





· · · · · · · · · · · · · · · · · · ·		apolis, Indiana	Project Nur	ibei.	08-04-009		
Client:	City of South Bend		Drilling Method:	Dire	ct Push		
Project:	Hannover Property		Sampling Method:	con	tinuous		
Location:	731 West Chippewa Ave	nue, South Bend, Indiana	Weather:	70's	, sunny		
Logged By:	JML	1	Time Termi	nated:			
Drilling Com	ipany: Midway	Drillers: Mark	Completion	Date:	June 19, 2008	1	
Depth (feet)		SOIL DESCRIPTION		Sample	REMARKS	PID (ppm)	Depth (feet)
- 2 -	ASPHALT, black LOAMY SAND, mix very dark gray	ed with brick, semi soft, dry, 10Y	R 3/1	1		8.5	
				2	soil sample taken between 2'-4' for laboratory analysis	0.7	
	NO RECOVERY			3			- 4 -
				4			
- 8 - (XXX) 		y moist, 10 YR 4/3 brown		5	soil sample taken between 8'-10' for laboratory analysis	0	- 8 -
- 10 - 11 	Fine to medium gra	ined SAND, wet, 10 YR 4/3 brow ined SAND, saturated at 11 feet		6		0	- 10 -
- 12 - - 12 -	4/3 brown				_		- 12 - - 12 -
				7		0	
- 14 -	very fine to fine gra	ined SAND, saturated, 10 YR 4/3		8		0	- 14 - - ·
14 - - 14 - 	Bottom of Boring at				-		- 16 -







			apolis, Indiana		Project Numb	ber:	08-04-009				
Client:	C	ity of South Bend			Drilling Method: Direct Push						
Project	: Н	lannover Property		S. M	ampling lethod:	cont	tinuous				
Locatio	on: 7	31 West Chippewa Ave	nue, South Bend, Indiana		Veather:	70's	, sunny				
Logged	By: J	ML		Т	ime Termina	ated:					
Drilling	Compa	_{ny:} Midway	Drillers: Mark	C	Completion D)ate:	June 19, 2008				
Depth (feet)			SOIL DESCRIPTION			Sample	REMARKS	PID (ppm)	Depth (feet)		
		CONRETE, gray				1		0			
		grained sand, 10 Y			m		soil sampled between 2'-4' for laboratory analysis	0			
- 4 - 			COAL FILL, moist, 10 YR	2/1 black		3		0.5	- 4 - 6		
		fine grained SAND,	moist, 10 YR 4/3 brown			4		0			
- 8 -		fine to medium grai	ned SAND, very moist, 10	YR 5/3 browr	n	5			- 8 -		
- 10 - - 12 -						6			- 10 - 		
- 12 - - 14 -						7	soil sampled between 12'-14' for laboratory		- 12 -		
		fine to medium grai 5/3 brown	ned SAND, saturated at 14	4 feet, 10 YR		8	analysis		- 14 -		
- 16 -		Bottom of Boring a	: 16 ft				-		- 16 -		







			apolis, Indiana		roject Numb	er:	08-04-009		
Client:	Ci	ity of South Bend			rilling ethod:	Dire	ct Push		
Project:	На	annover Property		Sa Me	ampling ethod:	con	tinuous		
Location	n: 7 3	31 West Chippewa Ave	nue, South Bend, Indiana	w	/eather:	70, j	partly cloudy		
Logged	By: JN	ИL		Ti	me Termina	ited:			
Drilling	Compar	_{iy:} Midway	Drillers: Mark	C	ompletion D	ate:	June 19, 2008		
Depth (feet)			SOIL DESCRIPTION			Sample	REMARKS	PID (ppm)	Depth (feet)
		NO RECOVERY				1			-
- 2 -		very fine grained S brown	AND, moist, 10 YR 4/6 dark y	yellowish		2	soil sampled between 2'-4' for laboratory analysis	0.0	- 2 -
- 4 -		very fine grained Sa yellowish brown	ANDY LOAM, wet, 10 YR 3/6	dark		3		0.3	- 4 -
- 6 -		fine to medium grai yellowish brown	ned SAND, wet, 10 YR 4/6 d	lark		4		1.1	- 6 · - -
- 0 - 						5		1.1	- 8 · - - - 10 ·
						6	soil sampled between 10'-12' for laboratory analysis	1.0	-
- 12 - 		fine to medium grai 4/6 dark yellowish b	ned SAND, saturated at 12 f prown	eet, 10 YR		7		1.0	- 12 - - -
- 14 - 						8		0.8	- 14 - - -
- 16 -		Bottom of Boring at	: 16 ft						- 16 -







			napolis, Indiana		oject Numb	er:	08-04-009		
Client:	C	ity of South Bend		Me	lling thod:	Dire	ct Push		
Project:	: H	lannover Property		San Met	npling thod:	cont	tinuous		
Locatio	n: 7	31 West Chippewa Ave	enue, South Bend, Indiana	We	eather:	suni	ny, 70s		
Logged	I Ву: Ј	ML	T	Tim	ne Termina	ited:			
Drilling	Compa	_{ny:} Midway	Drillers: Mark and Zach	Со	mpletion D	ate:	June 19, 2008	I	
Depth (feet)			SOIL DESCRIPTION			Sample	REMARKS	PID (ppm)	Depth (feet)
		CONCRETE fine to medium gra light yellowish brow	ined SAND with Gravel, mo vn	ist, 10 YR 6/4			soil sampled between 0'-2' for laboratory analysis	0	
		brown	, very moist, 2.5 YR 3/2 ver			2		7.7	
		dark gray	with pebbles, very moist, 2	.5 YR 4/1		3		1	- 6
		J. J	, wet, 2.5 YR 2/1 black , wet, 10 YR 4/1 dark gray			4		0	
- 8 -			ined SAND, mottled 10 YR ery wet, 10 YR 4/3 brown	4/6 dark		5		0	- 8 -
- 10 - - 12 -						6		3.7	- 10 - - ·
- 12 - 		fine grained SAND	, very wet, 10 YR 4/3 browr	1			soil sampled between 12'-14' for laboratory analysis	0	- 12 -
		fine grained SAND	, saturated at 15 feet, 10 YF	R 4/3 brown		8		0.8	- 14 -
- 16 -		Bottom of Boring a	t 16 ft						- 16 -
					1		i i i i i i i i i i i i i i i i i i i	1	1







		Indidat	apolis, Indiana	l			ct Numb	ber:	08-04-009		
Client:	Cit	y of South Bend				Drilling Metho		Dire	ct Push		
Project:	: Ha	nnover Property				Sampl Metho	ling od:	cont	tinuous		
Locatio	n: 73 ′	1 West Chippewa Ave	nue, Sou	th Bend, Indian	a	Weath	her:	sun	ny, 75		
Logged	By: JM	L				Time	Termina	ated:			
Drilling	Company	/ Midway	Drillers:	Mark and Zac	h	Comp	letion D	ate:	June 19, 2008		
Depth (feet)			SOIL DE	ESCRIPTION				Sample	REMARKS	PID (ppm)	Depth (feet)
_		CONCRETE									
								1		1.3	
		fine grained SAND,	dry, 10 \	YR 4/6 dark ye	ellowish brown						
- 2 -											- 2 -
								2	soil sampled between	2.5	
									2'-4' for laboratory		
- 4 -		fine grained SAND,	moist. 1	0 YR 4/4 dark	vellowish brow	/n			analysis		- 4 -
		5	,		,						
								3		1.5	
- 6 -											- 6 -
								4		1.5	
0		fine grained SAND,	moist, 1	0 YR 4/6 dark	yellowish brow	/n					0
								5		0.8	
								-			
- 10 -		fine grained SAND			brown						- 10 -
		fine grained SAND,	very IIIO	ISI, IU IK 4/3							
								6	soil sampled between	1.1	
									12'-14' for laboratory		
- 12 -		fine grained SAND,	wet, 10	YR 4/6 dark v	ellowish brown				analysis		- 12 -
		,	, -	- J							
		fine grained SAND,	10 YR 4	/6 dark yellow	ish brown,			7		0.9	
		saturated at 13 feet	t								
- 14 -		medium to coarse g	grained S	AND, 10 YR 4	/6 dark yellowi	sh					- 14 -
		brown						_			- -
								8		0.8	[-
- 16 -											- 16 -
10		Bottom of Boring at	16 ft								







