#### PURCHASE ORDER D-U-N-S 00-641-4361

1531 13th Street, Cohumbus, Indiana 47201 812 379 3000

Charles Moores



NORTH AMERICAN AUTOMOTIVE 1001 Hurricane St. Franklin, IN 46131

Attn: G. Ernest

ASAP When to Ship

OB Destination

Date of Order

5-27-86

Ship Via

Bear Truck

Terms 2% 15th and 30th. Invoices dated 1st to the 15th, received by the 20th will be paid on the 30th of the month. Invoices dated 16th to the end of the month, received by the 5th will be paid on the 15th of the following month.

QUANTITY .

DESCRIPTION

PRICE

Labor to remove 1000 gal. buried gas tank fill hole and seal with concrete

> Material \$1270.00 Labor 1048.00

U324326/333 HIS FURCHASE EXEMPT FROM INDIANA STATE GROSS RETAIL TAX AND USE TAX UNDER BLANKET CERTIFICATE NO. 35-0550-90 001-2

ibject to all the conditions shown above and on the verse side, all of which are made a part of this order.

NORTH AMERICAN AUTOMOTIVE

PLEASE ACKNOWLEDGE THIS ORDER IMMEDIATELY

NOTE: This order number must appear on each package laiso on your ravoice which should be sent in auplicate to NORTH AMERICAN AUTOMOTIVE, Autounts Payable BOX NUMBER 3002, COLUMBUS, IN 47202

The applicable provision Executive Orders 11246, as amended, 11141 and 117 e Vietnam Era Veterans Readjustment Act of 1977 and the Rehabilitation Act of 1973 are incorporated height by specific reference.

)-050-01H

# REMEDIAL ACTION PLAN: FORMER FUEL OIL UNDERGROUND STORAGE TANK AREA ARVIN NORTH AMERICAN AUTOMOTIVE FRANKLIN, INDIANA PLANT

Prepared for Arvin North American Automotive 1531 Thirteenth St. Columbus, Indiana 47201

February 1993

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Environmental Consultants
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Indianapolis, Indiana 46204
(317) 231-6500

#### REMEDIAL ACTION PLAN: FORMER FUEL OIL UNDERGROUND STORAGE TANK AREA FRANKLIN, INDIANA PLANT

February 24, 1993

Geraghty & Miller, Inc. is submitting this report to Arvin North American Automotive for work performed at Franklin, Indiana Plant. The report was prepared in conformance with Geraghty & Miller's strict quality assurance/quality control procedures to ensure that the report meets industry standards in terms of the methods used and the information presented. If you have any questions or comments concerning this report, please contact me.

Respectfully submitted,

GERAGHTY & MILLER, INC.

Oren J. Gottlieb

Principal Scientist/Associate

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# REMEDIAL ACTION PLAN: FORMER FUEL OIL UNDERGROUND STORAGE TANK AREA ARVIN NORTH AMERICAN AUTOMOTIVE FRANKLIN, INDIANA PLANT

#### 1.0 INTRODUCTION

This report presents the results of the investigation of a release of No. 2 fuel oil at the Arvin North American Automotive, Franklin, Indiana plant (Figure 1) and an evaluation of alternatives for remediation. Fuel oil was detected November 5, 1992 during the repair of a water main adjacent to the location of a former underground storage tank (UST). The UST had a capacity of 16,000 gallons and was reportedly removed in 1986.

The approach that was used to investigate the fuel oil release was to drill and sample soil borings adjacent to the former UST location. These borings were used to delineate the extent of petroleum hydrocarbon impacts, evaluate the types of subsurface materials present, and provide data required to evaluate the cost and effectiveness of remedial alternatives. Initially, four soil borings were drilled at the corners of the former UST location. After hydrocarbon impacts were detected in some of these soil borings, additional borings were drilled to delineate the impacts. No ground-water monitoring wells were installed since a significant transmissive layer was not detected, as will be discussed in the body of the report.

#### 2.0 METHODOLOGY

The investigation of the former UST was conducted during the week of November 23, 1992. The investigation consisted of drilling nine soil borings to a depth of approximately 15 feet per boring. The soil borings were drilled with a hollow-stem auger drilling rig and samples were collected continuously using a split barrel core sampler (split spoon). The augers and down hole equipment used in sampling were hot pressure washed between each boring. After completion of the borings, the borings were backfilled with bentonite.

Each soil sample that was collected was logged to determine geologic properties and to evaluate whether any evidence of petroleum impacts were present. In addition, the headspace of each sample was screened in the field using an organic vapor analyzer (OVA). This screening was performed by placing a portion of the sample in a plastic Zip-loc bag, sealing the bag and letting the sample sit at room temperature for approximately 5 or 10 minutes, and measuring the organic vapor concentration in the headspace of the bag using the OVA. The location of soil borings is provided on Figure 2. Soil boring logs are in Appendix A.

Initially, four soil borings were drilled approximately north, south, east and west of the former UST. These borings show that petroleum hydrocarbons are present in soil at levels over 100 parts per million (ppm) (an informal Indiana Department of Environmental Management [IDEM] cleanup guideline) east and west of the former tank location. Therefore, additional soil borings were drilled in these directions until what appeared to be a clean perimeter was reached.

The most impacted soil sample from each soil boring based on OVA measurements and field observations was collected for analysis for total petroleum hydrocarbons (TPH). Because the chemical of concern was No. 2 fuel oil, a TPH analysis for both the purgeable (volatile) and extractable (semi-volatile) fraction was performed using USEPA SW-846 Method 8015. Samples were collected by removing a portion of the sample from the split spoon using a clean latex glove,

placing the sample in containers provided by the laboratory, placing the sample on ice in a cooler, and shipping the sample accompanied by a chain of custody form, and sealed by a chain of custody seal to the analytical laboratory (NDRC Laboratory in Richardson, Texas). Soil sampling forms and chain-of-custody forms are provided in Appendix B.

Chemical analytical reports are provided in Appendix C. An evaluation of laboratory quality control indicates that all quality control parameters were within acceptable limits. Matrix spike/matrix spike duplicate relative percent differences were less than 10 percent. Average spike recovery was between 79 percent and 100 percent. Method blank concentrations were less than method detection limits and blank spike recovery limits were between 77.9 and 108 percent. Holding times and extraction/analysis times were not exceeded on any of the samples.

