE COMPLETED:	**6/24/2003**	**Northing:**	
		Easting:	
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		Well was blank drilled	No samples were collected	No PID measurements were taken	steel concrete
					bentonite seal
					pvc sch 40
5					sand pack
					pvc sch 40
10					

WELL CONSTRUCTION LOG

WELL NO.: **SVE0304**

TOTAL DEPTH: **11.50**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Mateco**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Greg Sawyer**
LOGGED BY:	**Mark Fisherkeller**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**6/23/2003**	**COORDINATES:**	
DATE COMPLETED:	**6/23/2003**	**Northing:**	
		Easting:	
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		Well was blank drilled	No samples were collected	No PID measurements were taken	steel
					concrete
					bentonite-pellets
					pvc sch 40
5					sand pack
					pvc sch 40
10					

WELL CONSTRUCTION LOG

WELL NO.: **SVE0305**

TOTAL DEPTH: **12.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Mateco**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Greg Sawyer**
LOGGED BY:	**Mark Fisherkeller**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**6/23/2003**	**COORDINATES:**	
DATE COMPLETED:	**6/23/2003**	**Northing:**	
		Easting:	
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		Well was blank drilled	No samples were collected	No PID measurments were taken	steel concrete bentonite-pellets pvc sch 40 sand pack pvc sch 40
5					
10					

WELL CONSTRUCTION LOG

WELL NO.: **SVE0306**

TOTAL DEPTH: **11.50**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Mateco**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Greg Sawyer**
LOGGED BY:	**Mark Fisherkeller**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**6/19/2003**	**COORDINATES:**	
DATE COMPLETED:	**6/19/2003**	**Northing:**	
		Easting:	
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		Well was blank drilled	No samples were collected	No PID measurements were taken	steel concrete bentonite-pellets pvc sch 40 sand pack pvc sch 40
5					
10					

WELL CONSTRUCTION LOG

WELL NO.: **SVE0307**

TOTAL DEPTH: **11.50**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Mateco**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Greg Sawyer**
LOGGED BY:	**Mark Fisherkeller**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**6/23/2003**	**COORDINATES:**	
DATE COMPLETED:	**6/23/2003**	**Northing:**	
		Easting:	
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		Well was blank drilled	No samples were collected	No PID measurements were taken	steel concrete bentonite-pellets pvc sch 40 sand pack pvc sch 40
5					
10					

WELL CONSTRUCTION LOG

WELL NO.: **SVE0308**

TOTAL DEPTH: **11.50**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Mateco**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Greg Sawyer**
LOGGED BY:	**Mark Fisherkeller**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**5/17/2002**	**COORDINATES:**	
DATE COMPLETED:	**5/17/2002**	**Northing:**	
		Easting:	
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		Well was blank drilled	No samples were collected	No PID measurements were taken	steel concrete bentonite-pellets pvc sch 40 sand pack pvc sch 40
5					
10					

WELL CONSTRUCTION LOG

WELL NO.: **SVE0309**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Mateco**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Greg Sawyer**
LOGGED BY:	**Mark Fisherkeller**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**6/19/2003**	**COORDINATES:**	
DATE COMPLETED:	**6/19/2003**	**Northing:**	
		Easting:	
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		Well was blank drilled	No samples were taken	No PID measurements were taken	steel concrete bentonite-pellets pvc sch 40 sand pack pvc sch 40
5					
10					

WELL CONSTRUCTION LOG

WELL NO.: **SVE0310**

TOTAL DEPTH: **9.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Mateco**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Greg Sawyer**
LOGGED BY:	**Mark Fisherkeller**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**6/19/2003**	**COORDINATES:**	
DATE COMPLETED:	**6/19/2003**	**Northing:**	
		Easting:	
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		Well was blank drilled	No samples were taken	No PID measurements were taken	steel concrete bentonite-pellets pvc sch 40 sand pack pvc sch 40
5					

WELL CONSTRUCTION LOG

WELL NO.: **SVE0311**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Mateco**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Greg Sawyer**
LOGGED BY:	**Mark Fisherkeller**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**6/24/2003**	**COORDINATES:**	
DATE COMPLETED:	**6/24/2003**	**Northing:**	
		Easting:	
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		Well was blank drilled	No samples were collected	No PID measurments were taken	steel concrete bentonite-pellets pvc sch 40 sand pack pvc sch 40
5					
10					

WELL CONSTRUCTION LOG

WELL NO.: **SVE0312**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Mateco**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Greg Sawyer**
LOGGED BY:	**Mark Fisherkeller**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**6/24/2003**	**COORDINATES:**	
DATE COMPLETED:	**6/24/2003**	**Northing:**	
		Easting:	
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		Well was blank drilled	No samples were collected	No PID measurements were taken	steel concrete bentonite-pellets pvc sch 40 sand pack pvc sch 40
5					
10					

WELL CONSTRUCTION LOG

WELL NO.: **SVE0314**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Mateco**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Greg Sawyer**
LOGGED BY:	**Mark Fisherkeller**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**6/24/2003**	**COORDINATES:**	
DATE COMPLETED:	**6/24/2003**	**Northing:**	
		Easting:	
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		Well was blank drilled	No samples were taken	No PID measurements were taken	steel concrete bentonite-pellets pvc sch 40 sand pack pvc sch 40
5					
10					

WELL CONSTRUCTION LOG

WELL NO.: **SVE0315**

TOTAL DEPTH: **11.50**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Mateco**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Greg Sawyer**
LOGGED BY:	**Mark Fisherkeller**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**6/25/2003**	**COORDINATES:**	
DATE COMPLETED:	**6/25/2003**	**Northing:**	
		Easting:	
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		Well was blank drilled	No samples were collected	No PID measurements were taken	pvc sch 40 concrete bentonite-pellets sand pack pvc sch 40
5					
10					

WELL CONSTRUCTION LOG

WELL NO.: **SVE0316**

TOTAL DEPTH: **11.80**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Allison Transmission Division**	DRILLING CO.:	**Mateco**
SITE LOCATION:	**Speedway, Indiana**	DRILLER:	**Greg Sawyer**
LOGGED BY:	**Mark Fisherkeller**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**6/26/2003**	**COORDINATES:**	
DATE COMPLETED:	**6/26/2003**	**Northing:**	
		Easting:	
		Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		Well was blank drilled	No samples were collected	No PID measurements were taken	steel concrete
					bentonite-pellets
					pvc sch 40
5					sand pack
					pvc sch 40
10					

BORING LOG

BORING LOG: **BK-0601**

TOTAL DEPTH: **35.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/10/2006 3:40:00 PM**	**COORDINATES**	
DATE COMPLETED:	**1/10/2006**	NORTHING:	1651930.6
		EASTING:	166886.4
		ELEVATION:	725.00

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SANDY CLAY: SANDY CLAY, brown, medium to fine sand, firm, dry.		BK-0601-01		1.2
				BK-0601-02		1.2
-5		SAND: SAND; light brown, medium to find sand, trace coarse sand/fill gravel, dry, loose.		BK-0601-03		1.2
				BK-0601-04		1.2
				BK-0601-05		1.2
-10		SAND: SAND; brown, medium sand, some fine, trace fine gravel/coarse sand, dry, loose, wet @ 14-15'.		BK-0601-06		1.2
				BK-0601-07		1.2
-15		SAND: SAND; gray to dark gray, medium, little fine sand, trace coarse sand, loose, wet.		BK-0601-08		1.2
				BK-0601-09		1.2
				BK-0601-10		1.2
-20				BK-0601-11		1.2
-25		SAND: SAND; gray, fine to very fine. Little medium sand, loose, moist.				
		SAND: Silty SAND to silt, dark gray, v. fine sand, firm, moist. Cohesive.				
		SAND: SAND, gray, medium to coarse sand, trace fine, wet, loose.				
-30		CLAY: (Till) CLAY, gray, silt and clay, little fine sand, hard, dry.				
-35						

BORING LOG

BORING LOG: **BK-0602**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/9/2006 2:40:00 PM**	**COORDINATES**	
DATE COMPLETED:	**1/9/2006 3:30:00 PM**	NORTHING:	1652293
		EASTING:	167273
		ELEVATION:	725.55

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		FILL: FILL; fine gravel, sand, loose medium to fine, gray, trace silt, dry.		BK-0602-01		0.5
		FILL: FILL; fine gravel, medium to find sand, gray to black, loose, dry.				
		SILTY CLAY: Brown SILTY CLAY, plastic, moist, trace fine sand.				
		SILTY CLAY: Brown SILTY CLAY. Plastic, moist, trace fine & medium sand.		BK-0602-02		0.5
		SILTY CLAY: Brown SILTY CLAY, plastic, moist, little fine sand. Trace medium, trace fine gravel.				
		SILTY CLAY: Brown SILTY CLAY, plastic, moist. Little fine sand, trace medium, trace fine gravel.		BK-0602-03		0.5
-5		BLANK: No recovery in liner.		BK-0602-04		0.5
		SAND: Brown medium to fine SAND, trace coarse sand and silt, dry, loose.		BK-0602-05		0.5
-10						

BORING LOG

BORING LOG: **BK-0603**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/11/2006 8:55:00 AM**	**COORDINATES**	
DATE COMPLETED:	**1/11/2006 9:20:00 AM**	NORTHING:	1649452.1
		EASTING:	169350.4
		ELEVATION:	715.63

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		ASPHALT: ASPHALT parking lot sub-base.		BK-0603-01		1.1
		GRAVEL: GRAVEL sub-base, gray, little coarse sand, dry.				
		SAND: SAND, light brown, medium to fine sand, trace fine gravel/coarse sand, loose, dry.				
				BK-0603-02		1.1
				BK-0603-03		1.1
-5						
				BK-0603-04		1.1
				BK-0603-05		1.1
-10						

BORING LOG

BORING LOG: **BK-0604**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**1/11/2006**	**COORDINATES**	
DATE COMPLETED:	**1/11/2006**	NORTHING:	1649226.5
		EASTING:	169347.4
		ELEVATION:	718.12

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		ASPHALT: ASPHALT		BK-0604-01		1.2
		GRAVEL: GRAVEL sub-base, little clay & sand, grayish brown.				
		SAND: SAND & gravel; gray, coarse sand, little medium sand, wet, loose; wet from surface water.				
		SAND: SAND; light brown to light olive brown, medium to fine sand, trace gravel, dry, loose.		BK-0604-02		1.2
				BK-0604-03		1.2
-5				BK-0604-04		1.2
				BK-0604-05		1.2
-10						

BORING LOG

BORING LOG: **BK-0605**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/19/2006 3:05:00 PM**	**COORDINATES**	
DATE COMPLETED:	**1/19/2006**	NORTHING:	1650298.9
		EASTING:	166202.2
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SAND: SAND & gravel; gray, medium to fine sand, fine gravel, little silt, loose, dry.		BK-0605-01		1.6
		SAND: SAND; brown; fine to medium sand. Trace/little silt, trace clay, moist, loose.		BK-0605-02		1.4
				BK-0605-03		1.6
-5				BK-0605-04		1.6
				BK-0605-05		1.4
-10						

BORING LOG

BORING LOG: **BK-0606**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/19/2006 1:50:00 PM**	**COORDINATES**	
DATE COMPLETED:	**1/19/2006 2:45:00 PM**	NORTHING:	1650156.5
		EASTING:	166154.4
		ELEVATION:	720.94

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SAND: SAND & gravel; gray, medium to fine sand, fine gravel, little silt, loose, dry.		BK-0606-01		1.2
		SAND: SAND; brown, fine to medium sand, little silt, trace clay. Wet, loose.		BK-0606-02		1.2
				BK-0606-03		1.3
-5				BK-0606-04		1.2
				BK-0606-05		1.2
-10						

BORING LOG

BORING LOG: **BK-0607**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	
DATE STARTED:	**1/20/2006**	**COORDINATES**	
DATE COMPLETED:	**1/20/2006**	NORTHING:	1649874.9
		EASTING:	166473.9
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SAND: Sub-base - SAND & gravel, black.		BK-0607-01		1.3
		SILTY CLAY: SILTY CLAY, dark gray, silt, trace fine and medium sand, moist, soft, plastic.		BK-0607-02		1.3
				BK-0607-03		1.3
-5		SAND: SAND; orangish brown, medium to fine, little coarse sand, trace clay & silt, moist, soft, mod. plastic.		BK-0607-04		1.3
				BK-0607-05		1.3
-10						

BORING LOG

BORING LOG: **BK-0608**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/20/2006**	**COORDINATES**	
DATE COMPLETED:	**1/20/2006**	NORTHING:	1649866.3
		EASTING:	166739.4
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		ASPHALT: ASPHALT and asphalt sub-base; gravel and sand, black, loose, dry.		BK-0608-01		1.3
		SAND: SAND; light brown to orangish brown, medium, little fine sand, little clay, trace silt, moist, med. plastic, soft.		BK-0608-02		1.3
				BK-0608-03		1.3
-5		BLANK: No Recovery.		BK-0608-04		1.3
		SAND: SAND; light brown, medium to fine sand, little clay & silt, firm, plastic, moist.				
		SAND: SAND; pink, medium, trace fine sand, loose, dry, well sorted.				
		SAND: SAND: light brown, medium to fine, trace brown sand. Trace fine gravel, trace silt, loose, dry.		BK-0608-05		1.3
-10						

BORING LOG

BORING LOG: **SB-01-0601**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Mike Petty**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/18/2006 12:40:00 PM**	**COORDINATES**	
DATE COMPLETED:	**1/18/2006 1:50:00 PM**	NORTHING:	1650473.3
		EASTING:	164710.6
		ELEVATION:	724.13

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SAND: SP. SAND, trace gravel, medium grain, yellowish brown, moist.		SB-01-0601-01		2.5
				SB-01-0601-02		4.2
		SILTY SAND: SM. SILTY SAND, with gravel, grayish brown & damp.		SB-01-0601-03		7.4
-5				SB-01-0601-04		5.2
		SAND: SP SAND, fine grained, black, moist, debris (wood, metal).		SB-01-0601-05		181
-10				SB-01-0601-06		48.5
		SAND: SW. SAND, med to coarse grained, gray, wet. Increased gravel (20%) 13.5-15. At 14 ft odor and sheen.		SB-01-0601-07		9.1
-15						

BORING LOG

BORING LOG: **SB-01-0602**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Mike Petty**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/18/2006 2:00:00 PM**	**COORDINATES**	
DATE COMPLETED:		NORTHING:	1650439.2
		EASTING:	164696.2
		ELEVATION:	726.03

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SILT: ML. SILT with sand, medium stiff, yellowish brown, moist.		SB-01-0602-01		1.9
				SB-01-0602-02		5.5
				SB-01-0602-03		6.7
-5		SILTY SAND: SM/SW. SILTY SAND and gravel, medium stiff, brown, moist, with debris (wood, glass)		SB-01-0602-04		1.8
		SAND: SW. SAND and gravelly sand, medium stiff, moist. Dark gray.		SB-01-0602-05		4.5
-10				SB-01-0602-06		6.2
		SAND: SW. SAND and gravelly sand, medium stiff, moist. Grayish brown.		SB-01-0602-07		6.3
		SAND: SW. SAND and gravelly sand, medium stiff, moist. Light yellowish brown. Wet at 15 ft.		SB-01-0602-08		4.9
-15		SANDY GRAVEL: GW. SANDY GRAVEL, loose, black, wet, odor.		SB-01-0602-09		9.2
		SILTY SAND: SM. SILTY SAND with trace gravel, hard, fine grained, gray, damp.		SB-01-0602-10		6.6
-20						

BORING LOG

BORING LOG: **SB-01-0603**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Mike Petty**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/18/2006 10:05:00 AM**	**COORDINATES**	
DATE COMPLETED:	**1/18/2006 11:30:00 AM**	NORTHING:	1650447.1
		EASTING:	164800.6
		ELEVATION:	724.11

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SANDY CLAY: CL. Silty SANDY CLAY, trace gravel, soft, slightly plastic, dark yellowish brown, very moist.		SB-01-0603-01		0.1
		SANDY CLAY: CL. SANDY CLAY and gravel, medium stiff, moist, dark brown, debris (plastic, brick, metal)		SB-01-0603-02		1.2
-5		SAND: SW. SAND with silt & gravel, medium dense, fine to coarse, dark brown, moist, debris (metal, glass, wood).		SB-01-0603-03		1.0
		SAND: SP/SW. SAND and (sand & gravel 13-15) medium stiff, moist, dark brown 6-8, light brown 8-9, dark grayish brown 9-13, black 13-15, increase in gravel 14-15, loose, wet, black, odor and sheen 14-15 wet at 12'		SB-01-0603-04		4.9
				SB-01-0603-05		15.5
-10				SB-01-0603-06		12.5
				SB-01-0603-07		1022
-15						

BORING LOG

BORING LOG: **SB-01-0604**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Mike Petty**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/19/2006 11:25:00 AM**	**COORDINATES**	
DATE COMPLETED:		NORTHING:	1650408.2
		EASTING:	164785.3
		ELEVATION:	726.24

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SANDY SILT: ML/SM. SANDY SILT, few gravel, soft to medium stiff, very moist, yellowish brown, brick fragments.		SB-01-0604-01		1.5
				SB-01-0604-02		1.7
-5		SILTY SAND: SM. SILTY SAND, trace gravel, debris (glass), dark brown, moist.		SB-01-0604-03		6.1
		SAND: SW. Silty gravelly SAND, dense, grayish brown, moist.		SB-01-0604-04		1.3
		SAND: SW. SAND and gravel, silty 13-14, medium dense, black 8-9, gray 9-10, dark grayish brown 10-14.		SB-01-0604-05		2.9
-10				SB-01-0604-06		6.5
				SB-01-0604-07		2.9
		SAND: SP. SAND, fine grained, loose, gray, moist to wet at 14.5'.		SB-01-0604-08		5.7
-15						

BORING LOG

BORING LOG: **SB-01-0605**

TOTAL DEPTH: **14.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Mike Petty**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/18/2006 8:45:00 AM**	**COORDINATES**	
DATE COMPLETED:	**1/18/2006 9:50:00 AM**	NORTHING:	1650412.3
		EASTING:	164903.9
		ELEVATION:	723.77

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SILTY CLAY: CL. SILTY CLAY with sand & trace gravel, soft, light brown, very moist.		SB-01-0605-01		1.8
		SANDY CLAY: CL. SANDY CLAY with gravel, soft, grayish brown, very moist.		SB-01-0605-02		3.1
		SAND: SP. SAND, loose, med to fine, dark gray, moist.		SB-01-0605-03		5.7
-5		SAND: SP/SW. SAND/Sand and gravel, medium dense, moist to wet at 12 ft. 6-7 light gray, 7-10 black, 10-13 gray, 13-14 sand with gravel gray, wet loose.		SB-01-0605-04		9.8
				SB-01-0605-05		186
-10				SB-01-0605-06		93.7
				SB-01-0605-07		94.5

BORING LOG

BORING LOG: **SB-01-0606**

TOTAL DEPTH: **16.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Mike Petty**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/19/2006 2:05:00 PM**	**COORDINATES**	
DATE COMPLETED:	**1/19/2006 3:50:00 PM**	NORTHING:	1650375.2
		EASTING:	164872.7
		ELEVATION:	724.87

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SILTY SAND: SM/ML. SILTY SAND/sandy silt with few gravel, medium dense, fine to medium, yellowish brown, moist.		SB-01-0606-01		0.0
				SB-01-0606-02		0.0
		SAND: SW. SAND and gravel, loose, yellowish brown, wet.		SB-01-0606-03		4.2
-5		SAND: SW. SAND with gravel, medium dense, dark gray to black, moist.				
		SAND: SP. SAND, medium grained, medium dense, grayish brown, some wood debris, moist.		SB-01-0606-04		3.7
		GRAVEL: GW. GRAVEL and sand, loose, dark gray, wet.		SB-01-0606-05		2.8
		SAND: SW. SAND with trace gravel, medium dense, light brown to dark gray, moist.				
-10				SB-01-0606-06		2.7
		SAND: SW/GW. SAND and gravel, loose, dark grayish brown, saturated.		SB-01-0606-07		2.4
		SAND: SP. SAND, fine grained, trace gravel, hard, damp.		SB-01-0606-08		4.7
-15						

BORING LOG

BORING LOG: **SB-01-0607**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Mike Petty**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/17/2006 12:15:00 PM**	**COORDINATES**	
DATE COMPLETED:	**1/17/2006 1:30:00 PM**	NORTHING:	1650389.1
		EASTING:	164923.3
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SANDY CLAY: CL. SANDY CLAY, soft, medium plasticity, dark yellowish brown, very moist.		SB-01-0607-01		0.4
				SB-01-0607-02		1.6
		SAND: SP. SAND, loose, fine to medium grain, black, damp to moist.		SB-01-0607-03		0.1
-5						
		SAND: SP. SAND, medium dense, fine to medium, dark gray, moist.		SB-01-0607-04		0.9
		SAND: SP. SAND, medium dense, fine to med. very light gray, moist.				
		SILTY SAND: SM. SILTY SAND, med dense, fine grain, black, very moist.		SB-01-0607-05		64.0
-10				SB-01-0607-06		30.1
		SAND: SW. SAND with gravel, med dense, light grayish brown, wet. Water at 11 ft.		SB-01-0607-07		33.4
		GRAVEL: GW. GRAVEL with sand, black, wet, odor/sheen.		SB-01-0607-08		104
-15						

BORING LOG

BORING LOG: **SB-01-0608**

TOTAL DEPTH: **12.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Russ Gordon**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/16/2006**	**COORDINATES**	
DATE COMPLETED:	**11/16/2006**	NORTHING:	1650513.05
		EASTING:	164687.84
		ELEVATION:	724.10

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SAND: SAND, trace gravel, med. dense, brown, moist		SB-01-0608-01		1.8
		SANDY SILT: SANDY SILT, med. dense, dark brown, damp. organic material		SB-01-0608-02		1.4
		SILT: SILT, med. loose, med. dense, grayish brown, damp, organic material		SB-01-0608-03		1.8
-5				SB-01-0608-04		2.1
		GRAVELLY SAND: GRAVELLY SAND, trace silt, med. loose, med. dense, gray, damp				
		SANDY GRAVEL: SANDY GRAVEL, loose, gray, saturated, odor		SB-01-0608-05	Pos	3.0
		TILL: TILL, trace gravel, dense-very dense, brown, dry				
-10				SB-01-0608-06		2.4

BORING LOG

BORING LOG: **SB-01-0609**

TOTAL DEPTH: **16.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Russ Gordon**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/15/2006**	**COORDINATES**	
DATE COMPLETED:	**11/15/2006**	NORTHING:	1650522.03
		EASTING:	164821.14
		ELEVATION:	722.53

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SANDY SILT: SANDY SILT, trace gravel, loose-med. dense, brown, moist		SB-01-0609-01		0.5
				SB-01-0609-02		0.0
		SILT: SILT, trace gravel, med. dense-dense, brown, damp,		SB-01-0609-03		0.6
-5				SB-01-0609-04		5.7
		SILTY SAND: SILTY SAND, trace gravel, med. dense, dark brown, damp		SB-01-0609-05		2.1
-10		SILT: SILT, trace gravel, med. dense, dark brown w/black staining, moist		SB-01-0609-06		0.8
				SB-01-0609-07	Neg	3.6
		TILL: TILL, trace gravel, dark brown, v. dense, dry		SB-01-0609-08		1.0
-15						

BORING LOG

BORING LOG: **SB-01-0610**

TOTAL DEPTH: **16.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Russ Gordon**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/15/2006**	**COORDINATES**	
DATE COMPLETED:	**11/15/2006**	NORTHING:	1650472.29
		EASTING:	164917.26
		ELEVATION:	724.13

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SILTY SAND: SILTY SAND, trace gravel, loose, brown, damp		SB-01-0610-01		0.4
				SB-01-0610-02		0.0
				SB-01-0610-03		0.0
-5				SB-01-0610-04		0.0
		BLANK: no recovery				
-10		GRAVEL: GRAVEL, loose, gray, moist		SB-01-0610-05		4.5
		SAND: SAND, trace gravel, loose, black				
		GRAVEL: GRAVEL, trace sand, dark brown, moist, fill material		SB-01-0610-06		0.7
		SILT: SILT, black, med. dense, saturated				
		SANDY GRAVEL: SANDY GRAVEL, loose, black w/sheen, saturated, odor		SB-01-0610-07	Pos	4.6
-15		TILL: TILL, brown, gravel clasts, v. dense, dry				

BORING LOG

BORING LOG: **SB-01-0611**

TOTAL DEPTH: **16.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Russ Gordon**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/16/2006**	**COORDINATES**	
DATE COMPLETED:	**11/16/2006**	NORTHING:	1650451.42
		EASTING:	164608.84
		ELEVATION:	723.02

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SAND: SAND, trace gravel, loose brown, moist		SB-01-0611-01		0.0
		SAND: SAND, trace gravel, loose brown, moist, w/organic material		SB-01-0611-02		0.9
		SANDY SILT: SANDY SILT, trace gravel, med. dense-dense, slight plasticity, brown, damp		SB-01-0611-03		1.7
-5				SB-01-0611-04		0.7
		GRAVELLY SAND: GRAVELLY SAND, loose, brown-black, little silt, damp				
		BLANK: no recovery				
-10		SILT: SILT, trace gravel, loose, black, dry		SB-01-0611-05		0.7
		BLANK: no recovery				
		GRAVELLY SAND: GRAVELLY SAND, loose, med, dense, black, sheen, saturated		SB-01-0611-06	Pos	6.0
-15		GRAVEL: GRAVEL, 3" of gravel				
		TILL: TILL, v. dense, trace gravel, black-brown, moist, odor				

BORING LOG

BORING LOG: **SB-01-0611**

TOTAL DEPTH: **16.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Russ Gordon**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/16/2006**	**COORDINATES**	
DATE COMPLETED:	**11/16/2006**	NORTHING:	1650451.42
		EASTING:	164608.84
		ELEVATION:	723.02

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)

BORING LOG

BORING LOG: **SB-01-0612**

TOTAL DEPTH: **16.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Russ Gordon**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/15/2006**	**COORDINATES**	
DATE COMPLETED:	**11/15/2006**	NORTHING:	1650401.86
		EASTING:	164755.63
		ELEVATION:	722.12

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SILTY SAND: SILTY SAND, trace gravel, loose, fine, brown, damp		SB-01-0612-01		0.8
		SILTY SAND: SILTY SAND, trace gravel, loose, fine, brown, damp, with brown staining		SB-01-0612-02		1.2
				SB-01-0612-03		1.3
-5		SANDY GRAVEL: SANDY GRAVEL, trace clay, loose, black, odor		SB-01-0612-04		1.0
		BLANK: no recovery				
-10		GRAVELLY SAND: GRAVELLY SAND, loose, brown, moist		SB-01-0612-05		3.5
		SANDY SILT: SANDY SILT, trace gravel, med. dense, black, saturated		SB-01-0612-06	Neg	1.5
-15		TILL: TILL, dark brown, trace gravel, v. hard, dry		SB-01-0612-07		1.1

BORING LOG

BORING LOG: **SB-01-0613**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Russ Gordon**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/16/2006**	**COORDINATES**	
DATE COMPLETED:	**11/16/2006**	NORTHING:	1650338.68
		EASTING:	164918
		ELEVATION:	721.21

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		GRAVELLY SAND: GRAVELLY SAND, loose, brown-black moist		SB-01-0613-01		2.5
				SB-01-0613-02		2.8
		SILTY SAND: SILTY SAND, little gravel, med. dense, brown-black, damp, organic material		SB-01-0613-03		2.8
-5				SB-01-0613-04		9.2
		BLANK: no recovery				
-10		SAND: SAND, little gravel, loose-med. dense, fine-med. grained, moist @ 11.5'		SB-01-0613-05		4.8
		SANDY SILT: SANDY SILT, soft, dark brown, moist				
		SAND: SAND, little gravel, loose-med. dense, fine-med. grained; saturated @ 14'		SB-01-0613-06	Neg	2.7
				SB-01-0613-07		3.0
-15		TILL: TILL, trace gravel, v. hard, brown, dry				

BORING LOG

BORING LOG: **SB-01-0701**

TOTAL DEPTH: **5.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6620 DT**
DATE STARTED:	**9/27/2007 2:50:00 PM**	**COORDINATES**	
DATE COMPLETED:	**9/27/2007 3:05:00 PM**	NORTHING:	1650600.95
		EASTING:	164539.83
		ELEVATION:	715.21

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL; organics.		SB-01-0701-01		0.0
		FILL: FILL material, gravel, wood, asphalt, fine sands & silt.				
		SAND: SANDS, gray (10YR 4/1), loose (sl. cohesive), gravels, fine sands, cinders, black staining, strong odor, wet.		SB-01-0701-02		65.8
		CLAY: CLAY, dk gray (10YR 3/1), plastic, moist, black staining, soft/firm, odor.		SB-01-0701-03		37.1
-5		SAND: SANDS, gray (10YR 4/1), loose (sl. cohesive), gravels, fine-med sands, odor.				

BORING LOG

BORING LOG: **SB-01-0702**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6620 DT**
DATE STARTED:	**9/27/2007 2:17:00 PM**	**COORDINATES**	
DATE COMPLETED:	**9/27/2007 2:27:00 PM**	NORTHING:	1650470.42
		EASTING:	164529.36
		ELEVATION:	723.29

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		FILL: FILL; asphalt, granite, sands.		SB-01-0702-01		0.0
		SAND: SILTY SAND; brown (10YR1/3), loose, sl. cohesive, gravels, wet.				
		SANDY CLAY: SANDY CLAY; brown (10YR 4/4), firm, plastic, tr. gravel, plastic, brick + rubber debris, color change to dk. brown (10YR 3/1) @ 7.5, inc. wetness @7.5', sl odor w/ depth.		SB-01-0702-02		0.0
				SB-01-0702-03		0.0
-5				SB-01-0702-04		0.0
				SB-01-0702-05		0.0
-10				SB-01-0702-06		0.0
		CLAY: CLAY, dk. brown-gray (10YR 3/1), tr. gravels, moist, wet intervals every 0.5', plastic, sticky, black training, odor, cinders.		SB-01-0702-07		0.0
		SAND: SANDS, dk. brown-black (10YR 3/1-2/1), wet, plastic, sticky, strong odor. Black staining, tr. gravels with oily sheen on inside of 14-15' bag.		SB-01-0702-08		0.0
-15						

BORING LOG

BORING LOG: **SB-01-0703**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**R. Woodruff**	DRILLING METHOD:	**geoprobe 6600**
DATE STARTED:	**10/5/2007 12:08:00 PM**	**COORDINATES**	
DATE COMPLETED:	**10/5/2007 12:20:00 PM**	NORTHING:	1650369.54
		EASTING:	164626.12
		ELEVATION:	716.53

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL		SB-01-0703 - 01		8.1
		SANDY CLAY: SANDY CLAY, brown, (10yr, 5/4), Tr gravel, firm, moist, cinders @ 3.0', plastic.		SB-01-0703 - 02		32.3
		CLAY: CLAY, Dk. Gray (10YR, 3/1), Tr. gravel, brick fragments, glass, cinders, black staining (odor), soft, plastic, moist, wet from 7.5 - 8.5		SB-01-0703 - 03		78.3
-5				SB-01-0703 - 04		61.7
				SB-01-0703 - 05		38.4
		SILTY CLAY: SILTY CLAY, gray, (10YR, 4/1), Tr. gravel, some sand, hard, dry, (Glacial Till)				
-10						

BORING LOG

BORING LOG: **SB-01-0704**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**R. Woodruff**	DRILLING METHOD:	**geoprobe 6600**
DATE STARTED:	**10/5/2007 11:36:00 AM**	**COORDINATES**	
DATE COMPLETED:	**10/5/2007 11:54:00 AM**	NORTHING:	1650276.93
		EASTING:	164881.78
		ELEVATION:	716.52

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL		SB-01-0704 - 01		2.1
		SANDY CLAY: SANDY CLAY, brown, (10YR 4/2), tr. gravel, firm, plastic, Sl. moist, (wet from 3.0-4.0)		SB-01-0704 - 02		12.8
		CLAY: CLAY, gray, (10YR 5/1), tr. gravels, firm, moist, plastic, color change to dk gray @ 11.0' (10YR 3/1), inc. sand content, soft, cinders, staining (11.0'-12.5')		SB-01-0704 - 03		19.3
-5				SB-01-0704 - 04		48.9
		SANDY GRAVEL: SANDY GRAVEL, brown (10YR 6/6), lots of gravel, loose, some clay, cinders and foundry sand (black).		SB-01-0704 - 05		63.1
-10						

BORING LOG

BORING LOG: **SB-01-0705**

TOTAL DEPTH: **12.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Bill Condon**
LOGGED BY:	**T. Hubbard**	DRILLING METHOD:	**geoprobe**
DATE STARTED:	**11/5/2007 4:00:00 PM**	**COORDINATES**	
DATE COMPLETED:	**11/5/2007 4:15:00 PM**	NORTHING:	1650612.03
		EASTING:	164466.21
		ELEVATION:	715.89

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SANDY SILT: ML, SANDY SILT w/ gravel, tr. concrete (fill), Vy Dk gray (5YR 3/1), heavily stained oil product from 3 - 6.7', heavy fuel odor, slightly plastic wet @ 6.7.		SB-01-0705 - 01		0.3
				SB-01-0705 - 02		10.2
				SB-01-0705 - 03		82.1
-5				SB-01-0705 - 04		59.6
		SANDY GRAVEL: SW, fine-coarse, sands and gravel, wet, black, compact, highly impacted w/ oily residue (sample collected @ 8')		SB-01-0705 - 05		20.0
		CLAYEY SILT: ML-CL, CLAYEY SILT w/ sand + gravel, firm-soft, wet. (glacial till)				
-10				SB-01-0705 - 06		10.0

BORING LOG

BORING LOG: **SB-01-0706**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Bill Condon**
LOGGED BY:	**T. Hubbard**	DRILLING METHOD:	**geoprobe**
DATE STARTED:	**11/2/2007 4:30:00 PM**	**COORDINATES**	
DATE COMPLETED:	**11/5/2007 1:35:00 PM**	NORTHING:	1650626.7
		EASTING:	164346.59
		ELEVATION:	715.66

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL		SB-01-0706 - 01		0.1
		CLAYEY SILT: ML-CL, CLAYEY SILT, tr. organics (roots), Dk yellowish brown (10YR 4/4), non-plastic, moist, soft.				
				SB-01-0706 - 02		0.0
				SB-01-0706 - 03		0.1
-5						
				SB-01-0706 - 04		0.0
		SANDY GRAVEL: SW, fine-coarse, SANDS and GRAVEL, yellowish brown (10YR 5/4), wet @ 8', compact, refusal @ 8'				
		CLAYEY SILT: ML-CL, CLAYEY SILT, w/ fine-med sands and gravel, gray (10YR 5/1), (glacial till), slightly plastic (water added), firm, moist.		SB-01-0706 - 05		0.0
-10						

BORING LOG

BORING LOG: **SB-01-0707**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Bill Condon**
LOGGED BY:	**Brett Sutton**	DRILLING METHOD:	**geoprobe**
DATE STARTED:	**10/25/2007 12:45:00 PM**	**COORDINATES**	
DATE COMPLETED:	**10/25/2007 1:40:00 PM**	NORTHING:	1650513.56
		EASTING:	164379.76
		ELEVATION:	720.04

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL - ML-CL		SB-01-0707 - 01		0.0
		SILTY SAND: Fine-Med SILT and SANDS w/ gravel Brown (10YR 4/4), moist, friable, loose		SB-01-0707 - 02		0.0
		CLAY: ML- SILTY CLAY w/ gravel olive brown (25Y 4/3), moist, nonplastic, firm, black foundry sand + silt (4.8-8.8 ft) (fill material)		SB-01-0707 - 03		0.0
-5				SB-01-0707 - 04		0.0
				SB-01-0707 - 05		0.0
-10				SB-01-0707 - 06		0.0
		CLAYEY SILT: ML-CL, CLAYEY SILT, tr. gravel, grayish brown (10YR 5/2), non-plastic, very stiff, dry, (glacial till)		SB-01-0707 - 07		0.0
				SB-01-0707 - 08		0.0
-15						

BORING LOG

BORING LOG: **SB-01-0708**

TOTAL DEPTH: **13.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Bill Condon**
LOGGED BY:	**T. Hubbard**	DRILLING METHOD:	**geoprobe**
DATE STARTED:	**11/20/2007 5:20:00 PM**	**COORDINATES**	
DATE COMPLETED:	**11/20/2007 5:35:00 PM**	NORTHING:	1650513.7
		EASTING:	164380
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SILTY SAND: SM, SILTY SAND w/ gravel (fill), dk yellowish brown (10YR 3/4)		SB-01-0708 - 01		0.0
				SB-01-0708 - 02		0.0
				SB-01-0708 - 03		0.1
-5				SB-01-0708 - 04		0.2
				SB-01-0708 - 05		0.1
-10		SAND AND GRAVEL: SP, Med-Coarse SAND + GRAVEL, Dk. yellowish brown (10YR 4/4), compact, rounded-subrounded, wet @ 12'		SB-01-0708 - 06		0.1
		CLAYEY SILT: ML-CL, CLAYEY SILT w/ fine-med sand + gravel, Dk. grayish brown (10YR 4/2), slightly plastic, stiff (glacial till).				

BORING LOG

BORING LOG: **SB-01-0709**

TOTAL DEPTH: **12.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Bill Condon**
LOGGED BY:	**T. Hubbard**	DRILLING METHOD:	**geoprobe**
DATE STARTED:	**11/2/2007 5:00:00 PM**	**COORDINATES**	
DATE COMPLETED:	**11/2/2007 5:15:00 PM**	NORTHING:	1650546.35
		EASTING:	164321.82
		ELEVATION:	717.73

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL		SB-01-0709 - 01		0.0
		SILTY SAND: SM, SILTY SAND, Dk. yellowish brown (10YR 4/4) soft, non-plastic, dry.		SB-01-0709 - 02		0.2
		SAND: SP, Med SANDs, pale brown (10YR 6/3), compact, friable, dry rounded to subrounded, wet @ 10'		SB-01-0709 - 03		0.4
-5				SB-01-0709 - 04		0.4
				SB-01-0709 - 05		0.1
-10				SB-01-0709 - 06		0.1
		CLAYEY SILT: ML-CL, CLAYEY SILT w/ fine-med sand + gravel, Dk grayish brown (10YR 4/2), slightly plastic, stiff, (glacial till)				

BORING LOG

BORING LOG: **SB-02-0600**

TOTAL DEPTH: **5.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**Bryant Griggs**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**11/15/2006 1:30:00 PM**	**COORDINATES**	
DATE COMPLETED:	**1/12/2006**	NORTHING:	1650281.14
		EASTING:	165382.14
		ELEVATION:	722.48

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		FILL: #53 crushed stone: FILL		SB-02-0600-01		1.7
		SAND: Brown-black SAND, med-coarse grained, moist (fill?)				
				SB-02-0600-02		1.7
		GRAVEL: Beige-gray RIVER ROCKS 3"-4" in diameter				
		SAND: Brown-gray SAND/gravel mix, med-coarse grained, moist. Boring terminated per Sarah Fishers request.		SB-02-0600-03		1.7
-5						

BORING LOG

BORING LOG: **SB-02-0601**

TOTAL DEPTH: **60.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Mini-Sonic**
DATE STARTED:	**2/8/2006 10:20:00 AM**	**COORDINATES**	
DATE COMPLETED:	**2/8/2006 11:47:00 AM**	NORTHING:	1650716.3
		EASTING:	165368.4
		ELEVATION:	722.15

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL		SB-02-0601-01		0.0
		SANDY CLAY: Dark grayish brown silty SANDY CLAY, plastic, coh., sticky, moist.		SB-02-0601-02		10.0
-5				SB-02-0601-03		11.2
				SB-02-0601-04		13.4
				SB-02-0601-05		9.6
-10				SB-02-0601-06		22.4
				SB-02-0601-07		18.7
-15				SB-02-0601-08		24.7
				SB-02-0601-09		20.5
				SB-02-0601-10		39.6
-20				SB-02-0601-11		43.1
				SB-02-0601-12		82.7
-25		SAND: Black clayey SAND, sl. plastic, sl. coh., non-sticky, moist, sheen, odor; wet @30.0'		SB-02-0601-13		226.1
				SB-02-0601-14		184.5
				SB-02-0601-15		209.4
-30				SB-02-0601-16		135.6
				SB-02-0601-17		142.7
-35				SB-02-0601-18		125.5
				SB-02-0601-19		156.3
				SB-02-0601-20		121.2
-40				SB-02-0601-21		127.9
				SB-02-0601-22		130.4
-45		SAND: Dark grayish brown clayey SAND, sl. plastic, sl. coh., non-sticky, wet.		SB-02-0601-23		111.5
				SB-02-0601-24		28.7
		SAND: Lt. gray med. to coarse SAND & gravel, wet, poorly graded, sub-rounded, sl. odor (methane?)		SB-02-0601-25		21.4
-50				SB-02-0601-26		29.1
				SB-02-0601-27		31.4
-55		SILT: Dark gray clayey SILT, nonplastic, coh., non-sticky, sl. moist, trace gravel, hard.		SB-02-0601-28		20.0
				SB-02-0601-29		18.9
		SAND: Lt. gray fine to med. SAND, wet, sl. odor (methane?)		SB-02-0601-30		36.2
-60						

BORING LOG

BORING LOG: **SB-02-0602**

TOTAL DEPTH: **38.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**Bryant Griggs**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**1/12/2006**	**COORDINATES**	
DATE COMPLETED:	**1/12/2006**	NORTHING:	1650445.7
		EASTING:	165390
		ELEVATION:	723.76

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		FILL: #53 Crushed stone: FILL		SB-02-0602-01		29.1
		GRAVEL: Black, GRAVEL, sand, clay mix (sand is fine grained-foundary type)		SB-02-0602-02		45.1
-5		SANDY CLAY: Black-gray silty SANDY CLAY, firm, trace gravel, moist, plastic.		SB-02-0602-03		24.4
		BLANK: Zero recovery - lots of garbage in split-spoon, steel, nails, etc.		SB-02-0602-04		NA
		SANDY CLAY: Black sandy silty SANDY CLAY mix 40/60, trace gravel, moist.		SB-02-0602-05		22.7
-10		SAND: Black SAND - gravel mix 80/20, trace clay, moist, fine grained, very moist at 13', trace silt, no clay.		SB-02-0602-06		35.3
				SB-02-0602-07		48.6
-15		BLANK: Less than 10% recovery		SB-02-0602-08		2.5
		SAND: Black & brown SAND, trace silt, fine grained, very moist, trace gravel.		SB-02-0602-09		7.6
		SILTY SAND: Gray SILTY SAND gravel mix 80/20, med-coarse grained, wet. Slight odor 22-24'.		SB-02-0602-10		4.1
-20				SB-02-0602-11		1.9
				SB-02-0602-12		2.4
				SB-02-0602-13		2.0
-25		SILTY SAND: Gray SILTY SAND - gravel mix 60/40, coarse grained, wet, odor.		SB-02-0602-14		4.5
				SB-02-0602-15		1.9
-30				SB-02-0602-16		2.5
				SB-02-0602-17		2.2
		SAND: Gray beige SAND, fine grained, trace silt, wet.		SB-02-0602-18		2.0
-35		SILTY CLAY: Gray-brown SILTY CLAY, firm, moist, not plastic, nonsticky, trace gravel.		SB-02-0602-19		1.9

BORING LOG

BORING LOG: **SB-02-0603**

TOTAL DEPTH: **1.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**Bryant Griggs**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**1/12/2006**	**COORDINATES**	
DATE COMPLETED:	**1/12/2006**	NORTHING:	1650441.2
		EASTING:	165390.5
		ELEVATION:	723.79

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		FILL: #53 Crushed stone: FILL		SB-02-0603-01		--
		SAND: Black-brown SAND-gravel mix (fill), very moist, debris. Encountered electrical wire, possibly going to observation tent. Depth of wire ~1.5'				

BORING LOG

BORING LOG: **SB-02-0604**

TOTAL DEPTH: **2.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**Bryant Griggs**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**1/12/2006**	**COORDINATES**	
DATE COMPLETED:	**1/12/2006**	NORTHING:	1650512
		EASTING:	165378.8
		ELEVATION:	723.35

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		FILL: #53 crushed stone: FILL		SB-02-0604-01		--
		SAND: Black-brown SAND-gravel mix (fill), very moist, debris.				
		SAND: Black fine-grained SAND (Foundary sand) wet, odor, debris. Refusal @ 2', chunk of steel? solid in-place.				

BORING LOG

BORING LOG: **SB-02-0605**

TOTAL DEPTH: **2.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**Bryant Griggs**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**1/11/2006**	**COORDINATES**	
DATE COMPLETED:	**1/11/2006**	NORTHING:	1650540.5
		EASTING:	165386.8
		ELEVATION:	722.73

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		FILL: #53 crushed stone: FILL		SB-02-0605-01		10.0
		SAND: Black-brown, SAND-gravel mix, very moist (Fill), debris.				
		SAND: Black fine grained SAND (foundary sand), very moist, odor. Refusal @ 2.5.', concrete slab.				

BORING LOG

BORING LOG: **SB-02-0606**

TOTAL DEPTH: **2.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**Bryant Griggs**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**1/11/2006**	**COORDINATES**	
DATE COMPLETED:	**1/11/2006**	NORTHING:	1650546.5
		EASTING:	165386.8
		ELEVATION:	722.65

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		FILL: #53 crushed stone: FILL		SB-02-0606-01		--
		SAND: Black-brown, SAND-gravel mix, very moist (Fill), debris, odor.				
		SAND: Black fine grained SAND (foundary sand), very moist, debris odor. Refusal @ 2.5.', concrete slab?				

BORING LOG

BORING LOG: **SB-02-0607**

TOTAL DEPTH: **2.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**Bryant Griggs**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**1/11/2006**	**COORDINATES**	
DATE COMPLETED:	**1/11/2006**	NORTHING:	1650551.6
		EASTING:	165382.2
		ELEVATION:	722.81

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		FILL: #53 crushed stone: FILL		SB-02-0607-01		--
		SAND: Black-brown, SAND-gravel mix, very moist, odor (Fill), debris.				
		SAND: Black fine grained SAND (foundary sand), debris. Refusal @ 2.5.', concrete slab?				

BORING LOG

BORING LOG: **SB-02-0608**

TOTAL DEPTH: **2.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**Bryant Griggs**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**1/11/2006**	**COORDINATES**	
DATE COMPLETED:	**1/11/2006**	NORTHING:	1650542.9
		EASTING:	165377.8
		ELEVATION:	722.79

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		FILL: #53 crushed stone: FILL		SB-02-0608-01		2.5
		SAND: Black SAND-gravel mix, debris, coarse grained, (Fill) odor, moist.				
		SAND: Black fine grained SAND (foundary sand), odor, moist. Refusal @ 2.5.', concrete slab?				

BORING LOG

BORING LOG: **SB-02-0609**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/13/2006 2:00:00 PM**	**COORDINATES**	
DATE COMPLETED:	**1/13/2006 3:05:00 PM**	NORTHING:	1650248.2
		EASTING:	165246
		ELEVATION:	723.43

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SAND: SAND & gravel, gray, medium to coarse sand, fine gravel, trace silt, loose, wet.		SB-02-0609-01		1.2
				SB-02-0609-02		1.2
				SB-02-0609-03		2.4
-5		CLAY: CLAY; gray, some silt, trace glass and wood, wood is black, organic odor, firm.		SB-02-0609-04		1.2
				SB-02-0609-05		1.2
-10		FILL: FILL, clay, gravel, and rubbish; including glass, plastic, wood, and trace scrap steel. Areas surrounded by clay and wood are black-decomposition. Organic odor, loose in fill, firm in clay, dry.		SB-02-0609-06		1.3
				SB-02-0609-07		1.2
				SB-02-0609-08		1.2
-15						

BORING LOG

BORING LOG: **SB-02-0610**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**1/13/2006**	**COORDINATES**	
DATE COMPLETED:	**1/13/2006**	NORTHING:	1650245.1
		EASTING:	165245.3
		ELEVATION:	723.36

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SAND: SAND & gravel, gray, medium to coarse sand, fine gravel, trace clays, loose, wet.		SB-02-0610-01		1.2
				SB-02-0610-02		1.2
				SB-02-0610-03		1.2
-5		CLAY: CLAY; gray, some silt, trace glass & wood, organic odor, firm: fill.		SB-02-0610-04		1.2
				SB-02-0610-05		1.3
-10						

BORING LOG

BORING LOG: **SB-02-0611**

TOTAL DEPTH: **4.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**1/17/2006**	**COORDINATES**	
DATE COMPLETED:	**1/17/2006**	NORTHING:	1650446.9
		EASTING:	165216.7
		ELEVATION:	723.94

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		GRAVEL: GW. GRAVEL and sand, medium to coarse, brownish gray, wet.		SB-02-0611-01		1.2
				SB-02-0611-02		10.6
		SAND: SW. SAND and gravel, loose, fine to medium sand, black, very moist.				