		_	Inatana	apolis, Indiana	1				ct Numb	er:	08-04-009		
Client:	C	City o	of South Bend					Drilling Metho		Dire	ct Push		
Project:	ŀ	lann	over Property					Sampl Metho	ling d:	cont	tinuous		
Location	n: 7	731 V	Vest Chippewa Ave	nue, Sou	th Bend,	Indiana		Weat	her:	sun	ny, 70s		
Logged	By: J	JML						Time	Termina	ated:	1615		
Drilling	Compa	any:	Midway	Drillers:	Mark an	nd Zach		Comp	letion D	ate:	June 19, 2008		
Depth (feet)				SOIL DE	ESCRIPTI	ION				Sample	REMARKS	PID (ppm)	Depth (feet)
		F	ine grained SAND	, dry, 10	YR 3/4 c	dark yello	wish brown			1	soil sampled between 0'-2' for laboratory analysis	1.3	- 2 -
		COAL, black, dry fine grained SAND, 10 YR 2/1 black, moist							2		8.2	-	
		fir	ne grained SAND,	10 YR 2	2/1 black,	, moist				3		12.2	
- 6 - - 8 -		- - - - - - - -								4		11.5	- 6 - - · · - · ·
- 0 - 		S	ANDY LOAM, moi ILTY CLAY LOAM ray				-			5		0.9	- 0 -
			ILTY CLAY LOAM ark gray	with gra	avel, very	/ moist, 1	0 YR 3/1 ve	ery		6	soil sampled between 10'-12' for laboratory	0.7	
- 12 - 		3/ Se	ILTY CLAY LOAM /1 very dark gray, a eam	at 13 fee	et there is	s a 10YR	4/1 dark gr	ay		7	analysis	0.5	- 12 - - -
- 14 -			ne to medium grair	ned SAN	iD, saturi	ated, 10	r R 5/3 drov	vn		8		0	- 14 -
- 16 - 										9		0	- 16 -
- 18 - 		fi	ne to mediume gra	ined SA	ND satu	Irated 10	YR 4/4 day	rk		10		0	- 18 - -
- 20 -		ye	ellowish brown ottom of Boring at		, 3alu								- 20 -







		- Internet	apolis, Indiana				ct Numb	ber:	08-04-009		
Client:	Cit	ty of South Bend				Drilling Metho		Dire	ct Push		
Project:	: Ha	nnover Property				Sampl Metho	ing d:	cont	tinuous		
Locatior	n: 73	1 West Chippewa Ave	enue, Sout	h Bend, Indiana	a	Weath	ner:	sun	ny, 70s		
Logged	By: JN	1L				Time ⁻	Termina	ated:			
Drilling (Compan	_{y:} Midway	Drillers:	Mark and Zach	1	Comp	letion D	ate:	June 19, 2008	1	
Depth (feet)			SOIL DE	SCRIPTION				Sample	REMARKS	PID (ppm)	Depth (feet)
		SANDY LOAM, dry mixed with COAL	, 10 YR 3	/2 very dark gr	ayish brown,			1		2.2	
- 2 -		fine grained SAND yellowish brown	with grav	el debris, mois	t, 10 YR 3/4 d	lark		2	soil sampled between 2'-4' for laboratory analysis	2.0	- 2 -
- 4 -		fine grained SAND yellowish brown	with grav	el debris, mois	t, 10 YR 3/6 d	lark		3		1.1	- 4 -
- 6 -								4		0.7	- 0 -
- 8 -								5		0.9	
- 10 - 		fine grained SAND 4/4 dark yellowish b	with grav prown	el debris, mois	t to wet, 10 YF	R		6	soil sampled between 10'-12' for laboratory	1.5	- 10 -
- 12 -									analysis		- 12 -
		fine grained SAND 10 YR 4/4 dark yell	with grav owish bro	el debris, satu own	rated at 13 fee	et,		7		1.3	 - 14
								8		0.9	
- 16 -		Bottom of Boring at	t 16 ft						-		- 16 -







	Indian	south Franklin Road apolis, Indiana		ct Numb	er:	08-04-009		
Client:	City of South Bend		Drilling Metho	od:	Dire	ct Push		
Project:	Hannover Property		Sampl Metho	ling od:	cont	inuous		
Location:	731 West Chippewa Ave	enue, South Bend, Indiana	Weat	her:	suni	ıy, 70's		
Logged By	DWM	1	Time	Termina	ited:	1350		
Drilling Cor	npany: Midway	Drillers: Mark and Zach	Comp	letion D	ate:	June 20, 2008		
Depth (feet)		SOIL DESCRIPTION			Sample	REMARKS	PID (ppm)	Depth (feet)
	COAL, dry				1		0	
	brown	ned SAND, moist, 10 YR 5/6 yell			2	soil sampled between 2'-4' for laboratory analysis	0	- 2 - - - -
- 4	fine to medium grai brown	ned SAND, wet, 10 YR 5/4 yellov	vish		3		0	- 4 - - - 6 -
					4		0	-
	medium grained SA brown	ND, very wet, 10 YR 4/6 dark ye	llowish		5		0	- 8 - - -
- 10 -					6		0	- 10 -
	medium to coarse g yellowish brown	grained SAND, very wet, 10 YR 3	/4 dark		7		0	- 12 -
					8	soil sampled between 14'-16' for laboratory	0	- 14 - - -
- 16	coarse grained SAI brownish yellow	ND, saturated at 16 feet, 10 YR 6	/6		9	analysis	0	- 16 -
					10		0	- 18 - - -
- 20 -	Bottom of Boring a	: 20 ft						- 20 -







9	Indiana	polis, Indiana	Project Numb	er:	08-04-009		
Client:	City of South Bend		Drilling Method:	Dire	ct Push		
Project:	Hannover Property		Sampling Method:	cont	tinuous		
Location:	731 West Chippewa Ave	nue, South Bend, Indiana	Weather:	sun	ny, 70's		
Logged B	y: DWM		Time Termina	ted:	0855		
Drilling Co	ompany: Midway	Drillers: Mark and Zach	Completion Da	ate:	June 20, 2008		
Depth (feet)		SOIL DESCRIPTION		Sample	REMARKS	PID (ppm)	Depth (feet)
	fine grained SAND v	with gravel, dry, 10 YR 3/3 dark	Drown	1	soil sample taken between 0'-2' for	0	-
- 2 -				2	laboratory analysis	0	2 - - -
- 4 -	NO RECOVERY			3		0	- 4 - - -
- 6 -				4		0	- 6 - - -
- 8	fine grained SAND,	very wet, 10 YR 6/3 pale brown		5		0	- 8 - - -
- 10 - 				6	soil sample taken between 10'-12' for laboratory analysis	0	- 10 - - -
- 12	fine grained SAND, brown	saturated at 12 feet, 10 YR 6/3	pale	7	water sample taken for laboratory analysis	0	- 12 - - -
- 14 -				8		0	14 - - -
- 16 -	Bottom of Boring at	16 ft					- 16 -







		polis, Indiana		t Numb	er.	08-04-009		
Client:	City of South Bend		Drilling Metho		Dire	ct Push		
Project:	Hannover Property		Sampli Method	ng d:	cont	inuous		
Location:	731 West Chippewa Ave	nue, South Bend, Indiana	Weath	ier:	suni	ny, 70's		
Logged By	y: DWM		Time 1	Fermina	ted:	1045		
Drilling Co	mpany: Midway	Drillers: Mark and Zach	Compl	letion Da	ate:	June 20, 2008		
Depth (feet)		SOIL DESCRIPTION		:	Sample	REMARKS	PID (ppm)	Depth (feet)
 	ASPHALT with GRA	VEL, ary			1		0	-
- 2 -	fine grained SAND	with gravel, moist, 10 YR 3/3 da	ark brown		2		0	- 2 - - -
- 4 -						soil sample taken between 4'-6' for	0	- 4 - - -
	fine to medium grair dark grayish brown	ned SAND with gravel, moist, 1	0 YR 4/2		4	laboratory analysis	0	- 6 -
- 8	medium grained SA brown	NDY LOAM, very wet, 10 YR 3	/3 dark		5		0	- 8 - - - - 10 -
	fine to medium grain	ned SAND, very wet, 10 YR 4/3	3 brown		6		0	-
- 12	medium grained SA brown	ND, very wet, 10 YR 4/2 dark g	jrayish		7		0	- 12 - - -
 - 14 - 						soil sample taken between 14'-16' for	0	- 14 - - -
- 16	medium grained SA grayish brown	ND, saturated at 16 feet, 10 Yi	R 4/2 dark		9	laboratory analysis	0	- 16 - - -
E 1					10		0	- 18 - - -
- 20 -	Bottom of Boring at	20 ft						- 20 -