#### 3.0 RESULTS OF INVESTIGATION

The soil borings indicate that the subsurface materials consist of clayey silt containing sporadic sand layers that were generally less than two feet thick. At the approximate location of the former UST, sediments appear to be more disturbed and significantly wetter. This increased wetness may be due to water from the leaking water line that is adjacent to the former UST location.

At the soil borings closest to the former UST location, a fuel oil sheen was detected. However, no evidence of a free product layer perched on the water table was detected.

Analyses of soil samples indicated up to 133 ppm TPH at the former tank location. Further north, south, and west of the former tank location soil TPH levels were below 100 ppm. Towards the east, levels up to 320 ppm were detected. As the drilling proceeded further east, it became apparent that petroleum hydrocarbons were concentrated in thin sand stringers and that the soil above and below these thin sand stringers was not impacted by hydrocarbons. Therefore, it appears that the soil impacts are limited to the area immediately around the former tank location and that any impacts further from the tank are due to migration through extremely thin sand stringers which are clayey and silty (therefore relatively low permeability), which do not represent a potable source of ground water. Chemical analyses of soil are summarized in Table 1.

Based on the analytical data and the screening of soil samples in the soil boring logs, by interpolating between borings, it is estimated that an area of 50 feet by 20 feet by 10 feet deep contains TPH levels above 100 ppm. Therefore, the total volume of impacted soil is approximately 400 cubic yards.

#### **4.0 EVALUATION OF POTENTIAL RECEPTORS**

An evaluation has been performed to determine whether there are any significant potential impacts to human health and the environment from the petroleum hydrocarbons detected in this investigation. This evaluation consisted of obtaining well log records from the Indiana Department of Natural Resources, and reviewing a topographic map of the site and surrounding area to evaluate if there are any residences that could be affected by migration of petroleum hydrocarbons originating from the site into basements, or there any streams or surface water drainages that could be impacted by hydrocarbons detected at the site.

Well logs obtained from the Indiana Department of Natural Resources (IDNR) (Appendix D), indicate that the area around the site is served by city water. The city water is provided by the Indiana Cities Water Corporation that has a well field approximately 1 mile northeast of the site. The wells at this field are screened in sand and gravel at a depth of approximately 100 feet. The search of IDNR records indicates that there may be 24 water wells within approximately 1 mile of the site. These wells are all screened below a clay layer that extends in general from the surface to at least 30 feet deep. The closest water well recorded in IDNR files is approximately 300 feet west of the former UST area.

The soil boring logs from this project show that petroleum hydrocarbons were restricted to thin, sporadic sand layers and were underlain by unimpacted finegrained sediments. Therefore, the petroleum hydrocarbons investigated do not appear to have the potential for impacting water wells near the site.

Residences are located approximately 200 feet south of the former underground storage location. The area north, east and west of the former UST location is occupied by the plant and there is a large distance to residences (over 300 feet). The investigation has indicated that the

petroleum hydrocarbons do not extend a large distance (less than 50 feet) south of the former UST location, and, therefore, the hydrocarbons do not pose a threat to the residences through migration to basements or similar pathways.

An examination of the topographic map for the site and the surrounding area indicates that the nearest surface water drainage is approximately 1 mile away from the former UST location. Since the levels of petroleum hydrocarbons decrease in almost all directions away from the UST, and due to the great distance to the surface water drainage, it does not appear possible that the petroleum hydrocarbons detected at the UST area could affect surface water.

#### **5.0 EVALUATION OF REMEDIAL ALTERNATIVES**

The investigation has indicated that petroleum hydrocarbon impacts are limited to soil and there are no substantial, transmissive ground-water zones that are impacted. Therefore, the evaluation of remedial alternatives is restricted to soil remediation.

The subsurface sediments consist of clayey silt. This sediment typically has a low permeability, on the order of 10<sup>-1</sup> x 10<sup>-5</sup> or less centimeters/second. In addition, especially around the former UST, these sediments are relatively wet. Subsurface venting is typically the most cost effective in-situ remedial technology. The low permeability and the wetness of the site sediments would make utilizing an in-situ venting type technology difficult. These technologies utilize blowers to induce a vacuum in the subsurface or force airflow through the subsurface and thereby volatilize or enhance the biodegradation of the hydrocarbons. If the site sediments were more permeable and less wet, bioventing would likely be a applicable technology since fuel oil is generally relatively degradable. However, given the subsurface conditions, this technology should probably only be utilized if more cost effective technologies are not available.