BORING LOG

BORING LOG: **SB-02-0612**

TOTAL DEPTH: **3.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**1/17/2006**	**COORDINATES**	
DATE COMPLETED:	**1/17/2006**	NORTHING:	1650433.5
		EASTING:	165177.4
		ELEVATION:	724.06

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		GRAVEL: GW. GRAVEL and sand, medium to coarse, brownish gray, wet.				
		SAND: SW. SAND and gravel, loose, fine to medium sand, black, very moist, some debris.				

BORING LOG

BORING LOG: **SB-02-0613**

TOTAL DEPTH: **3.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**1/17/2006**	**COORDINATES**	
DATE COMPLETED:	**1/17/2006**	NORTHING:	1650390.8
		EASTING:	165155.7
		ELEVATION:	724.11

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		GRAVEL: GW. GRAVEL and sand, medium dense, medium to coarse, brownish gray, very moist, debris (railroad spike).				
		SAND: SW. SAND, loose, fine to medium, black, very moist (foundary sand), debris.				

BORING LOG

BORING LOG: **SB-02-0614**

TOTAL DEPTH: **3.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**1/17/2006**	**COORDINATES**	
DATE COMPLETED:	**1/17/2006**	NORTHING:	1650339.3
		EASTING:	165109.1
		ELEVATION:	723.27

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		GRAVEL: GW. GRAVEL and sand, medium dense, fine to coarse, brownish gray, very moist.				
		SAND: SW. SAND, loose, fine to medium, black, very moist, debris (metal, plastic).				

BORING LOG

BORING LOG: **SB-02-0615**

TOTAL DEPTH: **5.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**1/18/2006 11:10:00 AM**	**COORDINATES**	
DATE COMPLETED:	**1/18/2006 12:55:00 PM**	NORTHING:	1650325.2
		EASTING:	165095.8
		ELEVATION:	722.58

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SAND: SAND and clay (topsoil), brown to dark brown, medium to fine sand, little coarse, clay, little silt, soft, moist, low plasticity.		SB-02-0615-01		1.6
		SAND: SAND; gray dark gray, medium sand, little fine, little clay, soft, loose, moist.				
				SB-02-0615-02		1.4
				SB-02-0615-03		1.4
-5						

BORING LOG

BORING LOG: **SB-02-0616**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Russ Gordon**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/15/2006 1:30:00 PM**	**COORDINATES**	
DATE COMPLETED:	**11/15/2006 2:30:00 PM**	NORTHING:	1650281.14
		EASTING:	165382.14
		ELEVATION:	722.48

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		GRAVELLY SAND: GRAVELLY SAND, medium dense - loose, brown, damp.				
		SILT: SILT, loose, black, dry, odor, metal debris.				
		BLANK: No recovery				
-5		SILT: SILT with trace gravel, loose, black, dry, odor, metal debris.		SB-02-0616-04		0.4
		BLANK: No recovery		SB-02-0616-05		238.0
-10		CLAYEY SILT: CLAYEY SILT, loose - med. dense, black, damp, odor, metal.		SB-02-0616-06		4.9
				SB-02-0616-07		267.0
		CLAY: CLAY, slight plasticity, medium dense, brown/black staining, odor.		SB-02-0616-08		270.0
-15		SAND: SAND, medium grained, trace gravel, brown, loose, slight odor.		SB-02-0616-09		121.0
		BLANK: No recovery.				
		CLAYEY SILT: CLAYEY SILT, medium dense to loose, trace sand, odor, damp.		SB-02-0616-10		162.0
-20		SANDY GRAVEL: SANDY GRAVEL, loose, black sheen, saturated, odor.				

BORING LOG

BORING LOG: **SB-02-0616**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Russ Gordon**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/15/2006 1:30:00 PM**	**COORDINATES**	
DATE COMPLETED:	**11/15/2006 2:30:00 PM**	NORTHING:	1650281.14
		EASTING:	165382.14
		ELEVATION:	722.48

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
-20						

BORING LOG

BORING LOG: **SB-02-0617**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Russ Gordon**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/15/2006 10:35:00 AM**	**COORDINATES**	
DATE COMPLETED:	**11/15/2006 11:25:00 AM**	NORTHING:	1650435.46
		EASTING:	165245.72
		ELEVATION:	723.51

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SILTY SAND: SILTY SAND, trace gravel, medium dense, black, damp.		SB-02-0617-01		1.2
				SB-02-0617-02		4.8
		BLANK: No recovery.		SB-02-0617-03		--
-5		SILTY SAND: SILTY SAND, medium dense, black, damp.		SB-02-0617-04		95.0
		SILTY SAND: SILTY SAND, very loose, black, dry, organic/metallic material.		SB-02-0617-05		62.4
-10		SILT: SILT, loose, slight plasticity, black, damp, organic material.		SB-02-0617-06		264.0
		SILTY SAND: SILTY SAND, trace gravel, medium dense, black, dry.		SB-02-0617-07		74.4
		SILTY SAND: SILTY SAND, trace gravel, medium dense, black, dry, brown.		SB-02-0617-08		89.5
-15		GRAVELLY SAND: GRAVELLY SAND, very loose, poor sorting, brown, moist.				
		BLANK: No recovery.		SB-02-0617-09		--
		SANDY SILT: SANDY SILT, medium dense, black, damp, odor.		SB-02-0617-10		93.4
-20		GRAVEL: GRAVEL, loose, black, saturated, sheen, odor.				

BORING LOG

BORING LOG: **SB-02-0618**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Russ Gordon**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/15/2006 11:45:00 AM**	**COORDINATES**	
DATE COMPLETED:	**11/15/2006 12:30:00 PM**	NORTHING:	1650430.57
		EASTING:	165285.55
		ELEVATION:	723.38

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		GRAVELLY SAND: GRAVELLY SAND, some gravel, dense, brown, moist.		SB-02-0618-01		0.8
				SB-02-0618-02		243.0
		SILTY SAND: SILTY SAND with debris.				
		BLANK: No recovery.		SB-02-0618-03		--
-5						
		GRAVELLY SAND: GRAVELLY SAND, medium dense, brown, saturated.		SB-02-0618-04		75.2
		BLANK: No recovery.		SB-02-0618-05		--
-10		GRAVELLY SAND: GRAVELLY SAND, medium dense, brown, saturated.		SB-02-0618-06		123.0
		SILT: SILT, dense, black (stained red at 11.5 ft), damp.				
		BLANK: No recovery.		SB-02-0618-07		--
		GRAVELLY SAND: GRAVELLY SAND, medium dense, brown, saturated.		SB-02-0618-08		125.0
-15						
		SAND: SAND, trace gravel, loose, brown, damp.		SB-02-0618-09		86.3
				SB-02-0618-10		57.8
		SAND: SAND, trace gravel, fine, dense, black, saturated.				
-20						

BORING LOG

BORING LOG: **SB-02-0701**

TOTAL DEPTH: **7.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6620 DT**
DATE STARTED:	**9/27/2007 10:10:00 AM**	**COORDINATES**	
DATE COMPLETED:	**9/27/2007 10:30:00 AM**	NORTHING:	1650626.09
		EASTING:	165364.1
		ELEVATION:	721.06

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL		SB-02-0701-01		27.7
		SAND: SAND, brown (10YR 4/4), loose gravel, dry, some clay present, asphalt at 1.0', fin-med sands.				
		SANDY CLAY: SANDY CLAY, dk. brown (10YR 3/2), soft/firm, tr. gravel, some cinders, concrete from 4.8-5.0, concrete and refusal from 6.0-7.0. Bent rod.				
				SB-02-0701-02		0.0
				SB-02-0701-03		0.0
-5						
				SB-02-0701-04		0.0

BORING LOG

BORING LOG: **SB-02-0702**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6620 DT**
DATE STARTED:	**9/27/2007 4:00:00 PM**	**COORDINATES**	
DATE COMPLETED:	**9/27/2007 4:15:00 PM**	NORTHING:	1650424.38
		EASTING:	165481.11
		ELEVATION:	723.58

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		FILL: FILL material, gravel, asphalt, fine sands.		SB-02-0702-01		0.0
		SAND: CLAYEY SAND, dk. brown (10YR 3/1), tr. gravel, dry, loose (sl. cohesive).		SB-02-0702-02		0.0
		SAND: SAND, fine sand, light brown (10YR 6/6), loose, dry.				
		SAND: SILTY SAND; dk. brown (10YR 3/1), tr. gravel, dry, loose (sl. cohesive), concrete and tile @ 4.8-5.0, red staining @ 6.0, metallic (shiny) particles from 6.0-6.5'.		SB-02-0702-03		0.0
-5				SB-02-0702-04		0.0
				SB-02-0702-05		0.0
-10						

BORING LOG

BORING LOG: **SB-02-0703**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6620 DT**
DATE STARTED:	**9/27/2007 3:30:00 PM**	**COORDINATES**	
DATE COMPLETED:	**9/27/2007 3:40:00 PM**	NORTHING:	1650155.53
		EASTING:	165318.41
		ELEVATION:	721.65

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL, organics.		SB-02-0703-01		0.0
		SAND: SILTY SAND, lt. brown (10YR 6/4), tr. gravels, loose, dry.				
		SANDY CLAY: SANDY CLAY, brown (10YR 4/3), tr. gravels, firm, dry, cinders, glass fragments.		SB-02-0703-02		0.0
		SAND: SANDS, dk. brown (10YR 2/1), tr. gravels, fine sands, dry, loose.				
		SANDY CLAY: SANDY CLAY, dk. brown-black (10YR 2/1), soft/firm, tr. gravels, plastic, moist; glass & brick fragments @5.0', slight odor @ 4.0-6.0'.		SB-02-0703-03		0.0
-5				SB-02-0703-04		0.0
		SAND: SAND, lt. brown-lt. gray, (10YR 5/1), loose (sl. cohesive), tr. gravel, wet.		SB-02-0703-05		0.0
-10						

BORING LOG

BORING LOG: **SB-02-0704**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**R. Woodruff**	DRILLING METHOD:	**geoprobe 6600**
DATE STARTED:	**10/5/2007 11:00:00 AM**	**COORDINATES**	
DATE COMPLETED:	**10/5/2007 11:15:00 AM**	NORTHING:	1650176.19
		EASTING:	165149.59
		ELEVATION:	716.68

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL		SB-02-0704-01		31.2
		SAND: SAND, brown, (10YR 5/4), loose, dry, tr. gravels				
		SANDY CLAY: SANDY CLAY, Dk. brown, (10YR 4/3), tr. gravel, sl. plastic, firm, sl. moist, inc. gravel content w/ depth, dec. sand content w/ depth, color fades to gray (10 YR 4/1).		SB-02-0704-02		55.1
				SB-02-0704-03		78.9
-5		CLAYEY SAND: CLAYEY SAND, brown (10YR 5/4), tr. gravels, sl. moist, sl. cohesive, soft.				
		CLAY: SILTY SANDY CLAY, gray (10YR 5/1), soft (hardens w/ depth), tr. gravels, sl. moist, cinders @ 7.5'-8.0', (staining, odor)		SB-02-0704-04		28.2
				SB-02-0704-05		46.8
		SANDY GRAVEL: SANDY GRAVEL, brown (10YR 6/6), lots of gravel, loose, sl. moist				
-10		SILTY CLAY: SILTY CLAY, gray (10YR 5/1), firm, tr. gravels, sl. plastic.				

BORING LOG

BORING LOG: **SB-02-0705**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6620 DT**
DATE STARTED:	**9/27/2007 11:42:00 AM**	**COORDINATES**	
DATE COMPLETED:	**9/27/2007 12:00:00 PM**	NORTHING:	1650286.78
		EASTING:	165048.44
		ELEVATION:	721.08

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		FILL: FILL, gravel, asphalt, fine sands and clay.		SB-02-0705-01		0.0
				SB-02-0705-02		0.0
		SANDY CLAY: SANDY CLAY; dark brown (10YR 3/1), tr. gravel, plastic, moist, wet @ 4.0', sticky, sl. odor, color change to brown @ 5.5 (10YR4/3), some black staining @ 9.5-10.5, brick and scrap metal from 12.0-15.0, black staining fr. 13.5-15.5, dk. green, strong odor.		SB-02-0705-03		0.0
-5				SB-02-0705-04		0.0
				SB-02-0705-05		0.0
-10				SB-02-0705-06		0.0
				SB-02-0705-07		9.1
				SB-02-0705-08		0.0
-15						

BORING LOG

BORING LOG: **SB-02-0706**

TOTAL DEPTH: **5.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6620 DT**
DATE STARTED:	**9/27/2007 10:58:00 AM**	**COORDINATES**	
DATE COMPLETED:	**9/27/2007 11:20:00 AM**	NORTHING:	1650442.77
		EASTING:	165099.26
		ELEVATION:	723.07

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL; organics		SB-02-0706-01		27.0
		SAND: SAND; brown(10YR 4/3), loose, dry, large gravel, med. sands.				
		SANDY CLAY: SANDY CLAY; reddish brown (2.5YR 3/2), dry, firm, tr. gravel.		SB-02-0706-02		18.4
		SANDY CLAY: SANDY CLAY, dk. gray-black (2.5YR 2/1), odor, dk. green stringers, moist, plastic, tr. gravel, tr. wood.		SB-02-0706-03		0.0
-5		SAND: SAND, w/silt, brown (10YR 4/3), fine sands, tr. gravel, wet, sticky, plastic.				

BORING LOG

BORING LOG: **SB-02-0707**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Russ Jordan**
LOGGED BY:	**T. Hubbard**	DRILLING METHOD:	**geoprobe**
DATE STARTED:	**11/2/2007 1:05:00 PM**	**COORDINATES**	
DATE COMPLETED:	**11/2/2007 1:10:00 PM**	NORTHING:	1650115.84
		EASTING:	165441.57
		ELEVATION:	719.12

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL		SB-02-0707 - 01		0.0
		SANDY SILT: ML, SANDY SILT, dark yellowish brown (10YR 3/4), moist, soft, non-plastic, trace organics + gravel		SB-02-0707 - 02		0.0
-5		BLANK: No Recovery (too soft to enter sample casing)				
		SANDY SILT: ML, SANDY SILT, dark brown (10YR 3/3), moist, soft, cinders/foundry sand from 8.2-8.4, no odor		SB-02-0707 - 03		4.3
-10		SAND: SW, fine-coarse SANDS, dark yellowish brown (10YR 4/4), very moist, compact, rounded - sub rounded		SB-02-0707 - 04		0.3
				SB-02-0707 - 05		0.1
				SB-02-0707 - 06		0.4
-15						

BORING LOG

BORING LOG: **SB-02-0708**

TOTAL DEPTH: **12.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Bill Condon**
LOGGED BY:	**T. Hubbard**	DRILLING METHOD:	**geoprobe**
DATE STARTED:	**11/2/2007 12:55:00 PM**	**COORDINATES**	
DATE COMPLETED:	**11/2/2007 1:05:00 PM**	NORTHING:	1650235.19
		EASTING:	165461.51
		ELEVATION:	721.90

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL		SB-02-0708 - 01		0.0
		SANDY SILT: ML, SANDY SILT w/ gravel, dk yellowish brown (10YR 3/4), moist, soft, non-plastic.				
				SB-02-0708 - 02		0.0
				SB-02-0708 - 03		0.0
-5						
				SB-02-0708 - 04		0.4
		CLAYEY SAND: SC, CLAYEY SANDS, Dk Gray (10YR 4/1) compact, wet.				
		CLAYEY SILT: ML-CL, CLAYEY SILT w/ fine-med sands and gravel (glacial till), dk. gray (10YR 4/1), plastic, firm, moist, trace organics from 11.5-12.0 (suggests fill material)				
				SB-02-0708 - 05		1.1
-10				SB-02-0708 - 06		0.8

BORING LOG

BORING LOG: **SB-02-0709**

TOTAL DEPTH: **50.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone / Russ Jordan**
LOGGED BY:	**T. Hubbard**	DRILLING METHOD:	**geoprobe**
DATE STARTED:	**11/2/2007 1:30:00 PM**	**COORDINATES**	
DATE COMPLETED:	**11/5/2007 5:15:00 PM**	NORTHING:	1650406.27
		EASTING:	165601.38
		ELEVATION:	723.29

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		ASPHALT: ASPHALT				
		SANDY SILT: ML, SANDY SILT w/ gravel, dark brown (10YR 3/3), slightly plastic, moist, firm				
-5		SAND AND GRAVEL: Sw, fine-coarse SANDS and GRAVEL, dark yellowish brown (10YR 4/4), rounded - sub-rounded, compact, moist.				
-10						
-15		SAND AND GRAVEL: SW, fine-coarse SANDS + GRAVEL, same as previous, wet @ 19.4', gradual color change to grayish brown (10YR 5/2) @ ~ 40' bgs.				
-20						
-25						
-30						
-35						
-40						
-45		SAND AND GRAVEL: SW, fine-coarse SANDS + GRAVEL, gray (10YR 5/1), rounded-subrounded, w/ 0.2 seams of ML-CL, gray clay (glacial till), interbedded from 40'-50' bgs.				
-50						

BORING LOG

BORING LOG: **SB-02-0710**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**R. Woodruff**	DRILLING METHOD:	**geoprobe 6600**
DATE STARTED:	**10/5/2007 12:38:00 PM**	**COORDINATES**	
DATE COMPLETED:	**10/5/2007 12:50:00 PM**	NORTHING:	1650665.93
		EASTING:	165415.06
		ELEVATION:	721.98

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL		SB-02-0710 - 01		2.8
		SANDY CLAY: SANDY CLAY w/ gravels (dk brown), (10YR 3/1), firm, sl. plastic, sl. moist; cinders/foundry sand @ 4.5'				
				SB-02-0710 - 02		38.1
				SB-02-0710 - 03		83.9
-5						
		CLAY: CLAY, black; strong odor; concrete @ 7.0-9.0'; moist, plastic, soft		SB-02-0710 - 04		74.6
				SB-02-0710 - 05		72.8
-10						

BORING LOG

BORING LOG: **SB-02-0711**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**R. Woodruff**	DRILLING METHOD:	**geoprobe 6600**
DATE STARTED:	**10/5/2007 1:30:00 PM**	**COORDINATES**	
DATE COMPLETED:	**10/5/2007 1:42:00 PM**	NORTHING:	1650625.95
		EASTING:	165266.56
		ELEVATION:	719.99

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL		SB-02-0711 - 01		594.0
		SAND: SAND, brown (10YR 4/4), tr. gravel, dry, loose		SB-02-0711 - 02		147.0
		SANDY CLAY: SANDY CLAY, dk. brown (10YR 2/1), firm, tr. gravels, sl. plastic, cinders.		SB-02-0711 - 03		630.0
-5		SAND: SAND, brown (10YR 4/4), tr. gravel, dry, loose; concrete from 7.0' - 7.5'		SB-02-0711 - 04		578.0
		SAND: SAND, black, loose, sl. moist, tr. gravel; cinders.		SB-02-0711 - 05		80.1
-10						

BORING LOG

BORING LOG: **SB-02-0712**

TOTAL DEPTH: **13.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**T. Hubbard**	DRILLING METHOD:	**geoprobe**
DATE STARTED:	**11/5/2007 12:45:00 PM**	**COORDINATES**	
DATE COMPLETED:	**11/5/2007 1:00:00 PM**	NORTHING:	1650593.58
		EASTING:	165031.87
		ELEVATION:	717.56

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL		SB-02-0712 - (0-2)		
		SAND AND GRAVEL: SP, Med-coarse SANDS + GRAVEL, dark yellowish brown (10YR 4/4), rounded - subrounded, loose, dry-moist.		SB-02-0712 - (4-6)		
-5						
		SAND: SAND FILL, ML-SM, Mixture of silt and silty sands (fill?) w/ gravel + rock fragments. moist, non-plastic, wet @ 10' above glacial till (pearched water)				
-10		CLAYEY SILT: ML-CL, CLAYEY SILT w/ fine - coarse sands + gravel, gray (10YR 4/1) (glacial till), slightly plastic (water added), firm, moist, (SP, coarse sand seam from 12.5-12.7)				

BORING LOG

BORING LOG: **SB-02-0713**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**R. Woodruff**	DRILLING METHOD:	**geoprobe 6600**
DATE STARTED:	**10/5/2007 1:07:00 PM**	**COORDINATES**	
DATE COMPLETED:	**10/5/2007 1:25:00 PM**	NORTHING:	1650707.7
		EASTING:	165480.09
		ELEVATION:	722.44

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SANDY CLAY: SANDY CLAY, (brown) (10YR 3/1), tr. gravels, firm/soft, plastic, sl. moist, cinders @ 3.5'-3.75'; brick debris @ 4.0'; cinders @ 8.0-9.0'; wet from 9.0'-10.0'; odor.		SB-02-0713 - 01		1.7
				SB-02-0713 - 02		6.5
				SB-02-0713 - 03		12.3
-5				SB-02-0713 - 04		32.6
				SB-02-0713 - 05		53.8
-10						

BORING LOG

BORING LOG: **SB-02-0714**

TOTAL DEPTH: **10.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**R. Woodruff**	DRILLING METHOD:	**geoprobe 6600**
DATE STARTED:	**10/5/2007 1:56:00 PM**	**COORDINATES**	
DATE COMPLETED:	**10/5/2007 2:06:00 PM**	NORTHING:	1650674.41
		EASTING:	165216.73
		ELEVATION:	720.15

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL		SB-02-0714 - 01		72.0
		SANDY CLAY: SANDY CLAY, (various colors) (gray, brown, dk. brown, dk. red), cinders @ 4.0'; fining sands w/ depth; foundry sands from 8.0'-9.0', black staining from 7.0'-10.0'; odor, moist, plastic, tr. gravels, wet from 6.0'-7.5'				
				SB-02-0714 - 02		86.2
				SB-02-0714 - 03		46.2
-5						
				SB-02-0714 - 04		5.6
				SB-02-0714 - 05		13.0
-10						

BORING LOG

BORING LOG: **SB-02-0715**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Russ Jordan**
LOGGED BY:	**T. Hubbard**	DRILLING METHOD:	**geoprobe**
DATE STARTED:	**11/2/2007 12:45:00 PM**	**COORDINATES**	
DATE COMPLETED:	**11/2/2007 1:00:00 PM**	NORTHING:	1650058.96
		EASTING:	165624.21
		ELEVATION:	717.42

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL		SB-02-0715 - 01		0.1
		SANDY SILT: ML, SANDY SILT dark yellowish brown (10Yr 3/4), moist, non-plastic, tr. organics + gravel. (fill)		SB-02-0715 - 02		0.0
		BLANK: No Recovery, rock fragments from ~ 5' bgs appear to have blocked sample casing (soft advancement)				
-5						
		SAND AND GRAVEL: SW, fine-coarse, SANDS and GRAVEL, dry, angular to subrounded rock fragments, loose (fill material), moist.		SB-02-0715 - 03		0.1
-10				SB-02-0715 - 04		0.1
				SB-02-0715 - 05		0.0
				SB-02-0715 - 06		0.0
-15						

BORING LOG

BORING LOG: **SB-02-0716**

TOTAL DEPTH: **8.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Bill Condon**
LOGGED BY:	**none listed**	DRILLING METHOD:	**geoprobe**
DATE STARTED:	**11/2/2007 12:30:00 PM**	**COORDINATES**	
DATE COMPLETED:	**11/2/2007 12:40:00 PM**	NORTHING:	1650211.26
		EASTING:	165537.43
		ELEVATION:	721.19

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL		SB-02-0716 - 01		0.0
		SANDY SILT: ML, SANDY SILT w/ gravel (fill), dk yellowish brown (10YR 3/4), moist, firm, non-plastic				
				SB-02-0716 - 02		0.2
				SB-02-0716 - 03		0.1
-5				SB-02-0716 - 04		0.2
		CLAYEY SILT: ML-CL, CLAYEY SILT w/ fine-med sand and gravel, dk. gray (10YR 4/1), slightly plastic (water added, firm, moist) (glacial till)				

BORING LOG

BORING LOG: **SB-02-0717**

TOTAL DEPTH: **12.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Bill Condon**
LOGGED BY:	**T. Hubbard**	DRILLING METHOD:	**geoprobe**
DATE STARTED:	**11/2/2007 1:30:00 PM**	**COORDINATES**	
DATE COMPLETED:	**11/2/2007 1:40:00 PM**	NORTHING:	1650414.17
		EASTING:	165689.13
		ELEVATION:	723.33

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		ASPHALT: ASPHALT		SB-02-0717 - 01		0.2
		SANDY SILT: ML, SANDY SILT w/ gravel, dark brown (10YR 3/3) slightly plastic, moist, firm				
				SB-02-0717 - 02		0.5
				SB-02-0717 - 03		0.1
-5						
				SB-02-0717 - 04		0.8
		SAND AND GRAVEL: SW, fine-coarse SANDS + GRAVEL, dk. yellowish brown (10YR 4/4), rounded to subrounded, compact moist.		SB-02-0717 - 05		2.0
-10				SB-02-0717 - 06		1.8

BORING LOG

BORING LOG: **SB-02-0718**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Russ Jordan**
LOGGED BY:	**T. Hubbard**	DRILLING METHOD:	**geoprobe**
DATE STARTED:	**11/2/2007 3:20:00 PM**	**COORDINATES**	
DATE COMPLETED:	**11/2/2007 3:40:00 PM**	NORTHING:	1650970.87
		EASTING:	165046.51
		ELEVATION:	718.37

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL		SB-02-0718 - 01		0.0
		SANDY SILT: ML, SANDY SILT, dk yellowish brown (10YR 3/6), some gravel + rock fragments (fill), slightly plastic, moist, soft.		SB-02-0718 - 02		0.0
		SAND AND GRAVEL: SW, Fine-coarse SANDS + GRAVEL, compact, rounded - subrounded, dry, wet @ 14'		SB-02-0718 - 03		0.1
-5				SB-02-0718 - 04		0.1
				SB-02-0718 - 05		0.0
-10				SB-02-0718 - 06		0.4
				SB-02-0718 - 07		0.1
				SB-02-0718 - 08		0.2
-15						

BORING LOG

BORING LOG: **SB-02-0719**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Russ Jordan**
LOGGED BY:	**T. Hubbard**	DRILLING METHOD:	**geoprobe**
DATE STARTED:	**11/2/2007 2:45:00 PM**	**COORDINATES**	
DATE COMPLETED:	**11/2/2007 3:00:00 PM**	NORTHING:	1650999.89
		EASTING:	165468.75
		ELEVATION:	719.03

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL		SB-02-0719 - 01		0.0
		SANDY SILT: ML, SANDY SILT, dk. yellowish brown (10YR 3/6), some gravel from 3-4' bgs. (fill), slightly plastic, moist, soft.		SB-02-0719 - 02		0.0
		SAND AND GRAVEL: SW, fine-coarse SANDS + GRAVEL, compact, rounded-subrounded, dry, wet @ 14'		SB-02-0719 - 03		0.1
-5				SB-02-0719 - 04		0.1
				SB-02-0719 - 05		0.2
-10				SB-02-0719 - 06		0.4
				SB-02-0719 - 07		0.1
				SB-02-0719 - 08		0.0
-15						

BORING LOG

BORING LOG: **SB-02-0720**

TOTAL DEPTH: **8.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Bill Condon**
LOGGED BY:	**T. Hubbard**	DRILLING METHOD:	**geoprobe**
DATE STARTED:	**11/2/2007 2:20:00 PM**	**COORDINATES**	
DATE COMPLETED:	**11/2/2007 2:40:00 PM**	NORTHING:	1650863.07
		EASTING:	165724.71
		ELEVATION:	721.88

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL		SB-02-0720 - 01		0.0
		SANDY SILT: ML, SANDY SILT w/ gravel, concrete encountered @ 7.5' (fill), dark brown (10YR 3/3), non-plastic, stiff.				
				SB-02-0720 - 02		0.1
				SB-02-0720 - 03		0.0
-5						
				SB-02-0720 - 04		0.0

BORING LOG

BORING LOG: **SB-02-0721**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Russ Jordan**
LOGGED BY:	**T. Hubbard**	DRILLING METHOD:	**geoprobe**
DATE STARTED:	**11/2/2007 4:10:00 PM**	**COORDINATES**	
DATE COMPLETED:	**11/2/2007 4:30:00 PM**	NORTHING:	1650798.83
		EASTING:	165122.27
		ELEVATION:	720.90

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL		SB-02-0721 - 01		0.0
		SANDY SILT: ML, SANDY SILT w/ gravel, dk. yellowish brown, (10YR 3/6), concrete fragments @ 2.5', slightly plastic, moist, soft.		SB-02-0721 - 02		11.8
		CLAY: CL, CLAY w/ SAND + GRAVEL, concrete fragments, brick, cinders, black (10YR 2/1), slight odor, slightly plastic, moist, wet @ 13.0'		SB-02-0721 - 03		28.6
-5				SB-02-0721 - 04		31.2
				SB-02-0721 - 05		21.2
-10				SB-02-0721 - 06		62.8
				SB-02-0721 - 07		19.1
		SAND AND GRAVEL: SP, med-coarse SANDS + GRAVEL, dk gray (10YR 3/1), wet, loose.		SB-02-0721 - 08		21.2
-15						

BORING LOG

BORING LOG: **SB-02-0722**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Russ Jordan**
LOGGED BY:	**T. Hubbard**	DRILLING METHOD:	**geoprobe**
DATE STARTED:	**11/2/2007 4:40:00 PM**	**COORDINATES**	
DATE COMPLETED:	**11/2/2007 4:50:00 PM**	NORTHING:	1650787.96
		EASTING:	165339.48
		ELEVATION:	720.98

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL		SB-02-0722 - 01		0.2
		SANDY SILT: ML, SANDY SILT w/ gravel, dk. yellowish brown (10YR 3/6), concrete fragments (fill), slightly plastic, moist, soft. (foundry fill)				
				SB-02-0722 - 02		8.8
				SB-02-0722 - 03		12.6
-5						
				SB-02-0722 - 04		14.2
		SILTY SAND: SM, SILTY SANDS w/ fine gravel, dk. grayish brown (10YR 3/2) (foundry sands), loose, moist.		SB-02-0722 - 05		28.8
-10				SB-02-0722 - 06		17.6
				SB-02-0722 - 07		12.6
		CLAY: CL, CLAY w/ SAND + GRAVEL, dk. grayish brown (10YR 3/2), plastic, moist, soft, wet @ 14.5'.		SB-02-0722 - 08		10.9
-15						

BORING LOG

BORING LOG: **SB-02-0723**

TOTAL DEPTH: **7.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Russ Jordan**
LOGGED BY:	**T. Hubbard**	DRILLING METHOD:	**geoprobe**
DATE STARTED:	**11/2/2007 5:00:00 PM**	**COORDINATES**	
DATE COMPLETED:	**11/2/2007 5:15:00 PM**	NORTHING:	1650783.9
		EASTING:	165589.59
		ELEVATION:	723.09

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL		SB-02-0723 - 01		0.8
		SANDY SILT: ML, SANDY SILT w/ gravel, dk. grayish brown (10YR 3/2), w/ rock fragments, concrete, and cinders, loose, non-plastic, dry-moist, (foundry fill) refusal @ 7.0' (concrete)				
				SB-02-0723 - 02		20.9
				SB-02-0723 - 03		22.1
-5						
				SB-02-0723 - 04		18.2

BORING LOG

BORING LOG: **SB-02-0724**

TOTAL DEPTH: **5.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**T. Hubbard**	DRILLING METHOD:	**geoprobe/hand auger**
DATE STARTED:	**11/5/2007 11:20:00 AM**	**COORDINATES**	
DATE COMPLETED:	**11/5/2007 11:30:00 AM**	NORTHING:	1650782.6
		EASTING:	165009.4
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL		SB-02-0724 - 01		0.1
		SAND: SAND FILL, ML-SM, mixture of silt + silty sand, dark yellowish brown (10YR 4/4), w/ black staining and foundry sand throughout. (fill), brick, concrete, cinders, coke, etc..... Refusal @ 5.0' (concrete) EOB @ 5.0'				
				SB-02-0724 - 02		28.8
				SB-02-0724 - 03		61.1
-5						

BORING LOG

BORING LOG: **SB-03-0601**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/27/2006**	**COORDINATES**	
DATE COMPLETED:	**1/27/2006**	NORTHING:	1650929.7
		EASTING:	165960.4
		ELEVATION:	717.84

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE slab.		SB-03-0601-01		0.0
		GRAVEL: Concrete sub-base, GRAVEL				
		SAND: SAND with clay; dark grayish brown. Medium to fine sand, trace coarse sand, clay, little silt, soft, loose, moist.		SB-03-0601-02		0.0
		SAND: SAND; light brown, fine. Some medium sand, trace coarse sand/fine gravel. Moist, loose, increasing coarse sand to 13.5'.		SB-03-0601-03		0.0
-5				SB-03-0601-04		0.0
				SB-03-0601-05		0.0
-10				SB-03-0601-06		0.0
				SB-03-0601-07		0.0
		SAND: SAND; brown, coarse, some medium sand, little fine gravel, trace silt, wet, loose.		SB-03-0601-08		0.0
-15		SAND: SAND; grayish brown, fine, trace medium, well sorted, trace silt, loose, wet.				

BORING LOG

BORING LOG: **SB-03-0601**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/27/2006**	**COORDINATES**	
DATE COMPLETED:	**1/27/2006**	NORTHING:	1650929.7
		EASTING:	165960.4
		ELEVATION:	717.84

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
-15 –						

BORING LOG

BORING LOG: **SB-03-0602**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/23/2006 8:00:00 AM**	**COORDINATES**	
DATE COMPLETED:		NORTHING:	1650860.2
		EASTING:	165938.1
		ELEVATION:	722.53

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		GRAVEL: GRAVEL and sub-base.		SB-03-0602-01		0.8
		CLAY: CLAY with sand; brown, medium to fine sand, cohesive, moist. Mod. plastic.				
		CLAY: CLAY with sand, as above, dark brown to black color. Slight odor, fine gravel, medium to fine, little coarse sand, trace silt, loose, dry.		SB-03-0602-02		0.9
				SB-03-0602-03		1.2
-5		BLANK: No recovery.				
				SB-03-0602-04		1.5
		SAND: SAND; light brown, medium, little fine and coarse sand, trace fine gravel, trace silt, loose, dry.		SB-03-0602-05		1.8
-10				SB-03-0602-06		2.7
				SB-03-0602-07		2.3
				SB-03-0602-08		2.4
-15				SB-03-0602-09		1.9
		SAND: SAND; brown. Coarse to medium sand. Trace fine gravel, wet, loose.		SB-03-0602-10		1.6
		SAND: SAND; gray, wet. Fine to medium sand, loose, wet.				
-20						

BORING LOG

BORING LOG: **SB-04-0601**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/24/2006 9:40:00 AM**	**COORDINATES**	
DATE COMPLETED:	**1/24/2006 12:05:00 PM**	NORTHING:	1650825.5
		EASTING:	166039.3
		ELEVATION:	722.40

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor		SB-04-0601-01		0.0
		SAND: SAND with gravel, brown, medium sand, little fine, gravel, fine, trace coarse sand, loose, dry, moist top 4".		SB-04-0601-02		0.0
		SAND: SAND, light brown, fine, little medium sand, trace coarse sand and fine gravel, trace silt, dry, loose, granular.		SB-04-0601-03		0.0
-5				SB-04-0601-04		0.9
				SB-04-0601-05		0.5
-10				SB-04-0601-06		3.4
				SB-04-0601-07		1.1
				SB-04-0601-08		2.6
-15		BLANK: No recovery in macro sampler, liner melted, shoe contained <0.5' of coarse sand, little medium sand, trace fine gravel, moist, hot (temperature).		SB-04-0601-09		NR
				SB-04-0601-10		NR
-20						

BORING LOG

BORING LOG: **SB-04-0602**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/24/2006 1:00:00 PM**	**COORDINATES**	
DATE COMPLETED:	**1/24/2006 3:50:00 PM**	NORTHING:	1650859.5
		EASTING:	166208.5
		ELEVATION:	722.37

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor		SB-04-0602-01		0.0
		SAND: SAND & gravel, brown, medium and fine sand, fine gravel, trace coarse, dry, loose, no odor.				
		SAND: SAND; medium dark brown, medium, some fine & coarse, little fine gravel, cohesive, soft, moist.		SB-04-0602-02		0.0
		SAND: SAND; light brown, fine, little medium sand, trace coarse sand and fine gravel, trace silt, loose, dry.		SB-04-0602-03		1.4
-5				SB-04-0602-04		2.3
				SB-04-0602-05		2.0
-10				SB-04-0602-06		38.7
				SB-04-0602-07		38.9
				SB-04-0602-08		20.1
-15		SAND: SAND; dark reddish brown, medium to coarse sand, little silt and fine sand, moist to wet, oily sheen on material, loose.		SB-04-0602-09		32.8
		CLAY: CLAY (till), dark gray, clay with silt, trace fine gravel/coarse sand, hard, cohesive, low plasticity, dry.		SB-04-0602-10		30.2
-20						

BORING LOG

BORING LOG: **SB-05-0601**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/24/2006**	**COORDINATES**	
DATE COMPLETED:	**1/24/2006**	NORTHING:	1650909.3
		EASTING:	166513.9
		ELEVATION:	722.34

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor		SB-05-0601-01		64.0
		SAND: SAND; dark brown, medium to fine, trace coarse sand, trace fine gravel, little silt & clay, moist, cohesive, soft.		SB-05-0601-02		19.4
				SB-05-0601-03		46.5
-5				SB-05-0601-04		4.7
				SB-05-0601-05		28.9
-10				SB-05-0601-06		38.9
		SAND: SAND; gray, medium, little fine, wet, loose, slight odor.				
		CLAY: CLAY (till), gray, clay and silt, little v. fine sand, dry, hard, low plasticity.		SB-05-0601-07		12.7
				SB-05-0601-08		11.6
-15				SB-05-0601-09		17.2
				SB-05-0601-10		7.3
-20						

BORING LOG

BORING LOG: **SB-05-0602**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/24/2006**	**COORDINATES**	
DATE COMPLETED:	**1/24/2006**	NORTHING:	1650826.6
		EASTING:	166573.5
		ELEVATION:	722.36

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor		SB-05-0602-01		62.6
		FILL: floor sub-base, concrete fragments, gravel, medium sand: FILL				
		SAND: SAND; dark brown, medium sand, little fine and coarse sand, trace fine gravel, little clay, moist, soft.		SB-05-0602-02		6.7
				SB-05-0602-03		0.0
-5		BLANK: No recovery.				
				SB-05-0602-04		0.4
		SAND: SAND; light brown, fine, little medium sand, trace coarse sand/fine gravel, loose, dry.				
				SB-05-0602-05		1.2
-10				SB-05-0602-06		2.9
		SAND: SAND; grayish brown, medium/little coarse and fine sand, wet, loose, mild odor, staining (oily).				
		CLAY: CLAY; (till) gray to grayish brown, silt, little fine sand, trace coarse sand/fine gravel, dry, hard, brittle.				
				SB-05-0602-07		0.4
				SB-05-0602-08		0.0
-15						

BORING LOG

BORING LOG: **SB-06-0601**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/25/2006 9:10:00 AM**	**COORDINATES**	
DATE COMPLETED:	**1/25/2006 10:00:00 AM**	NORTHING:	1650936.1
		EASTING:	166441.3
		ELEVATION:	722.36

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor.		SB-06-0601-01		18.2
		SAND: SAND; light brown, fine to v. fine, little medium sand, trace coarse sand/fine gravel, loose, dry.				
				SB-06-0601-02		25.3
				SB-06-0601-03		1.3
-5						
				SB-06-0601-04		2.4
				SB-06-0601-05		3.0
-10				SB-06-0601-06		2.4
		SAND: SAND; brown, medium, little coarse sand, wet, loose, mild odor, oily staining.				
		SAND: SAND; gray, fine sand, trace silt, wet, loose, mild odor.				
		CLAY: CLAY; gray to grayish brown, silty, little v. fine sand, hard, brittle, dry, low plasticity.		SB-06-0601-07		1.8
				SB-06-0601-08		3.4
-15						

BORING LOG

BORING LOG: **SB-08-0601**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/25/2006 10:50:00 AM**	**COORDINATES**	
DATE COMPLETED:	**1/25/2006**	NORTHING:	1650976.3
		EASTING:	166642.3
		ELEVATION:	722.34

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor.		SB-08-0601-01		1.3
		SAND: SAND; light brown, fine, little medium sand, trace fine gravel/coarse sand, dry, loose. At 9' bgs, 2" of medium sand, black, no odor.		SB-08-0601-02		0.0
				SB-08-0601-03		0.0
-5				SB-08-0601-04		0.0
				SB-08-0601-05		0.0
-10		SAND: SAND; grayish brown, medium to fine sand, trace coarse sand, trace silt, moist, loose, slight odor.		SB-08-0601-06		0.0
		SAND: SAND: brown to black, medium to fine sand, trace coarse sand. Bottom (12-13') stained black, mild odor, wet throughout.		SB-08-0601-07		3.2
		CLAY: CLAY: (till) dark grayish brown, silty, little fine sand, hard, brittle, low plasticity, dry.		SB-08-0601-08		2.4
-15						

BORING LOG

BORING LOG: **SB-09-0601**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**1/26/2006**	**COORDINATES**	
DATE COMPLETED:	**1/26/2006**	NORTHING:	1650526.5
		EASTING:	166209.5
		ELEVATION:	722.42

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SB-09-0601-01		0.0
		SAND: SAND; light brown, fine to very fine, trace clays and silts, dry, loose.				
				SB-09-0601-02		0.0
				SB-09-0601-03		0.0
-5						
				SB-09-0601-04		0.0
				SB-09-0601-05		0.8
-10				SB-09-0601-06		0.0
				SB-09-0601-07		0.0
		SAND: SAND; orangish brown fine to medium, dry, loose.		SB-09-0601-08		1.4
-15						
				SB-09-0601-09		0.0
				SB-09-0601-10		0.4
		SAND: SAND; grayish brown, med. to coarse sand & gravel, wet, loose.				
-20						

BORING LOG

BORING LOG: **SB-09-0602**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/26/2006**	**COORDINATES**	
DATE COMPLETED:	**1/26/2006**	NORTHING:	1650504.2
		EASTING:	166155.8
		ELEVATION:	722.40

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor.		SB-09-0602-01		0.0
		SAND: SAND; dark brown, medium to fine, trace coarse sand, trace clay. Moist, soft, loose.				
		SAND: SAND; brown, medium, some fine sand, little coarse sand, little fine gravel, loose, dry, increasing fines to 18'.		SB-09-0602-02		0.0
				SB-09-0602-03		0.0
-5				SB-09-0602-04		0.0
				SB-09-0602-05		0.6
-10				SB-09-0602-06		2.3
				SB-09-0602-07		2.0
				SB-09-0602-08		6.4
-15				SB-09-0602-09		7.0
		SAND: SAND; light brown, medium, little fine and coarse, wet, loose.		SB-09-0602-10		12.4
		SAND: SAND; brown, fine, little medium sand, wet, loose.				
-20						

BORING LOG

BORING LOG: **SB-10-0601**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Mike Petty**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/23/2006 11:00:00 AM**	**COORDINATES**	
DATE COMPLETED:	**1/23/2006 1:00:00 PM**	NORTHING:	1650560.1
		EASTING:	166527.7
		ELEVATION:	722.36

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SB-10-0601-01		1.0
		SAND: SW. SAND with trace gravel, fine to coarse, light brown, loose, damp.		SB-10-0601-02		18.4
				SB-10-0601-03		32.4
-5				SB-10-0601-04		31.5
				SB-10-0601-05		28.1
		SILTY SAND: SM. SILTY SAND, medium dense, brown, moist.				
		SAND: SP. SAND, fine, medium dense, light gray brown, damp.				
-10		SAND: SP/SW. SAND, alternating layers of poorly and well sorted, fine to coarse, medium dense, light gray, damp to moist.		SB-10-0601-06		30.7
				SB-10-0601-07		28.3
		SILTY SAND: SM. SILTY SAND with gravel, medium dense, fine to coarse, brown, moist.		SB-10-0601-08		128
-15		SILTY SAND: SM. SILTY SAND, trace gravel, fine grained, dense, olive gray, slightly damp to wet @ 20 ft. Refusal at 20 ft with macro-core, end of barrel wet.		SB-10-0601-09		15.2
				SB-10-0601-10		9.6
-20						

BORING LOG

BORING LOG: **SB-10-0602**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/26/2006**	**COORDINATES**	
DATE COMPLETED:	**1/27/2006**	NORTHING:	1650512
		EASTING:	166615.1
		ELEVATION:	722.36

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor		SB-10-0602-01		2.0
		SAND: SAND; dark brown, medium to fine, little clay & silt, trace fine gravel, moist, cohesive.				
		SAND: SAND; light brown, fine to v. fine, little medium sand, trace coarse sand and fine gravel, little silt, dry, loose.		SB-10-0602-02		1.2
				SB-10-0602-03		27.9
-5						
				SB-10-0602-04		22.8
				SB-10-0602-05		41.4
-10				SB-10-0602-06		22.4
				SB-10-0602-07		22.8
				SB-10-0602-08		18.4
-15		SAND: SAND; light brown, fine, little medium sand, trace coarse sand, compacted, similar composition to 1.25-14.5 interval, dry.				
		CLAY: CLAY; grayish brown, (till), silt, little fine to v. fine sand, trace coarse sand/fine gravel, hard, brittle, dry. Oily substance on outside of till/Geoprobe liner, slight odor. Refusal upon attempt to sample directly to 25' bgs.		SB-10-0602-09		13.0
				SB-10-0602-10		11.4
-20						

BORING LOG

BORING LOG: **SB-10-0603**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/26/2006**	**COORDINATES**	
DATE COMPLETED:	**1/26/2006**	NORTHING:	1650501.9
		EASTING:	166566.2
		ELEVATION:	722.36

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor.		SB-10-0603-01		0.0
		SAND: SAND with clay; dark brown, medium to fine sand, clay, some silt, little coarse sand, cohesive, loose, moist.				
		SAND: SAND; light brown, fine to v. fine, little medium, trace coarse sand, trace fine gravel, loose, dry.		SB-10-0603-02		0.0
				SB-10-0603-03		0.0
-5						
				SB-10-0603-04		1.4
				SB-10-0603-05		2.6
-10				SB-10-0603-06		3.8
				SB-10-0603-07		19.5
				SB-10-0603-08		10.0
-15						
		SAND: SAND; black, medium, little fine sand, little silt, moist to wet, slight staining on liner, oily-like odor, loose.		SB-10-0603-09		20.0
		SILT: SILT; gray with brown mottling (17-17.5) to gray (17.5-18) silt, little clay, firm, moist, no odor.				
		CLAY: CLAY; (till), grayish brown, silt, trace fine sand, hard, dry, brittle.		SB-10-0603-10		5.0
-20						

BORING LOG

BORING LOG: **SB-11-0601**

TOTAL DEPTH: **24.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/7/2006 9:10:00 AM**	**COORDINATES**	
DATE COMPLETED:	**2/7/2006 4:35:00 PM**	NORTHING:	1650441.9
		EASTING:	166476.6
		ELEVATION:	722.43

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor.		SB-11-0601-01		1.5
		SAND: SW. SAND, trace silt, trace gravel, fine to coarse, loose, brown, moist.		SB-11-0601-02		43.5
				SB-11-0601-03		27.6
-5		SAND: SW. SAND, trace gravel, fine to coarse, loose, light grayish brown, slightly damp.		SB-11-0601-04		37.7
				SB-11-0601-05		44.0
-10				SB-11-0601-06		29.0
				SB-11-0601-07		17.2
				SB-11-0601-08		7.6
-15		SILTY SAND: SM/ML. SILTY SAND/sandy silt, non-plastic, stiff, light brown, moist.		SB-11-0601-09		23.3
		SILTY CLAY: ML/CL. SILTY CLAY, with sand, trace gravel, hard, olive gray, moist.		SB-11-0601-10		29.0
-20		SAND: SP. SAND, loose, fine, olive brown, wet.		SB-11-0601-11		14.6
		SILTY CLAY: ML/CL. SILTY CLAY, with sand, trace gravel, hard to stiff, gray, moist.		SB-11-0601-12		15.2