		India	napolis, Indiana		Project N	imber:	08	8-04-009		
Client:		City of South Bend			Drilling Method:	Di	irect	Push		
Project:		Hannover Property			Sampling Method:	co	ontini	uous		
Location	n:	731 West Chippewa Ave	enue, South Bend, Indiana		Weather:	cl	oudy	, 70's		
Logged	By:	DWM			Time Terr	ninated:	12	215		
Drilling	Comp	any: Midway	Drillers: Mark and Zach		Completic	n Date:	Jı	une 20, 2008		
Depth (feet)			SOIL DESCRIPTION			Sam	ple	REMARKS	PID (ppm)	Depth (feet)
		fine grained SAND dark grayish brown	with CONCRETE, dry, 10 YR 3	3/2 very		1			0	
- 2 -		fine to medium gra YR 4/2 dark grayis	ined SAND with CONCRETE, r n brown	noist, 1(0	2	so be	bil sample taken etween 2'-4' for boratory analysis	0	- 2 -
						3			0	
		fine to medium gra	ined SAND, moist, 10 YR 3/3 d	ark brov	N N	4			0	
- 8 -		fine to medium gra grayish brown	ined SAND, wet, 10 YR 3/2 ver	y dark		5			0	- 8 -
- 10 - 		fine to medium gra	ined SAND, very wet, 10 YR 4/3	3 brown		6	so be	bil sample taken etween 10'-12' for boratory analysis	0	- 10 - - · ·
- 12 - 		medium to coarse YR 4/3 brown	grained SAND, saturated at 12	feet, 10		7			0	- 12 - - · ·
- 14 - 						8			0	- 14 -
- 16 -		Bottom of Boring a	t 16 ft							- 16 -







Project Hannover Property Sompling continuous Veather partiy cloudy, 75 Veather partiy cloudy, 75 Logged by: RMO Time Terminate: 1445		Indian	apolis, Indiana	Project Nu	mber:	08-04-009		
Location: 21 West Chippewa Avenue, South Bend, Indiana Weather: party cloudy, 75 Logged By: RMO Time Terminated: 143 Datiling Company. Midway Onliers: Mark and Zach Completion Date: June 23, 2008 Depting (entry) SOIL DESCRIPTION Samela REMARKS PD (gen) Depting (entry) - - fine to medium grained SAND, slightly moist, 10 YR 2/1 1 soil sample taken between 0°.2' for bottom, 10 YR 4/3 brown 1 soil sample taken between 0°.2' for between 0°.2'	Client:	City of South Bend		Drilling Method:	Dire	ect Push		
Location: 73 West Chippewa Avenue, South Bend, Indiana westher: partly cloudy, 75 Logged By: RMO Time Terminated: 1445 Deging (meg) SOIL DESCRIPTION Samela REMARKS PD (meg) 0 fine to medium grained SAND, slightly moist, 10 YR 2/1 soil sample taken between 0°.2' for betwe	Project:	Hannover Property		Sampling Method:	con	tinuous		
Dutling Company, Midway Ditlers Mark and Zach Completion Date: June 23, 2008 Depth (reg) SOIL DESCRIPTION Sample REMARKS PD (reg) PD (reg) 1 fine to medium grained SAND, slightly moist, 10 YR 2/1 1 soil sample taken between 0.2 for laboratory analysis 2.7 2 Tine to medium grained SAND, slightly moist to wet near 2 1 soil sample taken between 0.2 for laboratory analysis 2.0 6 - - - - - - 6 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -<	Location	n: 731 West Chippewa Ave	nue, South Bend, Indiana	Weather:	par	tly cloudy, 75		
Depth (Her) SOIL DESCRIPTION Sample REMARKS PD (PP) Depth (Her) - fine to medium grained SAND, slightly moist, 10 YR 2/1 1 soil sample taken between 0'-2' for baboratory analysis 2.7 - - fine to medium grained SAND, slightly moist to wet near bottom, 10 YR 4/3 brown 2 1.8 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - </td <td>Logged</td> <td>Ву: RMO</td> <td></td> <td>Time Term</td> <td>inated:</td> <td>1445</td> <td></td> <td></td>	Logged	Ву: RMO		Time Term	inated:	1445		
Depth Ideed SOIL DESCRIPTION sample REMARKS PD ppm Depth def 2 fine to medium grained SAND, slightly moist, 10 YR 2/1 1 soil sample taken between 0.2 for between 0.2 for	Drilling (Company: Midway	Drillers: Mark and Zach	Completio	n Date:	June 23, 2008		
(feet) SUIL DESCRIPTION sample REMARKS (pm) (feet) 2 fine to medium grained SAND, slightly moist, 10 YR 2/1 black 1 soil sample taken between 0'-2' for laboratory analysis 2.7 2 4 - <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
2 black 1 soil sample taken between 0.2 for laboratory analysis 27 4 - - - - - 4 - - - - 6 - - - - 6 - - - - 6 - - - - 6 - - - - 6 - - - - 6 - - - - 6 - - - - 6 - - - - 6 - - - - 6 - - - - 6 - - - - 6 - - - - 6 - - - - 6 - - - - 6 - - - - 6 - - - - 6 - - - - 6 - - - - 7 - - -			SOIL DESCRIPTION		Sample	REMARKS		Depth (feet)
2 - 2 - 1 -			ned SAND, slightly moist, 10 YR 2	2/1	1	soil sample taken	2.7	-
2 fine to medium grained SAND, slightly moist to wet near bottom, 10 YR 4/3 brown 2 18 2 4 - - - 4 - 4 - 4 - - - - - - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - - 4 - - 4 - - 4 - - 4 - - 4 - - 4 -						between 0'-2' for		-
bottom, 10 YR 4/3 brown 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 -	- 2 -	fine to medium grai	ned SAND, slightly moist to wet ne	ear				- 2 -
- 6 -		bottom, 10 YR 4/3 I	brown		2		1.8	-
- 6 -	- 4 -)] 	-		- 4 -
- -					3		2.0	-
- 8 - - - - - - - 8 - - 8 - 0.7 - 8 - 10 - - 10 - - 10 - 11 - 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10	- 6 -					-		- 6 -
- 10 - 5 0.7 - 10 - 6 soil sample taken between 10°-12' for laboratory analysis 1.3 - 12 - - - 7 0 - 14 - - - - 1.4 - 14 - - - - - - 14 - - - - - - 14 - - - - - - - 14 - - - - - - - - 14 -					4		0.9	-
- 10 - - 10 - - 12 - - 12 - - 12 - - 14 - - 14 - - 14 - - 14 - - 14 - - 14 - - 16 - - 18 - - 18 - - 18 - - 10 - - 10 - - 10 - - 12 for - 10 - - 10 -	- 8 -					-		- 8 -
12 fine to medium grained SAND, saturated at 12 feet, 10 YR 1.3 1.3 12 fine to medium grained SAND, saturated at 12 feet, 10 YR 7 0 14 7 0 14 14 8 14 14					5		0.7	-
12 fine to medium grained SAND, saturated at 12 feet, 10 YR 7 12 4/3 brown 7 0 14 8 14	- 10 -					-		- 10 -
- - <td></td> <td></td> <td></td> <td></td> <td>6</td> <td>between 10'-12' for</td> <td>1.3</td> <td></td>					6	between 10'-12' for	1.3	
	- 12 +	fine to medium grai	ned SAND, saturated at 12 feet, 1	0 YR				- 12 -
	·	4/3 brown			7		0	
	- 14 -				<u>.</u>	-		- 14 -
- 16 Bottom of Boring at 16 ft					8			- ·
	- 16 +	Bottom of Boring at	: 16 ft		<u> </u>	-		- 16 -







		Indida	apolis, Indiana				t Numb	er:	08-04-009		
Client:	City	of South Bend				Drilling Metho		Dire	ct Push		
Project:	Har	nover Property				Sampli Metho	ing d:	cont	tinuous		
Location:	731	West Chippewa Ave	nue, Sout	th Bend, Indiana	l	Weath	ner:	suni	ny, 75		
Logged By	: RM	0				Time 1	Termina	ated:	1630		
Drilling Co	mpany:	Midway	Drillers:	Mark and Zach		Compl	letion D	ate:	June 23, 2008		
Depth (feet)			SOIL DE	SCRIPTION				Sample	REMARKS	PID (ppm)	Depth (feet)
		medium grained SA 2/1 black	ND, sligt	ntly moist, with	gravel, 10 YR			1		0.3	-
- 2 - 		fine to medium grai yellowish brown	ned SAN	D, slightly mois	st, 10 YR 5/4				soil sample taken between 2'-4' for laboratory analysis	0.4	- 2 - - - - 4 -
		Coarse grained SA brown	ND, sligh	tly moist, 10 YF	R 5/4 yellowish	 1		3		0	- - - 6 -
		medium grained SA	ND, mois	st, 10 YR 5/4 ye	ellowish browr	 1		4		0	- - - 8 -
 								5		0	- - - - 10 -
		medium to coarse g	grained S	AND, wet, 10 Y	′R 4/3 brown				soil sample taken between 10'-12' for laboratory analysis	0	-
- 12 - 						æ		7		0	- 12 - - -
- 14 -		medium to coarse g 4/3 brown	grained S	and, saturated	a at 13.5, 10 Y	ĸ		8		0	14 - - -
- 16 -		Bottom of Boring at	: 16 ft								- 16 -