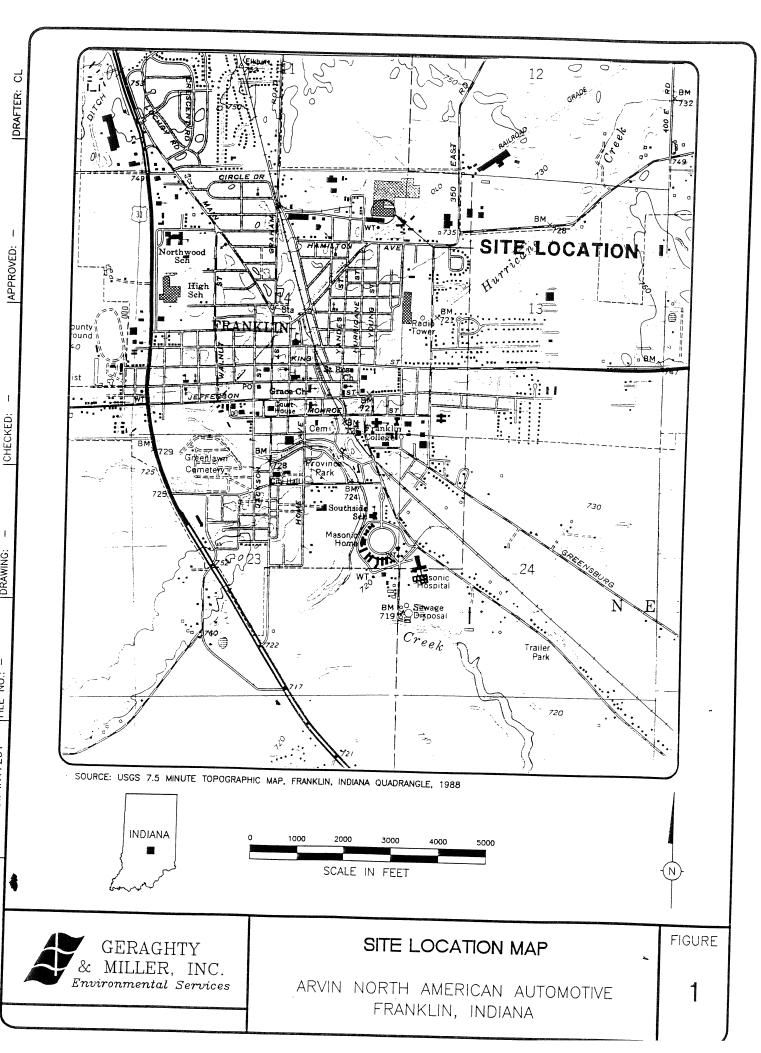
The two most commonly implemented ex-situ remedial technologies for relatively fine-grained soils are excavation of the contaminated soil and disposal of the soil at a landfill or at another location, or excavation of the soil and landfarming of the soil. Excavation and off-site disposal involves excavation using a backhoe or trackhoe until a clean perimeter (less than 100 ppm total petroleum hydrocarbon) is reached. The soil can be disposed of at a sanitary landfill licensed to accept petroleum-impacted soil or the soil can be used in asphalt blending. Facilities are available near the site for asphalt blending, however, a concern with this method of disposal its potential liability should the asphalt blending facility operate in an environmentally un-sound manner. Liability may be somewhat reduced with landfills due to the fact that there are several relatively large corporations operating landfills that may be more financially able to absorb the liability associated with disposal.

Excavation and landfarming involves excavating the soil and placing the soil within a containment structure. This containment usually includes low soil berms lined with thick plastic sheeting. Also, a sump is usually placed within the containment area to collect any water. Depending on the site wastewater handling capability, this water can usually be discharged through the plant. Discussion with Arvin indicates that the plant would be able to handle water generated from a landfarming operation. The landfarming process consists of spreading the soil in a layer approximately 1.5 feet thick and discing the soil periodically (every one to four weeks) to facilitate biodegradation of the hydrocarbons. Nutrients can also be added to facilitate biodegradation, if necessary. These nutrients would consist of commonly available fertilizer.

The principal disadvantage of the excavation and off-site disposal option is the liability associated with off-site disposal. The principal disadvantage of the landfarming option is the necessity for performing operation and maintenance which can be a burden on facility personnel. Previous experience with soils and contaminants of the type found at the former UST location indicates that levels can be reduced below 100 ppm in approximately one year by landfarming.

A comparison of costs between the excavation and off-site disposal and excavation and landfarming has been performed. A price quotation from a contractor that Geraghty & Miller has previously utilized to perform environmental contracting work was obtained. This quotation indicated that excavation and off-site disposal could be performed for \$50 per cubic yard and that excavation and landfarming could be performed for \$23 per cubic yard. Multiplied times the total number of cubic yards indicated to be impacted (400), the approximate costs for excavation and disposal would be \$20,000 and excavation and landfarming would be \$9,200. In-situ options, based on previous experience would cost on the order of \$100,000 to \$200,000. Therefore excavation and landfarming is the most cost effective option. However, the cost savings may be off-set by burdensome operational and maintenance requirements.

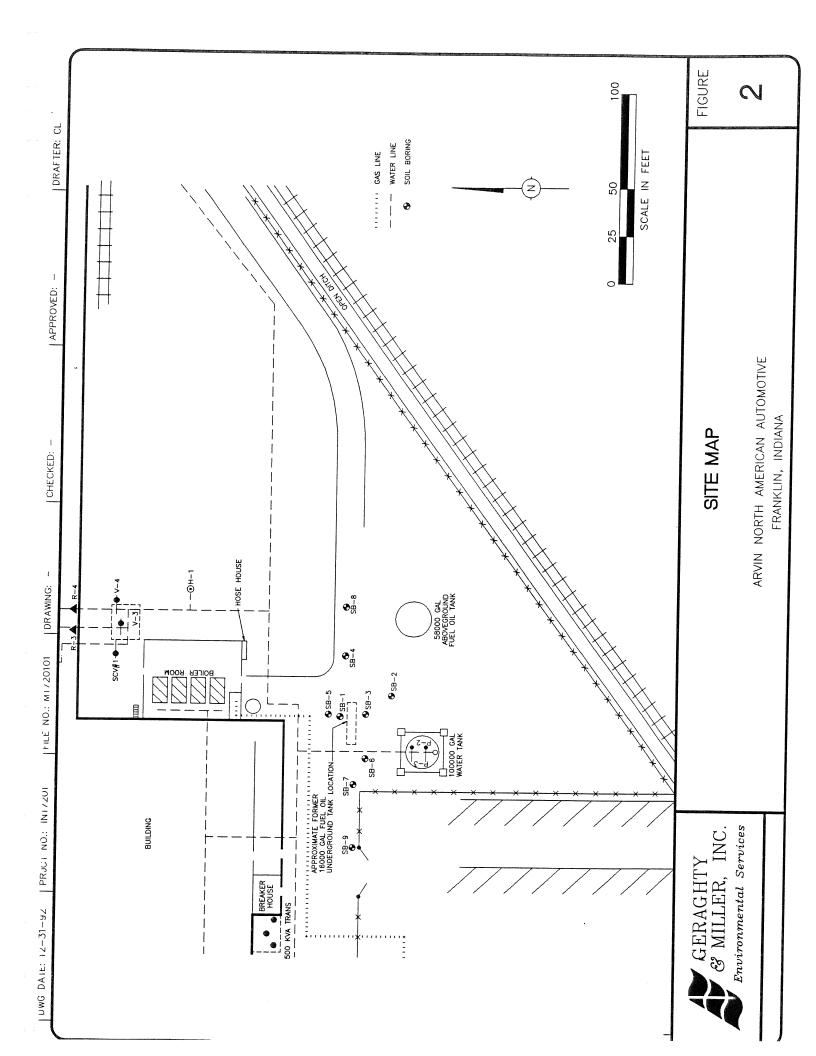
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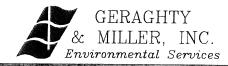
Table 1. Summary of TPH analyses of soil samples. Arvin North American Automotive, Franklin, Indiana.