BORING LOG

BORING LOG: **SB-11-0602**

TOTAL DEPTH: **26.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/7/2006 1:05:00 PM**	**COORDINATES**	
DATE COMPLETED:	**2/7/2006 4:30:00 PM**	NORTHING:	1650431.6
		EASTING:	166545.3
		ELEVATION:	722.39

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor.		SB-11-0602-01		60.1
		SAND: SP. SAND, loose, fine to medium, light grayish brown, damp.		SB-11-0602-02		33.5
				SB-11-0602-03		4.1
-5				SB-11-0602-04		12.4
				SB-11-0602-05		8.7
-10				SB-11-0602-06		18.9
				SB-11-0602-07		7.5
				SB-11-0602-08		29.6
-15		SILTY CLAY: ML/CL. SILTY CLAY, with sand, trace gravel, stiff, non-plastic, damp to moist. At 22 ft becoming damp to dry with gravel. Refusal at 26.0 ft.		SB-11-0602-09		6.1
				SB-11-0602-10		24.5
-20				SB-11-0602-11		3.9
				SB-11-0602-12		16.9
-25						

BORING LOG

BORING LOG: **SB-12-0601**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/3/2006 8:00:00 AM**	**COORDINATES**	
DATE COMPLETED:		NORTHING:	1650224.5
		EASTING:	166875.3
		ELEVATION:	722.41

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SB-12-0601-01		30.1
		SILTY SAND: SM. SILTY SAND with gravel, medium dense, fine to coarse, brown, moist.		SB-12-0601-02		40.2
		SAND: SW. SAND/sand with gravel, medium dense, fine to coarse, light grayish brown, dry to damp.		SB-12-0601-03		12.0
-5				SB-12-0601-04		37.6
				SB-12-0601-05		50.2
-10				SB-12-0601-06		27.0
				SB-12-0601-07		73.3
				SB-12-0601-08		75.1
-15				SB-12-0601-09		58.5
		SILTY CLAY: ML/CL. SILTY CLAY, stiff, moist, dark gray.				
		SAND: SP. SAND, loose, medium grained, olive gray, wet. Water at 17.5 ft.		SB-12-0601-10		49.7
-20						

BORING LOG

BORING LOG: **SB-12-0602**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/3/2006**	**COORDINATES**	
DATE COMPLETED:		NORTHING:	1650160.5
		EASTING:	166889.3
		ELEVATION:	722.39

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor.		SB-12-0602-01		0.7
		SAND: SAND and silt, dark brown, fine to medium sand, silt, trace fine gravel. Nails and iron fragments 0.5-1' bgs.		SB-12-0602-02		32.7
				SB-12-0602-03		34.5
-5						
		SAND: SAND; light brown, fine to very fine, little medium sand, trace fine gravel/coarse sand, trace silt, loose, dry.		SB-12-0602-04		24.8
				SB-12-0602-05		24.5
-10				SB-12-0602-06		20.7
				SB-12-0602-07		15.6
				SB-12-0602-08		26.5
-15						
		SAND: SAND; gray, medium, some fine sand, trace coarse sand, wet loose.		SB-12-0602-09		48.9
		CLAY: CLAY, brown, silt, trace fine sand, trace coarse sand, dry hard, brittle.				
		CLAY: CLAY gray, silt, trace fine sand and coarse sand, dry, brittle, hard.		SB-12-0602-10		82.4
-20						

BORING LOG

BORING LOG: **SB-13-0601**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/6/2006 1:55:00 PM**	**COORDINATES**	
DATE COMPLETED:	**2/6/2006 4:30:00 PM**	NORTHING:	1650410
		EASTING:	166867.9
		ELEVATION:	722.46

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor.		SB-13-0601-01		2.1
		SAND: SW. SAND with silt and trace gravel, loose, fine to coarse, light brown, damp to moist.		SB-13-0601-02		2.6
				SB-13-0601-03		2.6
-5				SB-13-0601-04		2.9
				SB-13-0601-05		4.1
-10		SAND: SP. SAND, fine grained, trace medium, trace gravel, loose, light grayish brown, slightly damp.		SB-13-0601-06		0.0
				SB-13-0601-07		15.5
				SB-13-0601-08		6.8
-15		SAND: SW. SAND with gravel, fine to coarse, loose, grayish brown, moist to wet at 16.5'		SB-13-0601-09		6.7
		SILTY CLAY: CL/ML. SILTY CLAY, hard, trace gravel, moist, dark gray.		SB-13-0601-10		7.0
-20						

BORING LOG

BORING LOG: **SB-13-0602**

TOTAL DEPTH: **7.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/3/2006**	**COORDINATES**	
DATE COMPLETED:	**2/3/2006**	NORTHING:	1650386.9
		EASTING:	166979.5
		ELEVATION:	722.49

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor.		SB-13-0602-01		47.8
		SAND: SW. SAND, trace silt, trace gravel, loose, light brown, moist.				
				SB-13-0602-02		1.7
				SB-13-0602-03		1.4
-5				SB-13-0602-04		1.2

BORING LOG

BORING LOG: **SB-13-0603**

TOTAL DEPTH: **3.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**2/3/2006**	**COORDINATES**	
DATE COMPLETED:	**2/3/2006**	NORTHING:	1650455.1
		EASTING:	166932.5
		ELEVATION:	722.47

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE slab, concrete sub-base.		SB-13-0603-01		53.0
		SAND: SAND; light brown, fine to v. fine, little medium sand, trace coarse gravel/fine gravel, concrete obstruction at 1.5' bgs.				
				SB-13-0603-02		74.0

BORING LOG

BORING LOG: **SB-14-0601**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/1/2006**	**COORDINATES**	
DATE COMPLETED:	**2/1/2006**	NORTHING:	1650403.7
		EASTING:	167076.4
		ELEVATION:	721.48

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE pad.		SB-14-0601-01		10.2
		GRAVEL: Concrete and gravel sub-base, fine and coarse GRAVEL, fine sand/dust.		SB-14-0601-02		41.1
		SAND: SAND; grayish brown, medium to fine sand. Some clay. Cohesive, loose, dry.		SB-14-0601-03		0.0
-5		SAND: SAND; brown to orange-brown, medium to fine, trace coarse sand, some clay, cohesive, moist, soft.		SB-14-0601-04		0.0
		BLANK: No recovery.		SB-14-0601-05		0.2
		SAND: SAND; light brown, fine, little medium sand, trace fine gravel, loose, dry.		SB-14-0601-06		0.0
-10				SB-14-0601-07		0.0
				SB-14-0601-08		1.1
-15		BLANK: No recovery. Sand, some clay, moist.		SB-14-0601-09		0.5
				SB-14-0601-10		0.0
-20		SAND: SAND med brown to gray. Coarse, some medium sand, some fine gravel, loose, wet.				
		CLAY: CLAY, gray, some silt, little v. fine to fine sand, trace fine gravel, hard, dry, low plasticity.				
-25						

BORING LOG

BORING LOG: **SB-14-0602**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/20/2006 9:10:00 AM**	**COORDINATES**	
DATE COMPLETED:	**1/20/2006**	NORTHING:	1650365
		EASTING:	167062.2
		ELEVATION:	721.48

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE and sub-base		SB-14-0602-01		0.6
		SAND: SAND; brown, medium to fine, trace coarse sand, trace fine gravel, little clay and silt, moist, soft.		SB-14-0602-02		0.6
				SB-14-0602-03		0.6
-5		BLANK: No recovery		SB-14-0602-04		0.8
		SAND: SAND; brown, medium to fine, trace coarse sand, trace fine gravel, little clay and silt, moist, soft.		SB-14-0602-05		0.8
-10		SAND: SAND; fine to medium, brown, trace coarse sand, loose, dry. Black staining at 15-15.5, 16', slight odor, dry.		SB-14-0602-06		0.8
				SB-14-0602-07		9.6
				SB-14-0602-08		12.5
-15		CLAY: CLAY; dark gray, trace fine sand, medium sand, fine gravel, some silt, hard, dry, brittle.		SB-14-0602-09		1.6
				SB-14-0602-10		1.3
-20				SB-14-0602-11		1.3
-25						

BORING LOG

BORING LOG: **SB-16-0601**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/1/2006 1:40:00 PM**	**COORDINATES**	
DATE COMPLETED:	**2/1/2006 3:00:00 PM**	NORTHING:	1650158.3
		EASTING:	167305.5
		ELEVATION:	721.47

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE.		SB-16-0601-01		0.0
		SAND: SM. Silty/clayey SAND, trace gravel, loose, dark brown, moist.		SB-16-0601-02		0.2
		SAND: SW. SAND, loose, fine to coarse, brown, moist.		SB-16-0601-03		0.4
-5				SB-16-0601-04		1.0
				SB-16-0601-05		0.0
-10				SB-16-0601-06		0.0
		SAND: SW. SAND with gravel, medium dense, fine to coarse, moist to wet at 16 ft, yellowish brown, 16-16.5' gray brown, odor at 16 ft.		SB-16-0601-07		3.5
				SB-16-0601-08		2.0
-15				SB-16-0601-09		21.7
		SILTY CLAY: CL. SILTY CLAY, stiff, gray, slightly plastic, trace coarse sand, moist.		SB-16-0601-10		2.7
-20						

BORING LOG

BORING LOG: **SB-17-0601**

TOTAL DEPTH: **5.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**2/1/2006**	**COORDINATES**	
DATE COMPLETED:	**2/1/2006**	NORTHING:	1650451.3
		EASTING:	167483.8
		ELEVATION:	722.67

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SB-17-0601-01		52.0
		SAND: Dark yellowish brown med. to coarse SAND & gravel, well graded, sub-rounded, dry.				
				SB-17-0601-02		36.0
				SB-17-0601-03		10.2
-5						

BORING LOG

BORING LOG: **SB-17-0602**

TOTAL DEPTH: **4.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Geraghty & Miller, Inc.**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**T. Hubbard**
LOGGED BY:	**T. Hubbard**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**12/21/2006**	**COORDINATES**	
DATE COMPLETED:	**12/21/2006**	NORTHING:	1650495.97
		EASTING:	167464.76
		ELEVATION:	722.10

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SAND AND GRAVEL: SP-SM, SILTY FINE-COARSE SAND AND GRAVEL, dark brown (10 yr 3/3), very loose, moist				
		SILT: SM, SILT w/sand & gravel, dark grayish brown (10 yr 4/2), soft, moist, slightly plastic, sticky				

BORING LOG

BORING LOG: **SB-19-0601**

TOTAL DEPTH: **14.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**S. Grutney**
LOGGED BY:	**M. Griles**	DRILLING METHOD:	**HBA/ Split spoon**
DATE STARTED:	**12/21/2006 1:10:00 PM**	**COORDINATES**	
DATE COMPLETED:		NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		GRAVEL: Asphalt, concrete, fill GRAVEL		SB-19-0601-01		
		CLAY: 10 YR 4/4, dark yellowish brown, ML/CL, silty, sandy CLAY, w/ fn. sand, pebbles, and gravel imbedded within clay, plastic, pliable, cohesive		SB-19-0601-02		173
				SB-19-0601-03		32.5
-5				SB-19-0601-04		48.7
		SAND: 10YR 4/2, grayish Brown, SW/SM, well graded, dusty SAND, med-coarse grained, poorly sorted, dry 50% RECOVERY (6' - 8') and 50% RECOVERY (8' - 10'), 0% RECOVERY (10' - 12'), 12 - 13.5 _____ impacts. Water table at 12'		SB-19-0601-05		52.8
-10				SB-19-0601-06		No recovery
				SB-19-0601-07	Pos	420
		CLAY: 10 YR 3/1, gray, ML, silty CLAY TILL, hard compact, firm, high silt element, imbedded pebbles, and gravels (subrounded)				

BORING LOG

BORING LOG: **SB-22-0601**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/7/2006 12:00:00 PM**	**COORDINATES**	
DATE COMPLETED:	**2/7/2006**	NORTHING:	1650722.2
		EASTING:	168010.6
		ELEVATION:	722.58

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor, concrete sub-base.		SB-22-0601-01		57.6
		SAND: SAND; dark reddish brown, medium to fine sand, trace coarse sand, little clay and silt, moist, loose.				
		SAND: SAND; light brown, fine, little medium, trace fine gravel, loose, dry. Becoming well sorted to 13' bgs.		SB-22-0601-02		56.3
				SB-22-0601-03		11.0
-5				SB-22-0601-04		26.9
		SAND: SAND; light brown to light grayish brown, fine to medium sand, trace fine gravel and coarse sand, loose, dry.		SB-22-0601-05		33.9
-10				SB-22-0601-07		46.9
				SB-22-0601-08		56.8
		SAND: SAND; brown to light brown, fine, trace medium sand, well sorted, wet, loose.		SB-22-0601-09		49.2
-15						

BORING LOG

BORING LOG: **SB-23-0602**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/7/2006**	**COORDINATES**	
DATE COMPLETED:	**1/7/2006**	NORTHING:	1650688
		EASTING:	167948.2
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor.		SB-23-0602-01		5.9
		SAND: SAND; dark reddish brown, medium to fine sand, trace coarse sand, little clay and silt, moist, loose.		SB-23-0602-02		6.7
				SB-23-0602-03		2.7
-5				SB-23-0602-04		3.4
		SAND: SAND; light brown, fine, little medium sand, trace fine gravel, increasing to light grayish brown to 14' bgs, dry, loose.		SB-23-0602-05		6.1
-10				SB-23-0602-06		5.1
				SB-23-0602-07		2.4
		CLAY: CLAY; reddish brown to gray (r. brown top 6"), silt, trace fine sand, trace fine gravel/coarse sand, dry, hard, low plasticity, brittle.		SB-23-0602-08		5.6
-15				SB-23-0602-09		5.8
		CLAY: CLAY, gray, fine to medium sand seams (between 1/2-3/4" at 17.25', 18' bgs) clay composition as above, sand seams wet, loose.				
		CLAY: CLAY, gray, silt, little v. fine sand, trace coarse sand/fine gravel, dry, brittle.		SB-23-0602-10		1.1
-20						

BORING LOG

BORING LOG: **SB-24-0601**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/31/2006 3:55:00 PM**	**COORDINATES**	
DATE COMPLETED:	**1/31/2006 4:30:00 PM**	NORTHING:	1650784
		EASTING:	168479.2
		ELEVATION:	722.19

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SB-24-0601-01		2.0
		SANDY CLAY: Silty SANDY CLAY, medium stiff, plastic, very moist, gray, odor, sheen.		SB-24-0601-02		0.1
		SANDY CLAY: Silty SANDY CLAY, medium stiff, non-plastic, moist, brown.		SB-24-0601-03		0.0
-5		SAND: SAND, loose, fine to medium, brown, moist.		SB-24-0601-04		0.0
		SAND: SAND, loose fine to medium, light grayish brown, moist to very moist.		SB-24-0601-05		0.0
-10				SB-24-0601-06		5.1
				SB-24-0601-07		0.2
		SAND: SAND and gravel, loose, coarse, dark gray, wet, odor.		SB-24-0601-08		13.5
-15		SILTY CLAY: SILTY CLAY, hard, dark gray, moist.				

BORING LOG

BORING LOG: **SB-24-0601**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/31/2006 3:55:00 PM**	**COORDINATES**	
DATE COMPLETED:	**1/31/2006 4:30:00 PM**	NORTHING:	1650784
		EASTING:	168479.2
		ELEVATION:	722.19

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
-15 –						

BORING LOG

BORING LOG: **SB-24-0602**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION

PROJECT: **GM/REALM (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **CJ Catlett**

DATE STARTED: **1/31/2006 3:05:00 PM**

DATE COMPLETED: **1/31/2006 3:45:00 PM**

DRILLING INFORMATION

DRILLING CO.: **Altech**

DRILLER: **Dan Wells**

DRILLING METHOD: **Hand Auger/Geoprobe**

COORDINATES

NORTHING: 1650657.3

EASTING: 168481

ELEVATION: 721.88

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE.		SB-24-0602-01		0.2
		SILTY CLAY: CL/ML. SILTY CLAY, stiff, plastic, gray, very moist, odor, sheen.		SB-24-0602-02		4.8
		SILTY SAND: SM. SILTY SAND, medium dense, light brown, very moist.		SB-24-0602-03		0.0
-5						
		SAND: SP. SAND, loose, gray, fine, very moist, silty.		SB-24-0602-04		3.4
		SAND: SW. SAND with gravel, loose, fine to coarse, gray, very moist.		SB-24-0602-05		2.7
-10		SAND: SW. SAND, loose, fine to medium, trace coarse, gray, very moist to wet at 12 ft, strong odor.		SB-24-0602-06		32.5
				SB-24-0602-07		544
		SILTY CLAY: CL. SILTY CLAY, stiff, dark gray, odor.		SB-24-0602-08		76.3
-15						

BORING LOG

BORING LOG: **SB-25-0601**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/2/2006**	**COORDINATES**	
DATE COMPLETED:	**2/2/2006**	NORTHING:	1650219.1
		EASTING:	168398.8
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE/asphalt pad.		SB-25-0601-01		2.9
		CLAY: CLAY; brown with gray mottling. Silt. Some fine sand, trace fine gravel, moist, cohesive, plastic.		SB-25-0601-02		0.0
				SB-25-0601-03		0.0
-5		BLANK: No Recovery		SB-25-0601-06		--
		CLAY: CLAY; brown, composition as 0.7-5' interval		SB-25-0601-07		0.0
		SAND: SAND; light brown to orangish brown, medium to fine, trace fine gravel, loose, dry.				
-10		BLANK: No Recovery		SB-25-0601-08		--
		SAND: SAND; orangish brown, fine, little medium, well sorted, loose, moist, slight odor.		SB-25-0601-09		0.0
		SAND: SAND, black, medium, some coarse and fine sand, heavy black staining, strong odor, wet, loose.		SB-25-0601-10		20.9
-15		SAND: SAND; gray, medium to fine, little coarse sand, loose, wet, strong odor.				

BORING LOG

BORING LOG: **SB-25-0601**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/2/2006**	**COORDINATES**	
DATE COMPLETED:	**2/2/2006**	NORTHING:	1650219.1
		EASTING:	168398.8
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
-15 –						

BORING LOG

BORING LOG: **SB-26-0601**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Mike Petty**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/20/2006 8:25:00 AM**	**COORDINATES**	
DATE COMPLETED:	**1/20/2006 9:50:00 AM**	NORTHING:	1650284.4
		EASTING:	168308.2
		ELEVATION:	721.88

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SAND: SW. SAND with gravel, loose, medium to coarse, light brown, moist. (0.0-0.5 gravel, gray, loose, dry).		SB-26-0601-01		0.8
				SB-26-0601-02		1.5
				SB-26-0601-03		1.9
-5		SILTY SAND: *NOTE* only 20% recovery from 5.0-10.0, SW/SM SILTY SAND and gravel (10% gravel), loose, medium to coarse olive gray, very moist.		SB-26-0601-04		254
				SB-26-0601-05		64.9
-10		SAND: SW. SAND with gravel, loose, medium to coarse, yellowish brown, moist.		SB-26-0601-06		63.5
		SAND: SW. SAND, trace gravel, loose, fine to coarse, light gray, very moist.		SB-26-0601-07		95.5
		SAND: SW. SAND, few gravel, loose, dark gray to black, very moist to wet at 14.25, odor.		SB-26-0601-08		111
-15						

BORING LOG

BORING LOG: **SB-26-0604**

TOTAL DEPTH: **3.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Geraghty & Miller, Inc.**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**T. Hubbard**
LOGGED BY:	**T. Hubbard**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**1/31/2007**	**COORDINATES**	
DATE COMPLETED:	**1/31/2007**	NORTHING:	1650353.05
		EASTING:	168385.29
		ELEVATION:	722.10

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE				
		SILTY SAND: SM, SILTY SANDS (fine-coarse) w/gravel, brown compact, moist				
		SANDY SILT: ML-CL, clayey SANDY SILT w/gravel, tr. cobbles, brown, slightly plastic, moist, med-stiff				

BORING LOG

BORING LOG: **SB-26-0605**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**12/1/2006**	**COORDINATES**	
DATE COMPLETED:	**12/1/2006**	NORTHING:	1650335.38
		EASTING:	168384.61
		ELEVATION:	722.14

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE				
		GRAVELLY SAND: SP - GRAVELLY SAND, med. loose, brown (10 yr 4/4), moist, odor		SB-26-0605-01		26.3
		CLAY: CL - CLAY, little sand & gravel, med. stiff, v. dark gray (10 yr 3/1), damp, odor, black staining		SB-26-0605-02		2.0
		SAND: SP - SAND, trace gravel, med. loose, med.-coarse grained, poorly graded, dark yellowish brown (10 yr 4/6), dry, saturation @ 14'; black staining and odor from 12'-14'		SB-26-0605-03		3.5
-5				SB-26-0605-04		2.2
				SB-26-0605-05		0.3
-10				SB-26-0605-06		2.7
				SB-26-0605-07	Pos	131.0
		TILL: CL - TILL, trace gravel, dark gray (10 yr 4/1)		SB-26-0605-08		40.5
-15						

BORING LOG

BORING LOG: **SB-26-0606**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/30/2006**	**COORDINATES**	
DATE COMPLETED:	**11/30/2006**	NORTHING:	1650307.16
		EASTING:	168400.11
		ELEVATION:	721.77

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE				
		SAND: SP - SAND, trace gravel, med. loose, v. coarse grained, brown (10 yr 5/3), wet		SB-26-0606-01		2.6
				SB-26-0606-02		1.4
		BLANK: No recovery				
-5				SB-26-0606-03		3.0
		SAND: SP - SAND, trace gravel, med. loose, v. coarse grained, brown (10 yr 5/3), damp				
		SAND: SP - SAND, med. loose, v. coarse grained, white, damp		SB-26-0606-04		1.4
		SAND: SP - SAND, trace gravel & cobbles, med. loose, v. coarse grained, brown (10 yr 5/3), damp				
-10				SB-26-0606-05		2.5
				SB-26-0606-06		3.2
		BLANK: No recovery				
		SAND: SP - SAND, trace gravel, med. loose, v. coarse grained, brown (10 yr 5/3), saturated, black staining		SB-26-0606-07		2.0
-15		TILL: CL - TILL, trace gravel, v. dense, dark grayish brown (10 yr 4/2), dry; cobble @ 19.5'		SB-26-0606-08		4.8
				SB-26-0606-09		1.7
-20						

BORING LOG

BORING LOG: **SB-26-0701**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6620 DT**
DATE STARTED:	**9/20/2007 10:27:00 PM**	**COORDINATES**	
DATE COMPLETED:	**9/20/2007 10:45:00 PM**	NORTHING:	1650533.84
		EASTING:	168094.54
		ELEVATION:	722.60

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SB-26-0701-01		0.0
		SAND: SAND, brown, fine, gravel, loose, dry.				
		CLAY: CLAY; sandy clay, brown, fine sands, tr. gravel, soft/ firm, plastic.		SB-26-0701-02		0.0
				SB-26-0701-03		1.3
-5		SAND: SAND, brown, fine gravel, loose, dry, red staining @ 5.5' and 6.0'; fining sand and inc. silt w/ depth. red staining from 10.0-14.0'.				
				SB-26-0701-04		0.0
				SB-26-0701-05		0.0
-10				SB-26-0701-06		1.2
				SB-26-0701-07		1.5
		SAND: SAND w/ some clay, gray, med. sands, tr. gravel. sl. cohesive, sl. plastic, moist, wet.		SB-26-0701-08		10.8
-15						

BORING LOG

BORING LOG: **SB-26-0702**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6620 DT**
DATE STARTED:	**9/19/2007 4:00:00 AM**	**COORDINATES**	
DATE COMPLETED:	**9/19/2007 4:30:00 AM**	NORTHING:	1650532.93
		EASTING:	168143.17
		ELEVATION:	722.58

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE (core)		SP-26-0702-01		0
		SANDY CLAY: SANDY CLAY, reddish brown, tr. gravels, stiff plastic, color change to brown-dk gray @ 2.0', color change to reddish brown @3.0', inc sand w/ depth, inc moisture w/ depth.		SP-26-0702-02		0
				SP-26-0702-03		0
-5		SAND: SILTY SAND, lt brown, loose, dry, tr. gravel, fine sands, "green ash" layers @ 7.0-8.0, green ash all throughout from 10.0-14.0', wet at 13.5-14.0'		SP-26-0702-04		0
				SP-26-0702-05		0
-10				SP-26-0702-06		0
				SP-26-0702-07		0
		SANDY CLAY: CLAYEY SAND, gray, loose, soft, moist, strong odor, med sands and gravel, wet.		SP-26-0702-08		16.8
-15				SP-26-0702-09		91.5
		CLAY: CLAY, dk gray, soft (firms w/ depth), trace gravel, plastic, moist, wet from 16.5-18.0', very strong odor, red staining.		SP-26-0702-10		16.9
-20						

BORING LOG

BORING LOG: **SB-27-0601**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/8/2006**	**COORDINATES**	
DATE COMPLETED:	**2/8/2006**	NORTHING:	1650316.5
		EASTING:	168181.3
		ELEVATION:	722.42

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor.		SB-27-0601-01		2.4
		SAND: SAND; brown, fine to medium, trace coarse sand, little fine and coarse gravel, trace cobbles, dry, loose.				
		SILTY SAND: SILTY SAND, dark brown, fine sand, well sorted, some clay, cohesive, dry.		SB-27-0601-02		9.0
		SAND: SAND; color as above, fine to v. fine, well sorted, loose, dry.		SB-27-0601-03		2.6
-5		SAND: SAND; light brown, fine to medium, trace coarse sand, loose, dry.		SB-27-0601-04		4.2
				SB-27-0601-05		15.0
-10				SB-27-0601-07		1530
				SB-27-0601-08		2.0
				SB-27-0601-09		2.0
-15				SB-27-0601-10		23.5
		SAND: SAND; gray to black, medium to fine sand, fine sand, increasing between 18.75 and 19.2', heavy black staining at 19.5-19.75, strong odor, staining (black) wet.		SB-27-0601-11		24.5
-20						

BORING LOG

BORING LOG: **SB-28-0601**

TOTAL DEPTH: **18.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Mike Petty**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/20/2006 10:15:00 AM**	**COORDINATES**	
DATE COMPLETED:	**1/20/2006**	NORTHING:	1650216.5
		EASTING:	168500.1
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		GRAVEL: GW. GRAVEL, loose, gray, damp.		SB-28-0601-01		11.2
		SAND: SW. SAND, loose, fine to coarse, light brown, moist.		SB-28-0601-02		45.7
-5		SILTY SAND: SM/ML. SILTY SAND, medium stiff, gray, moist.		SB-28-0601-03		862
		SANDY SILT: ML. SANDY SILT, stiff, light brown, moist.		SB-28-0601-04		50.8
		SILTY SAND: SM. SILTY SAND, medium stiff, fine to medium, light brown, moist.		SB-28-0601-05		17.2
-10				SB-28-0601-06		39.7
		SAND: SW. SAND with gravel, medium dense, fine to coarse, moist to wet at 16.5. At 10.5-12 yellowish brown, 12-13 light gray, 13-16 yellowish brown, 16-17.5 olive grayish brown, 17.5-18 black (odor)		SB-28-0601-07		19.0
				SB-28-0601-08		52.5
-15				SB-28-0601-09		2575

BORING LOG

BORING LOG: **SB-28-0602**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/23/2006 12:50:00 PM**	**COORDINATES**	
DATE COMPLETED:	**1/23/2006 3:00:00 PM**	NORTHING:	1650168
		EASTING:	168498.2
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SAND: SAND with clay; brown, medium sand, little fine, trace coarse sand, moist, loose/soft.		SB-28-0602-01		0.6
				SB-28-0602-02		0.7
		CLAYEY SAND: CLAYEY SAND; brown, medium to fine sand, cohesive, moderate plasticity, soft, moist, no odor.		SB-28-0602-03		0.9
-5				SB-28-0602-04		0.6
				SB-28-0602-05		0.6
-10		BLANK: No recovery.		SB-28-0602-06		1.9
				SB-28-0602-07		1.6
		SAND: SAND; light gray, fine, little medium sand, well sorted, loose, moist.				
		SAND: SAND; brown, medium to coarse sand. Little v. fine, loose, wet.		SB-28-0602-08		2.0
-15		SAND: V. fine SAND; brown, trace medium, well sorted, loose, wet.				
		CLAYEY SAND: CLAYEY SAND; gray, medium to fine sand, firm, wet, low plasticity.		SB-28-0602-09		1.6
		SAND: SAND; gray, fine to v. fine, trace medium sand. Wet, loose, well sorted.		SB-28-0602-10		0.8
		CLAY: CLAY (till) gray, clay, some silt, trace fine to medium sand, trace fine gravel/coarse sand, hard, firm, dry.				
-20						

BORING LOG

BORING LOG: **SB-29-0601**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/7/2006 1:35:00 AM**	**COORDINATES**	
DATE COMPLETED:	**2/7/2006**	NORTHING:	1650073.2
		EASTING:	168416.4
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor, concrete sub-base.		SB-29-0601-01		2.4
		SAND: SAND; brown, fine to medium, trace coarse sand, trace coarse gravel, trace cobbles, large cobble @ 4.5' bgs, dry.		SB-29-0601-02		1.2
				SB-29-0601-03		0.0
-5				SB-29-0601-04		0.0
				SB-29-0601-05		0.0
-10		SAND: SAND; light brown, fine to v. fine, little medium sand, trace fine gravel and coarse sand, loose, dry.		SB-29-0601-06		2.9
				SB-29-0601-07		5.8
				SB-29-0601-08		9.2
-15				SB-29-0601-09		153.0
		SAND: SAND; black, fine, trace medium, trace coarse sand, black staining, strong odor, wet, loose, increasing medium/coarse sand to 8'.				
		CLAY: CLAY; gray, silt, trace fine sand, coarse sand and fine gravel. Hard, dry, brittle.		SB-29-0601-10		31.0
-20						

BORING LOG

BORING LOG: **SB-29-0602**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**2/16/2006 2:21:00 PM**	**COORDINATES**	
DATE COMPLETED:	**2/16/2006 4:38:00 PM**	NORTHING:	1649938.9
		EASTING:	168465.4
		ELEVATION:	720.76

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		ASPHALT: ASPHALT/fill.		SB-29-0602-01		0.0
		SANDY CLAY: Brown silty SANDY CLAY, plastic, cohesive, sticky, moist, trace gravel.		SB-29-0602-02		0.8
				SB-29-0602-03		0.8
-5				SB-29-0602-04		1.2
		SAND: Dark yellowish brown medium to coarse SAND & gravel, dry, poorly graded, sub-rounded.		SB-29-0602-05		1.6
-10				SB-29-0602-06		10.5
				SB-29-0602-07		26.7
				SB-29-0602-08		156.0
-15		SAND: Black med. to coarse SAND & gravel, wet, staining, sheen, strong odor.		SB-29-0602-09		182.0
		SILT: Gray clayey SILT, nonplastic, cohesive, non-sticky, firm, trace gravel, moist.		SB-29-0602-10		35.6
-20						

BORING LOG

BORING LOG: **SB-29-0603**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/8/2006**	**COORDINATES**	
DATE COMPLETED:	**2/8/2006**	NORTHING:	1649828.7
		EASTING:	168433.4
		ELEVATION:	722.15

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor and concrete sub-base.		SB-29-0603-01		12.4
		SAND: SAND with silt, light brown, fine to v. fine sand, S. H. trace fine and coarse gravel, dry, loose.		SB-29-0603-02		95.3
-5		SAND: SAND with clay, dark brownish-gray, fine to medium sand, clay, little silt, trace fine gravel, cobbles in hole on all sides of hole. Clay compact, firm, dry.		SB-29-0603-03		3.4
				SB-29-0603-04		5.8
		SAND: SAND; light brown, fine to v. fine, little medium sand, trace fine gravel, well sorted from 15-16' bgs, dry, loose.		SB-29-0603-05		3.8
-10				SB-29-0603-06		15.6
				SB-29-0603-07		8.0
				SB-29-0603-08		117.6
-15		SAND: SAND, dark gray, medium, little fine, mild odor, wet, loose.		SB-29-0603-09		91.3
		CLAY: CLAY, dark gray to gray, silt, little v. fine sand, hard, brittle clay.		SB-29-0603-10		60.2
-20						

BORING LOG

BORING LOG: **SB-30-0601**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/30/2006**	**COORDINATES**	
DATE COMPLETED:	**1/30/2006**	NORTHING:	1650053.7
		EASTING:	167762.6
		ELEVATION:	722.47

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor.		SB-30-0601-01		0.0
		CONCRETE: Flowable CONCRETE.				
		SAND: SAND; light brown, medium to fine, trace coarse sand/fine gravel, trace silt, dry, loose.		SB-30-0601-02		0.0
				SB-30-0601-03		0.0
-5		BLANK: No Recovery				
		CLAYEY SAND: CLAYEY SAND; dark brown, medium to fine sand, clay, little silt increasing to 10' dry, cohesive, mod. plasticity.		SB-30-0601-04		0.0
				SB-30-0601-05		0.0
-10		BLANK: No Recovery.		SB-30-0601-06		0.0
		CLAYEY SAND: CLAYEY SAND; dark brown, composition as 6.25-10' interval.				
		SAND: SAND; light brown, fine, some medium sand, trace coarse sand to fine gravel, dry, loose.		SB-30-0601-07		0.0
				SB-30-0601-08		0.0
-15		SAND: SAND; gray fine to v. fine, little medium sand, well sorted, firm, wet.		SB-30-0601-09		0.0
		CLAY: CLAY; gray to light gray, little silt and fine sand, hard, moist to dry.		SB-30-0601-10		0.0
		SAND: SAND; brown, medium to fine, increasing fine to 20' bgs, loose, wet, trace silt.				
-20						

BORING LOG

BORING LOG: **SB-30-0602**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/30/2006**	**COORDINATES**	
DATE COMPLETED:	**1/30/2006**	NORTHING:	1650080.8
		EASTING:	167765.2
		ELEVATION:	722.50

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor.		SB-30-0602-01		0.0
		SAND: SAND: brown, medium to fine sand, little silt, little clay, soft, low plasticity, dry.		SB-30-0602-02		0.0
				SB-30-0602-03		0.0
-5				SB-30-0602-04		0.0
				SB-30-0602-05		0.0
-10		SAND: SAND; light brown, fine, little medium sand, trace fine gravel/coarse sand, little silt, dry, loose.		SB-30-0602-06		0.0
				SB-30-0602-07		6.0
				SB-30-0602-08		12.4
-15		SAND: SAND; brown, fine to v. fine, well sorted, loose, wet.		SB-30-0602-09		0.0
		SAND: SAND; brown, medium to coarse sand, wet, loose.				
		CLAY: CLAY with silt, gray to grayish brown, silt, little fine sand, trace coarse sand/fine gravel, hard, dry, low plasticity.		SB-30-0602-10		0.0
-20						

BORING LOG

BORING LOG: **SB-30-0603**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/2/2006**	**COORDINATES**	
DATE COMPLETED:	**2/2/2006**	NORTHING:	1650066.1
		EASTING:	167816.2
		ELEVATION:	722.59

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor.		SB-30-0603-01		1.9
		SAND: SAND; brown, fine, little medium sand, trace silt and clay, trace fine gravel/coarse sand, loose, dry.		SB-30-0603-02		3.7
				SB-30-0603-03		2.8
-5		BLANK: No recovery.		SB-30-0603-04		28.4
		SAND: SAND; light brown, fine to v. fine, little fine gravel (some fractured), trace silt, medium sand, loose, dry.		SB-30-0603-05		56.3
-10				SB-30-0603-06		49.2
				SB-30-0603-07		42.7
				SB-30-0603-08		26.9
-15		SAND: SAND; olive brown, medium to fine, well sorted, dry, loose, slight odor.		SB-30-0603-09		23.2
		SAND: SAND; gray, composition as above.				
		CLAY: CLAY; gray, silt, little v. fine sand, trace fine gravel, trace medium sand, brittle, hard, dry.		SB-30-0603-10		23.4
		SILT: SILT; brown, some v. fine sand, well sorted, wet, loose.				
-20						

BORING LOG

BORING LOG: **SB-30-0701**

TOTAL DEPTH: **12.50**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6620 DT**
DATE STARTED:	**9/20/2007 11:49:00 PM**	**COORDINATES**	
DATE COMPLETED:	**9/21/2007 12:02:00 AM**	NORTHING:	1650080.75
		EASTING:	167765.21
		ELEVATION:	722.22

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE (core)		SB-30-0701-01		0.0
		SAND: SAND, lt. brown-lt. gray, med sand and gravel, loose, dry.				
		SANDY CLAY: SANDY CLAY; dk. brown, fine sand, tr. gravel, soft/firm, plastic.		SB-30-0701-02		0.0
				SB-30-0701-03		0.0
-5						
				SB-30-0701-04		0.0
				SB-30-0701-05		0.0
		SAND: SAND, brown, med-coarse sands and gravel, loose, moist, red-pink staining.				
-10				SB-30-0701-06		0.0
		SAND: SAND; lt. brown, silt, fine-medium snd, loose, sl. moist.				
				SB-30-0701-07		0.0

BORING LOG

BORING LOG: **SB-31-0601**

TOTAL DEPTH: **28.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Mini-Sonic**
DATE STARTED:	**2/8/2006 10:20:00 AM**	**COORDINATES**	
DATE COMPLETED:	**2/8/2006 1:42:00 PM**	NORTHING:	1650017.6
		EASTING:	168058
		ELEVATION:	722.56

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE.		SB-31-0601-01		0.0
		FILL: Flowable FILL.		SB-31-0601-02		0.0
				SB-31-0601-03		0.0
-5				SB-31-0601-04		0.0
				SB-31-0601-05		0.0
-10				SB-31-0601-06		0.0
				SB-31-0601-07		0.0
				SB-31-0601-08		0.0/42.7
-15		SAND: Dark yellowish brown medium to coarse SAND & gravel, dry, poorly graded, sub-rounded, slight odor.		SB-31-0601-09		156.2
		SAND: Black medium to coarse SAND & gravel, dry, staining & strong odor.				
		SAND: Dark brown medium to coarse SAND & gravel, dry odor.		SB-31-0601-10		77.9
-20				SB-31-0601-11		83.4
				SB-31-0601-12		187.6
		SAND: Gray medium to coarse SAND & gravel, wet, heavy staining, strong odor.		SB-31-0601-13		212.4
-25				SB-31-0601-14		210.7

BORING LOG

BORING LOG: **SB-31-0701**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**S. Bruce**
LOGGED BY:	**R. Woodruff**	DRILLING METHOD:	**Geoprobe 6620 DT**
DATE STARTED:	**9/21/2007 12:24:00 AM**	**COORDINATES**	
DATE COMPLETED:	**9/21/2007 12:47:00 AM**	NORTHING:	1650146.98
		EASTING:	168107.99
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SB-31-0701-01		0.0
		SANDY CLAY: SANDY CLAY; dk. green/brown, gravels, loose, dry.				
		CLAY: CLAY; dk. brown, tr. gravel, plastic, soft/firm, moist.		SB-31-0701-02		0.0
		SANDY CLAY: SANDY CLAY; brown, tr. gravel, plastic, soft/firm, moist; light odor @ 12.0'.		SB-31-0701-03		0.0
-5				SB-31-0701-04		0.0
				SB-31-0701-05		0.0
-10				SB-31-0701-06		0.0
				SB-31-0701-07		0.0
				SB-31-0701-08		N/A
-15		BLANK: NO RECOVERY				
				SB-31-0701-09		N/A
				SB-31-0701-10		N/A
-20						

BORING LOG

BORING LOG: **SB-32-0601**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/31/2006**	**COORDINATES**	
DATE COMPLETED:	**1/31/2006**	NORTHING:	1650058.8
		EASTING:	168254.5
		ELEVATION:	722.59

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor.		SB-32-0601-01		12.0
		SAND: Brown medium to fine SAND, little silt, little clay, soft, low plasticity, moist at top, dry at bottom.		SB-32-0601-02		0.1
				SB-32-0601-03		0.0
-5		BLANK: No recovery.		SB-32-0601-04		36.6
				SB-32-0601-05		50.3
		SAND: SAND; brown, medium to fine sand, some silt and clay, low plasticity, firm, dry.		SB-32-0601-06		36.1
-10				SB-32-0601-07		42.8
				SB-32-0601-08		9.3
-15		CLAY: CLAY; gray, silt, little fine sand, hard, brittle, dry.		SB-32-0601-09		13.3
				SB-32-0601-10		860.0
		SILT: SILT, gray, silt, little v. fine sand, well sorted, strong odor, moist.				
-20		SAND: SAND; dark gray, medium to fine, trace coarse sand, loose, wet, very strong odor, slight staining.		SB-32-0601-11		560.0
				SB-32-0601-12		424.0
		SAND: SAND; gray, fine, some medium, trace coarse sand, increasing medium sand to bottom, strong odor, slight staining, wet.				
		SILTY CLAY: SILTY CLAY, gray, silt. Little fine sand, firm, cohesive, low plasticity, moist, strong odor.		SB-32-0601-13		205.0
-25						

BORING LOG

BORING LOG: **SB-32-0601**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/31/2006**	**COORDINATES**	
DATE COMPLETED:	**1/31/2006**	NORTHING:	1650058.8
		EASTING:	168254.5
		ELEVATION:	722.59

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
-25 –						

BORING LOG

BORING LOG: **SB-32-0602**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/31/2006**	**COORDINATES**	
DATE COMPLETED:	**1/31/2006**	NORTHING:	1650056.4
		EASTING:	168205.6
		ELEVATION:	722.66

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor.		SB-32-0602-01		3.0
		GRAVEL: GRAVEL sub-base, fine sand and silt, lose, dry.		SB-32-0602-02		3.6
				SB-32-0602-03		4.4
-5		BLANK: No Recovery		SB-32-0602-04		8.2
		GRAVEL: GRAVEL sub-base, as above.		SB-32-0602-05		2.7
		SAND: SAND, light brown, fine sand, some medium, little coarse sand, trace fine gravel & silt, dry loose.		SB-32-0602-06		2.2
-10				SB-32-0602-07		2.8
				SB-32-0602-08		6.7
		SAND: SAND; grayish brown, fine to v. fine, trace medium sand, well sorted, loose, moist, wet @ 17.5'.		SB-32-0602-09		14.0
-15		SAND: SAND; black to gray, medium, some fine sand, trace silt, heavy black staining, strong odor, wet.		SB-32-0602-10		306.0
		SAND: SAND; gray, fine sand, well sorted wet, loose. Odor.				
-20		SAND: SAND; grayish brown, medium to coarse sand. Little fine				

BORING LOG

BORING LOG: **SB-32-0602**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/31/2006**	**COORDINATES**	
DATE COMPLETED:	**1/31/2006**	NORTHING:	1650056.4
		EASTING:	168205.6
		ELEVATION:	722.66

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
-20		gravel, loose, wet, odor.				

BORING LOG

BORING LOG: **SB-32-0604**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/31/2006**	**COORDINATES**	
DATE COMPLETED:	**1/31/2006 1:00:00 PM**	NORTHING:	1649988
		EASTING:	168183.5
		ELEVATION:	722.52

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor.		SB-32-0604-01		5.6
		SAND: SAND; brown, medium to fine sand, cobbles and coarse gravel. Little fine gravel and coarse sand, loose, dry.		SB-32-0604-02		21.1
				SB-32-0604-03		18.7
-5		BLANK: No recovery.		SB-32-0604-04		NR
				SB-32-0604-05		12.5
		SAND: SAND; composition and color as 0.7-5' interval				
		SAND: SAND; light brown, fine, some medium. Trace coarse sand and fine gravel, fractured limestone clast at 9.5' bgs., dry, loose.				
-10		SAND: SAND; gray, medium, some fine sand, loose, wet, strong odor.		SB-32-0604-06		47.0
				SB-32-0604-07		13.3
				SB-32-0604-08		16.7
-15				SB-32-0604-09		334.0
		CLAY: CLAY; gray, silt, little v. fine to fine sand, trace fine gravel/coarse sand, hard, brittle, dry, slight odor.		SB-32-0604-10		247.0
-20						

BORING LOG

BORING LOG: **SB-33-0601**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/6/2006 4:50:00 PM**	**COORDINATES**	
DATE COMPLETED:	**2/6/2006 9:00:00 AM**	NORTHING:	1650230.67
		EASTING:	166457.28
		ELEVATION:	722.39

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor.		SB-33-0601-01		14.9
		SILTY SAND: SM. SILTY SAND, trace gravel, medium dense, fine to coarse, brown, moist.		SB-33-0601-02		9.5
		SAND: SW. SAND, fine to coarse, trace gravel, light grayish brown, damp.		SB-33-0601-03		25.7
-5				SB-33-0601-04		41.1
				SB-33-0601-05		35.3
-10				SB-33-0601-06		34.2
				SB-33-0601-07		28.7
				SB-33-0601-08		29.5
-15		SANDY SILT: SM. SANDY SILT, medium stiff, non-plastic, light brown, moist, trace gravel.				
		SAND: SW. SAND and gravel, medium dense, fine to coarse, grayish brown, moist to wet @ 19.5'.		SB-33-0601-09		20.2
				SB-33-0601-10		30.1
-20						

BORING LOG

BORING LOG: **SB-33-0602**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/9/2006**	**COORDINATES**	
DATE COMPLETED:	**2/9/2006**	NORTHING:	1650514.38
		EASTING:	167439.59
		ELEVATION:	722.49

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		FILL: Hand cleared prior - FILL.		SB-33-0602-01		--
				SB-33-0602-02		--
				SB-33-0602-03		7.6
-5		SAND: SAND; light brown, fine, some medium sand, trace coarse sand and fine gravel, trace silt, loose, dry. Fine sand seam at 13.5-14' bgs.		SB-33-0602-04		62.7
				SB-33-0602-05		55.9
-10				SB-33-0602-06		62.4
				SB-33-0602-07		45.0
				SB-33-0602-08		77.6
-15		SAND: SAND; brown, medium, little coarse sand, little fine, wet, loose.		SB-33-0602-09		88.9
		CLAY: CLAY; gray silt, little fine sand, hard, brittle, dry.		SB-33-0602-10		54.6
-20						

BORING LOG

BORING LOG: **SB-33-0603**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/2/2006 11:00:00 AM**	**COORDINATES**	
DATE COMPLETED:	**2/2/2006**	NORTHING:	1650225.37
		EASTING:	167932.89
		ELEVATION:	722.52

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE floor.		SB-33-0603-01		0.0
		SAND: SAND; brown, medium to fine sand, little coarse sand, trace fine and coarse gravel, loose, moist.		SB-33-0603-02		0.0
				SB-33-0603-03		19.3
-5				SB-33-0603-04		7.8
				SB-33-0603-05		9.2
		SAND: SAND; light brown, fine to v. fine, little medium sand, trace coarse sand and fine gravel, dry, loose.				
-10				SB-33-0603-06		26.1
				SB-33-0603-07		0.4
				SB-33-0603-08		7.4
-15				SB-33-0603-09		47.8
		SAND: SAND; black, foundry sand (?). Medium, well sorted, no staining or odor.				
		SAND: SAND; grayish brown, fine to v. fine, well sorted, wet, loose, mild odor.		SB-33-0603-10		158.0
-20		SAND: SAND; dark gray, composition as above, slight staining throughout. Strong odor, loose.				