	Indian	apolis, Indiana		ect Numb	ber:	08-04-009		
Client:	City of South Bend		Drillir Meth		Dire	ct Push		
Project:	Hannover Property		Samp Metho	oling od:	cont	tinuous		
Location:	731 West Chippewa Ave	nue, South Bend, Indiana	Wea	ther:	PC,	75		
Logged By:	RMO		Time	Termina	ated:	1535		
Drilling Con	npany: Midway	Drillers: Mark and Zach	Com	pletion D	ate:	June 23, 2008		
Depth (feet)		SOIL DESCRIPTION			Sample	REMARKS	PID (ppm)	Depth (feet)
	SAND, 10 YR 2/1 b	lack ned SAND, slightly moist, 10 YR 5/	/6		1		0.9	
- 2 - 	yellowish brown					soil sample taken between 2'-4' for laboratory analysis	0.6	- 2 -
					3		0	- 4 -
- 6 -					4		0	- 6 -
- 8 -					5		0	- 8 -
- 10 - 	medium grained SA YR 4/3 brown	ND, moist, 10 YR 2/1 black mottlir	ng, 10		6	soil sample taken between 2'-4' for laboratory analysis	0	- 10 -
- 12 -	coarse grained SAN YR 4/3 brown	ID, moist, 10 YR 2/1 black mottling	<u>,</u> 10		7			- 12 -
- 14 -	\rightarrow mottling, 10 YR 4/3	D, saturated at 13.5, 10 YR 2/1 bla brown saturated, 10 YR 2/1 black mottlin	7		8			- 14 - - 14 -
- 16 -	Bottom of Boring at	16 ft						- 16 -







		Indian	ipolis, Indiana		Project Nur	nber:	08-04-009		
Client:	C	City of South Bend			Drilling Method:	Dire	ect Push		
Project	: F	lannover Property			Sampling Method:	con	tinuous		
Locatio	n: 7	/31 West Chippewa Ave	nue, South Bend, Indiana		Weather:	sun	ny, 70s		
Logged	By: C	DWM			Time Termi	nated:	930		
Drilling	Compa	any: Midway	Drillers: Zach		Completion	Date:	June 26, 2008	1	
Depth (feet)			SOIL DESCRIPTION			Sample	REMARKS	PID (ppm)	Depth (feet)
		CONCRETE/ASPH	ALT, dry, Black moist, 10 YR 4/2 dark gra	ayish brown		1	-		
 		fine grained SAND	wet, 10 YR 4/3 brown			2	soil sample taken between 2'-4' for laboratory analysis	3.0	 - 4 -
 		inte granted SAND,				3 3	-	0.7	
 - 8						4		1.7	
 - 10		fine to medium grain dark yellowish brow	ned SANDY LOAM, very n	wet, 10 YR 3	3/4	5		1.8	
		fine grained SAND,	very wet, 10 YR 4/3 brov	vn		6	soil sample taken between 10'-12' for laboratory analysis	0.6	
- 12 - 		fine grained SAND,	saturated at 12 feet, 10	/R 4/3 brown	n	7		0.0	- 12 -
- 14 						8		0.0	- 14 -
- 16 -		Bottom of Boring at	16 ft						- 16 -







		Indianapolis, Indiana			Project Numb	er:	08-04-009		
Client:	City of South E	Bend			Drilling Method:	Dire	ct Push		
Project:	Hannover Prop	perty		S	Sampling Method:	cont	tinuous		
Location:	731 West Chip	pewa Avenue, Sout	h Bend, Indiana	,	Weather:	suni	ny, 70s		
Logged By	: RMO				Time Termina	ited:	1910		
Drilling Co	mpany: Midway	Drillers:	Mark and Zach		Completion D	ate:	June 23, 2008		
Depth (feet)		SOIL DE	SCRIPTION			Sample	REMARKS	PID (ppm)	Depth (feet)
	medium gi	rained SAND, 10 Y	/R 2/1 black						
- 2 -						1		0	
	fine to mee yellowish t	dium grained SAN prown	D, slightly moist, 10 YF	R 5/6			soil sample taken between 2'-4' for	0	
- 4 -						3	laboratory analysis	0	- 4 -
- 6 -						4		0	- 6 -
- 8 -									- 8 -
 - 10 -						5		0	
- 12 -						6		0	
	medium gi	rained SAND, sligh	ntly moist, 10 YR 4/3 bi	rown		7		0	
- 14 - - 14 - 16 - - 16 - 						8	soil sample taken between 14'-16' for	0	- 14 -
- 16 -	coarse gra brown	ined SAND, satur	ated at 16 feet, 10 YR	4/3		9	laboratory analysis	0	- 16 -
- 18 -									- 18 -
						10		0	
20	Bottom of	Boring at 20 ft							20 -







	Indian	apolis, Indiana	Project Num	ber:	08-04-009		
Client:	City of South Bend		Drilling Method:	Dire	ct Push		
Project:	Hannover Property		Sampling Method:	cont	tinuous		
Location:	731 West Chippewa Ave	nue, South Bend, Indiana	Weather:	sun	ny, 75		
Logged By:	RMO		Time Termin	ated:	1811		
Drilling Con	npany: Midway	Drillers: Mark and Zach	Completion I	Date:	June 23, 2008		
Depth (feet)		SOIL DESCRIPTION		Sample	REMARKS	PID (ppm)	Depth (feet)
	medium grained SA	ND, slightly moist, 10 YR 2/1 blacl	<	1		0	-
- 2 -	fine to medium grain yellowish brown	ned SAND, slightly moist, 10 YR 5.	/6	2	soil sample taken between 2'-4' for laboratory analysis	0	- 2 - - - - 4 -
 				3		0	- 4 - - - - 6 -
				4		0	-
- 8 -	medium to coarse g	rained SAND, wet, 10 YR 4/3 brov	vn	5		0	- 8 · - -
- 10 - 				6		0	10 - - -
- 12 -				7	soil sample taken between 14'-16' for laboratory analysis	0	12 - - -
- 14 -	medium to coarse g YR 4/3 brown	rained SAND, saturated at 14.5 fe	et, 10 -	8	aduratury analysis	0	14 - - -
- 16 -	Bottom of Boring at	16 ft		:			- 16 -







		Indianapolis,	, Indiana		Project		er:	08-04-009		
Client:	City of South	Bend			Drilling Method		Dire	ct Push		
Project:	Hannover Pro	operty			Samplin Method:	ig :	cont	inuous		
Location:	731 West Chi	ippewa Avenue	, South Bend, Indiana		Weathe	er:	suni	ıy, 70's		
Logged E	By: DWM				Time Te	erminat	ted:	1050		
Drilling C	ompany: Midway	Drill	lers: Zach		Comple	tion Da	ate:	June 26, 2008	1	
Depth (feet)		SC	DIL DESCRIPTION			S	Sample	REMARKS	PID (ppm)	Depth (feet)
2		OVERY					1			- - - 2 -
	grayish b	prown	SAND, moist, 10 YR 4				2	soil sample taken between 2'-4' for laboratory analysis	0	
	fine to m	edium grained	SAND, moist, 10 YR 4	/3 brown			3		0	- - -
- 6 -							4		0	- 6 -
- 8 -	fine grain	-	SAND, wet, 10 YR 4/3 DAM, very wet,10 YR 3				5		0	- 8 -
- 10 -	gray						6		0.3	- 10 -
- 12 -	fine grair	ned SAND, ver	y wet, 10 YR 5/4 yellov	vish brown			7		0	- 12 - - · ·
- 14 -							8	soil sample taken between 14'-16' for	0	- 14 -
- 16 -		to coarse grair ark grayish bro	ned SAND, saturated a own	t 16 feet, 10	D		9	laboratory analysis	0	- 16 - - · ·
- 18 							10		0	- 18 - - -
- 20 -	Bottom o	f Boring at 20	ft			-				- 20 -