Soil Boring	Depth (feet)	TPH Concentration <sup>1</sup>
SB-2	5-7	25
SB-3	5-7	133
SB-4	5-7	250
SB-5	7-9	0.5
SB-6	5-7	ND
SB-7	3-5	28.53
SB-8	5-7	320
SB-9	3-5	59

Note: TPH performed on sample from each boring determined most impacted by headspace analysis.

<sup>&</sup>lt;sup>1</sup> All results in ppm. TPH includes purgeable and extractable fraction.

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ELEVATION	TOC GL				Robert S. Fedo	orchak											
WELL CONST.	DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	GRAIN SIZ	DN: COLOR, ZE, ODOR, PI INING, REMAR	LASTICITY		MOISTURE CONTENT	OVA (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE			
	1-3				Brown, non-cohe sand, odorless	esive (so	ft), si	lty	М	40		5 6 6	67	SS			
	3-5				Oil smell, brov				W	.04		8 4 2 1	50	SS			
	5-7				Cohesive (stiff odorless, grey-				W	.15		3 1 1 2	50	SS			
	7-9	Addition to the property of the control of the cont			Clayey silty sa ive (stiff/soft				W	.04		1 0 7 1	50	SS			
	9-11				Clay silty sand cohesive (stiff slag				W	.1		1 9 5 3	33	SS			
	11-13				Gray/brown, non cohesive (soft) silty sand and	, fuel oi gravel, c	l smell	,	М	15		2 9 5 0	50	SS			
	13-1				sand and gravel Trace clay, silt non-cohesive, ta fuel oil smell, Borehole abandon bentonite	ty sand a an brown, stiff	concre	te,	M	27		.1 5 0 5 .4	30	S			



JOB NUMB	ER CI	JENT		LOCA	ATION WELL NO. PAGE WELL LOCATION	
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	GL				Robert S. Fedorchak SB-,	<del>)</del>
WELL CONST.	DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY, GRAIN SIZE, ODOR, PLASTICITY STAINING, REMARKS  DESCRIPTION: COLOR, DENSITY, GRAIN SIZE, ODOR, PLASTICITY STAINING, REMARKS  ON STAINING REMARKS	SAMPLE TYPE
	1-3				Musty smell, blackish brown, cohesive D 90 1 80 (soft), sand and gravel, stain 9 8	SS
	3 <b>-</b> 5				Cohesive (hard/stiff), clayey silty D .11 6 2 100 sand with brick, musty smell 3	SS
	5-7				Clay and silt, grey-brown, cohesive D 3 100 (stiff), fuel oil smell .	SS
	7-9				Clayey silty sand, grey-brown, musty M 1 100 smell, cohesive (soft) 1	SS
	9-11	All and Pile in the All all the second			Clayey silty sand, grey-brown, musty W 4 100 smell, cohesive (stiff/soft) 5	SS
	11-11				Tan-brown, clayey silty sand/clayey W 4 100 s silty sand and gravel, cohesive (hard) 9 1:9	SS
	13-15				Tan-brown, clayey silty sand, non- W 10 100 s cohesive (dense), no smell 16 23	SS
; 3					Borehole abandoned by filling with bentonite	



JOB NUMB		LENT Cvin		LOCA		WELL NO. SB-3	PAGE 1 OF	WELL LOG SKETCH	CATION B:	aile	ding	^)		
DRILLING METHOD HOllow DRILLING S	Stem START 1 INISH 1	1 Auc 1/23	/92	AfV	n-Franklin SAMPLING METHOD Split Spoon DEVEL START FINISH DRILLED BY	<del>Α</del> ξ		tan		0	3-3			
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	1 <b>-</b> 3				Gray-black, co	, silty s	and and	gravel				3 4 2 2	70	
	5-7				Brown/black, c silty sand & g smell, stained Clayey silty s	ravel, sh	een, fue	el oil	W			2 1 1 2	30	
					cohesive(soft)  Auger in rubble Borehole abanda bentonite, 14"	, sheen, control of the fill control of the fill control of the file of the fi	fuel oil illing w	. smell vith	$\mathbb{W}$			1 2 1	20	



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WELL CONST.	DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	GRAIN S	TION: COLOR, SIZE, ODOR, F TAINING, REMAI	LASTICITY		MOISTURE	OVA (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
	1-3				Clayey silty brown, cohesi smell (stiff/	ve, staini			М	60		4 5 7	Same and the same of the same	SS
	3-5				Tan-brown, cl gravel, cohes smell			8	D	20		12 3 1 1	60	55
	5-7				Brown, clayey cohesive (hard				М	30		2 2 2 1	50	SS
	7-9				Tan-brown, col clayey silty s smell		-		W	40		2 2 2	60	SS
	9-11				Tan-brown, col clayey silty s smell				W	15		2 2 4- 6 12		
	11-1	В			Dark brown, co clayey silty s smell				W	15		5 13 14 45	30	SS
	13-1				Tan-brown, colclayey silty smell				W	20		8 15 21 30	90	SS
					Borehole aband	loned by fi	lling w	ith						



JOB NUMBE		JENT		LOCA	ATION	WELL NO.	PAGE I	WELL LO	CATION		<b>/</b> ************************************			
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WELL CONST.	DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	GRAIN S	ION: COLOR, IZE, ODOR, F AINING, REMAI	LASTICITY		MOISTURE	OVA (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE TYPE
	1 <b>-</b> 3				Black, cohesive sand and grave brick fragment	el, fuel o es, staine wn, cohes	il smel d ive(sti	1, ff),	D D	10 14		6 7 2:5 19 19	THE CONTRACT OF SCHOOL	SS
	5-7				clayey silty soil smell, sta Gray-brown, cl gravel, cohesi	and and grained	ravel, f	fuel and	D	14		6 5 5		SS
	7-9				oil smell  Gray-brown, cla gravel, cohesi	ayey silty	y sand a	ınd		15		2 3 3 2	90	
Ç	9-11				oil smell Tan-brown, cohe silty sand and	esive(stif gravel, π	ff), cla	yey ell	W	10		1 2 2 5 7	90	SS
	.1-13				Tan-brown, cohe silty sand and	esive(hard gravel, m	.), clay usty sm	ey ell	W	0		10 6 12 23 17	100	SS
1	3-15				Tan-brown, clay gravel, cohesiv	re (hard),	musty	smell	W				100	SS
					Borehole abando bentonite	wed by II.	riing w	- L11						