BORING LOG

BORING LOG: **SB-33-0603**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/2/2006 11:00:00 AM**	**COORDINATES**	
DATE COMPLETED:	**2/2/2006**	NORTHING:	1650225.37
		EASTING:	167932.89
		ELEVATION:	722.52

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
-20						

BORING LOG

BORING LOG: **SB-33-0604**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**2/13/2006 11:25:00 AM**	**COORDINATES**	
DATE COMPLETED:	**2/13/2006 2:09:00 PM**	NORTHING:	1650720.53
		EASTING:	169116.32
		ELEVATION:	719.99

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SB-33-0604-01		1.4
		SAND: Dark yellowish brown medium to coarse SAND & gravel, dry, poorly graded, sub-rounded.		SB-33-0604-02		2.9
				SB-33-0604-03		2.5
-5				SB-33-0604-04		3.7
				SB-33-0604-05		9.4
-10				SB-33-0604-06		8.1
				SB-33-0604-07		12.2
		SANDY CLAY: Dark grayish brown silty SANDY CLAY, plastic, cohesive, sticky, very moist, trace gravel, soft.		SB-33-0604-08		16.3
-15				SB-33-0604-09		15.5
		SAND: Dark grayish brown fine to medium SAND, wet.		SB-33-0604-10		18.4
		SILT: Dark gray clayey SILT, slightly plastic, cohesive, slightly sticky, moist, trace gravel, firm.		SB-33-0604-11		27.6
-20		SAND: Dark yellowish brown medium to coarse SAND & gravel, wet.		SB-33-0604-12		30.9
		CLAYEY SILT: Dark gray CLAYEY SILT, nonplastic, cohesive, non-sticky, slightly moist, trace gravel, hard.		SB-33-0604-13		22.1
-25						

BORING LOG

BORING LOG: **SB-33-0605**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/6/2006**	**COORDINATES**	
DATE COMPLETED:	**2/10/2006**	NORTHING:	1650690.6
		EASTING:	168773.79
		ELEVATION:	719.95

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE flooring.		SB-33-0605-01		5.5
		SAND: SAND; grayish brown, fine to medium sand, trace fine gravel, trace clay & silt, loose, moist.		SB-33-0605-02		4.2
				SB-33-0605-03		4.0
-5		BLANK: No recovery		SB-33-0605-04		NR
		SAND: SAND, brown. Medium, some fine, trace fine gravel, loose, dry.		SB-33-0605-05		124.0
-10				SB-33-0605-06		13.5
		SILT: SILT, brown, trace v. fine sand, trace clay, well sorted, wet, firm.				
		CLAY: CLAY; gray, silt, little v. fine sand. Trace coarse sand/fine gravel, dry, brittle/low plasticity, hard.		SB-33-0605-07		66.5
				SB-33-0605-08		70.2
-15						

BORING LOG

BORING LOG: **SB-33-0606**

TOTAL DEPTH: **12.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Bill Condon**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/30/2006 4:30:00 PM**	**COORDINATES**	
DATE COMPLETED:	**11/30/2006 5:20:00 PM**	NORTHING:	1650705.87
		EASTING:	168774.57
		ELEVATION:	719.98

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE				
		SAND: SP - SAND with gravel, med. loose, dark brown (10 YR 3/6), dry, fine - coarse grained				
-5						
		CLAYEY SILT: ML - CLAYEY SILT lens (2" thick), with sand and trace gravel				
		SAND: SP - SAND with gravel, med. loose, dark brown (10 YR 3/6), dry, fine - coarse grained				
-10						
		SILT: ML - SILT, trace fine sand and gravel inclusions, med. loose, brown (10 YR 4/6), dry				
		SILT: ML - SILT, trace gravel, dense, dark gray (10 YR 4/1), dry, black staining; *tooling lost at 12'				

BORING LOG

BORING LOG: **SB-33-0608**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/30/2006**	**COORDINATES**	
DATE COMPLETED:	**11/30/2006**	NORTHING:	1650669
		EASTING:	168783.8
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE				
		SAND: SP - SAND, trace gravel, med. loose, fine-coarse grained, dark yellowish brown (10 yr 3/4), dry; black staining & cobbles from 6'-7.75'		SB-33-0608-01		7.8
				SB-33-0608-02		6.8
				SB-33-0608-03		112.0
-5				SB-33-0608-04		17.9
		SANDY SILT: SM - SANDY SILT, trace fine gravel, dense, 10 yr 3/2 (v. dark grayish brown), dry				
		SAND: SP - SAND, trace gravel, med. loose, fine-coarse grained, dark yellowish brown (10 yr 3/4), dry		SB-33-0608-05		7.9
-10		SILT: ML - SILT, trace gravels, dense, 10 yr 3/1, v. dark gray, dry, slightly cohesive		SB-33-0608-06		51.5
				SB-33-0608-07		8.2
				SB-33-0608-08		3.5
-15				SB-33-0608-09		5.2
				SB-33-0608-10		24.0
		SILTY SAND: SM - SILTY SAND, v. fine grained, v. dark gray (10 yr 3/1), moist				
-20		SILT: ML - SILT, trace gravels, dense, v. dark gray (10 yr 3/1), dry, slightly cohesive		SB-33-0608-11		2.5
				SB-33-0608-12		1.8
				SB-33-0608-13		3.5
-25						

BORING LOG

BORING LOG: **SB-35-0601**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/1/2006**	**COORDINATES**	
DATE COMPLETED:	**2/1/2006**	NORTHING:	1649762.09
		EASTING:	168352.33
		ELEVATION:	721.75

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE slab.		SB-35-0601-01		2.8
		SAND: Foundry SAND, black, fine to medium, no odor.				
		SAND: SAND & gravel, gray, fine, some medium sand, fine gravel and coarse gravel, cobbles.		SB-35-0601-02		2.1
		SANDY CLAY: SANDY CLAY; dark brown, medium to fine sand, clay, some silt, trace fine gravel, cohesive, moist.		SB-35-0601-03		3.2
-5		BLANK: No recovery		SB-35-0601-04		3.4
		CLAY: CLAY; dark brown to orangish brown, silt and v. fine sand, little fine gravel. Poorly sorted, firm, moist.		SB-35-0601-05		12.1
-10		SAND: SAND; light brown, medium to fine, gravel clast at 7.75', trace coarse sand, loose, dry.		SB-35-0601-06		12.8
				SB-35-0601-07		0.8
				SB-35-0601-08		65.9
-15				SB-35-0601-09		10.3
		CLAY: CLAY; gray, silt, little v. fine sand, trace fine gravel/coarse sand, hard, brittle, dry.				
		SAND: SAND; gray, medium to fine sand, trace coarse sand, loose, wet, mild odor.		SB-35-0601-10		163.0
		CLAY: CLAY; gray, silt, little v. fine sand, trace fine gravel/coarse sand, hard, dry, brittle.				
-20						

BORING LOG

BORING LOG: **SB-36-0601**

TOTAL DEPTH: **4.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/1/2006 12:06:00 PM**	**COORDINATES**	
DATE COMPLETED:	**2/1/2006 1:15:00 PM**	NORTHING:	1649691.4
		EASTING:	168350.34
		ELEVATION:	720.09

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SB-36-0601-01		0.0
		GRAVEL: GW. GRAVEL (limestone sub-base), loose, light gray, damp.				
		SAND: SM. Silty clayey SAND, trace gravel, loose, dark gray, moist.		SB-36-0601-02		0.0
		SAND: SW. SAND, loose, fine to medium, trace coarse, light brown, moist. Refusal at 4 ft (3 attempts).				

BORING LOG

BORING LOG: **SB-36-0602**

TOTAL DEPTH: **4.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/2/2006 10:15:00 AM**	**COORDINATES**	
DATE COMPLETED:		NORTHING:	1649691.4
		EASTING:	168354.4
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SB-36-0602-01		0.0
		GRAVEL: GW. GRAVEL and sand (limestone sub-base), loose, light gray, damp.				
		SILTY SAND: SM. SILTY SAND, loose, trace gravel, gray, moist.		SB-36-0602-02		0.0
		SAND: SW. SAND, fine to medium, loose, brown, moist. Refusal at 4 ft (twice).				

BORING LOG

BORING LOG: **SB-38-0601**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/1/2006 9:55:00 AM**	**COORDINATES**	
DATE COMPLETED:	**2/1/2006**	NORTHING:	1649406.21
		EASTING:	168209.22
		ELEVATION:	721.64

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SB-38-0601-01		0.0
		GRAVEL: GW. GRAVEL (limestone sub-base), loose, damp.				
		SILTY CLAY: CL. SILTY CLAY, stiff, plastic, olive gray, moist.		SB-38-0601-02		0.0
		SANDY CLAY: CL. SANDY CLAY, stiff, non-plastic, brownish gray, moist, trace gravel.		SB-38-0601-03		10.9
-5		SAND: SW. SAND, loose, fine to coarse, grayish brown 4-5, moist 5-19, light brown, damp, loose.		SB-38-0601-04		2.1
				SB-38-0601-05		1.7
-10				SB-38-0601-06		5.8
				SB-38-0601-07		3.0
				SB-38-0601-08		4.0
-15				SB-38-0601-09		5.1
		GRAVEL: GW. GRAVEL with sand, fractured rock, light gray, dry.		SB-38-0601-10		39.9
-20		SAND: SW. SAND, loose, fine to coarse, gray, moist, odor.		SB-38-0601-11		334.0
		SAND: SW. SAND, loose, fine to coarse, light grayish brown, strong odor, very moist to wet at 24 ft.		SB-38-0601-12		271.0
-25				SB-38-0601-13		326.0

BORING LOG

BORING LOG: **SB-38-0602**

TOTAL DEPTH: **26.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Mike Petty**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/20/2006 12:20:00 PM**	**COORDINATES**	
DATE COMPLETED:	**1/20/2006**	NORTHING:	1649404.79
		EASTING:	168267.95
		ELEVATION:	720.94

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SILTY SAND: SM. SILTY SAND, loose, fine to medium, brown, moist.		SB-38-0602-01		0.0
				SB-38-0602-02		3.8
		SAND: SW. SAND, loose, fine to coarse, light brown, moist.		SB-38-0602-03		2.9
-5				SB-38-0602-04		8.5
				SB-38-0602-05		3.6
-10				SB-38-0602-06		14.6
		SAND: SW. SAND with gravel, fine to coarse, light brown, very moist.		SB-38-0602-07		13.5
				SB-38-0602-08		12.2
-15				SB-38-0602-09		4.8
				SB-38-0602-10		7.8
-20		SAND: SW. SAND with gravel, fine to coarse, loose, dark gray 20-21, gray 21-22, very moist, strong odor 20-22.		SB-38-0602-11		111.0
				SB-38-0602-12		16.7
-25		SAND: SW. SAND and gravel (gravelly sand), loose, fine to coarse, dark gray, wet, strong odor.		SB-38-0602-13		451.0

BORING LOG

BORING LOG: **SB-40-0601**

TOTAL DEPTH: **45.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Mike Magna and Jim Robinson**
LOGGED BY:	**M. Griles**	DRILLING METHOD:	**Mini-Sonic**
DATE STARTED:	**4/26/2006 1:30:00 PM**	**COORDINATES**	
DATE COMPLETED:	**4/27/2006 9:25:00 AM**	NORTHING:	1649200.73
		EASTING:	168557.26
		ELEVATION:	720.80

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		ASPHALT: ASPHALT and fill.		SB-40-0601-01		4.4
		CLAY: CL 10YR 3/4 Dark yellowish brown silty sandy CLAY, with pebbles and gravels within the matrix, sl. plastic, high sand count.		SB-40-0601-02		6.8
-5				SB-40-0601-03		9.6
		SAND: SW 10YR 5/6 well-med graded SANDs w/ gravel, pebbles, and coarse gravel sand in mix, subrounded, dry.		SB-40-0601-04		18.1
				SB-40-0601-05		10.1
-10				SB-40-0601-06		20.2
				SB-40-0601-07		21.1
-15				SB-40-0601-08		25.6
				SB-40-0601-09		5.7
				SB-40-0601-10		4.9
-20				SB-40-0601-11		6.0
				SB-40-0601-12		5.6
-25		SAND: SW 10YR 6/6 gray SANDs med-graded, w/ little gravel and pebbles, tr. cobbles, strong odor and staining moist. Wet at 26, muddy/silty from 27.5-28.0, NAPL positive at 27.0 ft.		SB-40-0601-13		39.3
				SB-40-0601-14		37.5
		SAND: SW 10YR 5/6 well-med graded SANDs w/ gravel, pebbles, and coarse grained sand in mix, subrounded, saturated.		SB-40-0601-15		16.8
-30				SB-40-0601-16		2.5
				SB-40-0601-17		2.5
-35				SB-40-0601-18		2.0
				SB-40-0601-19		3.6
		CLAY: 10YR 3/1 ML gray silty CLAY till w/ tr. gravel and pebbles, compact, cohesive, non-plastic,, hard, dry, and friable from 44-45 ft.		SB-40-0601-20		3.1
-40				SB-40-0601-21		2.3
				SB-40-0601-22		2.1
-45						

BORING LOG

BORING LOG: **SB-40-0613**

TOTAL DEPTH: **28.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**2/10/2006 9:05:00 AM**	**COORDINATES**	
DATE COMPLETED:	**2/10/2006 11:11:00 AM**	NORTHING:	1648213.98
		EASTING:	168323.77
		ELEVATION:	717.59

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL		SB-40-0613-01		0.0
		SAND: Dark yellowish brown medium to coarse SAND and gravel, poorly graded, sub-rounded, dry, wet at 26.0'.		SB-40-0613-02		0.0
				SB-40-0613-03		0.8
-5				SB-40-0613-04		0.6
				SB-40-0613-05		0.2
-10				SB-40-0613-06		0.1
				SB-40-0613-07		0.0
				SB-40-0613-08		0.7
-15				SB-40-0613-09		0.5
				SB-40-0613-10		0.4
-20				SB-40-0613-11		0.0
				SB-40-0613-12		0.0
				SB-40-0613-13		0.1
-25				SB-40-0613-14		1.5

BORING LOG

BORING LOG: **SB-40-0614**

TOTAL DEPTH: **28.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**2/10/2006 11:23:00 AM**	**COORDINATES**	
DATE COMPLETED:	**2/10/2006 2:00:00 PM**	NORTHING:	1648248.88
		EASTING:	168289.42
		ELEVATION:	718.26

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		ASPHALT: ASPHALT/Fill.		SB-40-0614-01		0.5
		SAND: Dark yellowish brown medium to coarse SAND & gravel, dry, poorly graded, sub-rounded.		SB-40-0614-02		1.2
				SB-40-0614-03		0.1
-5				SB-40-0614-04		0.0
				SB-40-0614-05		0.0
-10				SB-40-0614-06		0.3
				SB-40-0614-07		2.1
				SB-40-0614-08		0.8
-15				SB-40-0614-09		0.7
				SB-40-0614-10		0.1
-20				SB-40-0614-11		1.4
				SB-40-0614-12		1.6
				SB-40-0614-13		0.9
-25				SB-40-0614-14		2.2

BORING LOG

BORING LOG: **SB-42-0601**

TOTAL DEPTH: **5.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**2/13/2006 2:50:00 PM**	**COORDINATES**	
DATE COMPLETED:	**2/13/2006 3:30:00 PM**	NORTHING:	1650885.11
		EASTING:	169006
		ELEVATION:	719.95

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SB-42-0601-01		0.3
		SAND: Dark yellowish brown medium to coarse SAND & gravel, dry, poorly graded, sub-rounded.				
				SB-42-0601-02		1.1
				SB-42-0601-03		0.8
-5						

BORING LOG

BORING LOG: **SB-42-0602**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**2/13/2006 8:47:00 AM**	**COORDINATES**	
DATE COMPLETED:	**2/13/2006 11:00:00 AM**	NORTHING:	1650909.79
		EASTING:	169051.91
		ELEVATION:	719.97

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SB-42-0602-01		0.7
		SAND: Dark yellowish brown medium to coarse SAND & gravel, poorly graded sub-rounded, dry.		SB-42-0602-02		2.3
				SB-42-0602-03		3.6
-5				SB-42-0602-04		7.9
				SB-42-0602-05		8.3
-10				SB-42-0602-06		12.2
				SB-42-0602-07		36.7
		CLAYEY SAND: Dark grayish brown CLAYEY SAND, slightly plastic, slightly cohesive, slightly sticky, moist.		SB-42-0602-08		72.1
-15		SAND: Dark yellowish brown fine to medium SAND, moist.				
		SAND: Dark yellowish brown medium to coarse SAND & gravel, moist, wet at 17.0', strong odor (chlorinated) 17.0-18.0'		SB-42-0602-09		116.0
				SB-42-0602-10		68.4
-20						

BORING LOG

BORING LOG: **SB-42-0603**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**2/10/2006**	**COORDINATES**	
DATE COMPLETED:	**2/10/2006**	NORTHING:	1650884.6
		EASTING:	168978
		ELEVATION:	719.93

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SB-42-0603-01		43.0
		SAND: SAND, brown, fine to medium, trace gravel, loose, dry.		SB-42-0603-02		92.0
				SB-42-0603-03		89.0
-5				SB-42-0603-04		214.0
		SAND: SAND, brown, medium to coarse w/ gravel, dry, loose.		SB-42-0603-05		343.0
-10				SB-42-0603-06		1.6
		SANDY CLAY: Gray silty SANDY CLAY, soft, plastic, moist.		SB-42-0603-07		1.4
				SB-42-0603-08		0.5
-15		SAND: SAND w/ silt, gray to dark gray, fine to very fine sand, well sorted, loose, wet @ 15.5ft		SB-42-0603-09		1.2
		SILTY CLAY: SILTY CLAY, gray, trace gravel, hard, slightly moist.		SB-42-0603-10		1.3
-20						

BORING LOG

BORING LOG: **SB-42-0604**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**Tim Yates**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**2/16/2006 8:09:00 AM**	**COORDINATES**	
DATE COMPLETED:	**2/16/2006**	NORTHING:	1650873.31
		EASTING:	169002.23
		ELEVATION:	719.95

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SB-42-0604-01		0.0
		SAND: Dark yellowish brown medium to coarse SAND & gravel, dry, poorly graded, sub-rounded.		SB-42-0604-02		0.3
				SB-42-0604-03		1.6
-5				SB-42-0604-04		4.7
				SB-42-0604-05		10.1
-10				SB-42-0604-06		15.4
				SB-42-0604-07		12.3
		SANDY CLAY: Dark gray silty SANDY CLAY, plastic, cohesive, sticky, very moist, trace gravel; increased sand content @ 14.0'.		SB-42-0604-08		17.9
-15				SB-42-0604-09		16.2
		SAND: Gray medium to coarse SAND & gravel, wet.				
		CLAYEY SILT: Gray CLAYEY SILT, non-plastic, cohesive, non-sticky, moist, firm, trace gravel.		SB-42-0604-10		18.6
-20						

BORING LOG

BORING LOG: **SB-42-0605**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Bill Condon**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/28/2006**	**COORDINATES**	
DATE COMPLETED:	**11/28/2006**	NORTHING:	1650916.43
		EASTING:	168989.6
		ELEVATION:	719.95

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SB-42-0605-01		70.0
		SAND: SP - SAND, trace gravel, loose, fine-med. grained, d. brown (10 yr 4/3), dry; some gravel 4-10.66'; black staining from 6-10.66'		SB-42-0605-02		90.0
				SB-42-0605-03		76.9
-5				SB-42-0605-04		140.0
				SB-42-0605-05		135.0
-10				SB-42-0605-06		0.0
		SILT: ML - SILT, trace gravel, med. dense-dense, d. brown (10 yr 4/3), moist; trace fine from 14'-14.9'		SB-42-0605-07		4.9
				SB-42-0605-08		0.0
-15		SAND: SP - SAND, med. loose, fine grained, d. grayish brown (10 yr 4/8), damp; trace gravel from 18-20'; saturated @ 16'		SB-42-0605-09		5.0
				SB-42-0605-10		196.0
-20						

BORING LOG

BORING LOG: **SB-42-0606**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Bill Condon**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/29/2006 10:50:00 AM**	**COORDINATES**	
DATE COMPLETED:	**11/29/2006 12:00:00 PM**	NORTHING:	1650909.63
		EASTING:	169005.89
		ELEVATION:	719.93

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE				
		SAND: SP SAND, little gravel, medium loose, fine-coarse grained, poorly graded, dark brown (10YR 3/6), dry, dense at 4 ft, black staining at 8 ft.		SB-42-0606-01		20.0
				SB-42-0606-02		28.0
				SB-42-0606-03		40.2
-5						
				SB-42-0606-04		32.5
				SB-42-0606-05		53.6
-10				SB-42-0606-06		36.4
		SILT: ML SILT, trace sand, medium dense, grayish brown (10YR 4/2), dry.				
		SANDY SILT: ML SANDY SILT, trace gravel and clay, medium dense, dark brown (10YR 4/3), damp, slightly cohesive and plastic.		SB-42-0606-07		15.1
				SB-42-0606-08		0.0
-15		SAND: SP SAND, trace silt, medium loose, fine grained, grayish-brown (10YR 4/2), damp, medium dense and saturated at 16 ft, dense at 19 ft.		SB-42-0606-09		25.1
				SB-42-0606-10		5.1
-20						

BORING LOG

BORING LOG: **SB-42-0607**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Bill Condon**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/29/2006**	**COORDINATES**	
DATE COMPLETED:	**11/30/2006**	NORTHING:	1650929.33
		EASTING:	169065.66
		ELEVATION:	719.94

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE				
		SAND: SP - SAND, trace gravel, med. loose, fine-coarse sand, brown (10 yr 4/3), dry		SB-42-0607-01		0.0
				SB-42-0607-02		61.8
				SB-42-0607-03		155.0
-5						
				SB-42-0607-04		36.8
				SB-42-0607-05		18.7
-10				SB-42-0607-06		45.5
		SANDY SILT: SM - SANDY SILT, trace fine gravel, dense, dark yellowish brown (10 yr 3/4), dry, @13.25 moist		SB-42-0607-07		1.1
		SAND: SP - SAND, med. loose, fine-med. grained, yellowish brown (10 yr 5/3), damp		SB-42-0607-08		47.3
-15						
		SAND: SP - SAND, trace silt & gravel, med. dense, med.-coarse grained, yellowish brown (10 yr 4/2), saturated		SB-42-0607-09		27.4
				SB-42-0607-10		2.4
-20		GRAVELLY SAND: SP - GRAVELLY SAND, saturated				

BORING LOG

BORING LOG: **SB-42-0608**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Bill Condon**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/28/2006 11:45:00 AM**	**COORDINATES**	
DATE COMPLETED:	**11/28/2006 1:15:00 PM**	NORTHING:	1650940.42
		EASTING:	169032.1
		ELEVATION:	719.90

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SB-42-0608-01		82.8
		SAND: SP SAND, trace gravel, medium loose, fine-medium grained, 10YR 4/4, dry; black staining present from 4-8'; damp at 10 ft, moist at 11.5 ft.		SB-42-0608-02		105.0
				SB-42-0608-03		212.0
-5				SB-42-0608-04		200.0
				SB-42-0608-05		21.3
-10				SB-42-0608-06		33.7
				SB-42-0608-07		34.2
		GRAVELLY SAND: SP GRAVELLY SAND, medium dense, dark brown (10YR 3.2), dry.		SB-42-0608-08		4.9
-15		SILT: ML SILT, trace gravel, brownish gray, (10YR 4/2), damp.				
		SAND: SP SAND, several gravel inclusions, medium loose, medium grained, dark brown (10YR 4/3); saturated from 16-16.5'; moist from 16.5-18'; 18-20' very moist.		SB-42-0608-09		130.0
				SB-42-0608-10		0.0
-20						

BORING LOG

BORING LOG: **SB-42-0701**

TOTAL DEPTH: **35.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**S. Bruce**
LOGGED BY:	**R. Woodruff**	DRILLING METHOD:	**Geoprobe 6620 DT**
DATE STARTED:	**9/18/2007 9:50:00 PM**	**COORDINATES**	
DATE COMPLETED:	**9/18/2007 11:32:00 PM**	NORTHING:	1650884.6
		EASTING:	168921.5
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SP-42-0701-01		0
		SAND: SAND, clayey sand, lt. brown, loose, dry, tr. gravel, increasing sand + silt + gravel with depth		SP-42-0701-02		0
				SP-42-0701-03		0
-5				SP-42-0701-04		0
				SP-42-0701-05		0
-10				SP-42-0701-06		0
		CLAY: CLAY, with some sand+silt, gray, firm @ 12' but quickly softens, tr. sands + gravel, plastic, moist, wet from 12.5-13.5', hardens + dec. gravel content @ 20', almost no gravel content @ 24', very wet from 25.0-27.0'		SP-42-0701-07		0
-15				SP-42-0701-08		0
				SP-42-0701-09		0
				SP-42-0701-10		0
-20				SP-42-0701-11		0
				SP-42-0701-12		0
				SP-42-0701-13		0
-25				SP-42-0701-14		0
		SAND: SAND, brownish-gray, soft, loose-plastic, moist, wet from 28.0-29.0', medium sands and gravel.		SP-42-0701-15		0
-30				SP-42-0701-16		0
		CLAY: CLAY, with some sand, gray, soft (inc. firm with depth), tr. sands + gravel, plastic, moist, wet from 31.0-33.0'.		SP-42-0701-17		0
-35				SP-42-0701-18		0

BORING LOG

BORING LOG: **SB-42-0702**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**S. Bruce**
LOGGED BY:	**R. Woodruff**	DRILLING METHOD:	**Geoprobe 6620 DT**
DATE STARTED:	**9/25/2007 10:30:00 PM**	**COORDINATES**	
DATE COMPLETED:	**9/25/2007 11:00:00 PM**	NORTHING:	1650948.7
		EASTING:	168944.6
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SB-42-0702-01		0.0
		SAND: CLAYEY SAND, brown, loose, gravels, medium sands and gravel, dry, inc. clay and wilt w/ depth; red staining at 9.0.		SB-42-0702-02		0.0
				SB-42-0702-03		0.0
-5				SB-42-0702-04		0.0
				SB-42-0702-05		0.0
-10				SB-42-0702-06		0.0
		CLAY: CLAY, gray, tr. gravel, tr. sand, soft, moist, plastic; sand stinger from 14.6-14.8, wet @ 14.0-15.0		SB-42-0702-07		0.0
				SB-42-0702-08		0.0
-15						
		SAND: SANDS; with some clay, gray, med-cse sands and gravel, moist, wet, loose but cohesive.		SB-42-0702-09		0.0
				SB-42-0702-10		0.0
-20				SB-42-0702-11		0.0
				SB-42-0702-12		0.0
		CLAY: CLAY, gray, tr. gravel, firm, plastic, moist, wet @ 24.5-25.		SB-42-0702-13		0.0
-25						

BORING LOG

BORING LOG: **SB-42-0702***

TOTAL DEPTH: **5.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6620DT**
DATE STARTED:	**9/19/2007 1:35:00 AM**	**COORDINATES**	
DATE COMPLETED:	**9/19/2007 1:45:00 AM**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE (Core)		SB-42-0702*-01		0
		CLAYEY SAND: CLAYEY SAND, lt. brown, loose, dry, tr. gravel, inc sand & silt & gravel with depth. Refusal at 5.0 ft.				
				SB-42-0702*-02		0
				SB-42-0702*-03		0
-5						

BORING LOG

BORING LOG: **SB-42-0703**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6620 DT**
DATE STARTED:	**9/18/2007 1:45:00 AM**	**COORDINATES**	
DATE COMPLETED:	**9/18/2007 2:05:00 AM**	NORTHING:	1650983.19
		EASTING:	168970.31
		ELEVATION:	719.94

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE (core)		SP-42-0703-01		0
		SANDY CLAY: CLAYEY SAND, brown (10yr 4/3), loose, dry, tr gravel.		SP-42-0703-02		0
				SP-42-0703-03		0
-5				SP-42-0703-04		0
				SP-42-0703-05		0
		SANDY CLAY: SANDY CLAY, dk. brown (10yr 3/6), stiff, plastic, sl moist, tr gravel.				
-10		SAND: SAND, brown, (10yr 4/3), loose, med grained, dry, tr gravel.		SP-42-0703-06		0
		SANDY CLAY: SANDY CLAY, gray (10yr 6/1), tr gravel, soft, moist, wet from 13.0-15.0, sticky plastic.		SP-42-0703-07		6.7
				SP-42-0703-08		23.2
-15						

BORING LOG

BORING LOG: **SB-42-0704**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6620 DT**
DATE STARTED:	**9/18/2007 12:33:00 AM**	**COORDINATES**	
DATE COMPLETED:	**9/18/2007 12:52:00 AM**	NORTHING:	1650982.96
		EASTING:	169018.26
		ELEVATION:	719.93

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE (core)		SP-42-0704-01		0
		SAND: SAND, dk. brown (10yr 3/6), loose, sl. moist, tr gravel, fine-med sand, inc sand size w/ depth, inc moist w/ depth.		SP-42-0704-02		0
				SP-42-0704-03		0
-5				SP-42-0704-04		0
				SP-42-0704-05		0
-10		SILTY CLAY: SILTY CLAY, dk. gray, (10yr 6/1), stiff, plastic, sl. moist, tr. gravel, wet.		SP-42-0704-06		6.8
		SAND: SAND, brown, (10yr 4/3), loose, dry, tr. gravel, fine-med sands,		SP-42-0704-07		13.2
		SILTY CLAY: SILTY CLAY, gray (10yr 6/1), tr. gravel, soft, moist, wet from 13.0-15.0, sticky, plastic.		SP-42-0704-08		43.8
-15						

BORING LOG

BORING LOG: **SB-42-0705**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6620 DT**
DATE STARTED:	**9/17/2007 4:17:00 AM**	**COORDINATES**	
DATE COMPLETED:	**9/17/2007 4:45:00 AM**	NORTHING:	1650979.97
		EASTING:	169071.79
		ELEVATION:	719.95

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE (core)		SP-42-0705-01		0
		SAND: SAND, brown (10yr 4/3), loose, fine, tr. gravels, dry, inc silt content at 5.0', and inc moisture at 5.0'		SP-42-0705-02		0
				SP-42-0705-03		0
-5				SP-42-0705-04		0
				SP-42-0705-05		0
-10				SP-42-0705-06		0
		SANDY CLAY: SANDY CLAY, brown (10yr 4/3), stiff, sl moist, sl plastic, tr. gravel.		SP-42-0705-07		0
		SANDY CLAY: SANDY CLAY with some SILT, dk. brown, (10yr 4/1), some gravel, moist, wet from 13.0-14.5', sticky, plastic, firms w/ depth, inc sand content w/ depth.		SP-42-0705-08		0
-15						

BORING LOG

BORING LOG: **SB-42-0706**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6620 DT**
DATE STARTED:	**9/18/2007 12:02:00 AM**	**COORDINATES**	
DATE COMPLETED:	**9/18/2007 12:17:00 AM**	NORTHING:	1650919.16
		EASTING:	169117.65
		ELEVATION:	719.97

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE (core)		SB-42-0706-01		0.0
		SAND: SILTY SAND, brown, loose, gravels, fine-med sands and gravels, dry, black-green staining at 9.0 feet		SB-42-0706-02		0.0
				SB-42-0706-03		0.0
-5				SB-42-0706-04		0.0
				SB-42-0706-05		0.0
-10				SB-42-0706-06		0.0
		SANDY CLAY: SANDY CLAY, brown, tr. rvel, firm, plastic, dry.				
		CLAY: CLAY, brown, wet, moist, plastic, tr. gravels, color change to gray at 14.0'; inc sand w/ depth.		SB-42-0706-07		0.0
				SB-42-0706-08		0.0
-15						

BORING LOG

BORING LOG: **SB-42-0706***

TOTAL DEPTH: **5.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6620 DT**
DATE STARTED:	**9/18/2007 12:02:00 AM**	**COORDINATES**	
DATE COMPLETED:	**9/18/2007 12:17:00 AM**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE (Core)		SB-42-0706*-01		0
		SAND: SAND, brown (10yr 4/3), loose, dry, gravel				
				SB-42-0706*-02		0
				SB-42-0706*-03		0
-5		SANDY CLAY: SANDY CLAY, brown, (10yr 4/3), nonplastic, stiff, dry, tr gravel. Refusal after 5.0 ft.				

BORING LOG

BORING LOG: **SB-43-0601**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/30/2006 11:35:00 AM**	**COORDINATES**	
DATE COMPLETED:	**11/30/2006 11:55:00 AM**	NORTHING:	1650877.03
		EASTING:	169071.67
		ELEVATION:	719.97

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE				
		SAND: SP SAND, trace fine gravel, medium loose, medium coarse grained, dark yellowish brown (10YR 4/4), dry.		SB-43-0601-01		2.1
				SB-43-0601-02		2.2
		BLANK: No recovery		SB-43-0601-03		--
-5				SB-43-0601-04		1.1
		SAND: SP SAND, some gravel, medium loose, medium coarse grained, dark yellowish brown (10YR 4/4), damp.				
		GRAVELLY SAND: SP GRAVELLY SAND, trace silt, medium dense, medium coarse grained, dark yellowish brown, (10YR 4/4), damp.		SB-43-0601-05		0.9
-10		SAND: SP SAND, trace fine gravel, medium loose, medium-coarse grained, dark yellowish brown (10YR 4.4), dry; moist at 10.8 ft.		SB-43-0601-06		3.1
		SANDY SILT: SM SANDY SILT, trace gravel, medium loose, dark grayish brown (10YR 4/2), damp; very dense at 12.3 ft.		SB-43-0601-07		0.0
				SB-43-0601-08		0.0
-15		SAND: SP SAND, medium loose, coarse grained, dark yellowish brown (10YR 4/4), damp.				
		SANDY SILT: ML SANDY SILT, trace gravel, medium loose, dark grayish brown (10YR 4/2), damp.		SB-43-0601-09		0.8
		SAND: SP SAND, medium loose, dark yellowish brown (10YR 4/3), saturated.		SB-43-0601-10		7.8
-20						

BORING LOG

BORING LOG: **SB-43-0602**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Bill Condon**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/28/2006 10:30:00 AM**	**COORDINATES**	
DATE COMPLETED:	**11/28/2006 11:25:00 AM**	NORTHING:	1650844.45
		EASTING:	168975.1
		ELEVATION:	719.98

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SB-43-0602-01		10.2
		SAND: SP SAND, trace fine gravel and trace silt, loose, 10YR 3/6, dry.				
		SAND: SP SAND, trace fine gravel, loose, fine-medium grained, 10YR 3/6, dry; black staining from 4-6'.		SB-43-0602-02		12.2
				SB-43-0602-03		11.2
-5						
				SB-43-0602-04		32.2
				SB-43-0602-05		3.4
-10				SB-43-0602-06		19.5
		SILT: ML SILT, trace gravel, very dense, 10YR 4/2, dry.				
		SANDY SILT: ML SANDY SILT, trace gravel, medium dense, fine-medium grained sand, 10YR 4/3, dry.		SB-43-0602-07		33.3
		SILT: ML SILT, trace gravel and sand, medium dense, 10YR 4/2, damp-moist; very most at 16 ft.		SB-43-0602-08		0.0
-15						
		BLANK: Slough.		SB-43-0602-09		1.5
		SAND: SP SAND, trace coarse grained, medium loose, 10YR 3/1, very moist.		SB-43-0602-10		3.2
		TILL: CL TILL, stiff, trace gravel, 10YR 4/1, dry.				
-20						

BORING LOG

BORING LOG: **SB-45-0601**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**1/12/2006**	**COORDINATES**	
DATE COMPLETED:	**1/12/2006**	NORTHING:	1650282.23
		EASTING:	168637.04
		ELEVATION:	719.26

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SAND: SAND; brown to light brown, medium little fine sand, trace fine gravel, loose, wet.		SB-45-0601-01		0.9
				SB-45-0601-02		0.9
				SB-45-0601-03		0.9
-5				SB-45-0601-04		0.9
				SB-45-0601-05		0.9
-10		CLAY: CLAY, dark gray, trace fine sand, little silt, trace fine gravel, hard, very dry, brittle.		SB-45-0601-06		0.9
				SB-45-0601-07		0.9
				SB-45-0601-08		0.9
-15		SILTY CLAY: SILTY CLAY, dark gray, silt, trace v. fine sand, hard, dry, brittle.		SB-45-0601-09		0.9
				SB-45-0601-10		0.9
-20						
		SANDY SILT: SANDY SILT, gray, medium to fine sand, wet, loose (fell out of down hole end of macro sampler)				
-25						

BORING LOG

BORING LOG: **SB-46-0601**

TOTAL DEPTH: **30.00**

PROJECT INFORMATION

PROJECT: **GM/REALM (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **M. Beckwith-Laube**

DATE STARTED: **1/18/2006 11:00:00 AM**

DATE COMPLETED: **1/18/2006 3:40:00 PM**

DRILLING INFORMATION

DRILLING CO.: **Altech**

DRILLER: **Johnny Davis**

DRILLING METHOD: **Hand Auger/Geoprobe**

COORDINATES

NORTHING: 1650369.93

EASTING: 168682.33

ELEVATION: 719.94

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SAND: SAND; brown, medium to fine, trace coarse sand and fine gravel, trace silt, loose, dry.		SB-46-0601-01		6.3
				SB-46-0601-02		5.9
		CLAYEY SAND: CLAYEY SAND, dark brown, medium sand with little fine sand in clay matrix. Low plasticity, cohesive, soft, moist.		SB-46-0601-03		3.0
-5		BLANK: No recovery.				
		SAND: SAND; brown, medium, some fine, little coarse sand, trace fine gravel, dry, loose.		SB-46-0601-04		2.7
		SAND: SAND; brown, medium, some fine, little coarse sand, trace fine gravel, dry, loose.		SB-46-0601-05		9.0
-10		SAND: SAND; light brown, fine, little medium to coarse, trace fine gravel, loose, dry.		SB-46-0601-06		4.2
		CLAY: CLAY, gray, silt, trace fine sand, dry, brittle, low plasticity.		SB-46-0601-07		2.4
				SB-46-0601-08		2.6
-15				SB-46-0601-09		1.4
		CLAY: CLAY; gray, little silt, fine sand trace fine gravel/coarse gravel. Extremely expansive, moderate plasticity, dry, hard.		SB-46-0601-10		1.6
-20						
-25						
-30						

BORING LOG

BORING LOG: **SB-47-0601**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/18/2006**	**COORDINATES**	
DATE COMPLETED:		NORTHING:	1650405.42
		EASTING:	168632.19
		ELEVATION:	719.85

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CLAYEY SAND: CLAYEY SAND; dark gray, medium to fine sand, clay, little silt. Moist, cohesive, soft.		SB-47-0601-01		
		CLAYEY SAND: CLAYEY SAND; orangish brown to brown, medium sand, little fine clay, little silt, cohesive, soft, moist.		SB-47-0601-02		1.2
				SB-47-0601-03		1.3
-5		SAND: SAND; light olive brown, medium, little fine sand trace coarse sand and fine gravel, loose, dry.				
		BLANK: No recovery		SB-47-0601-04		1.3
		SAND: SAND, light to dark brown. Medium, little fine and coarse sand. Trace fine gravel, loose, dry. < 1/2" band of blue sand at 8.5', no odor.		SB-47-0601-05		1.3
		SAND: SAND, light gray, fine, trace medium, loose, dry.				
-10				SB-47-0601-06		5.4
		SILT: SILT; gray to black staining, little v. fine sand, black staining for 6" (13.5-14'), slight odor, moist, firm.		SB-47-0601-07		220.5
		SANDY CLAY: SANDY CLAY, orangish brown, fine sand, trace medium little silt, firm, dry, brittle.		SB-47-0601-08		6.9
-15		CLAY: CLAY; gray, little fine sand. Silt, trace fine gravel/coarse sand, hard, brittle, dry.		SB-47-0601-09		1.4
				SB-47-0601-10		1.6
		SILTY CLAY: SILTY CLAY, gray, silt, trace fine sand, hard, brittle/low plasticity, dry.				
-20						

BORING LOG

BORING LOG: **SB-50-0601**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/18/2006 8:00:00 AM**	**COORDINATES**	
DATE COMPLETED:		NORTHING:	1650229.82
		EASTING:	169567.02
		ELEVATION:	719.96

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SAND: SAND; brown to dark brown, medium to fine, trace coarse sand/fine gravel, loose, dry.		SB-50-0601-01		0.8
				SB-50-0601-02		1.7
				SB-50-0601-03		1.4
-5						
		BLANK: No recovery.		SB-50-0601-04		1.6
		SAND: SAND, brown, medium to fine sand, trace fine gravel and coarse sand, trace clay and silt, dry, loose.		SB-50-0601-05		1.6
		CLAY: CLAY, dark brown to gray, silt, little fine sand, trace medium sand, trace wood, firm, non-plastic, dry.		SB-50-0601-06		1.2
-10						
				SB-50-0601-07		0.8
		SAND: SAND; light olive brown, medium, little fine, trace coarse sand, trace clay, loose, moist.				
		CLAY: CLAY; gray, trace silt, trace coarse sand, plastic, most, soft.		SB-50-0601-08		0.8
		CLAY: CLAY with silt, gray, little very fine sand, low plasticity, moist.				
-15						
		BLANK: No recovery. Slough.		SB-50-0601-09		0.8
		SANDY CLAY: SANDY CLAY; brown, fine sand, little medium sand, trace fine gravel, firm, med. plastic, moist.				
		SAND: SAND; gray, fine, well sorted, wet, loose.		SB-50-0601-10		0.8
		SAND: SAND; gray, medium, some fine and coarse sand, trace fine gravel, wet, loose.				
-20						

BORING LOG

BORING LOG: **SB-50-0602**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/17/2006 4:50:00 PM**	**COORDINATES**	
DATE COMPLETED:	**1/17/2006 5:45:00 PM**	NORTHING:	1650421.98
		EASTING:	169561.54
		ELEVATION:	719.96

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SAND: SAND; brown to light brown. Medium to fine, trace coarse sand/fine gravel, dry, loose.		SB-50-0602-01		0.3
				SB-50-0602-02		0.2
				SB-50-0602-03		0.4
-5				SB-50-0602-04		0.3
				SB-50-0602-05		0.3
-10		BLANK: No recovery.		SB-50-0602-06		0.3
				SB-50-0602-07		0.3
		SAND: SAND, brown to light brown, med., little fine/coarse sand, trace fine gravel, trace clay moist, loose		SB-50-0602-08		1.2
-15		SAND: SAND; light gray, fine, trace medium sand, loose, dry.				
		SILT: SILT, brown, firm, moist.		SB-50-0602-09		1.2
		SAND: SAND; light brown, medium to fine sand, loose, dry.				
		SAND: SAND; gray, medium, some fine and coarse sand, trace fine gravel, wet, loose.		SB-50-0602-10		1.4
-20		SAND: SAND; gray, fine, trace medium sand, well sorted, loose, wet.				

BORING LOG

BORING LOG: **SB-50-0603**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/17/2006**	**COORDINATES**	
DATE COMPLETED:		NORTHING:	1650315.21
		EASTING:	169560.9
		ELEVATION:	720.03

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SAND: SAND; brown to light brown, medium to fine, trace fine gravel and coarse sand, dry, loose.		SB-50-0603-01		0.4
				SB-50-0603-02		0.3
				SB-50-0603-03		0.2
-5		CLAY: CLAY, dark brown, to black, little silt and medium to fine sand, trace coarse sand and fine gravel, firm, dry, v. low plasticity.		SB-50-0603-04		0.6
				SB-50-0603-05		0.8
-10				SB-50-0603-06		1.2
				SB-50-0603-07		0.6
		SAND: SAND; light olive brown to light brown, medium to fine, trace coarse sand, trace fine gravel to 14-15'.		SB-50-0603-08		0.4
-15				SB-50-0603-09		0.2
		CLAY: CLAY, gray, silty, little fine sand, moderate plasticity, firm, moist.		SB-50-0603-10		0.6
-20		SAND: SAND; gray, fine, little medium sand, well sorted, wet, loose.				