		apolis, Indiana		Project Numb	er:	08-04-009		
Client:	City of South Bend			Prilling 1ethod:	Dire	ct Push		
Project:	Hannover Property		Sa M	ampling lethod:	cont	tinuous		
Location:	731 West Chippewa Ave	nue, South Bend, Indiana	v	Veather:	suni	ny, 70's		
Logged By:	DWM	1	т	ïme Termina	ited:	1135		
Drilling Con	npany: Midway	Drillers: Zach	С	completion D	ate:	June 26, 2008		
Depth (feet)		SOIL DESCRIPTION			Sample	REMARKS	PID (ppm)	Depth (feet)
- 2 -	CONCRETE/ASPH fine grained SAND,	ALT moist, 10 YR 3/4 dark yellow	ish brown		1		0.0	
					2	soil sample taken between 2'-4' for laboratory analysis	0.4	
	fine grained SAND' brown	Y LOAM, moist, 10 YR 3/4 da	rk yellowis	h	3		3.2	
- 6 -					4		2.2	- 6 -
- 8	fine grained SAND,	wet, 10 YR 3/3 dark brown			5		0	- 8 -
	fine to medium grai	ned SAND, very wet, 10 YR 4	1/3 brown		6		0	- 10 -
- 12 - 	fine to medium grai brown	ned SANDY LOAM, very wet,	, 10 YR 4/3	3	7		0	- 12 -
- 14 - 14	fine grained SAND,	very wet, 10 YR 5/4 yellowis	h brown			soil sample taken between 14'-16' for	0	- 14 -
- 16	medium to coarse g YR 4/3 brown	grained SAND, saturated at 1	6 feet, 10		9	laboratory analysis	0	- 16 -
- 18 -					10		0	- 18 -
- 20 -	Bottom of Boring at	: 20 ft						- 20 -







			Inalana	ipolis, Indiana		Project N	lumb	er:	08-04-009		
Client:		City of So	outh Bend			Drilling Method:		Dire	ct Push		
Project	t:	Hannove	r Property		1	Sampling Method:		cont	tinuous		
Locatio	on:	731 West	Chippewa Ave	nue, South Bend, Indiana		Weather	:	sun	ny, 80's		
Logged	d By:	DWM				Time Ter	mina	ted:	1345		
Drilling	Com	any: Mid	way	Drillers: Zach		Completi	on D	ate:	June 26, 2008	1	
Depth (feet)				SOIL DESCRIPTION				Sample	REMARKS	PID (ppm)	Depth (feet)
		FILL	rained SANDY	′ LOAM, moist, 10 YR 3/3 dark	brown			1		0	- - - 2 -
- · ·								2	soil sample taken between 2'-4' for laboratory analysis	0	- - - 4 -
- · ·								3		0.9	- - - 6 -
								4		0	- - - 8 -
								5		0	-
								6		0	- 10 - - -
- 12 - - 12 - 								7	Saturation Zone was not found soil sample taken between 12'-14' for	0	- 12 - - -
- 14 - - 14 -								8	laboratory analysis REFUSAL	1.1	- - 14 - -
1		Botto	m of Boring at	15 ft							







	Indiana	npolis, Indiana		ect Numb	er:	08-04-009				
Client:	City of South Bend			Drilling Method: Direct Push						
Project:	Hannover Property		Sam Meth	pling od:	con	tinuous				
Location:	731 West Chippewa Ave	nue, South Bend, Indiana	Wea	ther:	sun	ny, 78				
Logged By	y: RMO		Time	e Termina	ited:	1045				
Drilling Co	mpany: Midway	Drillers: Mark and Zach	Com	pletion D	ate:	June 24, 2008				
Depth (feet)		SOIL DESCRIPTION			Sample	REMARKS	PID (ppm)	Depth (feet)		
	fine to medium graii black	ned SAND with gravel, dry, 10 Y	R 2/1		1		1.0			
- 2	fine to medium grain yellowish brown	ned SAND, slightly moist, 10 YR	5/6		2	soil sample taken between 2'-4' for laboratory analysis	0.6	- 2 - 		
					3		0.4			
	medium grained SA brown	ND, moist, 10 YR 4/6 dark yellov	vish		4		0.6	 		
 - 10 -					5	-	0.7	 - 10		
					6		0.4	 		
					7		0	 		
					8	soil sample taken between 14'-16' for laboratory analysis	0			
- 16 -	coarse grained SAN brown	ID, saturation at 16 feet, 10 YR 4	4/3		9		0	- 16 - 		
- 18					10		0	- 18 		
- 20 -	Bottom of Boring at	20 ft				-		- 20 -		







	Indian	napolis, Indiana		oject Numb	er:	08-04-009					
Client:	City of South Bend			Drilling Method: Direct Push							
Project:	Hannover Property		Sa Me	mpling ethod:	con	tinuous					
Location:	731 West Chippewa Ave	enue, South Bend, Indiana	W	eather:	clou	ıdy, 60's					
Logged By:	DWM	T	Tir	me Termina	ated:	1620					
Drilling Con	npany: Midway	Drillers: Mark, Zach and JR	Co	ompletion D	ate:	June 25, 2008					
Depth (feet)		SOIL DESCRIPTION			Sample	REMARKS	PID (ppm)	Depth (feet)			
	NO RECOVERY	, moist, 10 YR 3/2 very dark grayis	sh		1	-					
	brown				2		3.1				
- 5 -	fine grained SAND,	wet, 10 YR 3/4 dark yellowish bro	own		3	soil sample taken between 4'-6' for	17.9	- 5 -			
					4	laboratory analysis	3.8				
- 10 -	fine grained SAND,	, very wet, 10 YR 4/2 dark grayish	brown		5	-	2.0	 - 10			
					6	soil sample taken between 10'-12' for	0				
	fine grained SAND grayish brown	, saturated at 12 feet, 10 YR 4/2 d	ark		7	laboratory analysis	0				
- 15 -					8	-	2.6	- 15 -			
					9	-	2.6				
20 -	fine to modium arei	and SAND acturated 10VD 4/4 d			10	-	2.9	- 20 -			
	yellowish brown	ned SAND, saturated, 10YR 4/4 d	ark		11	-	3.0				
					12	-	5.2				
- 25 -					13	-	6.0	- 25 -			
					14		4.5				
	Bottom of Boring a	t 28 ft									







Project: I	DWM	nue, South Bend, Indiana Drillers: Zach		con sun	ect Push tinuous ny, 70's							
Location: 7 Logged By:	731 West Chippewa Aver		Weather:	sun								
Logged By:	DWM				ny, 70's							
		Drillers: Zach	Time Terr		Weather: sunny, 70's							
Drilling Compa	any: Midway	Drillers: Zach	Time Terminated: 1050									
			Completio	on Date:	June 26, 2008							
Depth (feet)		SOIL DESCRIPTION		Sample	REMARKS	PID (ppm)	Depth (feet)					
		grained SAND, dry, 10 YR 4/3 brow	n	1 2 3 4	soil sample taken between 4'-6' for laboratory analysis	0	- 2 -					
- 8	CONCRETE			5			- 8 - - - - 10 -					
$P \rightarrow P$	NO RECOVERY			6			-					
				7	REFUSAL at 15', no		- 12 · - - - 14 ·					
	Bottom of Boring at	15 ft		8	saturation point found.		-					







	-	Indidad	upolis, Indiana	i			ct Numb	er:	08-04-009		
Client:	City o	f South Bend				Drilling Metho		Dire	ct Push		
Project:	Hanno	over Property				Sampl Metho	ing d:	cont	tinuous		
Location	n: 731 W	/est Chippewa Avei	nue, Sou	th Bend, India	ana	Weath	ner:	clou	dy, 70's		
Logged	By: DWM					Time ⁻	Termina	ited:	1345		
Drilling (Company: N	lidway	Drillers:	Mark, Zach	and JR	Comp	letion D	ate:	June 25, 2008	1	1
Depth (feet)			SOIL DE	ESCRIPTION				Sample	REMARKS	PID (ppm)	Depth (feet)
	AS	SPHALT									
		e grained SAND, own	moist, 1	0YR 3/2 very	y dark grayish			1			
	××× Nr	O RECOVERY					××××	2	soil sample taken between 2'-4' for		
- 5 -								3	laboratory analysis	0.7	- 5 -
		e grained SAND, own	moist, 1	0 YR 3/2 ver	y dark grayish			4			
- 10 -		e to medium grair own	ned SAN	DY LOAM, v	wet, 10 YR 3/3 d	lark		5		0.6	- 10 -
	XXXX C	aturated at 12 feet					×××××		soil sample taken between 10'-12' for	0.6	
			, NO RE	OVERT				7	laboratory analysis		
- 15 -		edium grained SA						8		2.6	- 15 -
		e grained LOAMY own	' SAND,	saturated, 1	UYR 3/3 dark			9		230	
- 20 -								10		150	
								11		160	
								12		380	
- 25 -	tin	e grained SAND,	saturate	a, 10YR 4/1	dark gray			13		208	- 25 -
- 25 -								14			
	Bo	ottom of Boring at	28 ft								