JOB NUMBER	CLIEN	T		LOCA	ATION	WELL NO.	PAGE 1	WELL LO	CATION		A September 1	eresilence a sie		
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LEVATION TOO					Farth Fxplo: LOGGED BY Robert S. Fe									
WELL CONST.	PEPIH FEET SAMPLE	INTERVAL	NAME	CLASS	GRAIN	PTION: COLOR, SIZE, ODOR, I TAINING, REMA	PLASTICITY		MOISTURE	OVA (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE
1 -	3				Brownish blac and gravel, c	ckish claye cohesive (s	ey silty soft)sta	sand ined	W			2 2 2		SS
3 -	5				Blackish-brow clayey silty (soft)/cohesi	sand and g	brown, s	stained cohesiv	W e			2 2 2 2	100	SS
5-	7				Blackish-brow clayey silty cohesive (sof	sand and g	stained ravel,	l,	W			4 7 2 2	100	SS
7-	9				Tan-brown, cla gravel, cohes	ayey silty ive (soft)	sand ar	ıd	W			3 1 1 1	100	SS
9-	Ll	on the second se			Tan-brown, cla	ayey silty ive (soft)	sand an	d	W			1 1 1 4	100	SS
1 -	-13				Tan-brown, cla	ayey silty ve (hard)	sand an	d	W			5 5 5 10	100	SS
13-	·15				Tan-brown, cla gravel/silty s non-cohesive (	and, cohes	sand and sive (so	d · . ft)/	W/ M	The second state of the second		10 29	L00	SS
	Notice the Control of				Borehole aband bentonite	oned by fi	.lling w	ith				33		
														STANSON STANS



JOB NUME		LIENT rvin		LOCA Arv:	MELL NO. PAGE 1 OF 1  Ln-Franklin SB-7	WELL LO SKETCH	CATION	`			a deciminate rivers de la company				
DRILLING METHOD HOllow	WHAT ARE TO STREET, IN	A PROPERTY OF	THE THE PARTY OF T		SAMPLING METHOD Split Spoon			<u> W</u>	<u>101</u>			7			
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ELEVATION	TOC GL				Earth Exploration LOGGED BY Robert S. Fedorchak										
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			
	1-3 3-5 5-7 7-9 9-11				Brown/black, clayey silty sand gravel, cohesive (soft)/non-cohesive (loose), fuel oil smetan see product in stained are Tan-brown, clayey silty sand a gravel, cohesive (soft), fuel smell  Same as above  Tan-brown, silty clayey sand, cohesive (stiff), fuel oil smell  Same as above  Reddish-brown, clayey silty sand and gravel, cohesive (hard), not gravel, cohesive (hard/soft), resmell  Borehole abandoned by filling woentonite	ell, as nd oil  ll  smell ad and ao	M M D	100 200 130 14 5		2 5 5 4 1 2 2 3 2 2 3 4 2 4 6 9 6 6 12 22 7 9 14 16 4 13 4 13 3 7	90 100 100	SS SS			



JOB NUME	BER CI	LIENT		LOCA	OF SETTING
IN1720 DRILLING METHOD HO110W	S CLASSEA STORY	rvin	The Phone Street Constitution of the Party o	Arv	in-Franklin SB-8  SAMPLING METHOD Split Spoon
DRILLING S	START ]	11/2	9er 4/92 4/92		DEVEL. START FINISH  Abardner  O
STATIC DTV	w I'		TIME DATE		DRILLED BY Earth Exploration
ELEVATION	TOC GL	Maga Talahan Talahan			Robert S. Fedorchak
WELL CONST.	DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	DESCRIPTION: COLOR, DENSITY, GRAIN SIZE, ODOR, PLASTICITY STAINING, REMARKS  ON ON SAMPLE SAM
	1-3				Brown/black, fuel oil smell, sheen, W 210 2 50 SS stain, clayey silty sand and gravel cohesive(soft) 1
	3-5				Same as above W 200 1 1 10 SS
	5-7				Same as above (red brick) W 200 2 40 SS 2
	7-9				Grayish blackish brown, clayey silty sand and gravel, cohesive (soft), stain on outside of sample, fuel oil smell, brown (dark inside)
	9 <b>-</b> 11				fuel oil smell, brown (dark inside)  Same as above (reddish-brown inside) W 50 2 100 SS  3 6 12
		Control Management of the Police of the Poli			Borehole abandoned by filling with bentonite



JOB NUMB	BER C	LIENT		LOCAT	TION	WELL NO.	PAGE 1	WELL LO	САПОЛ			A. which is a second	on sile securità	n dien dan der
IN1720	)1 A:	rvin	Control of the Contro	Arvi	n-Franklin	SB-9	1	SKETCH						
DRILLING METHOD HOllow	Ster	n Au	ger		SAMPLING METHOD Split Spoon									
DRILLING S	START ] INISH		5/92 5/92		DEVEL. START FINISH									
STATIC DTW	V gı	7410750 748	TIME DATE	The second state of the second	DRILLED BY									
ELEVATION	TOC	1.0000000000000000000000000000000000000	de la composição de la co		Earth Explora	ation								
	GL				Robert S. Fed	dorchak								
WELL CONST.	DEPTH FEET	SAMPLE INTERVAL	NAME	CLASS	GRAIN S	TON: COLOR, NZE, ODOR, F AINING, REMA	PLASTICITY	A CONTRACTOR OF THE CONTRACTOR	MOISTURE	OVA (PPM)	SAMPLE NO.	BLOWS	RECOVERY PERCENT	SAMPLE
	1-3 3-5				Tan-brown/bla and gravel, s cohesive (har fuel oil smel Brown, clayey cohesive (har stained	silty sand (d)/non-co .l / silty sa	l and graphesive	avel, (loose) gravel,	D	200		3 12 8 6 2 2	A COLUMN TWO IS NOT	SS
	5-7				Brown, clayey	silty sa	nd and o	gravel	М	35		6	100	SS
NOTIFICATION OF THE PROPERTY O	7-9				Tan brown, cl gravel, cohes			ind	D	10		3 2 2 3	100	SS
	9-11		i		Tan brown, cla gravel, staine fuel oil smell	ed, cohes:			W	5		3 5	20	SS
	11-13				Tan brown, cla gravel, staine soft)	ayey silty ed, cohesi	y sand a ive (sti	nd ff/	М	5		10 6 6 9	100	SS
1	L3-15				Tan brown, silgravel, cohest stained (sligh	ive (stiff ntly) doned by f	E/soft),	with	M/ D	5		12 5 27 37 42	100	SS
					bentonite and with the aspha		at surf	ace						