BORING LOG

BORING LOG: **SB-50-0603**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/17/2006**	**COORDINATES**	
DATE COMPLETED:		NORTHING:	1650315.21
		EASTING:	169560.9
		ELEVATION:	720.03

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
-20						

BORING LOG

BORING LOG: **SB-51-0701**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6620 DT**
DATE STARTED:	**9/17/2007 3:13:00 AM**	**COORDINATES**	
DATE COMPLETED:	**9/17/2007 3:32:00 AM**	NORTHING:	1650104.13
		EASTING:	168761.25
		ELEVATION:	720.01

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SP-51-0701-01		5.6
		SAND: SAND, lt brown (10yr 6/4), loose, dry, tr. gravel, fine-med.		SP-51-0701-02		0
		CLAY: CLAY, dk. brown-dk gray (10yr 3/1), firm, plastic, sl moist, tr gravel, inc. sand content at 5.0'.		SP-51-0701-03		7.8
-5				SP-51-0701-04		7.8
				SP-51-0701-05		0
-10		SANDY CLAY: CLAYEY SAND, brown (10yr 4/3), gravel, plastic, sticky, wet, moist, soft odor.		SP-51-0701-06		338.0
		SILTY CLAY: SILTY CLAY, dk. gray (10yr 6/1), hard, sl. plastic, inc moisture with depth, tr gravel, odor.		SP-51-0701-07		417.0
				SP-51-0701-08		67.4
-15						

BORING LOG

BORING LOG: **SB-51-0702**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	
DATE STARTED:	**9/16/2007 11:29:00 PM**	**COORDINATES**	
DATE COMPLETED:	**9/16/2007 11:48:00 PM**	NORTHING:	1650030.94
		EASTING:	168796.66
		ELEVATION:	719.98

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SP-51-0702-01		0
		SAND: SAND, brown (10yr 4/3), gravel, loose, moist		SP-51-0702-02		0
		SANDY CLAY: SANDY SILTY CLAY, dk brown, (10yr 4/1), stiff, plastic, tr gravel, dry.		SP-51-0702-03		0
-5				SP-51-0702-04		0
				SP-51-0702-05		0
		SAND: SAND, lt brown, (10yr 6/4), loose, fine, sl moist @ 10.2-10.5, (reddish discoloration), odor (strong).				
-10				SP-51-0702-06		405.0
		SILTY CLAY: SILTY CLAY, gray (10yr 6/1), stiff, dry, tr. gravel, becomes loose with depth		SP-51-0702-07		93.6
				SP-51-0702-08		80.2
-15						

BORING LOG

BORING LOG: **SB-51-0703**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6620 DT**
DATE STARTED:	**9/17/2007 12:13:00 AM**	**COORDINATES**	
DATE COMPLETED:	**9/17/2007 12:35:00 AM**	NORTHING:	1650035.57
		EASTING:	168872.5
		ELEVATION:	719.99

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE (core)		SP-51-0703-01		0
		SAND: SAND, lt. brown (10yr 6/4), gravel, loose, dry, red staining, odor		SP-51-0703-02		0
				SP-51-0703-03		0
-5						
		SAND: SAND, brown (10yr 4/3), fine, loose, dry, tr gravel.		SP-51-0703-04		0
				SP-51-0703-05		5.6
-10		CLAY: CLAY, gray (10yr 6/1), silty, stiff, dry, tr. gravel, becomes loose w/ depth, odor.		SP-51-0703-06		315.0
				SP-51-0703-07		225.2
				SP-51-0703-08		84.3
-15						

BORING LOG

BORING LOG: **SB-51-0704**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6620 DT**
DATE STARTED:	**9/17/2007 1:01:00 AM**	**COORDINATES**	
DATE COMPLETED:	**9/17/2007 1:19:00 AM**	NORTHING:	1650021.71
		EASTING:	168926.12
		ELEVATION:	719.99

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SP-51-0704-01		0
		SAND: SAND, brown, (10yr 4/3), loose, tr gravel, dry, red staining, odor.		SP-51-0704-02		0
		SANDY CLAY: SILTY SANDY CLAY, dk brown (10yr 3/6), firm, tr gravel, sl moist, plastic.		SP-51-0704-03		0
-5				SP-51-0704-04		0
				SP-51-0704-05		0
-10				SP-51-0704-06		0
				SP-51-0704-07		0
		SANDY CLAY: SILTY SANDY CLAY, hard at 14.0', inc gravel content, dec sand content.		SP-51-0704-08		18.2
-15						

BORING LOG

BORING LOG: **SB-51-0705**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6620 DT**
DATE STARTED:	**9/16/2007 10:25:00 PM**	**COORDINATES**	
DATE COMPLETED:	**9/16/2007 10:57:00 PM**	NORTHING:	1650025.16
		EASTING:	168697.99
		ELEVATION:	719.99

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SP-51-0705-01		0
		SAND: SAND, lt. brown-brown,(10yr 6/4), lots of gravel, loose SL, moist		SP-51-0705-02		0
				SP-51-0705-03		0
-5		SANDY CLAY: SANDY CLAY, brown, (10yr 4/3), plastic, sl moist, tr gravels		SP-51-0705-04		0
		SAND: SAND, brown (10yr 6/4), loose, tr gravel, dry, some dk red color within sand		SP-51-0705-05		0
-10				SP-51-0705-06		28.2
		CLAY: CLAY, gray (10yr 6/1), sl moist, stick, sl plastic, tr gravel, odor.		SP-51-0705-07		52.3
				SP-51-0705-08		3.3
-15						

BORING LOG

BORING LOG: **SB-51-0706**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6620DT**
DATE STARTED:	**9/27/2007 5:00:00 PM**	**COORDINATES**	
DATE COMPLETED:	**9/27/2007 5:20:00 PM**	NORTHING:	1649934.68
		EASTING:	168817.42
		ELEVATION:	719.62

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL		SB-51-0706-01		0.0
		SAND: SAND; brown (10YR 4/3), tr. gravels, loose, dry, inc. gravel and size with depth.		SB-51-0706-02		0.0
		SANDY CLAY: SANDY CLAY; dk. brown (10YR 3/6), plastic, tr. gravels, firm, sl. moist.		SB-51-0706-03		0.0
-5		SAND: SAND, brown (10YR 4/3), tr. gravel, loose, (sl. cohesive), moist, sine sands, dec. gravel @ 6.0', wet (11.0-12.0').		SB-51-0706-04		0.0
				SB-51-0706-05		0.0
-10				SB-51-0706-06		0.0
				SB-51-0706-07		124.2
		CLAY: CLAY, gray (10YR 5/1), firm, gravels, sl. plastic, sl. moist (inc. moisture w/ depth).		SB-51-0706-08		0.0
-15						

BORING LOG

BORING LOG: **SB-51-0707**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6620 DT**
DATE STARTED:	**9/17/2007 2:22:00 AM**	**COORDINATES**	
DATE COMPLETED:	**9/17/2007 2:45:00 AM**	NORTHING:	1649975.71
		EASTING:	168862.87
		ELEVATION:	720.03

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE (core)		SP-51-0707-01		0
		SAND: SAND, lt. brown (10yr 6/4), loose, dry, tr. gravel)		SP-51-0707-02		0
		SILTY CLAY: SILTY CLAY, dk. brown (10yr 4/1), stiff, plastic, sl. moist, tr. gravels.		SP-51-0707-03		3.3
-5		SANDY CLAY: CLAYEY SAND, lt. brown (10yr 6/4), loose, sl. moist, tr gravel, red staining.		SP-51-0707-04		0
				SP-51-0707-05		0
-10				SP-51-0707-06		0
		SILTY CLAY: SILTY CLAY, dk.gray (10yr 6/1), firm, sl. plastic, sl moist, tr. gravels.		SP-51-0707-07		0
-15				SP-51-0707-08		0

BORING LOG

BORING LOG: **SB-51-0708**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6620 DT**
DATE STARTED:	**9/17/2007 1:15:00 AM**	**COORDINATES**	
DATE COMPLETED:	**9/17/2007 2:00:00 AM**	NORTHING:	1649956.88
		EASTING:	169006.51
		ELEVATION:	719.96

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SP-51-0708-01		0
		SAND: SAND, dark brown, (10yr 6/4), loose, gravel, sl moist, red staining.		SP-51-0708-02		0
				SP-51-0708-03		0
-5				SP-51-0708-04		0
		SAND: SILTY SAND, lt brown, (10yr 6/4), loose gravel, sl. moist, inc moisture with depth.		SP-51-0708-05		0
-10				SP-51-0708-06		0
		SILTY CLAY: SILTY CLAY, dk. brown (10yr 4/3), stiff, moist, tr gravels, sl. plastic.				
		SILTY CLAY: SILTY CLAY, dk. brown, (10yr 4/1), firm, sl. plastic, wet from 12.2-12.6, tr. gravel.		SP-51-0708-07		0
		SAND: SAND, dk. brown, (10yr 4/1), loose, fine, tr. gravel, sl moist.		SP-51-0708-08		0
-15						

BORING LOG

BORING LOG: **SB-53-0601**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/13/2006**	**COORDINATES**	
DATE COMPLETED:	**1/13/2006**	NORTHING:	1650008.94
		EASTING:	169214.27
		ELEVATION:	719.99

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CLAY: CLAY, gray to brown-gray. Wet, loose.		SB-53-0601-01		2.7
		SAND: SAND; olive brown to light brown, medium to fine sand, little coarse sand/fine gravel, trace silt, dry, loose.		SB-53-0601-02		2.6
				SB-53-0601-03		1.1
-5		BLANK: No recovery.		SB-53-0601-04		1.1
		SAND: SAND; olive brown to light brown, medium to fine sand.		SB-53-0601-05		1.1
		SANDY CLAY: SANDY CLAY, dark gray, medium to fine sand, little, silt, non-plastic, firm to loose/brittle, dry.				
-10		BLANK: No recovery.		SB-53-0601-06		1.1
		SAND: SAND, brown, medium to coarse, little fine sand, trace silt, loose, dry at top, wet 11.5-12.5, odor observed.		SB-53-0601-07		8.4
		SILTY CLAY: SILTY CLAY, gray, trace fine sand, firm, cohesive, plastic.				
		SILTY CLAY: SILTY CLAY, gray to dark gray, little fine sand, brittle, dry.		SB-53-0601-08		9.1
-15		SAND: SAND; gray, medium to coarse, little fine sand, trace silt. wet. Loose, slight odor.		SB-53-0601-09		2.8
		CLAY: CLAY, gray, silt and fine sand, trace fine gravel, firm, slight plasticity, moist.				
		CLAY: CLAY, brown to gray, trace fine gravel, medium to coarse sand, brittle, dry.		SB-53-0601-10		2.4
-20						

BORING LOG

BORING LOG: **SB-53-0602**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/13/2006 10:05:00 AM**	**COORDINATES**	
DATE COMPLETED:	**1/13/2006 11:05:00 AM**	NORTHING:	1649999.33
		EASTING:	169259.53
		ELEVATION:	719.95

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SAND: SAND; light brown to brown, medium to fine sand, trace fine and coarse gravel, trace coarse sand, loose, dry.		SB-53-0602-01		11.8
				SB-53-0602-02		4.7
				SB-53-0602-03		7.8
-5		BLANK: No recovery.				
				SB-53-0602-04		6.7
		SAND: SAND, dark brownish gray, medium to fine, trace coarse sand, dry, loose.				
		CLAY: CLAY, dark gray, little fine sand, firm, dry.				
		SAND: SAND; dark grayish brown, medium, little fine and coarse sand. Trace clay and silt, loose, dry. Wet at 13.		SB-53-0602-05		9.6
-10				SB-53-0602-06		10.2
				SB-53-0602-07		2.4
		SAND: SAND; gray, fine, little medium, wet, loose.				
		CLAY: CLAY; brown to dark gray at bottom, trace silt and fine sand, firm, low plasticity, dry.		SB-53-0602-08		3.6
-15		SAND: SAND; gray, medium to fine, trace fine gravel, little silt/clay, firm to loose, wet.		SB-53-0602-09		7.3
		CLAY: CLAY; gray, little silt, plastic, moist, firm to soft.				
		CLAY: CLAY; gray, little silt, low plasticity, dry, brittle.		SB-53-0602-10		2.4
-20		CLAY: CLAY; Gray, some silt, trace fine sand, plastic, firm, moist				

BORING LOG

BORING LOG: **SB-54-0601**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/17/2006**	**COORDINATES**	
DATE COMPLETED:		NORTHING:	1650101.5
		EASTING:	169648.6
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SAND: SAND; brown, medium to fine, trace coarse sand, trace fine gravel, loose, dry.		SB-54-0601-01		4.3
				SB-54-0601-02		2.9
				SB-54-0601-03		1.2
-5		BLANK: No recovery.				
		SANDY CLAY: Silty SANDY CLAY (fill), brown to dark brown, v. fine sand, trace coarse sand, loose, dry, brittle.		SB-54-0601-04		1.4
		GRAVEL: GRAVEL, white/gray, fine and coarse, dry.		SB-54-0601-05		1.8
		SAND: SAND; brown, medium to fine, trace coarse sand, increasing clay & silt toward bottom 18", dry, loose.				
-10		SILTY CLAY: SILTY CLAY; olive brown, little fine/v. fine sand, trace medium to coarse sand, firm, brittle, dry.		SB-54-0601-06		1.4
		BLANK: No recovery.				
		SAND: SAND; yellowish brown to brown, medium to fine, trace coarse sand/fine gravel, trace silt, loose, dry.		SB-54-0601-07		1.1
		CLAY: CLAY, gray, little silt, trace fine gravel/coarse sand, low plasticity in top 10", highly plastic toward bottom, moist, soft.		SB-54-0601-08		1.1
-15		SILTY SAND: SILTY SAND, light brown, medium sand, trace fine/coarse sand, trace fine gravel, loose, moist.		SB-54-0601-09		1.1
		SAND: SAND; gray, medium, trace fine sand, well graded, wet, loose.		SB-54-0601-10		1.1
-20				SB-54-0601-11		1.1
				SB-54-0601-12		1.1
				SB-54-0601-13		1.1
-25						

BORING LOG

BORING LOG: **SB-55-0601**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/19/2006 9:00:00 AM**	**COORDINATES**	
DATE COMPLETED:	**1/19/2006 11:00:00 AM**	NORTHING:	1650286.45
		EASTING:	169633.97
		ELEVATION:	714.28

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SAND: SAND; dark brown to dark gray. Sand, medium to fine, little clay and silt, soft, moist, not plastic.		SB-55-0601-01		1.2
				SB-55-0601-02		2.0
				SB-55-0601-03		1.6
-5				SB-55-0601-04		1.4
		CLAY: CLAY, gray with brown mottling, silty, little fine sand, trace coarse sand/fine gravel, firm, dry, low plasticity.		SB-55-0601-05		1.4
-10		BLANK: No recovery.		SB-55-0601-06		1.6
				SB-55-0601-07		1.4
		SAND: SAND; brown, medium, some fine sand, trace fine gravel/coarse sand, trace silt, wet, loose.				
		SAND: SAND; gray, medium, little fine sand, wet, loose.		SB-55-0601-08		1.2
-15						

BORING LOG

BORING LOG: **SB-57-0601**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/11/2006 10:50:00 AM**	**COORDINATES**	
DATE COMPLETED:	**1/11/2006**	NORTHING:	1649881.48
		EASTING:	169716.88
		ELEVATION:	716.44

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		GRAVEL: GRAVEL, gray.		SB-57-0601-01		0.9
		SANDY CLAY: SANDY CLAY, dark brown, medium to v. fine sand, trace silt, plastic, moist, soft.		SB-57-0601-02		0.9
		SAND: SAND; light brown, medium, little fine and coarse sand, loose, dry.		SB-57-0601-03		0.9
-5		BLANK: No recovery.				
		SAND: SAND; brown to orangish brown, medium to fine, little coarse sand, trace fine gravel, loose, dry.		SB-57-0601-04		0.9
		SAND: SAND, orangish brown, coarse to medium, little fine sand, moist, loose.		SB-57-0601-05		0.9
		CLAY: CLAY, gray to dark gray, little silt, little coarse sand/fine gravel, soft, plastic, moist.		SB-57-0601-06		0.9
-10				SB-57-0601-07		0.9
		SAND: SAND, gray, fine to medium sand, trace coarse sand, loose, wet at 14'.		SB-57-0601-08		0.9
-15		BLANK: Slough.				
		SAND: SAND, gray medium to fine, little coarse, trace fine gravel, wet, firm.		SB-57-0601-09		0.9
				SB-57-0601-10		0.9
-20						

BORING LOG

BORING LOG: **SB-57-0602**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**1/11/2006 2:10:00 PM**	**COORDINATES**	
DATE COMPLETED:		NORTHING:	1649906.97
		EASTING:	169734.15
		ELEVATION:	715.19

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		GRAVEL: GRAVEL sub-base, some fine sand, loose, dry.		SB-57-0602-01		1.0
		SAND: SAND; light brown, medium to fine sand, loose, dry, no odor.		SB-57-0602-02		1.0
				SB-57-0602-03		1.0
-5				SB-57-0602-04		1.1
		CLAY: CLAY; gray to light gray, little silt and v. fine sand, trace coarse sand/fine gravel, hard, dry.		SB-57-0602-05		1.1
-10				SB-57-0602-06		1.1
				SB-57-0602-07		1.1
		SAND: Fine SAND, gray to dark gray, some medium, well sorted, loose, dry.				
		CLAY: CLAY; gray, little silt and v. fine sand, trace coarse sand/fine gravel, firm, dry.		SB-57-0602-08		1.1
-15		SAND: SAND: orangish brown, medium to coarse, little fine, trace fine gravel, loose, moist to wet.				
		CLAY: CLAY; dark gray, little silt, trace fine sand, firm, moist. Water @ 15 ft		SB-57-0602-09		1.1
		SAND: SAND; gray, medium to fine sand, trace coarse sand/fine gravel, wet, loose.		SB-57-0602-10		1.1
		CLAY: CLAY, dark gray, banded silt lenses, trace fine sand, firm, wet.				
-20						

BORING LOG

BORING LOG: **SB-57-0602**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**1/11/2006 2:10:00 PM**	**COORDINATES**	
DATE COMPLETED:		NORTHING:	1649906.97
		EASTING:	169734.15
		ELEVATION:	715.19

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
-20		SAND: SAND; gray, medium to fine, trace coarse sand, wet, loose, increasing fines to bottom.				

BORING LOG

BORING LOG: **SB-60-0601**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/1/2006**	**COORDINATES**	
DATE COMPLETED:	**2/1/2006**	NORTHING:	1650156.33
		EASTING:	167105.7
		ELEVATION:	721.39

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE pad.		SB-60-0601-01		0.0
		SAND: SAND; brown, fine, little medium sand, well sorted, loose, moist.				
		SAND: SAND and clay; grayish brown, medium to fine, sand, clay, cohesive, moderately plastic, soft, moist.		SB-60-0601-02		0.0
		CLAY: CLAY with sand; brown to light olive brown, clay, fine to v. fine sand, little silt, plastic, soft, moist.		SB-60-0601-03		0.0
-5		SAND: SAND, color as above. Fine to medium sand, trace fine gravel, loose, dry. Changing to gray fine sand around 14' bgs.		SB-60-0601-04		0.0
				SB-60-0601-05		1.4
-10				SB-60-0601-06		1.0
				SB-60-0601-07		22.6
				SB-60-0601-08		309.0
-15		SAND: SAND; black, medium, some coarse sand, little fine sand, black staining throughout, strong odor, wet.				
		CLAY: CLAY; gray, brown mottling at top 1/2 foot, silt, little fine to v. fine sand, hard, dry, brittle.		SB-60-0601-09		6.8
		SAND: SAND; gray, fine to v. fine, well sorted, wet, loose.		SB-60-0601-10		3.9
-20		CLAY: CLAY; gray, silt, little fine sand, dry, hard, low plasticity/brittle.				

BORING LOG

BORING LOG: **SB-60-0601**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/1/2006**	**COORDINATES**	
DATE COMPLETED:	**2/1/2006**	NORTHING:	1650156.33
		EASTING:	167105.7
		ELEVATION:	721.39

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
-20						

BORING LOG

BORING LOG: **SB-61-0601**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/2/2006 8:00:00 AM**	**COORDINATES**	
DATE COMPLETED:		NORTHING:	1650086.93
		EASTING:	166465.92
		ELEVATION:	722.18

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SB-61-0601-01		0.0
		SILTY SAND: SM. SILTY SAND, medium and stiff, brown, moist.		SB-61-0601-02		0.0
		SAND: SW. SAND, loose, fine to coarse, trace gravel, light brown, moist.		SB-61-0601-03		0.0
-5				SB-61-0601-04		0.0
				SB-61-0601-05		0.0
-10				SB-61-0601-06		0.0
				SB-61-0601-07		0.0
				SB-61-0601-08		0.0
-15				SB-61-0601-09		0.0
				SB-61-0601-10		0.0
-20		SAND: GW. SAND and gravel, loose, grayish brown, wet at 19.5'.				

BORING LOG

BORING LOG: **SB-62-0601**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/2/2006 1:00:00 PM**	**COORDINATES**	
DATE COMPLETED:	**2/2/2006 2:00:00 PM**	NORTHING:	1651054.27
		EASTING:	167989.08
		ELEVATION:	722.44

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SILTY CLAY: CL. SILTY CLAY, medium stiff, slightly plastic, olive gray, moist.		SB-62-0601-01		0.0
		SAND: SW. SAND with trace gravel, medium dense, fine to coarse, trace cobbles, light brown, moist, wet at 14.5 ft.				
				SB-62-0601-02		0.0
				SB-62-0601-03		0.0
-5						
				SB-62-0601-04		0.0
				SB-62-0601-05		0.0
-10				SB-62-0601-06		0.0
				SB-62-0601-07		0.0
				SB-62-0601-08		0.0
-15						

BORING LOG

BORING LOG: **SB-63-0701**

TOTAL DEPTH: **21.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6620 DT**
DATE STARTED:	**9/26/2007 2:50:00 AM**	**COORDINATES**	
DATE COMPLETED:	**9/26/2007 3:45:00 AM**	NORTHING:	1649985.04
		EASTING:	167593.22
		ELEVATION:	721.20

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		ASPHALT: ASPHALT		SB-63-0701-01		0.0
		SAND: SAND; brown, loose, gravel, dry.				
		SANDY CLAY: SANDY CLAY; brown, plastic, moist, tr. gravel, firm, inc. sand & gravel @ 2.5'.		SB-63-0701-02		0.0
		SAND: CLAYEY SAND; brown, loose, sl. cohesive, moist, sl. plastic, tr. gravel.		SB-63-0701-03		0.0
-5				SB-63-0701-04		0.0
				SB-63-0701-05		0.0
		SANDY CLAY: SANDY CLAY; brown, plastic, moist, tr. gravel, firm, concrete from 9.0'-9.5'.				
-10		SAND: CLAYEY SAND; brown, loose, sl. cohesive, moist, tr. gravel.		SB-63-0701-06		0.0
				SB-63-0701-07		0.0
		CLAY: CLAY, gray, hard, tr. gravel, wet from 14.0-14.5', plastic, moist, not wet enough for borehole water sample.		SB-63-0701-08		0.0
-15		SAND: CLAYEY SAND; brown, moist, tr. gravel, sl. cohesive, wet @ 20.0', fine sand.		SB-63-0701-09		0.0
				SB-63-0701-10		0.0
-20		SAND: CLAYEY SAND; same as above. Borehole water sample collected.		SB-63-0701-11		0.0

BORING LOG

BORING LOG: **SB-02-01-0602**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/27/2006 2:20:00 PM**	**COORDINATES**	
DATE COMPLETED:	**11/27/2006 2:55:00 PM**	NORTHING:	1651907.53
		EASTING:	167752.24
		ELEVATION:	725.25

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SB-02-01-0602-01		0.6
		SAND: SP SAND, trace silt, medium loose, fine-medium grained, 10YR 4/6, dry; black cinder at 3 ft.		SB-02-01-0602-02		1.7
		SILT: ML SILT, trace fine gravel, medium dense, 10YR 3/6, dry.		SB-02-01-0602-03		0.0
-5		SANDY SILT: ML SANDY SILT, medium dense - medium loose, 10YR 3/4, damp; trace gravel and trace cinder from 6-7.75 ft.		SB-02-01-0602-04		1.5
		SAND: SP SAND, with trace gravel and trace silt, medium loose, 10YR 4/6, damp.		SB-02-01-0602-05		0.1
-10		SAND: SP SAND, trace gravel, fine-medium grained, medium loose, 10YR 4/3, dry.		SB-02-01-0602-06		0.5
				SB-02-01-0602-07		0.2
		GRAVELLY SAND: SP GRAVELLY SAND, medium lose, medium - coarse grained, 10YR 5/6, damp; saturated at 14.75 ft.		SB-02-01-0602-08		0.5
-15						

BORING LOG

BORING LOG: **SB-02-01-0603**

TOTAL DEPTH: **16.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Russ Gordon**
LOGGED BY:	**S. Fisher**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/17/2006 2:30:00 PM**	**COORDINATES**	
DATE COMPLETED:	**11/17/2006 3:05:00 PM**	NORTHING:	1651880.86
		EASTING:	167750.81
		ELEVATION:	724.76

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		BLANK: CONCRETE		SB-02-01-0603-01		0.0
		SAND: SP SAND, medium dense, fine-medium grained, 10YR 4/4, dry.		SB-02-01-0603-02		0.0
		SANDY SILT: ML SANDY SILT, trace gravel, dense, 10YR 3/4, damp.				
-5		SANDY CLAY: CL SANDY CLAY, trace gravel, dense; 10YR 3/4, damp.		SB-02-01-0603-03		0.0
				SB-02-01-0603-04		0.0
		SANDY SILT: ML SANDY SILT, trace gravel, 10YR 5/3, dry.				
		SAND: SP SAND, trace gravel, 10YR 5/3, loose, fine-medium grained, dry.		SB-02-01-0603-05		3.0
-10				SB-02-01-0603-06		0.0
		SAND: SP SAND, trace gravel, 10YR 5/3, loose, fine-medium grained, medium dense, dry.		SB-02-01-0603-07		1.4
-15		SAND: SP SAND, trace gravel, 10YR 5/3, loose, fine-medium grained, medium dense, loose. Saturated at 15.5 ft.				

BORING LOG

BORING LOG: **SB-02-02-0601**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/9/2006 5:20:00 PM**	**COORDINATES**	
DATE COMPLETED:	**1/9/2005**	NORTHING:	1651674.1
		EASTING:	167444.4
		ELEVATION:	724.98

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		FILL: FILL; sand and brick, coarse gravel, brown to red, loose, dry.		SB-02-02-0601-01		0.8
				SB-02-02-0601-02		0.8
		SAND: SAND, brown to light brown, fine to medium, loose, dry, no odor.		SB-02-02-0601-03		0.8
-5		BLANK: No recovery.				
		SAND: SAND, brown to dark brown, medium to fine, little coarse, trace fine gravel & silt, dry, loose.		SB-02-02-0601-04		0.8
				SB-02-02-0601-05		0.8
-10		SANDY CLAY: SANDY CLAY, brown to light brown, medium sand, loose, dry.		SB-02-02-0601-06		0.8
				SB-02-02-0601-07		0.8
		CLAY: CLAY; dark bluish black, trace silt, firm, dry.				
		CLAYEY SAND: CLAYEY SAND, brown to light brown. Medium to fine sand, trace silt, firm, dry, water at 14'.		SB-02-02-0601-08		0.8
-15						

BORING LOG

BORING LOG: **SB-02-02-0602**

TOTAL DEPTH: **16.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Russ Gordon**
LOGGED BY:	**S. Fisher**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/17/2006 11:00:00 AM**	**COORDINATES**	
DATE COMPLETED:	**11/17/2006 11:35:00 AM**	NORTHING:	1651660.58
		EASTING:	167543.03
		ELEVATION:	724.66

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		GRAVELLY SAND: Fill; SP GRAVELLY SAND, 10YR 4/2, moist, loose-dense.		SB-02-02-0602-01		2.6
		SANDY GRAVEL: GP SANDY GRAVEL, loose, 10YR 2/1, moist.		SB-02-02-0602-02		2.0
-5		SANDY SILT: ML SANDY SILT, trace gravel, dense, 10YR 3/3, black staining, damp.		SB-02-02-0602-03		5.6
				SB-02-02-0602-04		2.8
		SAND: SP SAND, medium loose, medium grained, 10YR 4/6, damp.				
		GRAVELLY SAND: SP GRAVELLY SAND, medium loose-loose, 10YR 4/4, dry.		SB-02-02-0602-05		3.3
-10				SB-02-02-0602-06		2.4
				SB-02-02-0602-07		4.2
-15		GRAVELLY SAND: SP GRAVELLY SAND, very loose, 10YR 4/4, saturation at 15.5 ft.				

BORING LOG

BORING LOG: **SB-02-02-0603**

TOTAL DEPTH: **8.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**S. Grutney**
LOGGED BY:	**M. Griles**	DRILLING METHOD:	**Geoprobe / 4 ft Macro**
DATE STARTED:	**12/20/2006 10:00:00 AM**	**COORDINATES**	
DATE COMPLETED:		NORTHING:	1651673.09
		EASTING:	167579.91
		ELEVATION:	724.97

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		GRAVEL: GRAVEL, brick, limestone sand, Coal (?), fill sand, concrete.		SB-02-02-0603-01		1.8
				SB-02-02-0603-02		2.3
				SB-02-02-0603-03		3.8
-5				SB-02-02-0603-04		9.0

BORING LOG

BORING LOG: **SB-02-02-0701**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jason Greer**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6600 DT**
DATE STARTED:	**9/14/2007 2:57:00 PM**	**COORDINATES**	
DATE COMPLETED:	**9/7/2007 4:05:00 PM**	NORTHING:	1651763.32
		EASTING:	167481.29
		ELEVATION:	725.62

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE slab		SB-02-02-0701-01		0.0
		CINDER: CINDERS, red sands and gravel.				
		SANDY CLAY: SANDY CLAY, dk. brown, (10YR, 3/6), firm (inc. soft w/ depth), plastic, sl. moisture, tr. gravel, cinders, grades into silty sand.		SB-02-02-0701-02		0.0
		SAND: SILTY SAND, lt. brown, (10YR 5/6), fine-med sands + gravel, loose, soft, sl. moisture.		SB-02-02-0701-03		0.0
-5				SB-02-02-0701-04		0.0
				SB-02-02-0701-05		0.0
-10				SB-02-02-0701-06		0.0
				SB-02-02-0701-07		0.0
		SAND: SILTY SAND (same as above); but heavy med-coarse gravel, wet, loose.		SB-02-02-0701-08		1.1
-15				SB-02-02-0701-09		1.1
		SANDY CLAY: SANDY CLAY, brown-gray, (2.5y 5/1), soft, plastic, sticky, very wet, tr. gravel, med sands.		SB-02-02-0701-10		318.0
-20		SAND: SAND, dk. gray, (10YR 3/1), loose, soft, very wet, odor, tr gravel, med sands and gravels.				

BORING LOG

BORING LOG: **SB-02-02-0701**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jason Greer**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6600 DT**
DATE STARTED:	**9/14/2007 2:57:00 PM**	**COORDINATES**	
DATE COMPLETED:	**9/7/2007 4:05:00 PM**	NORTHING:	1651763.32
		EASTING:	167481.29
		ELEVATION:	725.62

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
-20						

BORING LOG

BORING LOG: **SB-02-02-0702**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**JG**
LOGGED BY:		DRILLING METHOD:	
DATE STARTED:	**9/14/2007 12:15:00 PM**	**COORDINATES**	
DATE COMPLETED:	**9/14/2007 12:45:00 PM**	NORTHING:	1651689.53
		EASTING:	167509.14
		ELEVATION:	725.55

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE SLAB.		SB-02-02-0702-01		1.1
		SILTY CLAY: SILTY CLAY, dk. brown, (10YR 3/4), soft, tr. gravels, plastic, med sands, sl. moisture, inc. hardness w/ depth.		SB-02-02-0702-02		0.0
				SB-02-02-0702-03		0.0
-5		SAND: SILTY SAND, lt. brown (10YR 5/6), med-coarse sands + gravel, soft, sl. moisture, inc. gravel size w/ depth, wet sand stringer down 14.5'-14.7', loose.		SB-02-02-0702-04		0.0
				SB-02-02-0702-05		0.0
-10				SB-02-02-0702-06		0.0
				SB-02-02-0702-07		0.0
				SB-02-02-0702-08		0.0
-15						

BORING LOG

BORING LOG: **SB-02-02-0703**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jason Greer**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6610 DT**
DATE STARTED:	**9/14/2007 1:15:00 PM**	**COORDINATES**	
DATE COMPLETED:	**9/14/2007 1:35:00 PM**	NORTHING:	1651679.59
		EASTING:	167587.21
		ELEVATION:	725.31

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		FILL: CONCRETE, gravel, brick fragments, wood.		SB-02-02-0703-01		0.0
				SB-02-02-0703-02		1.1
				SB-02-02-0703-03		0.0
-5				SB-02-02-0703-04		0.0
				SB-02-02-0703-05		0.0
-10				SB-02-02-0703-06		0.0
		SAND: SILTY SAND, lt. brown, (10yr 5/6), med-coarse sands + gravel, soft, loose, sl. moisture, wet from 12.5-13.0, some clay, dec. sand + gravel w/ depth.		SB-02-02-0703-07		0.0
				SB-02-02-0703-08		0.0
-15						

BORING LOG

BORING LOG: **SB-02-02-0704**

TOTAL DEPTH: **35.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dale Remmler**
LOGGED BY:	**Brett Sutton**	DRILLING METHOD:	**geoprobe**
DATE STARTED:	**10/25/2007 3:00:00 PM**	**COORDINATES**	
DATE COMPLETED:	**10/25/2007 4:00:00 PM**	NORTHING:	1651507.2
		EASTING:	167759.9
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		GRAVEL: GW, fine-coarse GRAVEL w/ fine-med sands, loose, gray (10YR 7/1), rounded - subrounded, dry (road base)		SB-02-02-0704-01		0.0
		SAND AND GRAVEL: SW, fine-med SANDS + GRAVEL, loose, dry, black staining (fill)		SB-02-02-0704-02		0.0
-5		SANDY SILT: ML, SANDY SILT w/ gravel, reddish brown (7.5YR 3/4), moist, non-plastic, firm.		SB-02-02-0704-03		0.9
				SB-02-02-0704-04		1.2
		SAND AND GRAVEL: SW, fine-med SANDS w/ GRAVEL, light brown (10YR 5/4) dry, loose		SB-02-02-0704-05		0.0
-10				SB-02-02-0704-06		0.8
				SB-02-02-0704-07		0.4
-15				SB-02-02-0704-08		0.4
		CLAY: CL, CLAY, gray (10YR 4/2), moist, plastic, very soft.		SB-02-02-0704-09	neg	0.4
		SAND AND GRAVEL: SW, fine-med SANDS + GRAVEL, brown (10YR 3/4) wet, loose, friable.		SB-02-02-0704-10		0.0
-20		SANDY CLAY: SL, SANDY CLAY w/ gravel, wet, plastic, stiff, gray (10YR 4/1).		SB-02-02-0704-11	neg	0.3
		SAND AND GRAVEL: SW, fine-med SANDS + GRAVEL, wet, compact, dk. gray (10YR 2/1)		SB-02-02-0704-12		0.2
-25				SB-02-02-0704-13		0.2
				SB-02-02-0704-14		0.3
				SB-02-02-0704-15		0.3
-30				SB-02-02-0704-16		0.3
				SB-02-02-0704-17	neg	0.4
		CLAYEY SILT: ML-CL, CLAYEY SILT, tr. gravel, grayish brown (10YR 4/2) non-plastic, very stiff, dry (glacial till)		SB-02-02-0704-18		0.0
-35						

BORING LOG

BORING LOG: **SB-02-02-0705**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Russ Jordan**
LOGGED BY:	**T. Hubbard**	DRILLING METHOD:	**geoprobe**
DATE STARTED:	**11/2/2007 9:40:00 AM**	**COORDINATES**	
DATE COMPLETED:	**11/2/2007 10:17:00 AM**	NORTHING:	1651320
		EASTING:	167691.1
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		ASPHALT: ASPHALT				
		BLANK: NO RECOVERY (most likely SP,-SW fine-med dry sand)				
		SAND: SW, fine-coarse SANDS, tr. gravel, dark brown (10YR 3/3), loose, friable, moist		SB-02-02-0705-01		1.8
		SANDY SILT: ML, SANDY SILT, trace gravel, dark brown (10YR 3/3), soft, slightly plastic, moist, black staining from 4.6 to 4.8 (appear to be coal cinders) no odor.		SB-02-02-0705-02		0.5
-5		BLANK: NO RECOVERY, (most likely soft ML, silt same as above)				
		SAND AND GRAVEL: SW, fine-coarse SANDS w/ GRAVEL, dk. yellowish brown (10YR		SB-02-02-0705-03		0.2
-10				SB-02-02-0705-04		0.3
				SB-02-02-0705-05		0.3
				SB-02-02-0705-06		0.4
-15				SB-02-02-0705-07	Neg @ 18.5'	0.7
				SB-02-02-0705-08		0.4
		SANDY CLAY: SC-CL, CLAYEY SANDS - SANDY CLAYS, gray (10YR 5/1) soft, moist, and plastic from 18.5-20', very soft wet/saturated, slightly plastic from 20'-24.7', fine-med sands, trace gravel throughout. (very soft glacial till)		SB-02-02-0705-09		0.3
-20				SB-02-02-0705-10		0.2
		SAND: SP, coarse SANDS, gray (10YR 5/1), compact, wet/saturated, slight odor (pid minimal?) rounded - sub rounded grains.		SB-02-02-0705-11		3.1
-25						

BORING LOG

BORING LOG: **SB-02-04-0601**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Russ Gordon**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/16/2006**	**COORDINATES**	
DATE COMPLETED:	**11/16/2006**	NORTHING:	1651936.26
		EASTING:	167950.35
		ELEVATION:	725.40

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SAND: SAND, loose, some gravel, gray, damp.		SB-02-04-0601-01		1.1
		SANDY SILT: SANDY SILT, trace gravel, dense, brown, damp, organic material.		SB-02-04-0601-02		0.7
-5		BLANK: No recovery.		SB-02-04-0601-03		--
		SAND: SAND, medium loose, brown, damp.		SB-02-04-0601-04		0.0
				SB-02-04-0601-05		1.0
-10		SANDY SILT: SANDY SILT, medium dense, brown, moist.		SB-02-04-0601-06		0.7
		GRAVELLY SAND: GRAVELLY SAND, 30% gravel, loose, gray-brown, damp.				
		SAND: SAND, medium grained, trace gravel, medium loose, brown, damp.		SB-02-04-0601-07		1.3
-15		SAND: SAND, medium grained, trace gravel, medium loose, brown, damp. Downward fining, medium grained - fine.		SB-02-04-0601-08		0.7
		SAND: SAND, medium grained, medium loose, brown, moist. At 16.75 ft, saturation.		SB-02-04-0601-09		1.1
				SB-02-04-0601-10		0.8
-20		SILTY SAND: SILTY SAND, trace gravel, medium dense, gray, saturated.				

BORING LOG

BORING LOG: **SB-02-04-0602**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Russ Gordon**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/16/2006**	**COORDINATES**	
DATE COMPLETED:	**11/16/2006**	NORTHING:	1651853.58
		EASTING:	167961.51
		ELEVATION:	724.70

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SAND: SAND, trace gravel, loose, fine-medium grained, brown, damp. Black staining at 9.8 ft.		SB-02-04-0602-01		2.3
		SAND: SAND, trace gravel, loose, fine-medium grained, brown, damp. Medium dense. At 3.8 ft, some silt.		SB-02-04-0602-02		5.2
		SILTY SAND: SILTY SAND, trace gravel, medium dense - dense, brown, damp.		SB-02-04-0602-03		4.8
-5				SB-02-04-0602-04		1.8
				SB-02-04-0602-05		7.5
-10		SANDY SILT: SANDY SILT, little gravel, very dense, brown, black staining, dry.		SB-02-04-0602-06		13.0
				SB-02-04-0602-07		5.8
				SB-02-04-0602-08		1.8
-15						

BORING LOG

BORING LOG: **SB-02-04-0603**

TOTAL DEPTH: **2.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Russ Gordon**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Hand auger**
DATE STARTED:	**11/14/2006**	**COORDINATES**	
DATE COMPLETED:	**11/14/2006**	NORTHING:	1651772.09
		EASTING:	167966.42
		ELEVATION:	723.56

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SAND: SAND, trace gravel, loose, brown, damp.		SB-02-04-0603-01		6.4

BORING LOG

BORING LOG: **SB-02-04-0701**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jason Greer**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6600 DT**
DATE STARTED:	**9/14/2007 1:58:00 PM**	**COORDINATES**	
DATE COMPLETED:	**9/14/2007 2:15:00 PM**	NORTHING:	1651847.74
		EASTING:	167973.7
		ELEVATION:	724.65

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL, gravel, wood.		SB-02-04-0701-01		0.0
		SAND: SILTY SAND, lt. brown, (10YR 5/6), fine-med grained sands + gravel, loose, soft, sl. moisture w/ depth, grades into silty clay.		SB-02-04-0701-02		0.0
		SILTY CLAY: SILTY CLAY, brown-dk. brownish/bray, (10yr 4/1), firm-soft plastic, tr. gravels, sl. moisture, some sand inc. w/ depth. staining from 4.0-4.5.		SB-02-04-0701-03		0.0
-5		SANDY CLAY: SANDY CLAY, brown (10YR 4/6), moist, tl. gravel, soft, plastic, wet from 9.0-10.0, 10.5-11.0.		SB-02-04-0701-04		0.0
				SB-02-04-0701-05		0.0
-10				SB-02-04-0701-06		0.0
				SB-02-04-0701-07		0.0
		SILTY CLAY: SILTY CLAY, dk gray, (2.5 y, 4/1), moist, plastic, inc gravel w/depth, wet at 14.5-15.0, staining from 14.0-15.0.		SB-02-04-0701-08		0.0
-15						

BORING LOG

BORING LOG: **SB-02-04-0702**

TOTAL DEPTH: **4.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Geraghty & Miller, Inc.**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Randy Woodruff**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Hand Auger**
DATE STARTED:	**9/28/2007 10:55:00 AM**	**COORDINATES**	
DATE COMPLETED:	**9/28/2007 11:12:00 AM**	NORTHING:	1651766.23
		EASTING:	167981.77
		ELEVATION:	722.94

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		TOPSOIL: TOPSOIL		SB-02-04-0702-01		0.0
		SAND: SAND; brown (10YR 4/6), tr. gravel, loose, dry, cinders @ 1.0-2.5'.				
				SB-02-04-0702-02		0.0

BORING LOG

BORING LOG: **SB-02-05-0601**

TOTAL DEPTH: **30.00**

PROJECT INFORMATION

PROJECT: **GM/REALM (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **M. Beckwith-Laube**

DATE STARTED: **1/10/2006 11:30:00 AM**

DATE COMPLETED: **1/10/2006**

DRILLING INFORMATION

DRILLING CO.: **Altech**

DRILLER: **Johnny Davis**

DRILLING METHOD: **Hand Auger/Geoprobe**

COORDINATES

NORTHING: 1651549.6

EASTING: 167829.1

ELEVATION: 724.41

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CLAY: CLAY with sand; brown. Clay, some fine and medium sand, moist, loose, cohesive.		SB-02-05-0601-01		1.1
				SB-02-05-0601-02		1.1
				SB-02-05-0601-03		1.2
-5		BLANK: No recovery. Slough from cave in.				
		SAND: SAND; brown, medium, little coarse and fine sand, clay increasing to 8', moist.		SB-02-05-0601-04		1.3
		CLAY: CLAY, brown, some silt, trace fine sand, firm, moist.		SB-02-05-0601-05		1.4
-10		SAND: SAND; brown, medium to fine, trace coarse sand/fine gravel, dry, loose.		SB-02-05-0601-06		1.1
		BLANK: No recovery. Slough.		SB-02-05-0601-07		1.2
		SAND: SAND; brown to gray. Medium, some fine sand, little coarse sand/fine gravel, trace silt, wet and 14.5 ft.		SB-02-05-0601-08		1.1
-15		SAND: SAND; gravel, brown, medium sand little fine/coarse sand. Fine gravel, decreasing to 17 ft, wet, loose.		SB-02-05-0601-09		1.1
		SAND: SAND, dark gray/black, medium, little fine, trace fine gravel, trace silt, faint organic odor.		SB-02-05-0601-10		1.1
-20				SB-02-05-0601-11		1.1
				SB-02-05-0601-12		1.1
				SB-02-05-0601-13		1.1
-25				SB-02-05-0601-14		1.1
				SB-02-05-0601-15		1.1
		CLAY: (Till) CLAY and silt, dark gray, trace coarse sand/fine gravel, v. firm, dry.				
-30						

BORING LOG

BORING LOG: **SB-02-06-0601**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/2/2006 3:25:00 PM**	**COORDINATES**	
DATE COMPLETED:	**2/2/2006 4:10:00 PM**	NORTHING:	1651966.4
		EASTING:	167202.7
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		GRAVEL: GW. GRAVEL with sand, limestone, loose, gray, very moist.		SB-02-06-0601-01		0.0
		SILTY SAND: SM. SILTY SAND, medium dense, fine to medium, brown, moist.				
		SAND: SW. SAND, trace gravel, fine to coarse, light brown, loose, moist.		SB-02-06-0601-02		27.4
				SB-02-06-0601-03		16.7
-5				SB-02-06-0601-04		3.6
		SAND: SP. SAND, fine grained, medium dense, light grayish brown, very moist.		SB-02-06-0601-05		5.1
-10				SB-02-06-0601-06		0.0
				SB-02-06-0601-07		0.0
		SAND: SW. SAND with gravel, gravelly sand at 14.5, loose, fine to coarse, brown, very moist to wet at 14.5'.				
				SB-02-06-0601-08		0.0
-15						

BORING LOG

BORING LOG: **SB-02-06-0602**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/2/2006**	**COORDINATES**	
DATE COMPLETED:	**2/2/2006**	NORTHING:	1651842.5
		EASTING:	166985.4
		ELEVATION:	726.03

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		ASPHALT: ASPHALT slab, asphalt sub-base.		SB-02-06-0602-01		
		CLAY: CLAY; brown to brownish yellow, clay, some silt. Little fine sand, soft, loose, moist.				
-5		BLANK: No recovery.				
		SAND: SAND; light brown, fine to v. fine, little medium sand, trace fine gravel/coarse sand, dry, loose.				
-10						
-15						
		SAND: SAND, brownish gray, medium, some coarse, little fine sand, trace fine sand, wet, loose.				
-20						

BORING LOG

BORING LOG: **SB-02-06-0603**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**S. Grutney**
LOGGED BY:	**M. Griles**	DRILLING METHOD:	**Geoprobe / 4 ft Macro**
DATE STARTED:	**12/20/2006 12:30:00 PM**	**COORDINATES**	
DATE COMPLETED:	**12/20/2006 6:30:00 PM**	NORTHING:	1651626.7
		EASTING:	167243.22
		ELEVATION:	724.27

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CINDER: CINDERS		SB-02-06-0603-01		32.8
		SANDY CLAY: 10YR 4/4, dark yellowish brown, ML/CL, silty SANDY CLAY, cohesive, plastic, pliable, slightly moist, trace sand and gravel/pebbles (subrounded), sand stringer at 7 ft is 2" thick, increased sand count with depth.		SB-02-06-0603-02		10.2
				SB-02-06-0603-03		16.3
-5				SB-02-06-0603-04		18.4
		SAND: 10YR 5/2 grayish brown, SM/SW, well graded/dirty SAND with pebbles and gravels (subangular) in mix, dry, poorly sorted, wet/saturated at 15.5 ft. At 18 ft, visible staining and odor present until EOB.		SB-02-06-0603-05		7.3
-10				SB-02-06-0603-06		13.2
				SB-02-06-0603-07		16.1
				SB-02-06-0603-08		8.3
-15				SB-02-06-0603-09		158.0
				SB-02-06-0603-10	Pos	555.0
-20						

BORING LOG

BORING LOG: **SB-02-06-0604**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**12/2/2006 1:30:00 PM**	**COORDINATES**	
DATE COMPLETED:	**12/2/2006 2:10:00 PM**	NORTHING:	1651843.08
		EASTING:	166864.6
		ELEVATION:	726.10

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		ASPHALT: ASPHALT		SB-02-06-0604-01		1684.0
		CLAYEY SILT: ML - CLAYEY SILT, trace gravel, medium stiff, dark yellowish brown (10YR 4/6), dry.		SB-02-06-0604-02		48.1
				SB-02-06-0604-03		33.1
-5				SB-02-06-0604-04		6.9
		SAND: SP - fine SAND, trace gravel, medium loose, dark yellowish brown (10YR 4/1), dry.		SB-02-06-0604-05		178.0
-10		BLANK: No recovery		SB-02-06-0604-06		--
		SAND: SP - SAND, trace gravel and cobbles, medium grained, poorly graded, brown (10YR 4/3), damp.		SB-02-06-0604-07		33.4
				SB-02-06-0604-08		281.0
-15		BLANK: No recovery		SB-02-06-0604-09		24.5
		GRAVELLY SAND: SP - GRAVELLY SAND, medium loose, yellowish brown (10YR 5/6), saturated.		SB-02-06-0604-10		160.0
-20						

BORING LOG

BORING LOG: **SB-02-06-0605**

TOTAL DEPTH: **40.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/27/2006 3:20:00 PM**	**COORDINATES**	
DATE COMPLETED:	**11/27/2006 4:40:00 PM**	NORTHING:	1651777.84
		EASTING:	166936.59
		ELEVATION:	726.83

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		ASPHALT: ASPHALT		SB-02-06-0605-01		0.1
		CONCRETE: CONCRETE		SB-02-06-0605-02		0.0
-5		SANDY SILT: ML SANDY SILT, trace gravel, medium dense, 10YR 3/1, dry, black staining.		SB-02-06-0605-03		0.0
				SB-02-06-0605-04		0.4
		SAND: SP SAND with some fine grained gravel, loose, medium grained, 10YR 4.6, damp.		SB-02-06-0605-05		0.5
-10		BLANK: No recovery.		SB-02-06-0605-06		
		SAND: SP SAND, some gravel, loose, 10YR 4/6, damp. Saturated at 18 ft.		SB-02-06-0605-07		0.0
-15				SB-02-06-0605-08		0.0
				SB-02-06-0605-09		0.8
				SB-02-06-0605-10		0.3
-20		GRAVELLY SAND: SP GRAVELLY SAND, medium loose, medium to coarse grained, 10YR 4/1, saturated.		SB-02-06-0605-11		0.6
		SAND: SP SAND, little gravel, medium loose, medium grained, 10YR 4/4, saturated; 10 YR 4/1 from 30-38.5 ft.		SB-02-06-0605-12		0.5
-25				SB-02-06-0605-13		0.5
				SB-02-06-0605-14		2.4
				SB-02-06-0605-15		0.7
-30				SB-02-06-0605-16		6.0
				SB-02-06-0605-17		4.8
				SB-02-06-0605-18		3.1
-35				SB-02-06-0605-19	Neg	4.0
				SB-02-06-0605-20		0.2
-40		TILL: CL TILL, trace gravel, very dense, 10YR 5/1, dry.				

BORING LOG

BORING LOG: **SB-02-06-0606**

TOTAL DEPTH: **30.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**11/27/2006 10:40:00 AM**	**COORDINATES**	
DATE COMPLETED:	**11/27/2006 11:50:00 AM**	NORTHING:	1652101.2
		EASTING:	167547.87
		ELEVATION:	725.54

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE		SB-02-06-0606-01		--
		BLANK: No recovery				
		SANDY SILT: ML SANDY SILT, trace gravel, medium dense, 10YR 3/6, dry.		SB-02-06-0606-02		2.5
				SB-02-06-0606-03		1.3
-5		BLANK: No recovery				
				SB-02-06-0606-04		2.1
		SAND: SP SAND, trace gravel, medium loose, medium to fine grained, 10YR 4/2, dry, brick inclusions.		SB-02-06-0606-05		0.8
-10		SAND: SP SAND, trace silt, loose, fine grained, 10YR 6/1, dry.		SB-02-06-0606-06		1.5
				SB-02-06-0606-07		1.0
		SAND: SP SAND, trace gravel, medium loose, medium to coarse grained, 10YR 4/4, dry; at 14.5 ft, very moist.		SB-02-06-0606-08		1.5
-15		BLANK: No recovery				
		BLANK: Slough.		SB-02-06-0606-09		2.7
		SAND: SP SAND, trace gravel, medium to coarse grained, medium loose, 10YR 4/3, saturated; iron oxidation at 18.5 ft and 19 ft.				
-20						
-25						
-30		TILL: CL TILL, trace gravel, very dense, 10YR 4/1, damp.				