		- Indiana	apolis, Indiana				ct Numb	er.	08-04-009		
Client:	Cit	y of South Bend				Drilling		Dire	ct Push		
Project:	На	nnover Property				Sampl Metho	ling bd:	cont	tinuous		
Location	n: 73 ′	1 West Chippewa Ave	nue, Sou	th Bend, India	na	Weat	her:	rain	y, 60's		
Logged I	By: DV	VM				Time	Termina	ated:	1520		
Drilling C	Company	/ː Midway	Drillers:	Mark, Zach a	ind JR	Comp	pletion D	ate:	June 25, 2008		
Depth (feet)			SOIL DE	ESCRIPTION				Sample	REMARKS	PID (ppm)	Depth (feet)
P.		CONCRETE						4		4.5	
	<u> </u>	fine grained SAND,	dry, 10 ۲	YR 3/2 very d	ark grayish brov	wn	<u> </u>	1		1.5	
								2	soil sample taken between 2'-4' for	0	
- 5 -		fine grained SAND	loam,	moist, 10 YR	3/2 very dark			3	laboratory analysis	0	- 5 -
		9.29.20						5			
								4		1.4	
		NO RECOVERY					XXXXX				
- +		NO RECOVERT						5			
- 10 -											- 10 -
		fine grained SAND,	VORVINO					6	soil sample taken	0	
- 1		fine grained SAND,	-						between 10'-12' for		
		ine grained SAND,	Saturate	a izieei,	10 f K 4/3 DIOWI	1		7	laboratory analysis	1.5	
- 15 -								8		0	- 15 -
								9		1.4	
- 20 -								10		1.3	
		medium to coarse g yellowish brown	rained S	AND, saturat	ed, 10 YR 3/4 c	lark		11		0	
								12		0	
- 25 -								13		0	- 25 -
								14		0	
		Bottom of Boring at	28 ft								







	Indianapolis, Indiana					er:	08-04-009					
Client:	С	ity of South Bend		Drilli Met		Dire	ct Push					
Project:	Н	annover Property		Sam Meth	pling 10d:	cont	tinuous					
Location	n: 7 3	31 West Chippewa Ave	enue, South Bend, Indiana	Wea	ather:	clou	ıdy, 60's					
Logged	By: D	WM	1	Time	Time Terminated: 945							
Drilling (Compar	_{ny:} Midway	Drillers: Mark, Zach and JR	Con	npletion D	ate:	June 25, 2008	1				
Depth (feet)			SOIL DESCRIPTION			Sample	REMARKS	PID (ppm)	Depth (feet)			
		CONCRETE				1		0				
		fine to medium grai yellowish brown	ned SAND, moist, 10YR 3/4 dark			2		0				
	×××××	NO RECOVERY			X		soil sample taken between 2'-4' for					
- 5 -						3	laboratory analysis		- 5 -			
		fine grained SAND,	moist, 10 YR 4/3 brown			4		0				
		medium to coarse of 4/2 dark grayish bro	grained SAND with gravel, moist, own	10YR		5		0				
- 10 -		brown	very wet, 10YR 4/4 dark yellowis	h		6	soil sample taken	0	- 10 -			
		Ū	AND, very wet, 10 YR 4/3 brown	/3	-	7	between 10'-12' for laboratory analysis	0				
- 15 -		brown				8		0	- 15 -			
		medium to coarse g brown	grained SAND, saturated, 10 YR 4	1/3		9		0				
						10		0				
- 20 -						12		0	- 20 -			
						14	-	0				
- 25 -						16		0	- 25 -			
						18		0				
		Bottom of Boring a	t 28 ft									







		apolis, Indiana		ect Numb	er:	08-04-009		
Client:	City of South Bend		Drillir Meth		Dire	ct Push		
Project:	Hannover Property		Samp Meth	oling od:	cont	inuous		
Location:	731 West Chippewa Ave	nue, South Bend, Indiana	Wea	ther:	clou	dy, 60's		
Logged By:	DWM		Time	Termina	ted:	1105		
Drilling Con	npany: Midway	Drillers: Mark, Zach and JR	Com	pletion D	ate:	June 25, 2008		
Depth (feet)		SOIL DESCRIPTION		Sample	REMARKS	PID (ppm)	Depth (feet)	
- 2	CONCRETE				1		0	- - - 2 -
	brown	ned SAND, moist, 10YR 4/2 da		2	soil sample taken between 2'-4' for laboratory analysis	0	- - -	
	fine grained SAND,	moist, 10 YR 3/6 dark yellowis		3		0	- 4 -	
- 6 -					4		0	- 6 - - - - 8 -
 	fine to medium grai grayish brown	ned SAND, very wet, 10 YR 4/2	2 dark		5		0	- - - - 10 -
					6	soil sample taken between 10'-12' for laboratory analysis	0	- - - - 12 -
	fine to medium grai 4/3 brown	ned SAND, saturated at 12 fee	t, 10YR		7		0	-
- 14 -					8		0	- 14 - - -
 - 14 - - 16 - 	medium to coarse g brown	rained SAND, saturated, 10YF	₹4/3		9		0	- 16 - - -
- 18 - - 20 -					10		0	- 18 - - -
- 20 -	Bottom of Boring at	20 ft						- 20 -







	Indianapolis, Indiana				08-04-009		
Client:	City of South Bend		Drilling Method:	Dire	ct Push		
Project:	Hannover Property		Sampling Method:	cont	tinuous		
Location:	731 West Chippewa Ave	nue, South Bend, Indiana	Weather:	clou	ıdy, 60's		
Logged By	y: DWM		Time Termina	ted:	1220		
	ompany: Midway	Drillers: Mark, Zach and JR	Completion Da	ate:	June 25, 2008		
Depth (feet)		SOIL DESCRIPTION		Sample	REMARKS	PID (ppm)	Depth (feet)
	CONCRETE			1		0	- - - 2 -
	fine to medium grai	1	2	soil sample taken between 2'-4' for laboratory analysis	0	- - - - 4 -	
				3		0	- - - - 6 -
				4		0	- 0 - - - 8 -
- 8 - - 10 -	fine grained SAND,	wet, 10YR 5/4 yellowish brown		5		0	- 8 - - - - 10 -
				6	soil sample taken between 10'-12' for	0	-
- 12 - - 14 - 	fine to medium grai 10YR5/4 yellowish l	ned SAND, saturated at 12 feet, prown		7	laboratory analysis	0	- 12 - - -
- 14 - 14				8		0	- 14 - - -
- 16 - - 	medium to coarse g yellowish brown	rained SAND, saturated, 10YR 5/	4	9		0	- 16 - - -
- 18 - - 18 - 				10		0	- 18 - - -
- 20 -	Bottom of Boring at	20 ft					- 20 -







		Indiana	ipolis, Indiana		-	ct Numb	er:	08-04-009		
Client:	С	ity of South Bend			Drillin Metho	ōd:	Dire	ct Push		
Project	: H	annover Property			Samp Metho	ling od:	cont	tinuous		
Locatio	n: 7 :	31 West Chippewa Ave	nue, South Bend, Indiana		Weat	her:	suni	ny, 70's		
Loggeo	By: D	WM			Time	Termina	ited:	1700		
Drilling	Compar	_{ny:} Midway	Drillers: Mark		Comp	letion D	ate:	June 24, 2008		
Depth (feet)			SOIL DESCRIPTION				Sample	REMARKS	PID (ppm)	Depth (feet)
		CONCRETE					1		0	-
		fine grained SANDY	ND, dry, 10YR 3/6 dark ye ′ LOAM, moist, 10YR 3/3 c	lark brown	wn		2	soil sample taken between 2'-4' for	0	-
- 5 -		medium grained SA brown	ND, moist, 10YR 3/6 dark	yellowish			3	laboratory analysis	0	- 5 -
							4		0	-
		fine grained SAND,	very wet, 10YR 5/6 yellow	ish brown			5		0	- - 10 -
								soil sample taken between 10'-12' for	0	-
		medium grained SA yellowish brown	ND, saturated at 12 feet, 1	I0YR 5/6			7	laboratory analysis	0	-
- 15 -							8		0	- 15 -
							9		0	-
							10		0	- 20 -
							11		0	-
 - 20 							12		0	-
1		Bottom of Boring at	24 ft							