Project/No. 10 (720)	Date/Time 11/23/92, 2:30pm
Site Location April - Fran	tlin
Sample Location <u>58-2</u>	
Sample Designation <u>SB-</u>	2-(5-7')
_	Sample Location Sketch
•	
	SAMPLING METHODS
Method of Reaching Sample I	Depth Hollow-Stem Auger
Sampling Method Solit -	Spoon
Decontamination Method	Spoon Phosphate-free soap w/water rinse.
	SOIL DESCRIPTION
Color Cray-brown	cohesive (stiff), dry, fueloil smell
	1 i CIMA A A I W
Description Silty Clay	cohesive (still), dry, live oil smell
	SAMPLE DESCRIPTION
Samula Danth = 7	2 22 22 22 22 22 22 22 22 22 22 22 22 2
Other (all INIII OVA )	None Sample Volume (2) 40ml + (1) 1 L
Other (pH, HNU, OVA etc) _	Abn e
Constituents	Container
Sampled	Container  Description (C %) ( L - L )
Sampled	Description (G&M Lab)
TPH (8015M)	(2) 40ml vials + (1) 1L amber jar
TPH CONTON	(2) 40ml vials + (1) 12 amber jar
Charles and the control of the contr	
Charge Control (China)	
The second secon	
Remarks	, , ,
Sampling Personnel R 5	Prodoport
A Common of the second second	



Project/No. IN 17201	Date/Time 11/28/92, 4pm
Site Location Avia - to	antlin
Sample Location <u>SB-</u>	3
Sample Designation 5	8-2-10-71)
Sample Designation	Sample Location Sketch
	Daniple Execution Sketch
	SAMPLING METHODS
Method of Reaching Sample	le Depth Hollow-Stein Auger
Sampling Method 5017	-Sman
Decontamination Method	Phosphate-free saup w/ water rinse
	SOIL DESCRIPTION
- 01.1	
Color BOCK	Staining Yes
Description Claver 51Ho	y sand = grovel, cohesive (soft), sheen, fuel oil smell
	SAMPLE DESCRIPTION
Sample Depth 5 - 7 Other (pH, HNU, OVA etc	Sample Volume (2) 40w(+(1) 1L
(F-1, 1-1, 1)	
Constituents Sampled	Container  Description (C & M. L. 1)
Sampled	Description (G&M Lab)
TPH (8015M)	(2) 40m viols + (1) 1 L amber agur
,	
· ·	
Remarks	
Sampling Personnel R.S. 9	Tellookloh
- Toronio Toro	IK DAI UKVANI



Project/No. 10 17 201	Date/Time 11/24/92, 8:30am
Site Location Arvin - Frankliv	1
Sample LocationSB-4	
Sample Designation 68	A - (= 71)
Sample DesignationSB	
	Sample Location Sketch
	SAMPLING METHODS
Method of Reaching Sample D	Depth Hollow-Stem Auger
Sampling Method Sol	4 - Sma
Decontamination Method 19	hosphule free 5000 m/ moder rinse
	. , ,
	SOIL DESCRIPTION
Color Brown	Staining NO
Description Clause Siltas	sand & grovel, cohesive (hard), fuel oil 5 mell
	SAMPLE DESCRIPTION
Sample Depth 5-7'	Sample Volume (2) 40ml = (1) 1L
Other (pH, HNU, OVA etc)	OUA -> 30ppm
	V 1
Constituents	Container
Sampled	Description (G&M Lab)
•	* '
TPH-(8015M)	(2) \$0ml viols + (1) 1L amber jar
	,
Remarks	Λ Α
Sampling Personnel R.S. 8	por portion in
	muni )



Project/No. IN 1760	Date/Time 11/24/92, 9:45am
Site Location Arun - Frankli	W
Sample Location58~6	
Sample Designation	
	Sample Location Sketch
	<b>6.5    </b>
	SAMPLING METHODS
Mothed of Deceling County D	and Hollow Stone A
Method of Reaching Sample D	lepth Hollow-Stem Auger
Sampling Method Solit-	Soona
Decontamination Method Physical Physica	Spann esphate free 50ap w/water rinse
	aprime free sittly with twise
	SOIL DESCRIPTION
Color <u>Gray-Brown</u>	Staining Mo
<b>G</b>	
Description Clayer Silty 9	and gravel, cohosive (soft) fuel oil smell
<u> </u>	
	SAMPLE DESCRIPTION
Sample Denth 7-91	Samula Valum (2) 40 d 100 d (1) /
Other (pH HNII OVA etc)	Sample Volume (2) 40 ml (1) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	(N/1 -5/6)
Constituents	Container
Sampled	Description (G&M Lab)
6	- ,
TPH-(8015M)	(2) 40ml vials +(1) 11 anber jar
	J
Remarks	$\wedge$
Sampling Personnel R.S. Fa	bootleth



Project/No. IN 17201 Site Location Aruin - F	Date/Time 11/24/92, 11am
Sample LocationSB-Q	2
Sample Designation	38-6-(5-71)
sumpre soligitution and	Sample Location Sketch
	SAMPLING METHODS
	le Depth <u>Hollow-Stem Augeir</u>
Sampling Method Solit	-5000h
Decontamination Method _	-Spaon Absolute flee soup w/water rinse
	SOIL DESCRIPTION
Color Backish taxish Brown	Staining Ves
Description Clayer Silt	g sand agazel, cohesive (soft), wet
	SAMPLE DESCRIPTION
Sample Depth 5-7	Sample Volume (2) 40 ml + (1) 1L
Other (pH, HNU, OVA etc	) none
Constituents Sampled	Container Description (G&M Lab)
TPH (8015/M)	(2) 40 ml vials + (1) (1) Amber Jar
Remarks	
Sampling Personnel $QS$	Tastrulay