BORING LOG

BORING LOG: **SB-02-06-0607**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**S. Grutney**
LOGGED BY:	**M. Griles**	DRILLING METHOD:	**Geoprobe / 4 ft Macro**
DATE STARTED:	**12/20/2006 3:50:00 PM**	**COORDINATES**	
DATE COMPLETED:	**12/20/2006**	NORTHING:	1651055.46
		EASTING:	167116.18
		ELEVATION:	724.62

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		ASPHALT: ASPHALT, gravel		SB-02-06-0607-01		4.2
		CLAY: 10YR 4/4 dark yellowish brown ML/CL, silty sandy CLAY. Cohesive, plastic, pliable, slightly moist, trace sand, pebbles and gravels (subrounded) within clay matrix, imbedded, slightly blocky.		SB-02-06-0607-02		3.8
		SAND: 10YR 5/2, dk grayish brown, SM/SP poorly graded/well sorted SAND w/ pebbles. At 7.5', v. fine grained/v. well sorted "sugar sand", dry, loose, crossbedded, fine grained segments interbedded w/ coarse grained mixes throughout, many oxidized zones. Wet@18'.		SB-02-06-0607-03		3.7
-5				SB-02-06-0607-04		2.9
				SB-02-06-0607-05		4.6
-10				SB-02-06-0607-06		7.2
				SB-02-06-0607-07		8.9
				SB-02-06-0607-08		3.1
-15				SB-02-06-0607-09		6.3
				SB-02-06-0607-10		2.7
		SILTY CLAY: 10YR 3/1 gray ML SILTY CLAY till, hard, slightly moist, compact, competent, non-plastic, imbedded subrounded pebbles and gravels.				
-20						

BORING LOG

BORING LOG: **SB-02-06-0608**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**S. Grutney**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe / 4 ft Macrocore**
DATE STARTED:	**12/20/2006 2:45:00 PM**	**COORDINATES**	
DATE COMPLETED:		NORTHING:	1651048.28
		EASTING:	167173.33
		ELEVATION:	724.87

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		GRAVEL: GRAVEL, cinders		SB-02-06-0608-01		3.1
		SAND: SAND fill.				
		CLAY: 10YR 4/4, dark yellowish brown, ML/CL, silty sandy CLAY, cohesive, plastic, pliable, slightly moist, trace sand, pebbles, and gravel (subrounded) within clay matrix.		SB-02-06-0608-02		5.2
				SB-02-06-0608-03		15.5
-5		SAND: 10YR 5/2, dark grayish brown, SM/SW, well graded/dry SAND with pebbles and gravels (subangular), poorly sorted and dirty (silts and fines in mix), very moist at 15.5 ft.		SB-02-06-0608-04		8.6
				SB-02-06-0608-05		9.6
-10				SB-02-06-0608-06		8.2
				SB-02-06-0608-07		5.4
				SB-02-06-0608-08		7.8
-15						
		SILTY CLAY: 10YR 3/1 gray ML SILTY CLAY till, hard/firm, dry, compact, competent, imbedded pebbles and gravel/subrounded.				
-20						

BORING LOG

BORING LOG: **SB-02-06-0609**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe/HSA**
DATE STARTED:	**12/5/2006 3:20:00 PM**	**COORDINATES**	
DATE COMPLETED:		NORTHING:	1651062.1
		EASTING:	167041.3
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		ASPHALT: ASPHALT		SB-02-06-0609-01		0.7
		CLAYEY SILT: ML - CLAYEY SILT, trace sand and trace fine gravel, med. dense, cohesive and plastic, dark yellowish brown (10 yr 3/6), dry		SB-02-06-0609-02		0.9
				SB-02-06-0609-03		0.8
-5		BLANK: No recovery		SB-02-06-0609-04		1.1
		SAND: SP - SAND, with gravel, trace cobbles and silt, med. loose, dark yellowish brown (10 yr 4/6), dry		SB-02-06-0609-05		0.6
-10		BLANK: No recovery		SB-02-06-0609-06		
				SB-02-06-0609-07		
		SAND: SP - SAND, with gravel, trace cobbles and silt, med. loose, fine grained sand, dark yellowish brown (10 yr 4/6), dry		SB-02-06-0609-08		2.1
-15		BLANK: No recovery		SB-02-06-0609-09		
				SB-02-06-0609-10		0.5
		SAND: SP - SAND, trace gravel and cobbles and silt, med. loose, fine grained sand, dark yellowish brown (10 yr 4/6), dry				
-20		GRAVELLY SAND: SP - GRAVELLY SAND, med. loose, med. - v. coarse grained, v. dark brown (10 yr 2/2), saturated, water table at 20'		SB-02-06-0609-11	Neg, 20.8	1.7
		TILL: CL - TILL, dark gray (10 yr 4/1), trace gravel, stiff		SB-02-06-0609-12		2.1
-25				SB-02-06-0609-13		1.7

BORING LOG

BORING LOG: **SB-02-06-0701**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Shannon Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6620DT**
DATE STARTED:	**9/28/2007 5:21:00 PM**	**COORDINATES**	
DATE COMPLETED:	**9/28/207 6:00:00 PM**	NORTHING:	1651067.9
		EASTING:	167423.3
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		ASPHALT: ASPHALT		SB-02-06-0701-01		0.0
		SANDY CLAY: SANDY CLAY; brown (10YR 4/6), tr. gravel, plastic, soft/firm, moist, inc. pebbles 2/ depth, sticky.		SB-02-06-0701-02		0.0
				SB-02-06-0701-03		0.0
-5				SB-02-06-0701-04		0.0
				SB-02-06-0701-05		0.0
-10				SB-02-06-0701-06		0.0
		SAND: SAND, lt. brown (10YR 5/3), dry, gravels, loose.		SB-02-06-0701-07		0.0
		SANDY CLAY: SANDY CLAY, lt brown (10YR 5/3), dry, tr. gravel, easily fractured.		SB-02-06-0701-08		0.0
-15		SAND: SAND, lt. brown (10YR 5/3), dry, gravels, loose.		SB-02-06-0701-09		0.0
		CLAY: CLAY, till, clay, gray (10YR 5/1), gravel, hard, dry. Well Abandoned due to lack of water.		SB-02-06-0701-10		0.0
-20						

BORING LOG

BORING LOG: **SB-02-06-0702**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Miller/Bruce**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	**Geoprobe 6620DT**
DATE STARTED:	**9/28/2007 11:48:00 AM**	**COORDINATES**	
DATE COMPLETED:	**9/28/2007 12:24:00 PM**	NORTHING:	1652059.8
		EASTING:	166879.6
		ELEVATION:	726.33

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		ASPHALT: ASPHALT		SB-02-06-0702-01		0.0
		SILTY CLAY: SILTY CLAY, silty sandy clay, dk. brown (10YR 3/10), tr. gravel, brick, soft/firm, moist, plastic.		SB-02-06-0702-02		0.0
		SAND: SAND; clayey sand, brn (10YR 4/4), gravels, moist, sl plastic, sl. loose, dry @7.0'+ inc. gravels (lt. brn-lt gray (10YR 5/2)), concrete from 9.0-10.0', wet cse. sands @ 11.0-12.0, dry fn. sands 12.0-13.0, red staining + wet from 13.0-14.0.		SB-02-06-0702-03		0.0
-5				SB-02-06-0702-04		0.0
				SB-02-06-0702-05		0.0
-10				SB-02-06-0702-06		0.0
				SB-02-06-0702-07		0.0
		SAND: (continued) SAND, med. sands from 13.0 16.0 ft, inc. gravel+size in wet zones; wet from 16.0-18.0 ft (loose gravel), sandy clay		SB-02-06-0702-08		0.0
-15				SB-02-06-0702-09		0.0
		CLAY: CLAY, brown-lt. gray (10YR 4/2), plastic, firm, moist, tr. gravel, sl. sticky.		SB-02-06-0702-10		0.0
		SAND: SANDY GRAVEL, (10YR 4/2), sl. cohesive, wet.				
-20		CLAY: CLAY, brown-lt. gray (10YR 4/2), plastic, firm, moist, wet, tr. gravel, sticky.		SB-02-06-0702-11		0.0
		SAND: SAND, brown (10YR 4/4), med gravels, moist, wet, loose, red staining @ 20.5-21.0, inc. gravel + size.		SB-02-06-0702-12		0.0
		SANDY CLAY: SANDY CLAY, sandy clay w/ gravels, (10YR 4/1), moist, wet @ 24.5, sl. plastic, sl. cohesive.		SB-02-06-0702-13		1.8
-25						

BORING LOG

BORING LOG: **SB-02-07-0601**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	
DATE STARTED:	**1/9/2006 3:55:00 PM**	**COORDINATES**	
DATE COMPLETED:	**1/9/2006 5:10:00 PM**	NORTHING:	1651753.5
		EASTING:	167201.1
		ELEVATION:	724.78

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SAND: SAND & fine gravel, brown to gray, loose, medium to fine sand, dry, loose.		SB-02-07-0601-01		0.8
		SAND: SAND; black sand and coarse sand, little fine, trace silt and fine gravel, loose, dry.		SB-02-07-0601-02		0.8
		SILTY CLAY: SILTY CLAY; brown, plastic, trace fine sand, cohesive, soft, moist.				
		SANDY CLAY: Silty SANDY CLAY, brown, low plasticity, medium & fine sand, loose, moist.		SB-02-07-0601-03		0.8
-5		BLANK: No recovery.				
		SANDY CLAY: Silty SANDY CLAY, brown, low plasticity, medium to fine sand, trace fine gravel, loose, dry.		SB-02-07-0601-04		0.8
		SAND: SAND, brown to light olive brown, medium to fine, trace coarse sand, dry, loose.		SB-02-07-0601-05		0.8
-10		SAND: SAND, light brown, medium to fine, trace silt, loose, dry.		SB-02-07-0601-06		0.8
		SAND: SAND with gravel, brown, medium to coarse sand, fine gravel, loose, dry.				
		SAND: SAND, light brown, medium to fine, trace coarse, loose, dry. Water encountered at 14.5 ft.		SB-02-07-0601-07		0.8
				SB-02-07-0601-08		0.8
-15						

BORING LOG

BORING LOG: **SB-02-08-0601**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/10/2006 8:15:00 AM**	**COORDINATES**	
DATE COMPLETED:	**1/10/2006 9:00:00 AM**	NORTHING:	1651835.6
		EASTING:	167454.7
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		GRAVEL: Fill GRAVEL		SB-02-08-0601-01		0.0
		SAND: SAND with fine gravel, brown, to light brown, medium to fine sand, trace silt, loose, dry.		SB-02-08-0601-02		0.0
		SANDY CLAY: SANDY CLAY, brown, medium to fine sand, little silt, plastic, moist, cohesive.				
		SAND: SAND; brown, medium to fine, trace fine gravel, loose, dry, fill.		SB-02-08-0601-03		0.0
-5				SB-02-08-0601-04		0.0
		SAND: SAND with fine gravel, brown to light brown, medium sand, some coarse sand, increasing grain size to 7.5, loose, dry.				
		FILL: Brick debris, gravel FILL.		SB-02-08-0601-05		0.0
		SAND: SAND; brown, medium to fine, loose, dry, no odor.				
-10		SAND: SAND and gravel, brown, fine to medium sand, some coarse sand, fine gravel, loose, dry.		SB-02-08-0601-06		0.0
				SB-02-08-0601-07		0.0
		GRAVEL: Fractured rock, gray (GRAVEL).				
		SAND: SAND, brown. Medium, some fine, loose, wet.		SB-02-08-0601-08		0.0
-15						

BORING LOG

BORING LOG: **SB-02-09-0601**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/10/2006 9:15:00 AM**	**COORDINATES**	
DATE COMPLETED:	**1/10/2006**	NORTHING:	1651825
		EASTING:	167519.7
		ELEVATION:	725.65

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SAND: Fill, SAND and clay, dark brown, medium to fine sand, low plasticity clay, firm, dry.		SB-02-09-0601-01		0.8
		SANDY CLAY: SANDY CLAY, brown, medium to fine sand, little silt, low plasticity, moist.		SB-02-09-0601-02		0.9
				SB-02-09-0601-03		0.9
-5		BLANK: No recovery in tube.		SB-02-09-0601-04		0.9
		SANDY CLAY: SANDY CLAY, dark brown, medium to fine sand, decreasing sand to bottom 1/2', firm.				
		SAND: SAND, light brown, medium to fine, trace coarse sand/fine gravel, loose, dry.		SB-02-09-0601-05		0.9
-10		BLANK: No recovery. Slough.		SB-02-09-0601-06		1.3
		GRAVEL: Fractured rock, gray (GRAVEL)		SB-02-09-0601-07		1.3
		SAND: SAND, light brown, fine to medium sand, trace fine gravel/coarse sand, loose, dry.		SB-02-09-0601-08		1.2
-15				SB-02-09-0601-09		19.8
		SAND: SAND, brow, medium, some fine sand, wet, loose.		SB-02-09-0601-10		70.4
		SAND: Composition as above, SAND, dark brown/black, light iridescent sheen, wet, slight staining, mild odor.				
-20						

BORING LOG

BORING LOG: **SB-02-10-0601**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/10/2006 10:25:00 AM**	**COORDINATES**	
DATE COMPLETED:	**1/10/2006 11:15:00 AM**	NORTHING:	1651632
		EASTING:	167900.2
		ELEVATION:	723.68

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		SAND: SAND, light brown, fine to medium, trace fine gravel, dry, loose.		SB-02-10-0601-01		1.1
		SAND: Foundary SAND & clay, black, medium to fine sand, trace coarse, trace silt, soft, loose, dry.				
		SANDY CLAY: SANDY CLAY brown, medium to fine sand, little silt, low plasticity, moist.		SB-02-10-0601-02		1.1
				SB-02-10-0601-03		1.1
-5		SAND: SAND; light brown, medium, some fine, trace coarse sand, loose, dry.		SB-02-10-0601-04		1.1
				SB-02-10-0601-05		1.1
-10		BLANK: No recovery.		SB-02-10-0601-06		1.1
		SAND: SAND, light brown, medium, little coarse and fine sand, trace fine gravel. Fractured rock @ 12.5' (6" long), dry, loose.		SB-02-10-0601-07		1.1
		GRAVEL: Fine GRAVEL, dark brown, little fine sand, loose, dry.				
		SAND: SAND; light olive brown, lose, dry (wet at bottom).		SB-02-10-0601-08		1.1
-15		GRAVEL: GRAVEL with medium sand, brown, little silt, wet,				

BORING LOG

BORING LOG: **SB-02-10-0601**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Johnny Davis**
LOGGED BY:	**M. Beckwith-Laube**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/10/2006 10:25:00 AM**	**COORDINATES**	
DATE COMPLETED:	**1/10/2006 11:15:00 AM**	NORTHING:	1651632
		EASTING:	167900.2
		ELEVATION:	723.68

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
-15 –		loose.				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0601-S2A**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**Bryant Griggs**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**1/19/2006 3:00:00 PM**	**COORDINATES:**	
DATE COMPLETED:	**1/19/2006 5:00:00 PM**	**Northing:**	**1650445.6**
		Easting:	**165261.4**
		TOC Elevation:	**718.16**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		GRAVEL: GW. GRAVEL and sand, loose, brown, wet.	MW-0601-S2A-01		0.6	PVC sch 40
						Unknown
			MW-0601-S2A-02		1.3	bent-cement grout
		SAND: SW. SAND with gravel, medium dense, black, very moist.	MW-0601-S2A-03		124.0	
5		SAND: SP. SAND, with debris (glass, wood, metal), fine grained, medium dense, black, moist.	MW-0601-S2A-04		236.0	
			MW-0601-S2A-05		363.0	
10		SAND: SP. SAND, medium dense, fine to medium grained, brownish gray, moist.	MW-0601-S2A-06		209.0	
			MW-0601-S2A-07		213.0	bentonite-chips
						sand pack
			MW-0601-S2A-08		151.0	
15		SAND: SW. SAND with gravel, medium dense, brownish gray, very moist.	MW-0601-S2A-09		49.8	PVC sch 40
			MW-0601-S2A-10		33.7	
20		GRAVEL: GW. GRAVEL and sand, loose, black, wet @ 19 ft, odor and staining/sheen.	MW-0601-S2A-11		5.1	
		GRAVEL: GW. GRAVEL and sand, loose, light gray brown, wet.	MW-0601-S2A-12		18.6	
25			MW-0601-S2A-13		15.9	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0601-S3**

TOTAL DEPTH: **48.00**

PROJECT INFORMATION

PROJECT: **GM/REALM (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **CJ Catlett**

DATE STARTED: **1/17/2006 2:45:00 PM**

DATE COMPLETED: **1/17/2006**

DRILLING INFORMATION

DRILLING CO.: **Altech**

DRILLER: **Mike Petty**

DRILLING METHOD: **Hand Auger/Geoprobe**

COORDINATES:

Northing: **1650446**

Easting: **165265.5**

TOC Elevation: **718.16**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		GRAVEL: GW. GRAVEL and sand, loose, brown, wet.	MW-0601-S3-01		0.6	steel
			MW-0601-S3-02		1.3	PVC sch 40
		SAND: SW. SAND with gravel, medium dense, black, very moist.	MW-0601-S3-03		124.0	bent-cement grout
5		SAND: SP. SAND, with debris (glass, wood, metal), fine grained, medium dense, black, moist.	MW-0601-S3-04		236.0	
			MW-0601-S3-05		363.0	
10		SAND: SP. SAND, medium dense, fine to medium grained, brownish gray, moist.	MW-0601-S3-06		209.0	
			MW-0601-S3-07		213.0	
			MW-0601-S3-08		151.0	
15		SAND: SW. SAND with gravel, medium dense, brownish gray, very moist.	MW-0601-S3-09		49.8	
			MW-0601-S3-10		33.7	
20		GRAVEL: GW. GRAVEL and sand, loose, black, wet @ 19 ft, odor and staining/sheen.	MW-0601-S3-11		5.1	
		GRAVEL: GW. GRAVEL and sand, loose, light gray brown, wet.	MW-0601-S3-12		18.6	
25		SAND: SP. SAND, very dense, fine grained, gray, very moist.	MW-0601-S3-13		15.9	
			MW-0601-S3-14		8.0	
			MW-0601-S3-15		3.4	
30			MW-0601-S3-16		2.7	
		TILL: ML. TILL, hard, gray, trace gravel, damp.				
		CLAY: CLAY till - dark gray, slightly moist, stiff, trace gravel.	MW-0601-S3-17		7.0	
			MW-0601-S3-18		1.4	gravel pack
35			MW-0601-S3-19		2.3	bentonite-chips
						PVC sch 40
		SAND: SAND & gravel, very moist to wet, loose, poorly sorted, very slight odor (wet in 38-40' spoon)	MW-0601-S3-20		0.5	
40			MW-0601-S3-21		0.7	
			MW-0601-S3-22		1.2	
			MW-0601-S3-23		1.5	
45		CLAY: CLAY till - dark gray, slightly moist, stiff, trace gravel.	MW-0601-S3-24		0.3	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0603-S1**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/25/2006 9:50:00 AM**	**COORDINATES:**	
DATE COMPLETED:		**Northing:**	**1650876.3**
		Easting:	**166444.3**
		TOC Elevation:	**721.91**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE	MW-0603-S1-01		2.9	Unknown PVC sch 40
		SAND: SAND: SW. SAND, Loose, fine to coarse, olive brown, moist				bent-cement grout
		SILTY CLAY: SILTY CLAY- CL/ML. SILTY CLAY, medium stiff, non-plastic, light brown, moist, trace gravel up to 4" diameter	MW-0603-S1-02		2.6	
			MW-0603-S1-03		1.4	bentonite-chips
5		SAND: SW. SAND, trace gravel, loose, fine to coarse, light brown, damp				
			MW-0603-S1-04		1.6	sand pack
			MW-0603-S1-05		1.2	PVC sch 40
10			MW-0603-S1-06		9.2	
		SAND: SW. SAND, trace gravel, loose, fine to coarse, dark gray, wet, odor				
		SILTY CLAY: CL/ML. SILTY CLAY/clayey silt, hard, non-plastic, gray, slightly damp	MW-0603-S1-07		3.3	
			MW-0603-S1-08		1.1	
15						

WELL CONSTRUCTION LOG

WELL NO.: **MW-0605-S2B**

TOTAL DEPTH: **32.00**

PROJECT INFORMATION

PROJECT: **GM/REALM (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **Tim Yates/CJ Catlett**

DATE STARTED: **1/24/2006 9:00:00 AM**

DATE COMPLETED: **1/24/2006**

DRILLING INFORMATION

DRILLING CO.: **Altech**

DRILLER: **Dan Wells**

DRILLING METHOD: **Geoprobe**

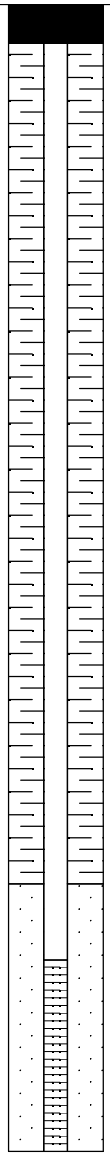
COORDINATES:

Northing: **1650370.3**

Easting: **167608.1**

TOC Elevation: **721.33**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE	MW-0605-S2B-01		0.4
		SAND: Dark yellowish brown medium to coarse SAND & gravel, poorly graded, sub-rounded, dry.	MW-0605-S2B-02		0.0
		SANDY CLAY: Dark grayish brown silty SANDY CLAY, plastic, cohesive, slightly sticky, trace gravel, moist, slightly firm.	MW-0605-S2B-03		0.0
5			MW-0605-S2B-04		0.0
		SAND: Dark yellowish brown medium to coarse SAND & gravel, dry. Very slightly moist @ 15 ft.	MW-0605-S2B-05		0.5
10			MW-0605-S2B-06		0.0
			MW-0605-S2B-07		1.2
			MW-0605-S2B-08		2.3
15		CLAYEY SILT: Dark gray CLAYEY SILT, nonplastic, cohesive, non-sticky, trace gravel, hard, slightly moist.	MW-0605-S2B-09		4.0
			MW-0605-S2B-10		1.5
20			MW-0605-S2B-11		0.3
			MW-0605-S2B-12		1.8
		SAND: Dark gray fine SAND stringers, wet; all < 0.25", ~ 3 stringers, 24.5-25: Dark gray fine sand stringers wet.	MW-0605-S2B-13		0.8
25			MW-0605-S2B-14		0.4
		SAND: Gray SAND, fine grained, loose, saturated (SP).	MW-0605-S2B-15		0.0
30		CLAYEY SILT: Dark gray CLAYEY SILT, nonplastic, cohesive, nonsticky, trace gravel, firm, moist.	MW-0605-S2B-16		6.5



WELL CONSTRUCTION DETAILS:

- Unknown
- PVC sch 40
- bent-cement grout
- sand pack
- PVC sch 40

WELL CONSTRUCTION LOG

WELL NO.: **MW-0609-S2B**

TOTAL DEPTH: **37.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/26/2006 5:10:00 PM**	**COORDINATES:**	
DATE COMPLETED:	**1/26/2006 9:30:00 AM**	**Northing:**	**1649977.3**
		Easting:	**167762.1**
		TOC Elevation:	**722.06**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE	MW-0609-S2B-01		0.0	Unknown PVC sch 40 bentonite-chips
		SAND: SW. SAND, medium dense, fine grained, few silt, few gravel, up to 3" in diameter, light brown, damp.	MW-0609-S2B-02		0.0	bent-cement grout
			MW-0609-S2B-03		0.0	
5		SAND: SW. SAND, loose, fine to coarse, trace gravel, light grayish brown, slightly damp.	MW-0609-S2B-04		0.0	
			MW-0609-S2B-05		0.0	
10			MW-0609-S2B-06		0.0	
			MW-0609-S2B-07		0.0	
			MW-0609-S2B-08		0.0	
15			MW-0609-S2B-09		0.0	
		SILTY CLAY: ML/CL. SILTY CLAY, hard, trace gravel, non-plastic, gray, moist.	MW-0609-S2B-10		0.0	
20			MW-0609-S2B-11		0.0	
			MW-0609-S2B-12		0.0	bentonite-chips
			MW-0609-S2B-13		0.0	sand pack
25			MW-0609-S2B-14		0.0	PVC sch 40
			MW-0609-S2B-15		0.0	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0609-S2B**

TOTAL DEPTH: **37.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/26/2006 5:10:00 PM**	**COORDINATES:**	
DATE COMPLETED:	**1/26/2006 9:30:00 AM**	**Northing:**	**1649977.3**
		Easting:	**167762.1**
		TOC Elevation:	**722.06**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
30		SAND: SW. SAND with silt and gravel, grayish brown, medium dense, wet at approx. 30 ft.	MW-0609-S2B-16		0.0	
		SANDY CLAY: ML.CL. Silty SANDY CLAY, same as above, with sand (30%).	MW-0609-S2B-17		0.0	
		SANDY CLAY: SANDY CLAY, soft, wet, gray.				
35		SAND: SW. SAND and gravel, loose, medium to coarse, grayish brown, wet.	MW-0609-S2B-18		>9999	
		BLANK: BLANK				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0610-S2B**

TOTAL DEPTH: **29.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/26/2006 8:15:00 AM**	**COORDINATES:**	
DATE COMPLETED:		**Northing:**	
		Easting:	
		TOC Elevation:	**722.17**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE	MW-0610-S2B-01		19.5	Unknown PVC sch 40 bentonite-chips
		SAND: SW. SAND, trace gravel, loose, fine to coarse, light brown, damp.	MW-0610-S2B-02		23.8	bent-cement grout
		SILTY SAND: SM. SILTY SAND, medium dense, fine, light brown, damp.	MW-0610-S2B-03		26.7	
5			MW-0610-S2B-04		24.4	
		SAND: SW. SAND, trace gravel, loose, fine to coarse, light grayish brown, slightly damp. 10-15% gravel at 10.0-15.0 ft.	MW-0610-S2B-05		29.2	
10			MW-0610-S2B-06		14.9	
			MW-0610-S2B-07		13.4	
			MW-0610-S2B-08		55.5	
15						bentonite-chips
			MW-0610-S2B-09		71.3	
		SAND: SW. SAND and gravel, medium dense, fine to coarse, gray, damp, slight odor.				sand pack
		CLAYEY SILT: ML. CLAYEY SILT with sand, hard, nonplastic, trace gravel, gray, moist, slight odor.	MW-0610-S2B-10		113.0	PVC sch 40
20		SILTY SAND: SM. SILTY SAND, medium dense, fine grained, gray, moist, strong odor.	MW-0610-S2B-11		145.0	
		SAND: SP. SAND, medium dense, fine to medium, gray, very moist, strong odor. At 21 ft a 1" black layer of sand, very strong odor. Water at 22 ft	MW-0610-S2B-12		100.4	
			MW-0610-S2B-13		56.4	
25			MW-0610-S2B-14		62.7	
		BLANK: BLANK				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0611-S1**

TOTAL DEPTH: **23.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**1/30/2006 10:20:00 AM**	**COORDINATES:**	
DATE COMPLETED:		**Northing:**	
		Easting:	
		TOC Elevation: 722.09	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE	MW-0611-S1-01		30.1	Unknown PVC sch 40 bentonite-chips
		SAND: SW. SAND and gravel, loose, fine to coarse, brown, damp.	MW-0611-S1-02		33.0	
		CLAYEY SAND: SM/SL. Silty/CLAYEY SAND, medium dense, olive gray, moist.				bent-cement grout
		SAND: SW. SAND, loose, fine to coarse, grayish brown, moist.	MW-0611-S1-03		159.0	
5		SILTY SAND: SM. SILTY SAND, medium dense, olive gray, very moist.	MW-0611-S1-04		102.0	
		SAND: SW. SAND, loose, fine to coarse, trace gravel, light brown, damp.	MW-0611-S1-05		181.0	
						bentonite-chips
10			MW-0611-S1-06		35.5	
						sand pack
			MW-0611-S1-07		28.1	
		SAND: SP. SAND, loose, fine, light grayish brown, damp.	MW-0611-S1-08		33.2	PVC sch 40
15		SAND: SW. SAND with gravel, loose, fine to coarse, gray, very moist, slight odor.				
		SAND: SP SAND, loose, fine, gray, wet, strong odor. Water at 16.00ft	MW-0611-S1-09		199.0	
			MW-0611-S1-10		553.0	
20		SAND: Gravelly SAND, dark gray, strong odor, wet, loose.	MW-0611-S1-11		682.0	
		SAND: SP. SAND, loose, fine, gray, wet, strong odor. Refusal at 23 ft.	MW-0611-S1-12		517.0	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0612-S2B**

TOTAL DEPTH: **32.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/8/2006 12:30:00 PM**	**COORDINATES:**	
DATE COMPLETED:		**Northing:**	**1650692.8**
		Easting:	**168966.3**
		TOC Elevation:	**719.31**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE floor	MW-0612-S2B-01		0.5	Flush Mount PVC sch 40 bentonite-chips
		SAND: SW. SAND, with gravel, loose, fine to coarse, yellowish brown, damp.	MW-0612-S2B-02		2.1	bentonite slurry
			MW-0612-S2B-03		0.4	
5			MW-0612-S2B-04		0.2	
			MW-0612-S2B-05		0.2	
10		CLAYEY SILT: ML. CLAYEY SILT, with sand, plastic, trace gravel, stiff, dark yellowish brown, moist.	MW-0612-S2B-06		0.7	
		CLAYEY SILT: ML. CLAYEY SILT, trace sand, trace gravel, stiff, olive gray, moist.	MW-0612-S2B-07		0.3	
		SAND: SW. SAND & gravel, dense, medium to coarse, dark yellowish brown, damp.	MW-0612-S2B-08		0.2	
15		CLAYEY SILT: ML. CLAYEY SILT, trace sand, trace gravel, stiff, non-plastic, olive gray, moist.	MW-0612-S2B-09		0.3	
			MW-0612-S2B-10		0.1	
		SAND: SW. SAND with gravel, medium dense, medium to coarse, dark yellowish brown, damp.	MW-0612-S2B-11		0.4	
20		CLAYEY SILT: ML. CLAYEY SILT, trace sand, stiff, olive gray, moist, 24-27.6 dark gray.	MW-0612-S2B-12		1.2	
			MW-0612-S2B-13		0.3	bentonite-chips
25			MW-0612-S2B-14		0.4	sand pack

WELL CONSTRUCTION LOG

WELL NO.: **MW-0612-S2B**

TOTAL DEPTH: **32.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/8/2006 12:30:00 PM**	**COORDINATES:**	
DATE COMPLETED:		**Northing:**	**1650692.8**
		Easting:	**168966.3**
		TOC Elevation:	**719.31**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
		SAND: SP. SAND, loose, fine, gray, wet.	MW-0612-S2B-15		0.7	PVC sch 40
30		SAND: SW. SAND with gravel, loose, medium to coarse, wet, 29.5-30 black.	MW-0612-S2B-16		0.2	
		CLAYEY SILT: ML/CL. CLAYEY SILT, stiff, gray, trace gravel, very moist.				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0613-S2A**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/10/2006 7:45:00 AM**	**COORDINATES:**	
DATE COMPLETED:		**Northing:**	**1650684.3**
		Easting:	**169074.6**
		TOC Elevation:	**719.76**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE floor.	MW-0613-S2A-01		12.7	Unknown PVC sch 40 bentonite-chips
		SAND: SW. SAND with gravel, fine to coarse, medium dense, light brown, damp.	MW-0613-S2A-02		2.0	
			MW-0613-S2A-03		2.9	
5			MW-0613-S2A-04		5.7	sand pack
			MW-0613-S2A-05		69.2	PVC sch 40
10			MW-0613-S2A-06		60.2	
			MW-0613-S2A-07		67.1	
		SILT: SM/ML. SILT and sand, soft, gray, very moist to wet @ 14.5, slightly plastic, sticky.	MW-0613-S2A-08		72.2	
15			MW-0613-S2A-09		54.0	
		SAND: SW. SAND, with gravel, fine to coarse, medium dense, yellowish brown, wet.				
		CLAYEY SILT: ML. CLAYEY SILT, trace gravel, stiff, olive gray, moist.	MW-0613-S2A-10		13.1	
20						

WELL CONSTRUCTION LOG

WELL NO.: **MW-0614-S2B**

TOTAL DEPTH: **36.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**CJ Catlett**	DRILLING METHOD:	**Hand Auger/Geoprobe**
DATE STARTED:	**2/8/2006 4:30:00 PM**	**COORDINATES:**	
DATE COMPLETED:	**2/8/2006 8:30:00 AM**	**Northing:**	**1650750**
		Easting:	**169023.8**
		TOC Elevation:	**719.66**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE floor.	MW-0614-S2B-01		1.0	Unknown PVC sch 40 bentonite-chips
		SAND: SW. SAND with gravel, loose, to medium dense, fine to medium to coarse, light brown, damp.	MW-0614-S2B-02		1.4	bent-cement grout
			MW-0614-S2B-03		104.0	
5			MW-0614-S2B-04		39.8	
		SAND: SW. SAND with silt, trace gravel, loose, fine to medium, yellowish brown, moist.	MW-0614-S2B-05		54.5	
10			MW-0614-S2B-06		127.0	
		SAND: SW. SAND, trace gravel, fine to coarse, grayish brown, loose, damp.	MW-0614-S2B-07		113.0	
		SILTY SAND: SM. SILTY SAND, fine, medium dense, light olive gray, moist.	MW-0614-S2B-08		278.0	
15		SAND: SW. SAND with silt, trace gravel, medium dense, yellowish brown, very moist.	MW-0614-S2B-09		149.0	
		CLAYEY SILT: ML. CLAYEY SILT, trace sand/gravel, olive gray, damp, stiff.	MW-0614-S2B-10		100.0	
20			MW-0614-S2B-11		134.0	
		CLAYEY SILT: ML. CLAYEY SILT, trace sand, olive gray, stiff, moist.	MW-0614-S2B-12		101.0	bentonite-chips
			MW-0614-S2B-13		105.0	
25			MW-0614-S2B-14		101.0	sand pack
		SAND: SP. SAND, loose, fine, gray, wet. Water at 27 ft	MW-0614-S2B-15		128.0	PVC sch 40
30			MW-0614-S2B-16		129.0	
		CLAYEY SILT: ML. CLAYEY SILT, trace sand, gray, stiff, moist.				
35		SAND: SP. SAND, loose, fine to medium, gray, wet.				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0615-S2**

TOTAL DEPTH: **22.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**Bryant Griggs**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**1/10/2006 11:20:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**1/10/2006**	**Northing:**	**1652050.6**
		Easting:	**167726.6**
		TOC Elevation:	**725.17**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE floor	MW-0615-S22-01		1.7	Unknown
		SANDY CLAY: Red-brown SANDY CLAY, trace gravel, moist, plastic, firm.				PVC sch 40
			MW-0615-S22-02		1.7	bent-cement grout
			MW-0615-S2222-03		1.7	
5			MW-0615-S222222-04		1.7	
		SAND: Brown-gray SAND-gravel mix, 70/30, coarse grained, moist.	MW-0615-S222222-05		1.7	bentonite-chips
10			MW-0615-S222222-06		1.8	sand pack
			MW-0615-S222222-07		2.9	PVC sch 40
		SAND: Brown-gray, SAND, fine grained moist to very moist at 15 ft.	MW-0615-S222222-08		2.8	
15		SAND: Brown gray SAND/gravel mix, 70/30, coarse grained, very moist.				
		SAND: Brown gray SAND/gravel mix, 70/30, coarse grained, wet. 1" of black staining at ~ 19 ft.	MW-0615-S222222-09		1.7	
			MW-0615-S222222-10		2.0	
20			MW-0615-S222222-11		1.9	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0616-S2**

TOTAL DEPTH: **24.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**Bryant Griggs**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**1/11/2006 8:50:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**1/11/2006 11:00:00 AM**	**Northing:**	**1651423.7**
		Easting:	**167839.3**
		TOC Elevation:	**725.03**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT parking lot surface.	MW-0616-S22-01		1.7	PVC sch 40
		SANDY CLAY: CL - Red brown SANDY CLAY 50/50, trace gravel, slightly plastic, moist.	MW-0616-S22-02		1.7	bent-cement grout
			MW-0616-S2222-03		1.7	
5			MW-0616-S222222-04		1.7	
			MW-0616-S222222-05		1.9	
		SAND: SP - Gray-brown, SAND/gravel mix 70/30, moist, coarse-med grain.				bentonite-chips
10			MW-0616-S222222-06		1.8	sand pack
		BLANK: Rock in split spoon barrel, < 10% recovery.	MW-0616-S222222-07		2.4	PVC sch 40
		SAND: SP. Gray-brown, SAND/gravel mix 70/30, moist-very moist, coarse-medium grained. Wet at 15.5' bgs.	MW-0616-S222222-08		1.9	
15			MW-0616-S222222-09		1.8	
		SILTY CLAY: Gray SILTY CLAY, soft, wet.				
		SAND: SP. Gray-brown, SAND/gravel mix 70/30, coarse-med grained, wet.	MW-0616-S222222-10		1.8	
20			MW-0616-S222222-11		1.8	
			MW-0616-S222222-12		1.8	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0617-S2**

TOTAL DEPTH: **22.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**Bryant Griggs**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**1/10/2006 3:20:00 PM**	**COORDINATES:**	
DATE COMPLETED:		**Northing:**	**1652089**
		Easting:	**167910.4**
		TOC Elevation:	**725.22**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE floor.	MW-0617-S22-01		14.1	PVC sch 40
		GRAVEL: Brown-black, GRAVEL/sand mix 80/20, med-coarse grained, moist.				
		ASPHALT: Layer of ASPHALT, ~3" thick.	MW-0617-S22-02		4.3	bent-cement grout
		GRAVEL: Black-brown, GRAVEL/sand mix 50/50, med-coarse grained, moist.	MW-0617-S2222-03		3.9	
5		SANDY CLAY: Brown silty SANDY CLAY, moist, plastic, slightly sticky, loose.				
		SANDY CLAY: Dark gray-brown silty SANDY CLAY, moist, firm, plastic, not sticky.	MW-0617-S222222-04		1.7	
		SILTY SAND: Dark brown SILTY SAND, trace gravel, dense, moist, fine-med grained.	MW-0617-S222222-05		2.5	bentonite-chips
						sand pack
10		SAND: Gray-brown, SAND/gravel mix 80/20, med-coarse grained, moist.	MW-0617-S222222-06		5.0	
			MW-0617-S222222-07		6.1	PVC sch 40
15		SAND: Gray-brown, SAND/gravel mix 80/20, med-coarse grained, wet. Sand and gravel increasingly coarse with depth. ~2" black staining at 19 ft bgs.	MW-0617-S222222-08		5.0	
			MW-0617-S222222-09		4.5	
			MW-0617-S222222-10		2.2	
20			MW-0617-S22222-11		2.5	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0618-S2**

TOTAL DEPTH: **22.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**Bryant Griggs**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**1/10/2006 8:20:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**1/10/2006 11:00:00 AM**	**Northing:**	**1651698.4**
		Easting:	**167258.6**
		TOC Elevation:	**721.54**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT and gravel sub-base.	MW-0618-S22-01		1.6	PVC sch 40
		SAND: Brown-gray, SAND-gravel mix 70/30, large grained, loose, moist.	MW-0618-S22-02		1.7	bent-cement grout
		SAND: Brown, SAND-gravel mix 80/20, med-coarse, very moist.	MW-0618-S2222-03		1.6	
5		BLANK: Rock in split spoon barrel, < 10% recovery.	MW-0618-S222222-04		1.9	
			MW-0618-S222222-05		1.8	bentonite-chips
		SAND: Gray-brown, SAND-gravel mix, 70/30, med-coarse, moist, odor. Very moist from 10.0-12.5'.				sand pack
10			MW-0618-S222222-06		2.2	PVC sch 40
		SANDY CLAY: Brown silty SANDY CLAY, firm, moist, plastic, slightly sticky.	MW-0618-S222222-07		1.7	
		SILTY CLAY: Gray SILTY CLAY, soft, very moist, plastic, sticky.	MW-0618-S222222-08		3.1	
15		SILTY SAND: Gray SILTY SAND, trace gravel, wet.	MW-0618-S222222-09		3.2	
			MW-0618-S222222-10		4.8	
20			MW-0618-S222222-11		5.0	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0619-S2**

TOTAL DEPTH: **24.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Altech**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Wells**
LOGGED BY:	**Bryant Griggs**	DRILLING METHOD:	**Hollow Stem Auger**
DATE STARTED:	**1/9/2006 3:00:00 PM**	**COORDINATES:**	
DATE COMPLETED:	**1/9/2006 5:00:00 PM**	**Northing:**	**1652202.1**
		Easting:	**167389.6**
		TOC Elevation:	**724.75**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT & gravel mix.	MW-0619-S22-01		1.6	PVC sch 40
		SANDY CLAY: Brown silty SANDY CLAY, slightly firm, moist, plastic.	MW-0619-S22-02		1.7	bent-cement grout
		SAND: Brown SAND, med-fine grained, trace gravel, moist, gravel increasing with depth.	MW-0619-S2222-03		1.8	
5		SAND: Brown SAND/gravel mix 70/30, coarse-med grained, slightly moist.	MW-0619-S222222-04		1.7	
		CLAYEY SAND: Brown-orange CLAYEY SAND, wet, sticky, odor.	MW-0619-S222222-05		4.9	bentonite-chips
						sand pack
10		SAND: Brown SAND/gravel mix 70/30, coarse grained, moist.	MW-0619-S222222-06		1.7	
		SAND: Light gray SAND, fine grained, very moist.	MW-0619-S222222-07		1.7	PVC sch 40
		SILTY SAND: Brown gray SILTY SAND/gravel mix, very moist-wet.				
		SILTY SAND: Brown SILTY SAND, fine grained, wet, odor.	MW-0619-S222222-08		3.2	
15			MW-0619-S222222-09		5.0	
			MW-0619-S222222-10		5.4	
		SAND: Brown-gray SAND/gravel mix 70/30, coarse grained, wet, odor.	MW-0619-S222222-11		7.0	
20			MW-0619-S222222-12		7.2	
		SILTY SAND: Gray SILTY SAND, wet, odor.				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0620-S1**

TOTAL DEPTH: **17.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	
DATE STARTED:	**12/4/2006 10:50:00 AM**	**COORDINATES:**	
DATE COMPLETED:		**Northing:**	**1650429.3**
		Easting:	**164678**
		TOC Elevation:	**722**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		SILT: ML - SILT, trace sand and gravel, stiff, slight plasticity, cohesive, d. brown, (10 yr 3/3), dry; black staining from 2-6'	MW-0620-S1-01		0.5	Flush Mount PVC sch 40 bent-cement grout
			MW-0620-S1-02		0.2	
			MW-0620-S1-03		0.1	
5						
		BLANK: No recovery	MW-0620-S1-04			sand pack PVC sch 40
		SILT: ML - SILT, trace sand and gravel, stiff, slight plasticity, cohesive, d. brown (10 yr 3/3), dry	MW-0620-S1-05		0.2	
		SAND: SP - SAND, trace gravel, med. loose, d. yellowish brown (10 yr 3/6), dry, black staining				
10		BLANK: No recovery	MW-0620-S1-06			
			MW-0620-S1-07			
			MW-0620-S1-08		1.2	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0620-S1**

TOTAL DEPTH: **17.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	
DATE STARTED:	**12/4/2006 10:50:00 AM**	**COORDINATES:**	
DATE COMPLETED:		**Northing:**	**1650429.3**
		Easting:	**164678**
		TOC Elevation:	**722**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
15		GRAVELLY SAND: SP - GRAVELLY SAND, d. yellowish brown (10 yr 2/6), moist, black staining; wood material at 15'; trace silt from 15 - 15.8'				
		TILL: CL - TILL, trace gravel, stiff - v. stiff, dark gray (10 yr 4/1), dry	MW-0620-S1-09		2.3	
		BLANK: End at 17'				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0621-S1**

TOTAL DEPTH: **12.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**4/6 Rotosonic**
DATE STARTED:	**11/22/2006 8:30:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**11/22/2006 9:15:00 AM**	**Northing:**	**1650568.7**
		Easting:	**164748.33**
		TOC Elevation:	**715.11**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		SILTY SAND: SM - SILTY SAND, little gravel. med. loose, 10 yr 4/4, damp, organic material	MW-0621-S1-01		0.9	Flush Mount; bent-cement grout; PVC sch 40
		SANDY SILT: ML - SANDY SILT, trace gravel, med. dense, 10 yr 4/4, damp	MW-0621-S1-02		0.6	sand pack
			MW-0621-S1-03		1.2	PVC sch 40
5		GRAVELLY SAND: SP - GRAVELLY SAND, loose, 10 yr 4/3, v. moist				
		SANDY GRAVEL: GP - SANDY GRAVEL, loose, 10 yr 4/3, saturated, water table at 7'	MW-0621-S1-04		1.0	
		GRAVELLY SAND: SP - GRAVELLY SAND, loose, 10 yr 4/3, saturated	MW-0621-S1-05		1.3	
		TILL: CL - TILL, trace gravel, v. dense, 10 yr 4/1, damp; dry from 12.5'; end of boring at 12.5'				sand pack
10			MW-0621-S1-06		3.3	bentonite

WELL CONSTRUCTION LOG

WELL NO.: **MW-0622-S2A**

TOTAL DEPTH: **27.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dan Harnan**
LOGGED BY:	**M. Griles**	DRILLING METHOD:	**Mini-Sonic**
DATE STARTED:	**4/26/2006 9:30:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**4/26/2006 12:30:00 PM**	**Northing:**	**1648699.2**
		Easting:	**168634.3**
		TOC Elevation:	**720.26**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT	MW-0622-S2A-01		1.8	PVC sch 40
		CLAY: CL 10YR 3/4 Dark yellowish brown silty sandy CLAY, sl. plastic, w/ coarse sand, pebbles, and gravels.				bent-cement grout
			MW-0622-S2A-02		2.9	
			MW-0622-S2A-03		4.1	
5			MW-0622-S2A-04		3.5	
		SAND: SW 10YR 5/6 well-med. graded SANDs w/ gravel, pebbles, subrounded, dry to slightly moist.	MW-0622-S2A-05		5.0	
10			MW-0622-S2A-06		4.9	
			MW-0622-S2A-07		4.3	
			MW-0622-S2A-08		4.9	
15						sand pack
			MW-0622-S2A-09		6.4	
						PVC sch 40
			MW-0622-S2A-10		6.8	
20			MW-0622-S2A-11		307.0	
		SAND: SW 10YR 6/1 gray SANDs med. graded, saturated, subrounded, coarse, visible staining at interval change, with strong odor. NAPL positive on 22-24 interval at 24 ft.	MW-0622-S2A-12		945.0	
			MW-0622-S2A-13		458.0	
25		CLAY: 10YR 3/1 ML Gray silty-CLAY till, with trace gravel, pebbles, competent, cohesive, non-plastic, not very well consolidated throughout, broken up w/ cobbles, gravel, and pebbles.	MW-0622-S2A-14		390.0	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0623-S2A**

TOTAL DEPTH: **30.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**M. Griles**	DRILLING METHOD:	**Mini-Sonic**
DATE STARTED:	**4/27/2006 10:15:00 AM**	**COORDINATES:**	
DATE COMPLETED:		**Northing:**	**1648588.5**
		Easting:	**168666**
		TOC Elevation:	**719.06**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT/Fill	MW-0623-S2A-01		0.0	PVC sch 40
		CLAY: CL 10YR 3/4 Dark yellowish brown silty, sandy CLAY, w/ high sand count, pebbles and gravels within matrix, plastic.				bent-cement grout
			MW-0623-S2A-02		0.0	
			MW-0623-S2A-03		0.0	
5			MW-0623-S2A-04		0.0	
		SAND: SW 10YR 5/6 well-med graded SANDs with gravel pebbles, coarse grained (sand within mix, subrounded), dry. Wet at 20 ft.	MW-0623-S2A-05		0.0	
10			MW-0623-S2A-06		0.0	
			MW-0623-S2A-07		0.0	
			MW-0623-S2A-08		0.0	
15			MW-0623-S2A-09		0.0	
			MW-0623-S2A-10		2.0	
20			MW-0623-S2A-11		3.5	
		SAND: SW 10YR 5/6 well-med graded SANDs with gravel pebbles, coarse grained (sand within mix, subrounded), dry. Increased fines/clay in mix.	MW-0623-S2A-12		14.2	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0623-S2A**