	Indiand	ipolis, Indiana		ect Numb	ber:	08-04-009				
Client:	City of South Bend			hod:	Dire	ct Push				
Project:	Hannover Property		Sam Meth	ipling 10d:	cont	tinuous				
Location:	731 West Chippewa Ave	nue, South Bend, Indiana	Wea	ather:	sun	ny, 80's				
Logged B	y: RMO		Tim	e Termina	ated:	1600				
Drilling Co	mpany: Midway	Drillers: Mark and Zach	Con	npletion D)ate:	June 24, 2008				
Depth (feet)		SOIL DESCRIPTION			Sample	REMARKS	PID (ppm)	Depth (feet)		
		ND, slightly moist, 10YR 2/1 blac			1		0	-		
	fine to medium graii yellowish brown	/6		2	soil sample taken between 2'-4' for laboratory analysis	0	-			
- 5 -					3		0	- 5 -		
-	medium to coarse o	rained SAND, wet, 10YR 4/2 darl	<u>,</u>		4		0			
- - 10 -	grayish brown	Tailieu SAND, wel, 101R 4/2 uair	X		5		0	- 10 -		
					6	soil sample taken between 10'-12' for laboratory analysis	0	-		
	medium to coarse g 10YR 4/2 dark gray	rained SAND, saturated at 12.5 f sh brown	eet,		7		0	-		
- 15 -					. 8		0	- 15 - -		
					9		0			
					10		0	- 20 -		
					11		0			
- 20 -					12		0	-		
	Bottom of Boring at	24 ft								

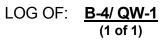






-			Indianapolis, Indiana	Project N		08-04-009		
Client:		City of South Bend		Drilling Method:		ect Push		
Project	:	Hannover Property		Sampling Method:	con	tinuous		
Locatio	n:	731 West Chippewa	Avenue, South Bend, Indiana	Weather	r: sun	ny, 85		
Logged	By:	RMO		Time Te	rminated:	1415		
Drilling	Comp	_{bany:} Midway	Drillers: Mark and Zach	Complet	ion Date:	June 24, 2008		
Depth (feet)			SOIL DESCRIPTION		Sample	REMARKS	PID (ppm)	Depth (feet)
			I SAND with gravel, dry, 10 YR 2/		1		0	
		fine to medium (yellowish brown	grained SAND, slightly moist, 10Y	R 5/6	2	soil sample taken between 2'-4' for	0	
- 4 - 		NO RECOVERY	(3	-laboratory analysis		- 4 -
- 6 - 	<u> </u>	fine to medium (grained SAND, moist, 10YR 4/3 b	rown	4		0	- 6 -
- 8 -		NO RECOVERY	(5	-		- 8 -
- 10 - 					6			- 10 -
- 12 - 					7			- 12 -
- 14 - 					8	-		- 14 -
- 16 - 16 					9			- 16 - - 16 -
 - 18					×	-		 - 18 -
- 16 - - 18 - 		Bottom of Borin	g at 20 ft		10	-		 - 20 -





						Project Number:	08-03-0	09		
Client:		City of South Bend					t Push			
Project		Hannover Property				Sampling Method: contin	nuous			
Locatio	on:	731 West Chippewa Avenu	ie, South Bend, Indiana			Elevation:				
Logged	d By:	JML				Time Terminated	:	Wea	ather: sunny, 70s	
Drilling	Com	pany: Midway	Drillers: Mark and Zach			Completion Date: June 19, 2008				
Depth (feet)	Depth (feet) SOIL DESCRIPTION Sam			Sample	REMARKS		Depth (feet)	WELL DIAGRAM		
- 2 -		NO RECOVERY LOAMY SAND, mottle yellowish brown, soft,	ed with 10 YR 5/6 moist, 10 YR 2/2 very		2			2	Surface Casing	
- 6 - 		dark brown LOAMY SAND, soft, r dark brown fine to medium graine moist, 10 YR 6/4 light	d SAND, soft, very		3 4 5		0 -	- 6 — - 8 — - -		
- 10 - - - 		finet o medium graine saturated at 12 feet, 1	d SAND, soft, 0 YR 6/4 light		6		0 -	10 - - - 12 -	#5 Quartz Sand Pack 2" PVC Sch. 40 0.010 Slot Screen	
- 14 -		yellowish brown	-		8		0 -			
- 16 - 		Boring terminated at 1	l6 ft	<u>, , , , , , , , , , , , , , , , , , , </u>	9			16 — - - 18 — - -		



LOG OF: <u>B-11/QW-2</u> (1 of 1)

			Project Number:	08-03-0	09				
Client:	City of South Bend				Drilling Method: Direct Push				
Project:	Hannover Property			Sampling Method: cont	inuous				
Location:	731 West Chippewa Avenu	ue, South Bend, Indiana		Elevation:					
Logged By:	DWM			Time Terminate	d: 1000	Weather: sun	ıy, 70's		
Drilling Com	ipany: Midway	Drillers: Mark and Zach		Completion Date	e: June 2	20, 2008			
Depth (feet)	SOIL DES	e REMARKS		Oepth (feet) WELL	DIAGRAM				
	fine grained SAND wi 10 YR 3/1 very dark g	th gravel and coal, dry, ray	1		0 -		-Surface Casing		
- 2	fine grained SAND wi 4/3 brown	th gravel, moist, 10 YR	2		0 -		–Bentonite Seal		
- 6 -			3		0 -				
- 8			4		0 -	8			
- 10 -	fine grained SAND, w 4/3 brown	et to very wet, 10 YR	5		0 -	10 -			
			6		0 -				
- 12 -	fine grained SAND, sa YR 4/3 brown	aturated at 12 feet, 10	7		0 -	12 -	-#5 Quartz Sand Pack -2" PVC Sch. 40 0.010 Slot Screen		
- 14 -			8		0 -				
- 16 -	Boring terminated at	16 ft	9	-	0	16 -			
- 18 -				-		18			



LOG OF: <u>**B-19/QW-3**</u> (1 of 1)

	_		Project Number:	08-03-0	09					
Client:	City of South Bend				Method: Direct Push					
Project:	Hannover Property			Sampling Method: contir	nuous					
Location:	731 West Chippewa Avenu	ie, South Bend, Indiana		Elevation:						
Logged By:	RMO			Time Terminated	1410	Weat	ther: sunny, 75			
Drilling Com	ipany: Midway	Drillers: Mark and Zach		Completion Date:	Completion Date: June 23, 2008					
Depth (feet)						Depth (feet)	WELL DIAGRAM			
- 5 -	COAL, 10 YR 2/1 Blac Medium grained SAN 4/3 brown	ck D, slightly moist, 10 YR		soil sample taken to lab for analysis between 2-4 foot interval at 13:55	2.3 - 0.7 - 0.4 - 0.9 -	5 -	Bentonite Seal			
	5/3 brown	d SAND, moist, 10 YR	6		0.7 -					
- 15 -	fine to medium graine 5/3 brown	d SAND, wet, 10 YR		soil sample taken to lab for analysis between 14-16	1.1 -	15 –				
	fine to medium graine 17 feet, 10 YR 5/3 bro	d SAND, saturated at		foot interval at 14:10	1.0 - 0.9 -					
- 20	Boring terminated at 2	20 ft	11			20 -				



LOG OF: <u>B-22/QW-4</u> (1 of 1)

			Project Number: 08-03-009						
Client:	City of South Bend			Drilling Method: Direct Push					
Project:	Hannover Property			Sampling Method: contin	nuous				
Location	on: 731 West Chippewa Avenu	e, South Bend, Indiana		Elevation:	Elevation:				
Logged	i By: RMO			Time Terminated:	Time Terminated: 1720 Weather: sunny, 75				
Drilling	Company: Midway	Drillers: Mark and Zach		Completion Date:	June	23, 2008	3		
Depth (feet) SOIL DESCRIPTION Sample				REMARKS	REMARKS PID Depth (feet) WELL DIAGRAM				
	medium grained SANI black fine to medium grained 10 YR 5/6 yellowish br NO RECOVERY medium to coarse gra YR 4/3 brown	d SAND, slightly moist, own	4 5 6 7 5 7 5	coil sample taken o lab for analysis between the 2-4 bot interval	0.3		Bentonite Seal		
- 14 - 	fine grained SAND, sa 10 YR 4/3 brown		<u> </u>	between the 2-14 foot nterval	0 -	14 – · · · · · · · · · · · · · · · · · ·	2" PVC Sch. 40 0.010 Slot Screen		
- 10 - 	Boring terminated at 1	6 ft	9		-	18 -			
			10	·					