Sample Designation 58-	
	Sample Location Sketch
	SAMPLING METHODS
Method of Reaching Sample D	Depth Hollow-Stem Auger
Sampling Method Solit-500	DΜ
Decontamination Method \( \frac{1}{2} \)	respliate free soop w/water rinse
	SOIL DESCRIPTION
A 1 4	SOIL DESCRIPTION
Color tanish brown	Staining NO
Description Clases Sitty 5	sand; comel, cohosive (soft), flueloil smell, moist
	SAMPLE DESCRIPTION
Sample Depth 3-5	Sample Volume (2) 40 % (1) 11
Sample Depth 3-5' Other (pH, HNU, OVA etc)	Sample Volume $(2)40$ $(2)1$
Sample Depth3-5' Other (pH, HNU, OVA etc) _	Sample Volume $240$ $\xi(1)$ $11$
Sample Depth 3-5' Other (pH, HNU, OVA etc) _  Constituents	
	Sample Volume (2) 40 ml \(\xi(1)\) 11  Ova - 2000pm  Container  Description (G&M Lab)
Constituents Sampled	Container Description (G&M Lab)
Constituents	Container
Constituents Sampled	Container Description (G&M Lab)



Project/No. 10 17201	Date/Time 11/24/92 Apm
Site Location Arula - From	aklin
Sample Location 58-8	
Sample Designation 60	-0 (= 70
Sample Designation 58	
	Sample Location Sketch
	SAMPLING METHODS
	1.11
Method of Reaching Sample	Depth Hollow-Stem Auger
Compling Mathed Solf	Cara
Sampling Method Solit-	Spoon
Decontamination Wethod 41	washate free soap w/ water rinse
	SOIL DESCRIPTION
Color Brown / Black	Staining Ves
•	
Description <u>Govern Salta</u>	sand; grovel, colostve(soft), shoen, queloit smell wet
	V V
	SAMPLE DESCRIPTION
Sample Death 5-71	Samula XII (2) 40 1 4 (4 V 1)
Other (pH. HNU, OVA etc.)	Sample Volume (2) 40 ml + (1) 11
Constituents	Container
Sampled	Description (G&M Lab)
TPH-(8015 M)	(2) 40 ml vials + (1) 1L amber Jar
11 (0.5)///	(2) com vias 1 (2) 12 amos gar
100 M	
Remarks	
Sampling Personnel R.S. &	reladell



Site Location Arvin - Fra Sample Location58-9	n klin Date/Time 11/25/92, 8am
Sample DesignationS8-4	
	Sample Location Sketch
	SAMPLING METHODS
	Depth Hollow-Stem Auger
Sampling Method	Spoon cophate free soap w/water rivse
	SOIL DESCRIPTION
Color Brown	Staining Yes
Description Clayer Silty 50	and a grovel, cohesive(hard), fuel oil smell, dry
	SAMPLE DESCRIPTION
Sample Depth3-5' Other (pH, HNU, OVA etc) _	Sample Volume (2) 40ml + (1) 1 L L
Constituents Sampled	Container Description (G&M Lab)
TPH - (8015M)	(2) 40ml vials + (1) 1 L amber jar
Remarks	

La				



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED:

30-NOV-1992

REPORT NUMBER: D92-13620-1

REPORT DATE: 8-DEC-1992

SAMPLE SUBMITTED BY :

Geraghty and Miller, Inc.

ADDRESS :

251 East Ohio St. Ste. 1010

Indianapolis, IN 46204

ATTENTION:

Mr. Robert Fedorchak

PROJECT :

IN17201

DATE SAMPLED:

23-NOV-1992

#### CASE NARRATIVE COMMENTS:

No unusual problems were encountered during the sample analysis for this project.

Please refer to the attached Case Narrative Summary for a comparison of sample identifications and analytical requests.

NDRC Laboratories, Inc.

Felicia A. Parker Project Manager CUSTOMER: Geraghty & Miller, Inc.

PROJECT: IN17201

SAMPLE ID : D92-13620-1 DATE SAMPLED : 23-NOV-1992

ID MARKS : SB-2-(5-7')

ANALYSIS PRP BY PREP DATE ANL BY ANALYSIS DATE

SOLID\_TPER
TPH\_8015ES TLR 1-DEC-1992 MGD 1-DEC-1992
TPH\_8015\_S RJD 3-DEC-1992

SAMPLE ID: D92-13620-2 DATE SAMPLED: 23-NOV-1992

ID MARKS : SB-3-(5-7')

ANALYSIS PRP BY PREP DATE ANL BY ANALYSIS DATE

SOLID\_TPER
TPH\_8015ES TLR 1-DEC-1992 MGD 1-DEC-1992
TPH 8015 S RJD 3-DEC-1992

\_\_\_\_\_\_

SAMPLE ID: D92-13620-3 DATE SAMPLED: 24-NOV-1992 ID MARKS: SB-4-(5-7')

ANALYSIS PRP BY PREP DATE ANL BY ANALYSIS DATE

SOLID\_TPER
TPH\_8015ES TLR 1-DEC-1992 MGD 3-DEC-1992
TPH\_8015\_S RJD 4-DEC-1992

-----

SAMPLE ID : D92-13620-4 DATE SAMPLED : 24-NOV-1992

ID MARKS : SB-5-(7-9')

ANALYSIS PRP BY PREP DATE ANL BY ANALYSIS DATE

SOLID\_TPER
TPH\_8015ES TLR 1-DEC-1992 MGD 1-DEC-1992
TPH\_8015\_S RJD 3-DEC-1992

SAMPLE ID : D92-13620-5 DATE SAMPLED : 24-NOV-1992

ID MARKS : SB-6-(5-7')