TOTAL DEPTH: **30.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**M. Griles**	DRILLING METHOD:	**Mini-Sonic**
DATE STARTED:	**4/27/2006 10:15:00 AM**	**COORDINATES:**	
DATE COMPLETED:		**Northing:**	**1648588.5**
		Easting:	**168666**
		TOC Elevation:	**719.06**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
		CLAY: Brown CLAY, 6" stringer.				
		SAND: SW 10YR 5/6 well-med graded SANDs with gravel pebbles, coarse grained (sand within mix, subrounded), dry.	MW-0623-S2A-13		296.0	sand pack PVC sch 40
25		SAND: Return to SANDs, cobbles, and gravel in mix, well saturated with little clay in mix. NAPL positive on 24-26 at 25 ft.	MW-0623-S2A-14		25.3	
		SAND: Return to high fine count/clay in matrix of SANDs until interval end at 29.5 ft.	MW-0623-S2A-15		14.7	
30		CLAY: 10YR 3/1 ML Gray silty, sandy CLAY till with trace gravel pebbles, and cobbles, competent, cohesive, sl. moist, hard, non-plastic.				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0624-S3**

TOTAL DEPTH: **43.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**T. Hubbard**	DRILLING METHOD:	**Mini-Sonic**
DATE STARTED:	**5/11/2006 11:15:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**5/12/2006 9:40:00 AM**	**Northing:**	
		Easting:	
		TOC Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: TOPSOIL	MW-0624-S3-01		0.0	PVC sch 40
		CLAY: CL, gravely CLAY, dark brown (7.5 YR 3/4), stiff, very plastic, moist.				bent-cement grout
			MW-0624-S3-02		0.0	
			MW-0624-S3-03		0.0	
5		SAND: SM, fine-med silty SANDs, little gravel, dark brown (10YR 3/3), loose, moist.	MW-0624-S3-04		0.0	
			MW-0624-S3-05		0.0	
10		GRAVEL: GM, silty fine-med GRAVEL, with fine-med sands, dark yellowish brown (10YR 3/4), rounded-subrounded, loose, moist.	MW-0624-S3-06		0.0	
		SAND: SP-SM, Fine-coarse silty SANDs with fine-med gravel, yellowish brown (10YR 5/4), loose, moist.	MW-0624-S3-07		0.0	
			MW-0624-S3-08		0.0	
15		GRAVEL: GM, silty fine-coarse GRAVEL with fine-med sands, yellowish brown (10 YR 5/4) rounded-subrounded, loose, moist. Color change at 20.0 ft to dark brown (7.5 YR 4/4).	MW-0624-S3-09		0.0	
			MW-0624-S3-10		0.0	
20			MW-0624-S3-11		0.0	
			MW-0624-S3-12		0.0	
		SILT: ML-CL, clayey SILT with fine-med gravel and sand, dark gray (10 YR 4/1), hard, slightly plastic, moist.	MW-0624-S3-13		0.0	
25			MW-0624-S3-14		0.0	
			MW-0624-S3-15		0.0	
30			MW-0624-S3-16		0.0	
			MW-0624-S3-17		0.0	sand pack
35			MW-0624-S3-18		0.0	PVC sch 40

WELL CONSTRUCTION LOG

WELL NO.: **MW-0624-S3**

TOTAL DEPTH: **43.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**T. Hubbard**	DRILLING METHOD:	**Mini-Sonic**
DATE STARTED:	**5/11/2006 11:15:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**5/12/2006 9:40:00 AM**	**Northing:**	
		Easting:	
		TOC Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
35		SAND: SP, fine-coarse SANDs, with fine-med gravel, dark gray (10YR 4/1) wet, loose.	MW-0624-S3-19		0.0	
		SILT: ML-CL, clayey SILT with fine-med gravel and sand, dark gray (10YR 4/1) hard, slightly plastic, moist.	MW-0624-S3-20		0.0	sand pack
40		SAND: SP, fine-coarse SANDs, trace gravel, dark gray (10YR 4/1), loose, wet.	MW-0624-S3-21		0.0	
		SILT: ML-CL, clayey SILT with fine-med gravel and sand, dark gray (10YR 4/1), hard, slightly plastic, moist.	MW-0624-S3-22		0.0	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0625-S2A**

TOTAL DEPTH: **32.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**T. Hubbard**	DRILLING METHOD:	**Mini-Sonic**
DATE STARTED:	**5/11/2006 3:00:00 PM**	**COORDINATES:**	
DATE COMPLETED:	**5/12/2006 9:00:00 AM**	**Northing:**	
		Easting:	
		TOC Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: TOPSOIL	MW-0625-S2A-01		0.0	PVC sch 40
		CLAY: CL, gravely CLAY, dark brown (10YR 3/4), soft, slightly plastic, moist, distinct clear contact to				bent-cement grout
			MW-0625-S2A-02		0.0	
			MW-0625-S2A-03		0.0	
5		SAND: SP, fine-coarse SANDs w/ fine-med gravel, trace silt, dark yellowish brown (10YR 4/4), loose, moist.	MW-0625-S2A-04		0.0	
			MW-0625-S2A-05		0.0	
10		SAND: SW, fine-coarse SANDs w/ fine-med gravel, dark yellowish brown (10YR 4/4), loose, moist.	MW-0625-S2A-06		0.0	
			MW-0625-S2A-07		0.0	
			MW-0625-S2A-08		0.0	
15			MW-0625-S2A-09		0.0	
			MW-0625-S2A-10		0.0	
20			MW-0625-S2A-11		0.0	sand pack
		SILT: ML-CL, clayey SILT with fine-med gravel and sands, dark gray (10YR 4/1), (w/ small black laminations), very stiff, slightly plastic, moist, faint odor. Sudan IV negative above and below.	MW-0625-S2A-12		56.7	PVC sch 40
			MW-0625-S2A-13		56.7	
25		SAND: SW, med-coarse SANDs w/ fine-coarse gravel, dark gray (10YR 4/1), loose, wet, strong fuel odor, Sudan IV negative.	MW-0625-S2A-14		142.0	
		GRAVEL: GM, silty fine-coarse GRAVEL w/ fine-med sands, dark yellowish brown (10YR 4/6), loose, wet, no odor.	MW-0625-S2A-15		0.0	
30		SAND: SW, med-coarse SANDs w/ fine-coarse gravel, dark gray (10YR 4/1), loose, wet, no odor.	MW-0625-S2A-16		0.0	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0626-S1**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe/HSA**
DATE STARTED:	**12/5/2006 1:05:00 PM**	**COORDINATES:**	
DATE COMPLETED:		**Northing:**	**1650148.06**
		Easting:	**167295.7**
		TOC Elevation:	**721.08**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE	MW-0626-S1-01			Flush Mount PVC sch 40 bent-cement grout
		BLANK: No recovery	MW-0626-S1-02		0.2	
		SANDY SILT: ML - SANDY SILT, trace gravel, med. dense, med. plasticity, dark yellowish brown (10 yr 3/6), damp, black staining	MW-0626-S1-03		0.0	
5		BLANK: No recovery	MW-0626-S1-04			sand pack
			MW-0626-S1-05		0.0	PVC sch 40
		SAND: SP - SAND, trace gravel and cobbles, fine-med. grained, brown (10 yr 4/3), damp				
10		BLANK: No recovery	MW-0626-S1-06		0.0	
		SAND: SP - SAND, some gravel, med. loose, yellowish red (5 yr 4/6), poorly graded, damp	MW-0626-S1-07		0.0	
			MW-0626-S1-08		0.0	
15			MW-0626-S1-09	Neg at 16.3'	0.0	
		TILL: CL - TILL, stiff - v. stiff, trace gravel, dark gray (10 yr 4/1); end of boring at 20'	MW-0626-S1-10		0.0	
20						

WELL CONSTRUCTION LOG

WELL NO.: **MW-0628-S2B**

TOTAL DEPTH: **50.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**S. Grutney and T. Hill**
LOGGED BY:	**M. Griles**	DRILLING METHOD:	**HSA/Split spoon**
DATE STARTED:	**12/19/2006 10:00:00 AM**	**COORDINATES:**	
DATE COMPLETED:		**Northing:**	**1650396.61**
		Easting:	**168366**
		TOC Elevation:	**721.66**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT and CONCRETE	MW-0628-S2B-01		NA	Flush Mount PVC sch 40 bent-cement grout
		FILL: FILL dirt/ gravel fill	MW-0628-S2B-02		201	
5		CLAY: 10 YR 4/4 ML-CL, silty CLAY, Brown, (dark yellowish), tr. sand and pebbles (subrounded), plastic, pliable, sl. moist, some staining at top of interval (3 - 3.5')	MW-0628-S2BBB-03		145	
			MW-0628-S2BBBBB-04		17.9	
			MW-0628-S2BBBB-05			
10		SILTY SAND: SM-SW, Fine-Coarse SILTY SANDS w/gravel, dark grayish brown (10YR 4/2), compact, dry-moist, reaching saturation @ 12', becoming more well graded/poorly sorted with depth; No recovery from 8-10', free product/oil, staining @ 12-13'	MW-0628-S2BBBBB-06		15.2	
			MW-0628-S2BBBBB-07		3679	
15		CLAY: 10 YR 3/1, Gray, silty CLAY TILL, hard, dry, competent, non-plastic, w/interbedded subrounded pebbles and gravels, interval of well sorted, poorly graded fine-med gray sands @ 26.5 to 28', returning to Gray Glacial Till @ 37'	MW-0628-S2B-08		910	
			MW-0628-S2B-09		273	
			MW-0628-S2B-10		60.1	
20			MW-0628-S2B-11		32.8	
			MW-0628-S2B-12		21.6	
25			MW-0628-S2B-13		22.7	
			MW-0628-S2B-14		18.4	
			MW-0628-S2B-15		15.6	
30			MW-0628-S2B-16		17.8	
			MW-0628-S2B-17		13.1	
35			MW-0628-S2B-18		3.1	bentonite-chips
			MW-0628-S2BB-19	Neg	143	sand pack
40		SAND: 10 YR 5/2 grayish brown, SM, silty SAND, poorly graded, well sorted, med. to coarse sand, saturated/wet, slight odor at top of interval	MW-0628-S2BB-20	Neg	358	PVC sch 40
			MW-0628-S2B-21		34.9	
			MW-0628-S2B-22		4.0	
45			MW-0628-S2B-23		3.4	
			MW-0628-S2B-24		3.3	
50		CLAY: 10 YR 3/1 Gray, silty CLAY TILL, ML, hard, dry, non-plastic, imbedded pebbles	MW-0628-S2BB-25		3.4	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0629-S2**

TOTAL DEPTH: **27.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**M. Griles**	DRILLING METHOD:	**Mini-sonic**
DATE STARTED:	**1/4/2007 6:20:00 PM**	**COORDINATES:**	
DATE COMPLETED:	**1/4/2007 8:30:00 PM**	**Northing:**	**1649762.02**
		Easting:	**168317.6**
		TOC Elevation:	**721.35**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT and CONCRETE	MW-0629-S2-01			Flush Mount PVC sch 40 bent-cement grout
		CLAY: 10 YR 4/4, ML/CL, silty sandy CLAY, dark yellowish Brown, firm, sl. plasticity, cohesive, sl. moist, pliable, some staining and odor at 3 - 5'	MW-0629-S2-02		37.1	
			MW-0629-S2-03		389	
5			MW-0629-S2-04		5.2	
		SAND: SP, Medium-coarse SANDS w/gravel, dark grayish brown (10YR 4/2), compact, dry-moist, reaching saturation @ 16.5'. Increased gravel size and silt fraction with depth. Dry friable silt (w/sand and gravel) seam @ 14.75-15.25'.	MW-0629-S2-05		12.3	
10			MW-0629-S2-06		8.7	
			MW-0629-S2-07		8.0	
			MW-0629-S2-08		16.5	
15			MW-0629-S2-09		6.6	
		CLAY: 10 YR 3/1, ML, Gray, silty CLAY TILL, hard, competent, cohesive, dry, with imbedded pebbles and gravels (subrounded), non-plastic, from 25.25 - 26.0' there is an interval of very fine well-graded/SATURATED SANDS (SW), then back to competent clay till	MW-0629-S2-10		35.6	bentonite-chips
20			MW-0629-S2-11		8.4	sand pack
			MW-0629-S2-12		10.3	PVC sch 40
			MW-0629-S2-13		5.4	
25			MW-0629-S2-14		3.3	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0629-S3**

TOTAL DEPTH: **75.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**M. Griles**	DRILLING METHOD:	**Mini-sonic**
DATE STARTED:	**1/3/2007 3:34:00 PM**	**COORDINATES:**	
DATE COMPLETED:		**Northing:**	**1649761.7**
		Easting:	**168309.54**
		TOC Elevation:	**721.31**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT and CONCRETE	MW-0629-S3-01			Flush Mount
			MW-0629-S3-02		37.1	PVC sch 40
5		CLAY: 10 YR 4/4, ML/CL, silty sandy CLAY, dark yellowish Brown, firm, sl. plasticity, cohesive, sl. moist, pliable, some staining and odor at 3 - 5'	MW-0629-S3-03		389	bent-cement grout
			MW-0629-S3-04		5.2	
			MW-0629-S3-05		12.3	
10		SAND: SP, Medium-coarse SANDS w/gravel, dark grayish brown (10YR 4/2), compact, dry-moist, reaching saturation @ 16.5'. Increased gravel size and silt fraction with depth. Dry friable silt (w/sand and gravel) seam @ 14.75-15.25'.	MW-0629-S3-06		8.7	
			MW-0629-S3-07		8.0	
15			MW-0629-S3-08		16.5	
			MW-0629-S3-09		6.6	
20		SILTY CLAY: CL-ML, SILTY CLAY (Glacial Till), Gray (10 YR 5/1), w/ interbedded fine-medium sands and gravel, hard, slightly plastic (water added), dry	MW-0629-S3-10		35.6	
			MW-0629-S3-11		8.4	
			MW-0629-S3-12		10.3	
25			MW-0629-S3-13		5.4	
		SAND: SW, Very fine SAND, Gray (10 YR 5/1), compact, friable, wet/saturated	MW-0629-S3-14		3.3	
			MW-0629-S3-15		8.3	
30		SILTY CLAY: CL-ML, SILTY CLAY (Glacial Till), Gray (10 YR 5/1), w/ interbedded fine-medium sands and gravel, hard, slightly plastic (water added), dry. Coarse Gravel seam from 30.0'-30.25' (wet/saturated).	MW-0629-S3-16		5.2	
			MW-0629-S3-17		5.4	
35			MW-0629-S3-18		6.8	
			MW-0629-S3-19		3.8	
			MW-0629-S3-20		2.9	
40			MW-0629-S3-21		3.4	
			MW-0629-S3-22		3.6	
45			MW-0629-S3-23		3.4	
			MW-0629-S3-24		3.3	
			MW-0629-S3-25		2.5	
50			MW-0629-S3-26		2.8	
			MW-0629-S3-27		3.3	
55			MW-0629-S3-28		3.2	
			MW-0629-S3-29		2.8	
			MW-0629-S3-30		2.3	
60			MW-0629-S3-31		3.5	bentonite-chips
			MW-0629-S3-32		2.9	sand pack
65		SILTY SAND: 10 YR 6/1, SM, SILTY SAND, wet/saturated, med-coarse grained, clay (glacial till) seams from 64 to 65', 66 to 66.5', and 69.5 to 69.75'	MW-0629-S3-33		3.5	PVC sch 40
			MW-0629-S3-34		3.6	
			MW-0629-S3-35		3.2	
70		SILTY CLAY: 10 YR 3/1, CL-ML, SILTY CLAY (Glacial Till) w/fine-med sands and gravels, hard, compact, slightly plastic (water added), moist	MW-0629-S3-36		3.8	
			MW-0629-S3-37		3.6	
75						

WELL CONSTRUCTION LOG

WELL NO.: **MW-0630-S3**

TOTAL DEPTH: **60.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**T. Hubbard**	DRILLING METHOD:	**Mini-sonic**
DATE STARTED:	**1/12/2007 1:15:00 PM**	**COORDINATES:**	
DATE COMPLETED:	**1/12/2007 5:15:00 PM**	**Northing:**	**1650138.77**
		Easting:	**168487.67**
		TOC Elevation:	**719.74**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		GRAVEL: Asphalt, limestone GRAVEL, SLAG	MW-0630-S3-01			Flush Mount PVC sch 40 bent-cement grout
		CLAY: 10 YR 4/6 dark yellowish Brown, CL, silty sandy CLAY, with tr. subrounded pebbles, sands, and gravels, imbedded within matrix, plastic, pliable, sl. moist, odor and visible staining at 4.5'	MW-0630-S3-02		26.1	
5			MW-0630-S3-03		437	
			MW-0630-S3-04		69.9	
		SILTY SAND: SM, Fine-Coarse SILTY SANDS, yellowish brown (10 YR 5/4), Poorly Graded, dry, loose-compact, coarse fraction cemented in pockets. Clay seam from 12'-13' (brown, plastic, cohesive, moist).	MW-0630-S3-05		13.6	
10			MW-0630-S3-06		5.4	
			MW-0630-S3-07		2.6	
15			MW-0630-S3-08		1.0	
		CLAY: 10 YR 3/1, ML, Gray, CLAY TILL, hard, competent, compact, non-plastic, dry, imbedded subrounded pebbles and gravels within clay till matrix	MW-0630-S3-09		0.9	
			MW-0630-S3-10		1.2	
20			MW-0630-S3-11		1.1	
			MW-0630-S3-12		1.2	
25			MW-0630-S3-13		0.8	
			MW-0630-S3-14		1.1	
			MW-0630-S3-15		1.5	
30			MW-0630-S3-16		1.1	
			MW-0630-S3-17		1.0	
35			MW-0630-S3-18		0.8	
			MW-0630-S3-19		1.1	
			MW-0630-S3-20		0.9	
40		CLAYEY SILT: ML-CL, CLAYEY SILT (Glacial Till), w/fine - coarse sand and gravel, slightly plastic (water added), moist, hard	MW-0630-S3-21		2.4	
			MW-0630-S3-22		1.3	
45			MW-0630-S3-23		1.4	
			MW-0630-S3-24		8.3	bentonite-chips
			MW-0630-S3-25		1.3	
50			MW-0630-S3-26		3.4	sand pack
		SILTY GRAVEL: GP-GM, Fine - coarse SILTY GRAVELS with fine - coarse sands, subrounded, loose, wet (saturated)	MW-0630-S3-27		5.9	PVC sch 40
55			MW-0630-S3-28		7.1	
			MW-0630-S3-29		3.2	
60			MW-0630-S3-30		2.3	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0630-S4**

TOTAL DEPTH: **111.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**M. Griles/L. Greene/T. Hubbard**	DRILLING METHOD:	**Mini-sonic**
DATE STARTED:	**1/10/2007 9:30:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**1/12/2007 12:30:00 PM**	**Northing:**	**1650145.04**
		Easting:	**168488**
		TOC Elevation:	**719.47**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		GRAVEL: Asphalt, limestone GRAVEL, SLAG	MW-0630-S4-01			Flush Mount
		CLAY: 10 YR 4/6 dark yellowish Brown, CL, silty sandy CLAY, with tr. subrounded pebbles, sands, and gravels, imbedded within matrix, plastic, pliable, sl. moist, odor and visible staining at 4.5'	MW-0630-S4-02		26.1	PVC sch 40
5			MW-0630-S4-03		437	bent-cement grout
			MW-0630-S4-04		69.9	
			MW-0630-S4-05		13.6	
10		SILTY SAND: SM, Fine-Coarse SILTY SANDS, yellowish brown (10 YR 5/4), Poorly Graded, dry, loose-compact, coarse fraction cemented in pockets. Clay seam from 12'-13' (brown, plastic, cohesive, moist).	MW-0630-S4-06		5.4	
			MW-0630-S4-07		2.6	
15			MW-0630-S4-08		1.0	
		CLAY: 10 YR 3/1, ML, Gray, CLAY TILL, hard, competent, compact, non-plastic, dry, imbedded subrounded pebbles and gravels within clay till matrix	MW-0630-S4-09		0.9	
20			MW-0630-S4-10		1.2	
			MW-0630-S4-11		1.1	
			MW-0630-S4-12		1.2	
25			MW-0630-S4-13		0.8	
			MW-0630-S4-14		1.1	
			MW-0630-S4-15		1.5	
30			MW-0630-S4-16		1.1	
			MW-0630-S4-17		1.0	
35			MW-0630-S4-18		0.8	
			MW-0630-S4-19		1.1	
			MW-0630-S4-20		0.9	
40			MW-0630-S4-21		2.4	
			MW-0630-S4-22		1.3	
45			MW-0630-S4-23		1.4	
			MW-0630-S4-24		8.3	
50		GRAVELLY SAND: 10 YR 4/2 (dark grayish brown) SP, GRAVELLY SAND, with silt, loose, coarse grained, poorly graded, saturated; till lens at 57'	MW-0630-S4-25		1.3	
			MW-0630-S4-26		3.4	
			MW-0630-S4-27		5.9	
55			MW-0630-S4-28		7.1	
			MW-0630-S4-29		3.2	
			MW-0630-S4-30		2.3	
60			MW-0630-S4-31		4.8	
		SILTY CLAY: CL - SILTY CLAY, trace sand and gravel, v. stiff, slight plasticity, dark gray (10 YR 4/1), damp, dry (till)	MW-0630-S4-32		6.6	
65			MW-0630-S4-33		11.7	
			MW-0630-S4-34		1.8	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0630-S4**

TOTAL DEPTH: **111.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**M. Griles/L. Greene/T. Hubbard**	DRILLING METHOD:	**Mini-sonic**
DATE STARTED:	**1/10/2007 9:30:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**1/12/2007 12:30:00 PM**	**Northing:**	**1650145.04**
		Easting:	**168488**
		TOC Elevation:	**719.47**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
70		CLAYEY SAND: SP - CLAYEY SAND, loose - med. dense, cohesive/slight plasticity, brown (10 yr 4/3), moist, 67.5 - 68 - till lens	MW-0630-S4-35		3.3	
			MW-0630-S4-36		2.8	
		SANDY SILT: CL - SANDY SILT, trace gravel, cohesive and plastic, dark grayish brown (10 yr 4/2), damp - dry; sand seam 73 - 74'; 85 - 95' - clayey sand seams < 0.5' approx. every 2'; 90 - 95' - organic material (wood inclusions), dark gray (10 yr 4/1)	MW-0630-S4-37		2.5	
75			MW-0630-S4-38		2.7	
			MW-0630-S4-39		2.1	
80			MW-0630-S4-40		2.7	
			MW-0630-S4-41		2.3	
			MW-0630-S4-42		3.0	
85			MW-0630-S4-43		2.7	
			MW-0630-S4-44		2.2	
			MW-0630-S4-45		2.5	
90			MW-0630-S4-46		1.9	bentonite-chips
			MW-0630-S4-47		3.1	sand pack
95		SAND: SM - SAND, with silt, cohesive, fine - v. fine grained, dense - v. dense, well graded, greenish gray (gray 1, 5/2), v. moist; trace gravel at 104'	MW-0630-S4-48		2.9	PVC sch 40
			MW-0630-S4-49		2.4	
			MW-0630-S4-50		2.8	
100			MW-0630-S4-51		1.5	sand pack
		SILT: ML - SILT (weathered bedrock), dense, cohesive, laminated, v. dark grayish brown (10 yr 3/2), dry	MW-0630-S4-52		1.9	bentonite-chips
105			MW-0630-S4-53		2.7	
			MW-0630-S4-54		3.2	
		SHALE: Weathered SHALE, brown (10 yr 5/3) shale, v. dark gray, end at 111' (10 yr 3/1)	MW-0630-S4-55		1.9	
110			MW-0630-S4-56		2.1	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0631-S1**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone**
LOGGED BY:	**S. Fisher**	DRILLING METHOD:	**Geoprobe**
DATE STARTED:	**1/7/2007 10:00:00 PM**	**COORDINATES:**	
DATE COMPLETED:		**Northing:**	**1650163.82**
		Easting:	**168214.09**
		TOC Elevation:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE				Flush Mount
		SANDY CLAY: Dark brown SANDY CLAY, dry, friable, loose	MW-0631-S1-01		1.2	PVC sch 40 bent-cement grout
			MW-0631-S1-02		48.6	
5			MW-0631-S1-03		2.6	bentonite
		SAND: Light brown SAND, dry, friable, loose	MW-0631-S1-04		7.2	sand pack
			MW-0631-S1-05		4.8	PVC sch 40
10		SAND AND GRAVEL: Reddish-yellow brown SAND AND GRAVEL, loose, dry	MW-0631-S1-06		5.1	
		SILT AND SAND: Gray SILT AND SAND, wet at 14.75, loose, strong odor at 18'; water table at 14.75'	MW-0631-S1-07		191	
15			MW-0631-S1-08	Neg	443	
			MW-0631-S1-09	Neg	635	
		CLAY: Gray CLAY, firm, moist, strong odor	MW-0631-S1-10	Neg	886	
20		SAND AND CLAY: Very fine gray SAND AND CLAY, moist, firm				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0632-S2**

TOTAL DEPTH: **30.00**

PROJECT INFORMATION

PROJECT: **GM/REALM (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **L. Greene**

DATE STARTED: **12/5/2006 10:45:00 AM**

DATE COMPLETED: **12/19/2006**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Jeff Stone**

DRILLING METHOD: **Geoprobe**

COORDINATES:

Northing: **1649633.4**

Easting: **167957.81**

TOC Elevation: **720.66**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT	MW-0632-S2-01		2.3	Flush Mount PVC sch 40 bent-cement grout
		SILT: ML - SILT, trace sand and gravel, med. dense, slight plasticity and cohesive, v. dark grayish brown (10 yr 3/2), dry - damp; little sand 4 - 5'	MW-0632-S2-02		44.2	
			MW-0632-S2-03		5.4	
5		BLANK: No recovery	MW-0632-S2-04		2.8	
		SAND: SP - SAND, trace gravel and silt, med. loose, fine - coarse grained, poorly graded, d. grayish brown, (10 yr 4/2), damp; trace cobbles from 14 - 15'	MW-0632-S2-05		9.2	
10			MW-0632-S2-06		17.1	
			MW-0632-S2-07		74.4	
			MW-0632-S2-08		19.7	
15		SAND: SP - SAND, v. fine grained, little silt, dry	MW-0632-S2-09		65.0	
		SAND: SP - SAND, trace gravel and silt, med. loose, fine - coarse grained, poorly graded, d. grayish brown (10 yr 4/2), damp	MW-0632-S2-10		97.4	sand pack PVC sch 40
20		BLANK: Slough	MW-0632-S2-11			
		SAND: SP - SAND, with gravel and trace cobbles, med. loose, d. brown (10 yr 3/3), saturated, odor, poorly graded, black staining from 24 - 26'; water table at 23'	MW-0632-S2-12		15.6	
			MW-0632-S2-13		62.7	
25		GRAVELLY SAND: SP - GRAVELLY SAND, med. loose, v. dark grayish brown (10 yr 3/3), saturated, odor	MW-0632-S2-14	Neg	22.5	
		TILL: CL - TILL, stiff; end at 30'	MW-0632-S2-15		2.8	
30						

WELL CONSTRUCTION LOG

WELL NO.: **MW-0633-S2**

TOTAL DEPTH: **23.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff and S. Grutney and T. Hill**
LOGGED BY:	**L. Greene / M. Griles**	DRILLING METHOD:	**Geoprobe 0-15; HSA/Split Spoon 15-2**
DATE STARTED:	**12/5/2006 2:10:00 PM**	**COORDINATES:**	
DATE COMPLETED:	**12/18/2006**	**Northing:**	**1650059.75**
		Easting:	**166460.71**
		TOC Elevation:	**721.79**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE	MW-0633-S2-01		4.5	Flush Mount PVC sch 40 bent-cement grout
		SANDY SILT: ML - SANDY SILT, trace gravel, med. dense - dense, v. dark grayish brown (10 yr 3/2), damp, cohesive, slightly plastic	MW-0633-S2-02		0.0	
			MW-0633-S2-03		0.5	
5		BLANK: No recovery				
		SANDY SILT: ML - SANDY SILT, trace gravel, med. dense - dense, v. dark grayish brown (10 yr 3/2), damp, cohesive, slightly plastic	MW-0633-S2-04		0.1	
		SAND: SP - SAND, trace gravel, fine - coarse grained, loose - med. loose, yellowish brown, (10 yr 5/6), dry; odor at 11'	MW-0633-S2-05		153	
10			MW-0633-S2-06		317	
						sand pack
			MW-0633-S2-07		12.1	
						PVC sch 40
			MW-0633-S2-08		0.0	
15		SAND: 10 YR 4/3 Brown, SM/SP, SAND, loose, with subrounded gravels, fine to med. grained, wet/saturated (water table) at 17'	MW-0633-S2-09		2.8	
			MW-0633-S2-10		3.4	
			MW-0633-S2-11		5.7	
20			MW-0633-S2-12		4.3	
		SILTY CLAY: 10 YR 3/1 Gray, ML, SILTY CLAY TILL, non-plastic, hard, with imbedded subrounded pebbles and gravels, moist				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0634-S2B**

TOTAL DEPTH: **40.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**T. Hubbard**	DRILLING METHOD:	**Mini-sonic**
DATE STARTED:	**12/19/2006 9:30:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**12/20/2006 2:30:00 PM**	**Northing:**	**1650651.55**
		Easting:	**168770.45**
		TOC Elevation:	**719.66**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE	MW-0634-S2B-01		0.0	Flush Mount PVC sch 40 bent-cement grout
		SAND AND GRAVEL: SP - Fine - coarse SANDS AND GRAVEL, little silt yellowish Brown (10 YR 5/4) to Brown (10 YR 4/3), loose/friable, dry with seam of CL-ML, silty clay with sand and gravel, plastic, firm, moist from 8.5 to 9.0' bgs	MW-0634-S2B-02		0.1	
5			MW-0634-S2B-03		0.5	
			MW-0634-S2B-04		0.3	
			MW-0634-S2B-05		0.9	
10		SILT: ML - sandy gravelly SILT, Brown (10 YR 4/3) with medium, faint, yellowish Brown (10 YR 5/8) mottles, firm, non-plastic, dry, with distinct clear contact to ML-CL (below)	MW-0634-S2B-06		0.6	
			MW-0634-S2B-07	Neg	0.4	
		CLAYEY SILT: ML-CL, CLAYEY SILT (Glacial Till) with fine - coarse sand and gravel, Dark Gray (10 YR 4/1), slightly plastic (added water), moist, Hard with abrupt smooth contact at 33.5 to SW - Medium Sands; water table at 33.5'	MW-0634-S2B-08		0.1	
15			MW-0634-S2B-09		0.1	
			MW-0634-S2B-10		0.3	
20			MW-0634-S2B-11		0.1	
			MW-0634-S2B-12		0.0	
			MW-0634-S2B-13		0.2	
25			MW-0634-S2B-14		0.1	
			MW-0634-S2B-15		0.1	bentonite-chips
30			MW-0634-S2B-16		0.2	sand pack
			MW-0634-S2B-17 17		0.0	PVC sch 40
		SAND: SW - Medium SANDS, Gray (10 YR 5/1) loose - compact / friable, saturated; water at 33.5'	MW-0634-S2B-18	Neg		
35			MW-0634-S2B-19		0.1	
		CLAYEY SILT: ML-CL, CLAYEY SILT (Glacial Till) with fin - coarse sand and gravel, Dark gray (10 YR 4/1), slightly plastic (added water), moist, hard	MW-0634-S2B-20		0.0	
40						

WELL CONSTRUCTION LOG

WELL NO.: **MW-0635-S2B**

TOTAL DEPTH: **27.50**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**M. Griles**	DRILLING METHOD:	**Mini-sonic**
DATE STARTED:	**1/9/2007 9:00:00 AM**	**COORDINATES:**	
DATE COMPLETED:		**Northing:**	**1651013.76**
		Easting:	**168958.81**
		TOC Elevation:	**718.41**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT	MW-0635-S2B-01		1.7	PVC sch 40
		LIMESTONE: LIMESTONE, Gravel				bent-cement grout
		CLAY: 10 YR 4/6 dark yellowish Brown, ML/CL, silty sandy CLAY, w/ trace subrounded pebbles, sands, and gravels imbedded, plastic, pliable, slightly moist, from 8-8.5 interval of staining with slight odor	MW-0635-S2B-02		2.4	
			MW-0635-S2B-03		2.2	
5			MW-0635-S2B-04		2.4	
		SAND: 10 YR 5/4, yellowish Brown, SM, silty SAND, dirty, dry, loose, med - coarse grained with trace fines in mix, med. graded/med. sorting, Wet/Saturated at 10' until end of interval; (water table documented at 10.75')	MW-0635-S2B-05		4.0	
10			MW-0635-S2B-06		2.2	
		CLAY: 10 YR 3/1, Gray, ML-CL, silty CLAY Till, compact, cohesive, competent, slightly plastic and moist, at beginning of interval there is 6" of v. fine grained well sorted / saturated sand, gray, return to till	MW-0635-S2B-07		3.0	
			MW-0635-S2B-08		2.7	bentonite-chips
15			MW-0635-S2B-09		3.5	sand pack
		SAND: 10 YR 6/2, SM/SW, light brownish Gray, well graded, dirty SAND, with high fines count, loose, wet/saturated	MW-0635-S2B-10		3.6	PVC sch 40
20			MW-0635-S2B-11		4.8	
			MW-0635-S2B-12		4.1	
			MW-0635-S2B-13		3.6	
25			MW-0635-S2B-14		2.3	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0635-S3**

TOTAL DEPTH: **50.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**M. Griles**	DRILLING METHOD:	**Mini-sonic**
DATE STARTED:	**1/5/2006 2:00:00 PM**	**COORDINATES:**	
DATE COMPLETED:	**1/8/2006 3:00:00 PM**	**Northing:**	**1651013.58**
		Easting:	**168967.99**
		TOC Elevation:	**718.37**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT	MW-0635-S3-01		1.7	Flush Mount PVC sch 40 bent-cement grout
		LIMESTONE: LIMESTONE, Gravel				
		CLAY: 10 YR 4/6 dark yellowish Brown, ML/CL, silty sandy CLAY, w/ trace subrounded pebbles, sands, and gravels imbedded, plastic, pliable, slightly moist, from 8-8.5 interval of staining with slight odor	MW-0635-S3-02		2.4	
			MW-0635-S3-03		2.2	
5			MW-0635-S3-04		2.4	
		SAND: 10 YR 5/4, yellowish Brown, SM, silty SAND, dirty, dry, loose, med - coarse grained with trace fines in mix, med. graded/med. sorting, Wet/Saturated at 10' until end of interval; (water table documented at 10.75')	MW-0635-S3-05		4.0	
10			MW-0635-S3-06		2.2	
		CLAY: 10 YR 3/1, Gray, ML-CL, silty CLAY Till, compact, cohesive, competent, slightly plastic and moist, at beginning of interval there is 6" of v. fine grained well sorted / saturated sand, gray, return to till	MW-0635-S3-07		3.0	
			MW-0635-S3-08		2.7	
15			MW-0635-S3-09		3.5	
		SAND: 10 YR 6/2, SM/SW, light brownish Gray, well graded, dirty SAND, with high fines count, loose, wet/saturated	MW-0635-S3-10		3.6	
20			MW-0635-S3-11		4.8	
			MW-0635-S3-12		4.1	
			MW-0635-S3-13		3.6	
25			MW-0635-S3-14		2.3	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0635-S3**

TOTAL DEPTH: **50.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**M. Griles**	DRILLING METHOD:	**Mini-sonic**
DATE STARTED:	**1/5/2006 2:00:00 PM**	**COORDINATES:**	
DATE COMPLETED:	**1/8/2006 3:00:00 PM**	**Northing:**	**1651013.58**
		Easting:	**168967.99**
		TOC Elevation:	**718.37**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
		CLAY: 10 YR 3/1 gray, CLAY till, ML-CL, silty, cohesive, competent	MW-0635-S3-15		2.1	
30			MW-0635-S3-16		1.7	
			MW-0635-S3-17		1.7	
			MW-0635-S3-18		2.2	
35			MW-0635-S3-19		0.6	
			MW-0635-S3-20		0.8	
40			MW-0635-S3-21		1.0	bentonite
			MW-0635-S3-22		0.7	
			MW-0635-S3-23		0.8	sand pack
45		SAND AND GRAVEL: SP, Fine - coarse SAND AND GRAVEL, Gray (10 YR 5/1), loose, Wet	MW-0635-S3-24		0.3	PVC sch 40
		CLAYEY SILT: ML-CL, CLAYEY SILT with fine - med. sands and gravel, (Glacial Till) Gray (10 YR 5/1), slightly plastic (water added), hard, moist; [Note: drove casing into Till an extra foot to verify that it was a competent layer.]	MW-0635-S3-25	Neg at 49.5'	0.2	
50						

WELL CONSTRUCTION LOG

WELL NO.: **MW-0636-S2A**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION

PROJECT: **GM/REALM (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **T. Hubbard**

DATE STARTED: **12/18/2006 10:00:00 PM**

DATE COMPLETED: **12/19/2006 12:30:00 PM**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Jim Robinson**

DRILLING METHOD: **Mini-sonic**

COORDINATES:

Northing: **1650884.69**

Easting: **168953.32**

TOC Elevation: **719.12**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE				Flush Mount
		SILTY SAND: SP-SM, Fine - med. SILTY SANDS with gravel, yellowish brown (10 YR 5/4), loose/friable, dry	MW-0636-S2A-01		29.8	PVC sch 40 bent-cement grout
			MW-0636-S2A-02		9.2	
			MW-0636-S2A-03		24.6	
5			MW-0636-S2A-04		8.6	
			MW-0636-S2A-05		46.0	sand pack
10			MW-0636-S2A-06		108	PVC sch 40
			MW-0636-S2A-07	Neg at 14'	137	
		SANDY SILT: ML-SANDY SILT with gravel, Gray (10 YR 5/1) slight plasticity, soft, moist	MW-0636-S2A-08		2.2	
15		SAND: SP - Fine - coarse SANDS with gravel, gray (10 YR 5/1), loose saturated (wet)	MW-0636-S2A-09		0.8	
			MW-0636-S2A-10	Neg	0.0	
20		SILTY CLAY: CL-ML, SILTY CLAY with gravel (Glacial Till), gray stiff, moist, plastic (10 YR 5/1)	MW-0636-S2A-11		0.0	
			MW-0636-S2A-12		0.0	
25						

WELL CONSTRUCTION LOG

WELL NO.: **MW-0636-S2B**

TOTAL DEPTH: **35.00**

PROJECT INFORMATION

PROJECT: **GM/REALM (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **L. Greene**

DATE STARTED: **1/11/2007 10:00:00 PM**

DATE COMPLETED: **1/12/2007 2:15:00 PM**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **John**

DRILLING METHOD: **4/6 Minisonic**

COORDINATES:

Northing: **1650884.81**

Easting: **168948.75**

TOC Elevation: **719.61**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE				Flush Mount
		SAND: SP - SAND, trace gravel, silt and cobbles, med. dense, dark yellowish brown (10 yr 3/6), dry	MW-0636-S2B-01		22.3	PVC sch 40
			MW-0636-S2B-02		20.4	bent-cement grout
			MW-0636-S2B-03		24.0	
5			MW-0636-S2B-04		11.8	
		SANDY CLAY: CL - SANDY CLAY, trace gravel, stiff - v. stiff, dark yellowish brown (10 yr 3/6), dry	MW-0636-S2B-05		158	
10		SAND: SP - SAND, with gravel, med. loose, dark yellowish brown (10 yr 3/6), dry	MW-0636-S2B-06		2.4	
		SILT: ML - SILT with sand, trace gravel and clay, med. soft, yellowish brown (10 yr 5/6), dry	MW-0636-S2B-07		18.2	
			MW-0636-S2B-08		17.0	
15			MW-0636-S2B-09		4.7	
			MW-0636-S2B-10	Neg	6.3	
20			MW-0636-S2B-11		1.8	
		SILTY CLAY: CL - SILTY CLAY (till), trace sand, stiff - v. stiff, med. plasticity, dark gray (10 yr 4/1), dry	MW-0636-S2B-12		3.8	
			MW-0636-S2B-13		4.2	
25						sand pack
			MW-0636-S2B-14		3.4	PVC sch 40
		SAND: SW - SAND, fine - med. grained, dark gray (10 yr 4/1), moist	MW-0636-S2B-15		2.3	
30			MW-0636-S2B-16	Neg	5.9	
		SILTY CLAY: CL - SILTY CLAY (till), trace sand and gravel, stiff - v. stiff, dark gray (10 yr 4/1), dry, slight plasticity, + cohesive, end at 35'	MW-0636-S2B-17		2.4	sand pack
						bentonite-chips
35			MW-0636-S2B-18		1.7	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0636-S3**

TOTAL DEPTH: **60.00**

PROJECT INFORMATION

PROJECT: **GM/REALM (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **L. Greene**

DATE STARTED: **12/13/2006 9:35:00 PM**

DATE COMPLETED: **12/14/2006 4:35:00 AM**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **John**

DRILLING METHOD: **4/6 Rotosonic**

COORDINATES:

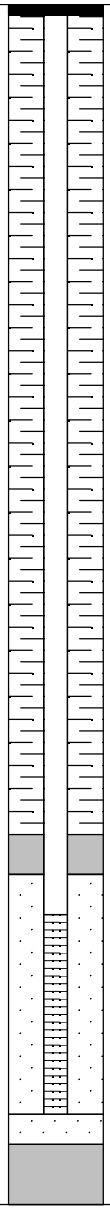
Northing: **1650884.53**

Easting: **168960.66**

TOC Elevation: **719.67**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION
0		CONCRETE: CONCRETE
5		SAND: SP - SAND, trace gravel, silt, and cobbles, med. dense, dark yellowish brown (10 yr 3/6), dry
		SANDY CLAY: CL - SANDY CLAY, trace gravel, stiff - v. stiff, dark yellowish brown (10 yr 3/6), dry
10		SAND: SP - SAND, with gravel, med. loose, dark yellowish brown (10 yr 3/6), dry
15		SILT: ML - SILT, with sand, trace gravel, loose, yellowish brown (10 yr 5/6), dry
20		SILTY CLAY: CL - SILTY CLAY (till), trace sand and gravel, med. stiff - stiff, dark gray (10 yr 4/1), dry, slightly plastic, cohesive
25		SAND: SW - SAND, fine - med. grained, dark gray (10 yr 4/1), saturated at interface, moist throughout
30		
35		SILTY CLAY: CL - SILTY CLAY (till), trace sand and gravel, med. stiff - stiff, dark gray (10 yr 4/1), dry, slightly plastic and cohesive
40		
45		SAND: SP - SAND, trace gravel, fine - coarse grained, dense, dark gray (10 yr 4/1), v. moist; saturated at 50 - 54.5'
50		
		SAND: SW - SAND, v. fine grained, med. loose - med. dense, dark gray (10 yr 4/1), moist
55		SILTY CLAY: CL - SILTY CLAY (till), trace gravel, v. stiff, dark gray (10 yr 4/1), dry, slightly plastic and cohesive; end at 60'
60		

SAMPLE ID	SUDAN IV	PID (ppm)
MW-0636-S3-01		22.3
MW-0636-S3-02		20.4
MW-0636-S3-03		24.0
MW-0636-S3-04		11.8
MW-0636-S3-05		158
MW-0636-S3-06		2.4
MW-0636-S3-07		18.2
MW-0636-S3-08		17.0
MW-0636-S3-09		11.9
MW-0636-S3-10	Neg, 19.9'	1.2
MW-0636-S3-11		8.9
MW-0636-S3-12		28.2
MW-0636-S3-13		7.3
MW-0636-S3-14		52.5
MW-0636-S3-15		47.5
MW-0636-S3-16		23.0
MW-0636-S3-17		31.9
MW-0636-S3-18	Neg, 34.4'	48.0
MW-0636-S3-19		
MW-0636-S3-20		
MW-0636-S3-21		8.2
MW-0636-S3-22		107
MW-0636-S3-23		16.0
MW-0636-S3-24		32.1
MW-0636-S3-25		19.2
MW-0636-S3-26		33.8
MW-0636-S3-27		15.5
MW-0636-S3-28	Neg, 55.9'	63.7
MW-0636-S3-29		42.5
MW-0636-S3-30		28.9



WELL CONSTRUCTION DETAILS:

- Flush Mount
- PVC sch 40
- bent-cement grout
- bentonite-chips
- sand pack
- PVC sch 40
- sand pack
- bentonite-chips

WELL CONSTRUCTION LOG

WELL NO.: **MW-0637-S3**

TOTAL DEPTH: **52.00**

PROJECT INFORMATION

PROJECT: **GM/REALM (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **L. Greene**

DATE STARTED: **12/11/2006**

DATE COMPLETED: **12/12/2006 1:23:00 AM**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Jim Robinson**

DRILLING METHOD: **4/6 Rotosonic**

COORDINATES:

Northing: **1650682.25**

Easting: **169279.89**

TOC Elevation: **719.78**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE	MW-0637-S3-01		0.0	Flush Mount
		SILTY SAND: SM - SILTY SAND, trace gravel, med. dense, fine to med. grained, poorly graded, brown (10 yr 4/3), dry; trace cobbles from 6' - 11.75'	MW-0637-S3-02		8.4	PVC sch 40
			MW-0637-S3-03		11.0	bent-cement grout
5			MW-0637-S3-04		8.4	
			MW-0637-S3-05		14.2	
10			MW-0637-S3-06		33.1	
		SILT: ML - SILT, trace gravel, med. loose, brown (10 yr 5/3) dry, slightly cohesive	MW-0637-S3-07		17.7	
		SILT: ML - SILT, trace fine sand and gravel, med. dense, dark grayish brown (10 yr 4/2) slightly cohesive and plastic, dry	MW-0637-S3-08		0.0	
15			MW-0637-S3-09		15.5	
		SAND: SP - SAND, trace fine - coarse gravel, fine grained, med. loose, yellowish brown (10 yr 3/6), dry	MW-0637-S3-10		45.1	
20		SAND: SP - SAND, trace fine gravel, fine - med. grained, brown (10 yr 4/3), moist to v. moist	MW-0637-S3-11		32.6	
			MW-0637-S3-12		40.9	
			MW-0637-S3-13		0.0	
25			MW-0637-S3-14	Neg 26.75'	0.0	
		SILTY CLAY: CL -SILTY CLAY, trace gravel, v. stiff - hard, dark gray (10 yr 4/1), damp - dry, cohesive and plastic (till)	MW-0637-S3-15		0.7	
30			MW-0637-S3-16		2.2	
			MW-0637-S3-17		10.9	
			MW-0637-S3-18		3.7	
35		SAND: SP - SAND, with silt and clay, med. loose - med. dense, dark gray (10 yr 4/1), v. moist, cohesive	MW-0637-S3-19		11.2	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0637-S3**

TOTAL DEPTH: **52.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**4/6 Rotosonic**
DATE STARTED:	**12/11/2006**	**COORDINATES:**	
DATE COMPLETED:	**12/12/2006 1:23:00 AM**	**Northing:**	**1650682.25**
		Easting:	**169279.89**
		TOC Elevation:	**719.78**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
		SILTY CLAY: CL - SILTY CLAY, trace gravel, v. stiff - hard, dark gray (10 yr 4/1), damp - dry, cohesive and plastic (till)	MW-0637-S3-20		5.6	
40			MW-0637-S3-21		8.7	bentonite
			MW-0637-S3-22		2.2	sand pack
			MW-0637-S3-23		10.2	
45						PVC sch 40
		SAND: SP - SAND, trace fine gravel and silt, med. loose, med. - coarse grained, dark gray (10 yr 4/1), saturated	MW-0637-S3-24	Neg at 37'	7.3	
			MW-0637-S3-25	Neg 49.5'	5.6	
50		SILTY CLAY: CL - SILTY CLAY, trace gravel, v. stiff - hard, dark gray (10 yr 4/1), damp dry, cohesive and plastic (till)	MW-0637-S3-26		6.8	
		BLANK: NR - drilling appears to have till hardness; end at 52'				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0638-S2B**

TOTAL DEPTH: **35.00**

PROJECT INFORMATION

PROJECT: **GM/REALM (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **T. Hubbard**

DATE STARTED: **12/19/2006 2:00:00 AM**

DATE COMPLETED: **12/19/2006 5:40:00 AM**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Jim Robinson**

DRILLING METHOD: **Mini-sonic**

COORDINATES:

Northing: **1650324.34**

Easting: **168734.88**

TOC Elevation: **719.85**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE	MW-0638-S2B-01		0.0	Flush Mount
		SILTY SAND: SP - SM, Fine - coarse SILTY SANDS with gravel, Dark yellowish brown (10 YR 3/6), compact	MW-0638-S2B-02		0.2	PVC sch 40 bent-cement grout
			MW-0638-S2B-03		3.6	
5		SANDY SILT: ML-CL, Very SANDY SILTY, fine - coarse sands and gravel, Dark yellowish Brown (10 yr 3/6), very stiff, non-plastic, dry	MW-0638-S2B-04		19.2	
		SILTY SAND: SP-SM, Fine - coarse SILTY SANDS, tr. gravel reddish Brown (5 yr 4/4) loose/friable, dry	MW-0638-S2B-05		8.2	
10		SANDY SILT: ML-CL, Very SANDY SILT with gravel, dark yellowish brown (10 yr 3/6)	MW-0638-S2B-06	Neg at 11.5'	1.4	
		SILTY SAND: SP-SM, Fine - coarse SILTY SANDS with gravel, yellowish brown (10 yr 5/6) loose, friable, dry	MW-0638-S2B-07		8.2	
			MW-0638-S2B-08		707	
15		CLAYEY SILT: ML-CL, CLAYEY SILT (Glacial Till), with gravel, Dark gray (10 yr 4/1) slightly plastic (added water) very stiff, dry	MW-0638-S2B-09	Pos at 17'	759	
		SILTY SAND: SP-SM, Fine - coarse SILTY SANDS with gravel, yellowish brown (10 yr 5/6) loose/friable, dry	MW-0638-S2B-10		110	
20		SAND: SP - Fine - coarse SANDS, gray (10 yr 5/1) friable/loose, dry-moist, strong/heavy odor and slight sheen at 16.5 - 17.5' (positive Sudan IV)	MW-0638-S2B-11		67.0	
			MW-0638-S2B-12		31.0	
		CLAYEY SILT: ML-CL, CLAYEY SILT (Glacial Till) with gravel, Dark gray (10 yr 4/1), slightly plastic (added water), very stiff - hard, moist	MW-0638-S2B-13		8.7	
25			MW-0638-S2B-14		6.8	
			MW-0638-S2B-15		3.2	sand pack PVC sch 40
30		SILTY GRAVEL: GM, SILTY GRAVEL with fine - coarse sands, yellowish brown (10 yr 5/4) loose, saturated with gradual contact to. . .	MW-0638-S2B-16		0.0	
			MW-0638-S2B-17	Neg		
		CLAYEY SILT: ML-CL, CLAYEY SILT (Glacial Till) with gravel, Gray Brown (10 yr 5/2), slightly plastic (added water), very stiff, moist	MW-0638-S2B-18		0.0	
35						

WELL CONSTRUCTION LOG

WELL NO.: **MW-0639-S2A**

TOTAL DEPTH: **22.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jeff Stone / Kevin Simpson / Dale**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**Geoprobe/HSA**
DATE STARTED:	**12/5/2006 9:15:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**12/6/2006**	**Northing:**	**1649827.07**
		Easting:	**169703.88**
		TOC Elevation:	**716.12**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT	MW-0639-S2A-01		0.0	Flush Mount PVC sch 40 bent-cement grout
		SILT: ML - SILT, trace gravel, med. dense dark yellowish brown (10 YR 3/6), dry, slightly cohesive and plastic	MW-0639-S2A-02		4.6	
			MW-0639-S2A-03		0.0	
5		SAND: SP - SAND, trace gravel and silt, med. loose, dark yellowish brown, (10 yr 4/6), dry, poorly graded	MW-0639-S2A-04		0.2	
			MW-0639-S2A-05		0.0	sand pack
		SILT: ML - Sandy SILT, slightly plastic and cohesive, d. yellowish brown (10 yr 4/6), moist				
10		SILT: ML - SILT, trace sand and gravel, med. dense, slight plasticity, trace cobbles, d. gray (10 yr 4/1), damp	MW-0639-S2A-06		0.0	PVC sch 40
			MW-0639-S2A-07		0.1	
		SAND: SP - SAND, trace gravel, med. loose, med. grained, d. yellowish brown (10 yr 4/6), damp				
		BLANK: No recovery	MW-0639-S2A-08		7.6	
15		GRAVELLY SAND: SP - GRAVELLY SAND, trace silt, med. loose, poorly graded, brown (10 yr 4/3), saturated, water table at 15.5'	MW-0639-S2A-09		0.0	
		SAND: SP - SAND, trace gravel, med. loose, med. - coarse grained, poorly graded, d. grayish brown (10 yr 4/2), saturated	MW-0639-S2A-10		0.1	
20						

WELL CONSTRUCTION LOG

WELL NO.: **MW-0640-S2**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**4/6 Roto-sonic**
DATE STARTED:	**11/20/2006 11:40:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**11/20/2006 12:15:00 PM**	**Northing:**	**1651833.66**
		Easting:	**167766.39**
		TOC Elevation:	**724.48**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		GRAVELLY SAND: SP - GRAVELLY SAND, little silt, 10 yr 3/2, damp	MW-0640-S2-01		0.0	Flush Mount PVC sch 40 bent-cement grout
			MW-0640-S2-02		4.5	
			MW-0640-S2-03		0.7	
5			MW-0640-S2-04		0.0	
			MW-0640-S2-05		0.3	
10			MW-0640-S2-06		5.8	
						sand pack
			MW-0640-S2-07		0.2	
		SANDY SILT: ML - SANDY SILT, trace gravel, med. dense, 10 yr 3/2, damp				PVC sch 40
		GRAVELLY SAND: SP - GRAVELLY SAND, med. grained, loose, 10 yr 3/2, damp	MW-0640-S2-08		279	
15		SANDY GRAVEL: GP - SANDY GRAVEL, loose, 10 yr 2/1, black staining, odor, damp; water table at 16'	MW-0640-S2-09		471	
		SANDY SILT: ML - SANDY SILT, trace gravel, med. dense, 10 yr 3/1, saturated, black staining, odor; water table at 16'	MW-0640-S2-10		38.8	
20		SAND: SP - SAND, trace gravel, fine - med. grained, loose, 10 yr 4/6, moist	MW-0640-S2-11		1.5	
		SAND: SP - SAND, little gravel, loose, 10 yr 3/2, moist, fine - med. grained; end of boring	MW-0640-S2-12		0.9	
						sand pack
25			MW-0640-S2-13		2.0	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0642-S2**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION

PROJECT: **GM/REALM (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **L. Greene**

DATE STARTED: **11/20/2006 2:30:00 PM**

DATE COMPLETED: **11/20/2006 3:30:00 PM**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Jim Robinson**

DRILLING METHOD: **4/6 Roto-sonic**

COORDINATES:

Northing: **1651653.14**

Easting: **167952.45**

TOC Elevation: **722.93**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		SAND: SP - SAND, little gravel, 10 yr 3/3, dry	MW-0642-S2-01		1.2	Flush Mount PVC sch 40 bent-cement grout
		SANDY SILT: ML - SANDY SILT, trace gravel, med. dense, 10 yr 3/2, damp	MW-0642-S2-02		1.5	
		SANDY SILT: ML - SANDY SILT, trace gravel, fine - coarse grained sand, dense - med. dense, 10 yr 3/6, damp	MW-0642-S2-03		0.5	
5			MW-0642-S2-04		0.7	
			MW-0642-S2-05		1.0	sand pack
10		BLANK: no recovery	MW-0642-S2-06		0.9	PVC sch 40
			MW-0642-S2-07		1.0	
		SAND: SP - SAND, little gravel, loose, fine - med. grained, 10 yr 2/1, dry	MW-0642-S2-08		1.0	
15		SAND: SP - SAND, fine - med. grained, med. loose, 10 yr 2/1, saturated, odor	MW-0642-S2-09		1356	
		GRAVELLY SAND: SP - GRAVELLY SAND, loose, 10 yr 2/1, saturated, odor; end at 25'	MW-0642-S2-10		23.9	
20			MW-0642-S2-11		11.0	natural formation
			MW-0642-S2-12		2.0	
25			MW-0642-S2-13		2.2	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0643-S2**

TOTAL DEPTH: **22.00**

PROJECT INFORMATION

PROJECT: **GM/REALM (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **L. Greene**

DATE STARTED: **11/21/2006 10:55:00 AM**

DATE COMPLETED: **11/21/2006 12:00:00 PM**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Jim Robinson**

DRILLING METHOD: **4/6 Roto-sonic**

COORDINATES:

Northing: **1651968.29**

Easting: **167194.43**

TOC Elevation: **725.24**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE	MW-0643-S2-01		0.1	Flush Mount PVC sch 40 bent-cement grout
		SANDY SILT: ML - SANDY SILT, some gravel, med. dense, 10 yr 3/6, moist; dense from 2 - 5'	MW-0643-S2-02		0.0	
			MW-0643-S2-03		0.0	
5		SAND: SP - SAND, some gravel, med. loose, med. grained, 10 3/6, damp; moist from 6 - 8'; dry and 10 yr 4/3 from 8 - 11.75'	MW-0643-S2-04		0.0	
			MW-0643-S2-05		0.0	
10			MW-0643-S2-06		0.9	sand pack
		SAND: SP - SAND, med. loose, fine grained, 10 yr 5/4, damp	MW-0643-S2-07		0.0	PVC sch 40
			MW-0643-S2-08	Neg	0.0	
15		SAND: SP - SAND, little gravel, fine - med. grained, loose, 10 yr 4/4, saturated; water table at 14.75'	MW-0643-S2-09		1.1	
		SANDY CLAY: CL - SANDY CLAY, trace gravel, dense, 10 yr 5/2, damp				
		SANDY GRAVEL: GP - SANDY GRAVEL, loose, 10 yr 3/4, saturated; end of boring at 22'	MW-0643-S2-10		0.3	
20			MW-0643-S2-11		0.1	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0644-S2**

TOTAL DEPTH: **22.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dale Remmler**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**HSA**
DATE STARTED:	**12/7/2006 1:30:00 PM**	**COORDINATES:**	
DATE COMPLETED:	**12/7/2006 3:30:00 PM**	**Northing:**	**1651711.92**
		Easting:	**166933.06**
		TOC Elevation:	**725.37**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		SILTY CLAY: CL - SILTY CLAY, med. stiff, trace sand, v. dark brown (10 yr 2/2), high plasticity, dry	MW-0644-S2-01		2.0	Flush Mount PVC sch 40 bent-cement grout
			MW-0644-S2-02		2.2	
			MW-0644-S2-03		3.6	
5		SILTY SAND: SM - SILTY SAND, d. brown (10 yr 3/3), damp cohesive	MW-0644-S2-04		2.1	
		BLANK: No recovery				
		SAND: SP - SAND, with gravel and cobbles, d. yellowish brown (10 yr 4/6), dry, poorly graded	MW-0644-S2-05		1.9	
		BLANK: No recovery				
10		SAND: SP - SAND, with gravel and trace cobbles, d. yellowish brown (10 yr 4/6), dry, poorly graded	MW-0644-S2-06		2.1	sand pack
		BLANK: No recovery	MW-0644-S2-07		1.6	PVC sch 40
		SAND: SP - SAND, with gravel and cobbles, d. yellowish brown (10 yr 4/6), poorly graded, dry; saturated at 14.75'	MW-0644-S2-08		2.8	
15		BLANK: No recovery	MW-0644-S2-09		22.7	
		SAND: SP - SAND, with gravel and cobbles, d. yellowish brown (10 yr 4/6), poorly graded, saturated, black staining and odor; end at 22'	MW-0644-S2-10		10.4	
20			MW-0644-S2-11		20.22	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0645-S2**

TOTAL DEPTH: **22.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**4/6 Roto-sonic**
DATE STARTED:	**11/21/2006 8:40:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**11/21/2006 9:20:00 AM**	**Northing:**	**1652098.82**
		Easting:	**167550.31**
		TOC Elevation:	**725.03**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE	MW-0645-S2-01		3.7	Flush Mount PVC sch 40 bent-cement grout
		SILT: ML - GRAVELLY SILT, some sand, med. dense, 10 yr 3/6, moist; dense from 2 - 5.5'	MW-0645-S2-02		0.5	
			MW-0645-S2-03		1.1	
5		GRAVELLY SAND: SP - GRAVELLY SAND, fine - med. grained, loose, 10 yr 4/4, dry; 10 yr 4/1 from 8 - 13'; 10 yr 5/8 from 13 - ____	MW-0645-S2-04		1.0	
			MW-0645-S2-05		3.6	
10			MW-0645-S2-06		2.6	sand pack
			MW-0645-S2-07		1.3	PVC sch 40
		SAND: SP - SAND, fine grained, med. loose, 10 yr 4/3, damp	MW-0645-S2-08		6.1	
15		GRAVELLY SAND: SP - GRAVELLY SAND, coarse grained, loose, 10 yr 3/4, saturated; water table at 15'	MW-0645-S2-09		1.3	
			MW-0645-S2-10		4.6	
20						

WELL CONSTRUCTION LOG

WELL NO.: **MW-0647-S2**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION

PROJECT: **GM/REALM (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **L. Greene**

DATE STARTED: **12/5/2006 2:00:00 PM**

DATE COMPLETED:

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Jeff Stone**

DRILLING METHOD: **Geoprobe/HSA**

COORDINATES:

Northing: **1651070.54**

Easting: **166888.95**

TOC Elevation: **725.56**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT	MW-0647-S2-01		7.9	Flush Mount PVC sch 40 bent-cement grout
		SILT: ML - SILT, trace sand and gravel and cobbles, med. dense - dense, slightly cohesive and plastic, dark yellowish brown (10 yr 4/4), dry	MW-0647-S2-02		41.8	
			MW-0647-S2-03		6.1	
5		BLANK: No recovery	MW-0647-S2-04			
		SAND: SP - SAND, trace gravel, loose, med. grained, poorly graded, dark yellowish brown (10 yr 4/6), dry	MW-0647-S2-05		5.8	
10		SAND: SP - SAND, loose, fine grained, well graded, brownish yellow (10 yr 6/6), dry	MW-0647-S2-06			
		BLANK: Slough	MW-0647-S2-07		1.1	
		SAND: SP - SAND, trace gravel, med. loose, fine - coarse grained, poorly graded, dark yellowish brown (10 yr 4/4), dry; trace cobbles from 16 - 18'; saturation at 18.65'	MW-0647-S2-08		1.4	sand pack
15			MW-0647-S2-09		1.4	PVC sch 40
			MW-0647-S2-10		8.4	
20			MW-0647-S2-11		5.2	
		GRAVELLY SAND: SP - GRAVELLY SAND, med. loose, coarse grained, dark yellowish brown (10 yr 4/4)	MW-0647-S2-12		6.9	
		SAND: SP - SAND, fine - med. grained, dark gray (10 yr 4/1), saturated	MW-0647-S2-13	Neg	4.5	
25		TILL: CL - TILL, dark gray (10 yr 4/1), trace gravel, v. stiff (till in shoe), end at 25.1'				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0649-S1**

TOTAL DEPTH: **15.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jim Robinson**
LOGGED BY:	**L. Greene**	DRILLING METHOD:	**4/6 Roto-sonic**
DATE STARTED:	**11/22/2006 11:00:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**11/22/2006 11:55:00 AM**	**Northing:**	**1650371.43**
		Easting:	**164833.66**
		TOC Elevation:	**721.75**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		SANDY SILT: ML - SANDY SILT, trace gravel, dense, 10 yr 3/6, damp	MW-0649-S1-01		0.0	Flush Mount PVC sch 40 bent-cement grout
			MW-0649-S1-02		0.3	sand pack
		SILTY SAND: ML - SILTY SAND, trace gravel, med. loose, 10 yr 2/1, moist, slight odor	MW-0649-S1-03		0.6	PVC sch 40
5		SANDY SILT: ML - SANDY SILT, trace gravel, med. dense, 10 yr 2/2, wet, slight odor, black staining	MW-0649-S1-04		1.6	
			MW-0649-S1-05		1.0	
10		SILTY SAND: SM - SILTY SAND, trace gravel, med. loose, 10 yr 2/1, moist, wood inclusion	MW-0649-S1-06		5.1	
		SILT: ML - SILT, med. dense, 10 yr 2/1, damp				
		GRAVELLY SAND: SP - GRAVELLY SAND, trace small cobbles, med. loose, 10 yr 2/1, saturated; water table at 12'	MW-0649-S1-07		3.2	
		TILL: CL - TILL, v. dense, trace gravel, 10 yr 3/1, dry; end of boring at 15'	MW-0649-S1-08		2.0	sand pack
15						

WELL CONSTRUCTION LOG

WELL NO.: **MW-0650-S1**

TOTAL DEPTH: **16.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jon Keifer**
LOGGED BY:	**Tai Hubbard**	DRILLING METHOD:	**Mini-sonic**
DATE STARTED:	**1/2/2007 11:45:00 PM**	**COORDINATES:**	
DATE COMPLETED:	**1/3/2007 3:45:00 AM**	**Northing:**	**1650966.37**
		Easting:	**166643.21**
		TOC Elevation:	**722.09**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE				Flush Mount
		SILTY SAND: SP-SM, Fine - coarse SILTY SANDS with gravel, little cobbles, dark yellowish brown (10 yr, 4/4), dry, compact (note: concrete fill material encountered from 5' - 6')	MW-0650-S1-01		0.7	PVC sch 40 bent-cement grout
			MW-0650-S1-02		0.6	
			MW-0650-S1-03		0.5	
5						sand pack
		SILTY SAND: SM, med. - coarse SILTY SAND and gravel, strong brown (7.5 yr 4/6) moist, compact	MW-0650-S1-04		0.6	
		SAND AND GRAVEL: SP - Fine - coarse SAND AND GRAVEL, trace silt, dark yellowish brown (10 yr, 4/6), dry - moist, compact; borehole caving at 10'	MW-0650-S1-05		0.4	PVC sch 40
10		SAND: SW - Fine SANDS, trace cobbles, dark gray (2.5 y 4/1), friable, compact, wet, stained with strong odor; water table at 10.5'	MW-0650-S1-06	Pos at 10.5'	0.7	
		SAND AND GRAVEL: SP - Fine - coarse SAND AND GRAVEL, trace silt, dark gray (2.5 y 4/1), compact, wet, stained with strong odor	MW-0650-S1-07	Pos at 13.5'	3.9	
		CLAYEY SILT: ML-CL - CLAYEY SILT, Glacial Till, dark gray (10 yr 4/1), slightly plastic (water added), dry, hard	MW-0650-S1-08		3.9	
15						

WELL CONSTRUCTION LOG

WELL NO.: **MW-0651-S2**

TOTAL DEPTH: **24.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**S. Grutney**
LOGGED BY:	**M. Griles**	DRILLING METHOD:	**HSA/Split spoon**
DATE STARTED:	**12/19/2006 3:30:00 PM**	**COORDINATES:**	
DATE COMPLETED:		**Northing:**	**1650439.05**
		Easting:	**166157.86**
		TOC Elevation:	**721.49**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		GRAVEL: GRAVEL/ASPHALT, wet and saturated	MW-0651-S2-01			Flush Mount PVC sch 40 bent-cement grout
			MW-0651-S2-02		1.2	
		SANDY CLAY: 10 YR 4/6 Brown, CL, Silty SANDY CLAY, plastic, pliable, v. moist, v. high sand count, subrounded grains, med. grained	MW-0651-S2-03		9.3	
5			MW-0651-S2-04		12.3	
		SAND: 10 YR 4/2 dark grayish Brown, SP-SW, SAND, loose, slightly moist w/subrounded pebbles & gravel sized grains in mix, Sand mix becomes v. hard and compact at 12' until 16', 16' return to loose/compact sand, Saturated at 16' (wet.), saturated sand to e.o.b.	MW-0651-S2-05		13.2	
10			MW-0651-S2-06		4.1	
			MW-0651-S2-07		1.3	sand pack
			MW-0651-S2-08		1.2	PVC sch 40
15			MW-0651-S2-09		6.1	
			MW-0651-S2-10		11.6	
20			MW-0651-S2-11		11.7	
			MW-0651-S2-12		12.8	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0652-S1**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Jon Keifer**
LOGGED BY:	**Tai Hubbard**	DRILLING METHOD:	**Mini-sonic**
DATE STARTED:	**1/4/2007 12:45:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**1/4/2007 4:30:00 AM**	**Northing:**	**1650403.11**
		Easting:	**166865.66**
		TOC Elevation:	**722.1**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE				Flush Mount
		CLAYEY SAND: SC - fine - coarse CLAYEY SAND and gravel, dark yellowish brown (10 yr 4/6) to dark brown (10 yr 3/3) (clay fraction highly plastic), compact, dry - moist	MW-0652-S1-01		0.0	PVC sch 40 bent-cement grout
			MW-0652-S1-02		0.0	
			MW-0652-S1-03		0.0	
5		CONCRETE: CONCRETE (observed Rebar at 8.5 foot, probably old footing or Pier)				
10		SAND AND GRAVEL: SP-SM, SILTY fine - coarse SAND AND GRAVEL, dark yellowish brown (10 yr 4/6), compact, dry	MW-0652-S1-04		0.0	sand pack
		SAND: SP - Fine - coarse SAND with gravel, trace silt, yellowish brown (10 yr 5/4), compact, wet at 15' (water table), dark gray staining from 16' to 16.5'. Slight odor.	MW-0652-S1-05		6.2	PVC sch 40
15			MW-0652-S1-06	Neg at 16.5'	25.0	
		CLAYEY SILT: ML-CL, CLAYEY SILT with gravel and fine - coarse sands, (Glacial Till), medium plasticity (water added), moist, hard				sand pack bentonite-chips
20						

WELL CONSTRUCTION LOG

WELL NO.: **MW-S3-0601**

TOTAL DEPTH: **55.00**

PROJECT INFORMATION

PROJECT: **GM/ENCORE (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **Tai Hubbard**

DATE STARTED: **10/12/2006 8:30:00 AM**

DATE COMPLETED: **10/12/2006 3:00:00 PM**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Kevin Smith**

DRILLING METHOD: **Sonic**

COORDINATES:

Northing: **1649730.5**

Easting: **168664.0**

TOC Elevation: **718.16**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT	MW-S3-0601-01		6.5	bent-cement grout PVC sch 40
		GRAVEL: GM, Silty GRAVEL - parking lot sub-base (engineered fill).	MW-S3-0601-02		6.2	
5		SANDY CLAY: CL, gravelly SANDY CLAY, very dark grayish brown (2.5YR 3/2), firm, low plasticity, moist.	MW-S3-0601-03		4.5	
			MW-S3-0601-04		9.7	
10		SAND: SW-SM, fine-coarse silty SANDs with gravel, some cobbles, dark yellowish brown (10YR 4/4), compact-loose, dry. Dark/black staining at 17-18' (strong odor).				
15			MW-S3-0601-05		68.4	
		SILT: ML-SM, sandy SILT, trace gravel and cobbles, dark grayish brown (2.5YR 4/2), compact-loose, moist, wet at 22'. Strong odor (no staining but a slight oily sheen at 22').	MW-S3-0601-06 MW-S3-0601-07	Pos	74.5	
20		SAND: SP-SM, med-coarse silty SANDs w/ fine gravel, brown (10YR 4/3) compact-loose, subrounded, wet.	MW-S3-0601-08	Neg	66.6	
25			MW-S3-0601-09	Neg	8.8	
		SAND: GP, coarse SAND and medium gravel, trace silt, brown (10YR 4/3), compact-loose, subrounded, wet. Abrupt, smooth contact at 37.5' to ML-CL.				
30			MW-S3-0601-10		8.6	
35			MW-S3-0601-11		8.9	
		SILT: ML-CL, clayey SILT w/ fine-med sands and gravel (glacial till), dark gray (10YR 4/1), low plasticity (added water), non-sticky, hard, moist, w/ abrupt smooth contact at 43.0' to SP.	MW-S3-0601-12 MW-S3-0601-13	Neg	4.8	bentonite-chips
40			MW-S3-0601-14		4.0	sand pack
		SAND: SP, fine-med SANDs, dark gray (10YR 4/1), compact-loose, wet, w/ gradual color change at 45.0' to brown (10YR 4/3). Abrupt smooth contact at 53.5' to ML-CL.	MW-S3-0601-15		3.8	PVC sch 40
45			MW-S3-0601-16		3.8	
50			MW-S3-0601-17		3.5	
		SILT: ML-CL, clayey SILT w/ fine-med sands and gravel (glacial till), dark gray (10YR 4/1), low plasticity (water added), non-sticky, hard, moist.	MW-S3-0601-20	Neg	4.5	
55						

WELL CONSTRUCTION LOG

WELL NO.: **MW-S2-0601**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/ENCORE (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Kevin Smith**
LOGGED BY:	**Tai Hubbard**	DRILLING METHOD:	**Sonic**
DATE STARTED:	**10/12/2006 4:30:00 PM**	**COORDINATES:**	
DATE COMPLETED:	**10/13/2006 11:00:00 AM**	**Northing:**	**1649731.7**
		Easting:	**168658.0**
		TOC Elevation:	**718.16**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT	MW-S2-0601-01		6.7	bent-cement grout PVC sch 40
		SILTY GRAVEL: GM, SILTY GRAVEL -- parking lot sub-base (engineered fill).				
		SILTY SAND: SW-SM; fine-coarse SILTY SANDs w/ gravel, some cobbles, dark yellowish brown (10YR 4/4), compact-loose, dry. Dark/black staining at 17-18' (strong odor).	MW-S2-0601-02		4.2	
5			MW-S2-0601-03		10.4	
			MW-S2-0601-04		10.1	
10						bentonite-chips
						sand pack
15			MW-S2-0601-05		86.7	
			MW-S2-0601-06	Pos		PVC sch 40
		SILT: ML-SM, sandy SILT, trace gravel and cobbles, dark grayish brown (2.5YR 4.2), compact-loose, subrounded, moist, wet at 20'. Strong odor (no staining) with a slight oily sheen at 20-20.2'.	MW-S2-0601-07	Neg	66.2	
20			MW-S2-0601-08	Neg	28.6	
		SILT: ML-SM, sandy SILT, trace gravel and cobbles, dark grayish brown (2.5YR 4.2), compact-loose, subrounded, no odor, wet. Groundwater encountered at 22 ft.	MW-S2-0601-09	Pos		
25						

WELL CONSTRUCTION LOG

WELL NO.: **MW-0701-S2**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**J. Miller**
LOGGED BY:	**Mark Otto**	DRILLING METHOD:	**Rotosonic**
DATE STARTED:	**9/18/2007 2:30:00 PM**	**COORDINATES:**	
DATE COMPLETED:	**9/18/2007 4:00:00 PM**	**Northing:**	**1651755**
		Easting:	**166786.8**
		TOC Elevation:	**726.37**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: TOPSOIL; OL, silty clay, soft, low plasticity, dark brown, dry, cinders, grass	MW-0701-S2-01		0.0	Flush Mount
						bentonite
		SILTY CLAY: SILTY CLAY, CH, firm, high plasticity, brown, dry.	MW-0701-S2-02		0.0	PVC sch 40
			MW-0701-S2-03		0.0	
5		SAND: SAND; SP, medium sand, loose, orange, moist, non-cohesive.	MW-0701-S2-04		0.0	
			MW-0701-S2-05		0.0	
		SAND: SAND, SW, gravelly sand, loose, noncohesive, light gray, dry.				
10			MW-0701-S2-06		0.0	
			MW-0701-S2-07		0.0	
						sand pack
			MW-0701-S2-08		0.0	
15						PVC sch 40
		SAND: SAND, GR, clayey gravel with sand, loose, noncohesive, brown, dry.	MW-0701-S2-09		0.0	
		SAND: SAND, SW, gravelly sand, loose, noncohesive, brown, wet.	MW-0701-S2-10		0.0	
20		SAND: SAND, clayey sand, loose, medium plasticity, brown, wet.	MW-0701-S2-11		0.0	
			MW-0701-S2-12		0.0	
25			MW-0701-S2-13		0.0	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0702-S2**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**J. Miller**
LOGGED BY:	**Mark Otto**	DRILLING METHOD:	**Rotosonic**
DATE STARTED:	**9/18/2007 10:30:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**9/18/2007 1:40:00 PM**	**Northing:**	**1651578.2**
		Easting:	**167415.1**
		TOC Elevation:	**724.09**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: TOPSOIL; OL, silty clay, soft, low plasticity, dk. brown, moist, grass, & cinders.	MW-0702-S2-01		0.0	Flush Mount
		SILTY CLAY: SILTY CLAY, CH, firm, brown, high plasticity, dry.	MW-0702-S2-02		0.0	bentonite PVC sch 40
			MW-0702-S2-03		0.0	
5		SAND: SAND, SW, gravelly sand, noncohesive, loose, light gray, dry.	MW-0702-S2-04		0.0	
			MW-0702-S2-05		0.0	
10		SAND: SAND, SW, gravelly sand, loose noncohesive, light gray, dry.	MW-0702-S2-06		0.0	
			MW-0702-S2-07		0.0	sand pack
			MW-0702-S2-08		0.0	
15		SAND: SAND, SC, clayey sand with gravel, medium plasticity, brown, high moisture.	MW-0702-S2-09		0.0	PVC sch 40
			MW-0702-S2-10		0.0	
20		SAND: SAND, SC, clayey sand w/ gravel, medium plasticity, brown, high moisture.	MW-0702-S2-11		0.0	
			MW-0702-S2-12		0.0	
25						

WELL CONSTRUCTION LOG

WELL NO.: **MW-0703-S2**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Dale Remmler**
LOGGED BY:	**Meryl Hicks**	DRILLING METHOD:	**geoprobe/hand auger**
DATE STARTED:	**10/26/2007 11:22:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**10/26/2007 1:00:00 PM**	**Northing:**	**1651079.9**
		Easting:	**168001.8**
		TOC Elevation:	**722.07**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: TOPSOIL, fine to med silty sands, hand auger	MW-0703-S2-01		0	Flush Mount bentonite-chips PVC sch 40
		SAND: SAND, fine to medium si sa, trace gravel, brown, 10YR 4/3, moist, loose	MW-0703-S2-02		0	
			MW-0703-S2-03		26.1	
5		CLAY: CLAY, silty, sandy, brown, moist, cohesive, plastic, sticky	MW-0703-S2-04		102.0	
			MW-0703-S2-05		143	sand pack PVC sch 40
10		SAND: fine to medium SAND, trace gravels, moist, wet @ 12.0' gravel and coarse sands at 18.0'	MW-0703-S2-06		3.2	
			MW-0703-S2-07		6.5	
			MW-0703-S2-08		10.2	
15			MW-0703-S2-09	neg	1.3	
			MW-0703-S2-10		2.0	
20		CLAYEY SILT: dk grayish CLAYEY SILT, trace gravel, glacial till, non-plastic EOB @ 20.0'				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0705-S1**

TOTAL DEPTH: **20.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**J. Miller**
LOGGED BY:	**Mark Otto**	DRILLING METHOD:	**Rotosonic**
DATE STARTED:	**9/18/2007 4:30:00 PM**	**COORDINATES:**	
DATE COMPLETED:	**9/18/2007 5:45:00 PM**	**Northing:**	**1652059.8**
		Easting:	**166879.6**
		TOC Elevation:	**726.33**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT	MW-0705-S1-01		0	Flush Mount
		SILTY CLAY: SILTY CLAY, very stiff, high plasticity, brown, moist.				PVC sch 40
			MW-0705-S1-02		0	bentonite
			MW-0705-S1-03		0	
5		SAND: SAND, gravelly sand, loose, noncohesive, light gray.				
			MW-0705-S1-04		0	
			MW-0705-S1-05		0	sand pack
10			MW-0705-S1-06		0	PVC sch 40
			MW-0705-S1-07		0	
			MW-0705-S1-08		0	
15			MW-0705-S1-09		0	
			MW-0705-S1-10		0	
20		CLAY: CLAY, firm, high plasticity, yellow-brown, moist, with pebbles.				

WELL CONSTRUCTION LOG

WELL NO.: **MW-0706-S2**

TOTAL DEPTH: **24.00**

PROJECT INFORMATION

PROJECT: **GM/REALM (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **Mark Otto**

DATE STARTED: **9/18/2007 8:00:00 AM**

DATE COMPLETED: **9/18/2007 9:30:00 AM**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **J. Miller**

DRILLING METHOD: **Rotosonic**

COORDINATES:

Northing: **1651981.7**

Easting: **167388.5**

TOC Elevation: **725.37**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		FILL: FILL; disturbed material and limestone gravel	MW-0706-S2-01		2.6	Flush Mount
		SILTY CLAY: SILTY CLAY; brown, very stiff, high plasticity, dry.				PVC sch 40
			MW-0706-S2-02		0.0	bentonite-chips
			MW-0706-S2-03		0.0	
5		SAND: SAND, gravels and cobbles, yellow brown, noncohesive, dry.				
			MW-0706-S2-04		0.0	
			MW-0706-S2-05		0.0	
10		SAND: SAND, gravelly sand, loose, brown, noncohesive, dry.	MW-0706-S2-06		0.0	
			MW-0706-S2-07		0.0	sand pack
			MW-0706-S2-08		0.0	PVC sch 40
15		SAND: SAND, gravelly sand, loose, brown noncohesive, moist.				
			MW-0706-S2-09		0.0	
			MW-0706-S2-10		0.0	
20		SAND: SAND, gravelly sand with cobbles, loose, brown, noncohesive, wet.	MW-0706-S2-11		0.0	
			MW-0706-S2-12		0.0	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0707-S2B**

TOTAL DEPTH: **35.00**

PROJECT INFORMATION

PROJECT: **GM/REALM (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **R. Woodruff**

DATE STARTED: **9/20/2007 12:40:00 AM**

DATE COMPLETED: **9/20/2007 3:15:00 AM**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **J. Miller/J. Gill**

DRILLING METHOD: **Rotosonic**

COORDINATES:

Northing: **1650812.1**

Easting: **168896.3**

TOC Elevation: **719.56**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		SILT	MW-0707-S2B-01		0	Flush Mount-Concrete
		SAND: SAND, brown, gravels, med. sands, loose, sl. moist, some clay present; concrete from 5.0-6.0.	MW-0707-S2B-02		0	PVC sch 40
						bentonite
			MW-0707-S2B-03		0	
5		SANDY CLAY: SANDY CLAY, dk brown, tr. large gravels, plaster, moist, firm	MW-0707-S2B-04		0	
		SAND: SAND, brown, large gravels, med. sands, loose, sl. moist; inc sand size from 13.0-14.0, sl. wet; wet from 15.0-16.5 ft.	MW-0707-S2B-05		0	
10			MW-0707-S2B-06		0	
			MW-0707-S2B-07		0	
			MW-0707-S2B-08		0	
15			MW-0707-S2B-09		0	
		CLAY: CLAY, dk. gray, tr gravels, stiff-very stiff, plastic, moist; wet from 20.0-21.5'; color change to dk. brown-gray @ 24.0'; gray sand seam from 25.5-26.0, wet from 26.0-28.0	MW-0707-S2B-10		0	
20			MW-0707-S2B-11		0	
			MW-0707-S2B-12		0	
			MW-0707-S2B-13		0	sand pack
25			MW-0707-S2B-14		0	PVC sch 40
		SAND: SAND, gray, med. sands, tr. gravel, loose, some clay, very wet, moist.	MW-0707-S2B-15		0	
30			MW-0707-S2B-16	negative	0	
		CLAY: CLAY, dk, gray, tr. gravel, hard, plastic, moist.	MW-0707-S2B-17		0	
35			MW-0707-S2B-18		0	

WELL CONSTRUCTION LOG

WELL NO.: **MW-0708-S2A**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**K. smith/T. Hill**
LOGGED BY:	**R. Woodruff**	DRILLING METHOD:	**Sonic**
DATE STARTED:	**9/26/2007 12:42:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**9/28/2007 11:20:00 PM**	**Northing:**	**1650782**
		Easting:	**169143.9**
		TOC Elevation:	**719.44**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		CONCRETE: CONCRETE (core)	MW-0708-S2A-01		0.0	Flush Mount-Concrete
		SAND: SILTY SAND, brown, loose, gravels, fine-med sand, dry, some clay, red staining throughout.				bentonite
						PVC
			MW-0708-S2A-02		0.0	
			MW-0708-S2A-03		0.0	
5						
			MW-0708-S2A-04		0.0	
			MW-0708-S2A-05		0.0	
10			MW-0708-S2A-06		0.0	
			MW-0708-S2A-07		0.0	
		CLAY: CLAY, gray-brown, moist, wet from 13.5-14.5, plastic, soft, tr. gravels.				
			MW-0708-S2A-08		0.0	
15		SAND: SAND, brown (10YR 4/3), gravels, sl. cohesive, fine-med, sl. moist.				
			MW-0708-S2A-09		0.0	
		SAND: SAND, brown (10YR 4/3), very fine, loose, sl. moist, no gravel.	MW-0708-S2A-10		0.0	sand pack
		SANDY CLAY: SANDY CLAY, lt. brown-lt. gray (10YR 5/2), tr. gravel, sl. moist, sl. plastic.				PVC
20			MW-0708-S2A-11		1.2	
		SAND: SAND, gray (10YR 5/1), wet, pebbles (matrix).				
		CLAY: CLAY, gray (10YR 4/1), wet, decreasing moisture w/ depth, dry @ 24', soft (hardens w/ depth), tr. gravels, dec. plasticity w/ depth.	MW-0708-S2A-12		0.0	
			MW-0708-S2A-13		0.0	
25						

BORING LOG

BORING LOG: **MW-0708***

TOTAL DEPTH: **5.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**J. Miller & J. Gill**
LOGGED BY:	**Randy Woodruff**	DRILLING METHOD:	
DATE STARTED:	**9/19/2007 9:58:00 PM**	**COORDINATES**	
DATE COMPLETED:	**9/19/2007 10:50:00 PM**	NORTHING:	
		EASTING:	
		ELEVATION:	

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	MOISTURE	SAMPLE NUMBER	SUDAN IV	PID (ppm)
0		CONCRETE: CONCRETE (Core)		MW-0708*-01		0.0
		CLAYEY SAND: CLAYEY SAND, brown, gravels, fine-med. sands, loose, sl. moist. Refusal at 5.0 ft. Monitoring well offset, please refer to boring log MW-0708-S2A				
				MW-0708*-02		0.0
-5						

WELL CONSTRUCTION LOG

WELL NO.: **MW-0709-S2**

TOTAL DEPTH: **30.00**

PROJECT INFORMATION

PROJECT: **GM/REALM (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **T. Hubbard**

DATE STARTED: **9/21/2007 10:00:00 AM**

DATE COMPLETED: **9/21/2007**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **J. Miller**

DRILLING METHOD: **Minisonic**

COORDINATES:

Northing: **1649639.1**

Easting: **168277.8**

TOC Elevation: **720.03**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		TOPSOIL: TOPSOIL	MW-0709-S2-01		0	Flush Mount bentonite-chips PVC sch 40
		CLAY: CL, CLAY w/fine-med. sands & gravel, dark reddish brown (5YR 3/2), plastic, non-sticky, stiff to firm (with increasing depth), moist	MW-0709-S2-02		0	
			MW-0709-S2-03		0	
5			MW-0709-S2-04		0	
			MW-0709-S2-05		0	
10		SAND AND GRAVEL: SW, fine-coarse SANDS & GRAVELS, some cobbles, trace silt, dark yellowish brown (10YR 4/4), rounded to sub-rounded, friable, compact, dry to moist, saturated @24'. Gray staining having slight sheen and hydrocarbon odor from 19-21' (smear zone).	MW-0709-S2-06		0	
			MW-0709-S2-07		0	
			MW-0709-S2-08		0	
15			MW-0709-S2-09		0	sand pack
			MW-0709-S2-10	positive	8.2	PVC sch 40
20			MW-0709-S2-11		6.9	
			MW-0709-S2-12		4.6	
			MW-0709-S2-13		4.3	
25			MW-0709-S2-14	negative	2.3	
		SILTY CLAY: CL-ML, SILTY CLAY (glacial till), dark gray (10YR 4/1), some fine to med. sands & gravel, plastic (water added), non-sticky, moist.	MW-0709-S2-15		0	
30						

WELL CONSTRUCTION LOG

WELL NO.: **MW-S2A-0601**

TOTAL DEPTH: **25.00**

PROJECT INFORMATION

PROJECT: **GM/REALM (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **Tai Hubbard**

DATE STARTED: **10/12/2006 4:30:00 PM**

DATE COMPLETED: **10/13/2006 11:00:00 AM**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Kevin Smith**

DRILLING METHOD: **Sonic**

COORDINATES:

Northing: **1650445.6**

Easting: **165261.4**

TOC Elevation: **723.3**

DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT	MW-S2A-0601-01		6.7	PVC sch 40
		SILTY GRAVEL: GM, SILTY GRAVEL -- parking lot sub-base (engineered fill).				bent-cement grout
		SILTY SAND: SW-SM; fine-coarse SILTY SANDs w/ gravel, some cobbles, dark yellowish brown (10YR 4/4), compact-loose, dry. Dark/black staining at 17-18' (strong odor).	MW-S2A-0601-02		4.2	
5			MW-S2A-0601-03		10.4	
			MW-S2A-0601-04		10.1	
10						bentonite-chips
						sand pack
15			MW-S2A-0601-05		86.7	
			MW-S2A-0601-06	Pos		PVC sch 40
		SILT: ML-SM, sandy SILT, trace gravel and cobbles, dark grayish brown (2.5YR 4.2), compact-loose, subrounded, moist, wet at 20'. Strong odor (no staining) with a slight oily sheen at 20-20.2'.	MW-S2A-0601-07	Neg	66.2	
20			MW-S2A-0601-08	Neg	28.6	
		SILT: ML-SM, sandy SILT, trace gravel and cobbles, dark grayish brown (2.5YR 4.2), compact-loose, subrounded, no odor, wet. Groundwater encountered at 22 ft.	MW-S2A-0601-09	Pos		
25						

WELL CONSTRUCTION LOG

WELL NO.: **MW-S3-0601**

TOTAL DEPTH: **55.00**

PROJECT INFORMATION

PROJECT: **GM/REALM (Allison Transmission)**

SITE LOCATION: **Speedway, IN**

LOGGED BY: **Tai Hubbard**

DATE STARTED: **10/12/2006 8:30:00 AM**

DATE COMPLETED: **10/12/2006 3:00:00 PM**

DRILLING INFORMATION

DRILLING CO.: **Boart Longyear**

DRILLER: **Kevin Smith**

DRILLING METHOD: **Sonic**

COORDINATES:

Northing:

Easting:

Elevation:

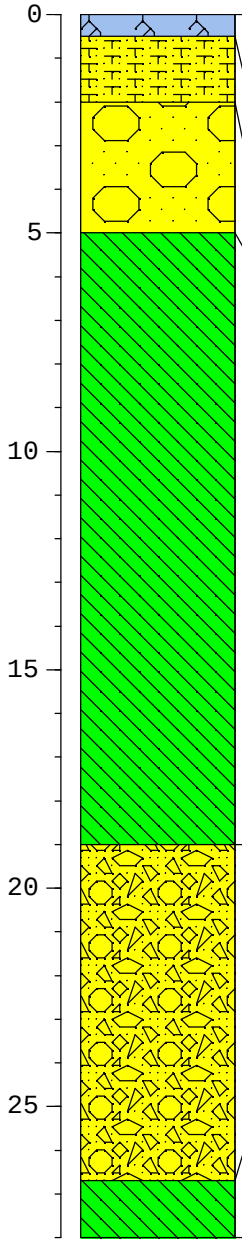
DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	PID (ppm)	WELL CONSTRUCTION DETAILS
0		ASPHALT: ASPHALT	MW-S3-0601-01	6.5	PVC sch 40 bent-cement grout
		GRAVEL: GM, Silty GRAVEL - parking lot sub-base (engineered fill).	MW-S3-0601-02	6.2	
5		SANDY CLAY: CL, gravelly SANDY CLAY, very dark grayish brown (2.5YR 3/2), firm, low plasticity, moist.	MW-S3-0601-03	4.5	
			MW-S3-0601-04	9.7	
10		SAND: SW-SM, fine-coarse silty SANDs with gravel, some cobbles, dark yellowish brown (10YR 4/4), compact-loose, dry. Dark/black staining at 17-18' (strong odor).			
15			MW-S3-0601-05	68.4	
		SILT: ML-SM, sandy SILT, trace gravel and cobbles, dark grayish brown (2.5YR 4/2), compact-loose, moist, wet at 22'. Strong odor (no staining but a slight oily sheen at 22').	MW-S3-0601-06 MW-S3-0601-07	74.5	
20		SAND: SP-SM, med-coarse silty SANDs w/ fine gravel, brown (10YR 4/3) compact-loose, subrounded, wet.	MW-S3-0601-08	66.6	
25			MW-S3-0601-09	8.8	
		SAND: GP, coarse SAND and medium gravel, trace silt, brown (10YR 4/3), compact-loose, subrounded, wet. Abrupt, smooth contact at 37.5' to ML-CL.			
30			MW-S3-0601-10	8.6	
35			MW-S3-0601-11	8.9	
		SILT: ML-CL, clayey SILT w/ fine-med sands and gravel (glacial till), dark gray (10YR 4/1), low plasticity (added water), non-sticky, hard, moist, w/ abrupt smooth contact at 43.0' to SP.	MW-S3-0601-12 MW-S3-0601-13	4.8	bentonite-chips
40			MW-S3-0601-14	4.0	sand pack
		SAND: SP, fine-med SANDs, dark gray (10YR 4/1), compact-loose, wet, w/ gradual color change at 45.0' to brown (10YR 4/3). Abrupt smooth contact at 53.5' to ML-CL.	MW-S3-0601-15	3.8	PVC sch 40
45			MW-S3-0601-16	3.8	
50			MW-S3-0601-17	3.5	
		SILT: ML-CL, clayey SILT w/ fine-med sands and gravel (glacial till), dark gray (10YR 4/1), low plasticity (water added), non-sticky, hard, moist.	MW-S3-0601-18	4.5	
55					

WELL CONSTRUCTION LOG

WELL NO.: **PZ-01-0701**

TOTAL DEPTH: **28.00**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**GM/REALM (Allison Transmission)**	DRILLING CO.:	**Boart Longyear**
SITE LOCATION:	**Speedway, IN**	DRILLER:	**Bill Condon**
LOGGED BY:	**T. Hubbard**	DRILLING METHOD:	**geoprobe**
DATE STARTED:	**10/25/2007 9:10:00 AM**	**COORDINATES:**	
DATE COMPLETED:	**10/25/2007 10:30:00 AM**	**Northing:**	**1649986.6**
		Easting:	**164704.3**
		TOC Elevation:	



DEPTH	SOIL SYMBOLS	SOIL DESCRIPTION	SAMPLE ID	SUDAN IV	PID (ppm)	WELL CONSTRUCTION DETAILS
		TOPSOIL: TOPSOIL - SM, fine-med SILTY SANDS w/ organics	PZ-01-0701 - 01		0.0	Flush Mount bentonite-granular PVC sch 40
		SILTY SAND: SM, fine-med SILTY SANDS, some gravel, brown (10TR 4/3), moist, friable, loose.	PZ-01-0701 - 02		3.0	
		SAND AND GRAVEL: SW, fine-coarse SANDS w/ GRAVEL, grayish brown (10YR 5/2), dry, friable, loose.	PZ-01-0701 - 03		1.9	
		CLAYEY SILT: ML-CL, CLAYEY SILT, (high organic content, 5-7'), very dk. gray (10YR 3/1), slightly plastic, non-sticky, moist, soft, gradual color change to dark yellowish brown (10YR 4/4).	PZ-01-0701 - 04		5.1	
			PZ-01-0701 - 05		17.1	
			PZ-01-0701 - 06		3.2	
			PZ-01-0701 - 07		1.6	
			PZ-01-0701 - 08		0.5	
						sand pack
			PZ-01-0701 - 09		0.0	
						PVC sch 40
			PZ-01-0701 - 10		0.0	
		GRAVEL: GW, fine-med GRAVEL, w/ fine-coarse sands, grayish brown (10YR 5/2), rounded to subrounded, compact, dry - wet @ 23.5	PZ-01-0701 - 11		0.0	
			PZ-01-0701 - 12		1.1	
			PZ-01-0701 - 13		1.0	
		CLAYEY SILT: ML-CL, CLAYEY SILT, tr. gravel, dark grayish brown (10YR 4/2), non-plastic, stiff. (glacial till)	PZ-01-0701 - 14	neg	1.2	