LOG OF: <u>**B-27/QW-5**</u> (1 of 1)

							Project Number: 08-03-009				
Client:		City of South Bend					t Push				
Project		Hannover Property				Sampling Method: contir	nuous				
Locatio	n:	731 West Chippewa Avenu	ue, South Bend, Indiana			Elevation:					
Logged	By:	RMO				Time Terminated	Time Terminated: 930 Weather: sunny, 75				
Drilling	Com	pany: Midway	Drillers: Mark and Zach			Completion Date:	June	24, 20	08		
Depth (feet)		SOIL DES	SCRIPTION		Sample	REMARKS	PID (ppm)	Depth (feet)	WELL DIAGRAM		
		CONCRETE medium grained SAN moist, 10 YR 2/1 blac	D with gravel, slightly k	4 44	1		0 -		Surface Casing		
		medium to fine grained SAND, slightly moist, 10 YR 5/6 yellowish brown			2	soil sample taken to lab for analysis between the 2-4	0 -	-			
- 5 -					3	foot interval	0 -	- 5 -			
	~~~				4		0 -	-			
		NO RECOVERY			5		0 -	- - 10			
		coarse grained SAND brown	9, moist, 10 YR 4/3		6		0 -	-			
					7		0 -	-			
- 15 -					8	soil sample taken to lab for analysis between the	0 -	- 15 -	#5 Quartz Sand Pack 2" PVC Sch. 40		
		coarse grained SANE 10YR 4/3 brown	, saturated at 16 feet,		9	14-16 foot interval	0 -	-	0.010 Slot Screen		
					10		0 -	- 20			
- 20 -		Boring terminated at 2	20 ft		11			- 20			



LOG OF: <u>**B-32/QW-6**</u> (1 of 1)

Client: Project:	City of South Bend Hannover Property	Drilling Method: Direct Push Sampling Method: continuous							
ocation:	731 West Chippewa Aven	ue, South Bend, Indiana	Elevation:						
Logged By: RMO				Time Terminated: 1000 Weather: sunny, 7					
Drilling Cor	npany: <b>Midway</b>		Completion Date	June	24, 200	8			
Depth (feet)	SOIL DESCRIPTION Sample			REMARKS PID Depth (ppm) (feet)			WELL DIAGRAM		
-	ASPHALT/CONCRE	TE	1		0 -		Surface Casing		
2 -	fine grained SAND, o yellowish brown	lry, 10 YR 4/6 dark	2		1.5 -	2			
4	fine grained SAND, r yellowish brown	noist, 10YR 4/6 dark	3		1.2 -	4			
6 -			4		1.0 -	6			
8	fine to medium grain 5/6 yellowish brown	ed SAND, wet, 10 YR	5		- 1.2 -	8 -			
10 -			6		0.8	10 -			
12	fine to medium grain 12 feet, 10YR 5/6 ye	ed SAND, saturated at lowish brown	7		0.4 -	12 -	Pack 2" PVC Sch. 40 0.010 Slot Screen		
14 –			8		0.3 -	14 -			
16	Boring terminated at	16 ft	9		-	16 -			
- 18 — -			10			- 18 —			



LOG OF: <u>**B-35/QW-7**</u> (1 of 1)

							Project Number: <b>08-03-009</b>			
Client: City of South Bend					Drilling Method: Direct Push					
Project: Hannover Property					Sampling Method: <b>continuous</b>					
Location: 731 West Chippewa Avenue, South Bend, Indiana						Elevation:				
Logged By: RMO						Time Terminated	Time Terminated: 1350 Weather: sunny, 80's			
Drilling	Com	pany: <b>Midway</b>	Drillers: Mark and Zach	Completion Date	Completion Date: June 24, 2008					
Depth (feet)						REMARKS	PID (ppm)	Depth (feet) WELL DIAGRAM		
		fine grained SAND an 2/1 black	d Gravel, dry, 10 YR		. 1		0 -	-	Surface Casing	
		fine to medium graine 10YR 5/6 yellowish br	d SAND, slightly moist, own		2	soil sample taken for lab analysis	0 -	-		
- 5 -		fine to medium grained SAND, slightly moist, 10YR 5/6 yellowish brown, mottling 10YR			3	between the 2-4 foot interval	0	- 5		
		2/1 black fine to medium graine	d SAND maint 10VP		4		0 -	-		
 - 10 -		4/3 brown		5		4.6 -	     			
					6	soil sample taken for lab analysis	0 -			
		coarse grained SAND brown coarse grained SAND 10YR 4/3 brown	,		7	between the 10-12 foot interval	0 -	-		
- 15 -					8		0 -	- 15 -		
					9		0.2	-		
- 20 -		fine grained SAND, sa odor,10YR 2/1 black	aturated, strong		10		234.6 -	- 20 -		
 - 20 -    					11		160.9 -	-	#5 Quartz Sand Pack 2" PVC Sch. 40 0.010 Slot Screen	
		Devine to write to the	04 <del>4</del>		12		283.6 -	-		
- 25 -	-	Boring terminated at 2	24 π		13			- 25 -		



LOG OF: <u>**B-40/QW-8**</u> (1 of 1)

		Project Number: 08-03-009			
Client:	City of South Bend	Drilling Method: Direct Push			
Project:	Hannover Property	Sampling Method: continuous			
Location	n: 731 West Chippewa Avenue, South Bend, Indiana	Elevation:			
Logged	By: RMO	Time Terminated: 1155 Weather: sunny, 80's			
Drilling (	Company: Midway Drillers: Mark and Zacl	Completion Date: June 24, 2008			
Depth (feet)	SOIL DESCRIPTION	Sample			well DIAGRAM
	medium grained SAND, slightly moist, 10Y 2/1 black	/R 1		0 -	Surface Casing
	fine to medium grained SAND, slightly moi 10YR 3/2 very dark grayish brown	2 S	oil sample taken or lab analysis	0.1 -	
- 5 -	NO RECOVERY	ja ka	etween the	0.1 - 4	5
	fine to medium grained SAND, moist, 10 Y 3/1 very dark gray	(R 4		0.3 -	
		5		0.3 -	Bentonite Seal
- 10 -	fine to medium grained SAND, wet, 10 YR 3/1 very dark gray	6 S	oil sample taken or lab analysis	0.1 -	
- +	fine to medium grained SAND, saturated a 13 feet, 10YR 3/1 very dark gray	b	between the	0.3 -	
- 15 -		8		- 1	
		9		_	
- 20 -		10		2	20
		11		37 -	
		12		179 -	#5 Quartz Sand Pack 2" PVC Sch. 40 0.010 Slot Screen
- 25 -		13		462 – 2	25
		14		-	
	Boring terminated at 28 ft				



LOG OF: <u>**B-18/QW-9**</u> (1 of 1)

					Project Number: 08-03-009					
Client:	ent: City of South Bend					Drilling Method: Direct Push				
Project:	t: Hannover Property					Sampling Method: <b>continuous</b>				
Location: 731 West Chippewa Avenue, South Bend, Indiana						Elevation:				
Logged By: DWM						Time Terminated: <b>1310</b> Weather: <b>sunny, 70's</b>				
Drilling	Company: <b>N</b>	Drillers: Mark and Zach	Completion Date: June 20, 2008							
Depth (feet)					Sample	REMARKS	MARKS PID Depth (ppm) (feet) WELL DIAGRA		WELL DIAGRAM	
	fine 3/3	to medium graine dark brown	d SAND, dry, 10 YR		2		0 - - - 0 -	- - - 2 -	Surface Casing	
- 4   		grained SAND, m k grayish brown	oist, 10 YR 3/2 very		3		0 -	- 4 - - - - - 6 - -		
- 8 - - 8 -  	fine 3/4	to medium graine dark yellowish bro	d SAND, moist, 10 YR wn		5		0 -	- 8 - - - - - - 10 -		
- 12 -	bro	wn	D, moist, 10 YR 5/3		6		0 -	- - - 12 -		
  - 14 -	me YR	dium to coarse gra 5/3 brown	ined SAND, wet, 10		7		0 -	- - - - 14		
	coa 10`	rse grained SAND YR 4/2 dark grayis	), saturated at 15 feet, h brown		8		0 -	- - - 16 -	##5 Quartz Sand Pack 2" PVC Sch. 40 0.010 Slot Screen	
- 18 -					9		0 -	- - - - 18 –		
					10		0 -	-		
- 20 -	Bor	ing terminated at 2	20 ft					- 20 -		