ANALYSIS PRP BY PREP DATE ANL BY ANALYSIS DATE

SOLID\_TPER
TPH\_8015ES TLR 1-DEC-1992 MGD 1-DEC-1992
TPH\_8015\_S RJD 3-DEC-1992

CUSTOMER : Geraghty & Miller, Inc. PROJECT : IN17201

\_\_\_\_\_\_

SAMPLE ID : D92-13620-6 DATE SAMPLED : 24-NOV-1992

ID MARKS : SB-7-(3-5')

ANALYSIS	PRP	BY	PREP	DATE	ANL	ВУ	ANALYSIS DATE
SOLID_TPER TPH_8015ES	TLR		1-DE	C-1992	MES MGD		1-DEC-1992 1-DEC-1992
TPH_8015_S					RJD		3-DEC-1992

\_\_\_\_\_\_

SAMPLE ID: D92-13620-7 DATE SAMPLED: 24-NOV-1992 ID MARKS: SB-8-(5-7')

ANALYSIS	PRP B	Y PREP DAT	E ANL	BY ANALYSIS	DATE
SOLID TPER TPH_8015ES TPH_8015_S	TLR	1-DEC-1	MES .992 MGD RJD	1-DEC-1 3-DEC-1 4-DEC-1	992

\_\_\_\_\_\_

SAMPLE ID : D92-13620-8 DATE SAMPLED : 25-NOV-1992 ID MARKS : SB-9-(3-5')

ANALYSIS	PRP	ВУ	PREP	DATE	ANL	ВУ	ANALYSIS	DATE
SOLID_TPER TPH_8015ES TPH_8015_S	TLR		1-DI	EC-1992	MES MGD RJD		1-DEC-19 1-DEC-19 4-DEC-19	992

\_\_\_\_\_\_\_ ANALYSIS ID DESCRIPTION

SOLID\_TPER Total Solids by OVEN
TPH\_8015ES Total Petroleum Hydrocarbon by GC
TPH\_8015\_S Total Recoverable Petroleum Hydrocarbon



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DALLAS

DATE RECEIVED: 30-NOV-1992

REPORT NUMBER : D92-13620-1

REPORT DATE: 8-DEC-1992

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc. ADDRESS : 251 East Ohio St. Ste.1010

: Indianapolis, IN 46204

ATTENTION : Mr. Robert Fedorchak

SAMPLE MATRIX : Soil

ID MARKS : SB-2-(5-7')

PROJECT: IN17201

DATE SAMPLED: 23-NOV-1992

PREPARATION METHOD : EPA 3550

PREPARED BY : TLR

PREPARED ON: 1-DEC-1992

ANALYSIS METHOD : EPA 8015

ANALYZED BY : MGD

ANALYZED ON: 1-DEC-1992

DILUTION FACTOR: 1

EXTRACTABLE TPH BY GAS CHROMATOGRAPHY		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	10 mg/Kg	14 mg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
o-Terphenyl (SS)	100 mg/Kg	97.2 %

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DALLAS

DATE RECEIVED: 30-NOV-1992

REPORT NUMBER : D92-13620-1

REPORT DATE: 8-DEC-1992

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 251 East Ohio St. Ste.1010
: Indianapolis, IN 46204

ATTENTION : Mr. Robert Fedorchak

SAMPLE MATRIX : Soil

ID MARKS : SB-2-(5-7')

PROJECT : IN17201

DATE SAMPLED : 23-NOV-1992 ANALYSIS METHOD : EPA 5030/8015

ANALYZED BY : RJD

ANALYZED ON: 3-DEC-1992

DILUTION FACTOR: 1

TRPH BY EPA METHOD MODIFIED 8015		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	50 μg/Kg	1100 μg/Kg

QUALITY CONTROL DATA		•
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Fluorobenzene	50.0 μg/Kg	74.0 %

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HOUSTON

DATE RECEIVED : 30-NOV-1992

REPORT NUMBER : D92-13620-1

REPORT DATE: 8-DEC-1992

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc. ADDRESS : 251 East Ohio St. Ste.1010

: Indianapolis, IN 46204

ATTENTION : Mr. Robert Fedorchak

SAMPLE MATRIX : Soil

ID MARKS : SB-2-(5-7')

PROJECT : IN17201

DATE SAMPLED: 23-NOV-1992

MISCELLANEOUS ANALYSES					
TEST REQUESTED	DETECTION LIMIT	RESULTS			
Total Solids	0.01 %	79.6 %			
Analyzed using EPA 160.3 on 1-DEC-1992 by MES					

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DALLAS

HOUSTON

DATE RECEIVED: 30-NOV-1992

REPORT NUMBER : D92-13620-2

REPORT DATE: 8-DEC-1992

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc. ADDRESS : 251 East Ohio St. Ste.1010

: Indianapolis, IN 46204

ATTENTION: Mr. Robert Fedorchak

SAMPLE MATRIX : Soil

ID MARKS : SB-3-(5-7')

PROJECT : IN17201

DATE SAMPLED: 23-NOV-1992

PREPARATION METHOD : EPA 3550

PREPARED BY : TLR

PREPARED ON: 1-DEC-1992

ANALYSIS METHOD : EPA 8015

ANALYZED BY : MGD

ANALYZED ON: 1-DEC-1992

DILUTION FACTOR: 1

EXTRACTABLE TPH BY GAS CHROMATOGRAPHY		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	10 mg/Kg	120 mg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
o-Terphenyl (SS)	100 mg/Kg	90.3 %

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DALLAS

DATE RECEIVED: 30-NOV-1992

REPORT NUMBER: D92-13620-2

REPORT DATE: 8-DEC-1992

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 251 East Ohio St. Ste.1010
: Indianapolis, IN 46204

ATTENTION: Mr. Robert Fedorchak

SAMPLE MATRIX : Soil

ID MARKS : SB-3-(5-7')

PROJECT : IN17201

DATE SAMPLED: 23-NOV-1992 ANALYSIS METHOD : EPA 5030/8015

ANALYZED BY : RJD

ANALYZED ON: 3-DEC-1992

DILUTION FACTOR: 1

TRPH BY EPA METHOD MODIFIED 8015		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	50 μg/Kg	1300 μg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Fluorobenzene	50.0 μg/Kg	90.0 %

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DALLAS

HOUSTON

DATE RECEIVED : 30-NOV-1992

REPORT NUMBER : D92-13620-2

REPORT DATE: 8-DEC-1992

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc. ADDRESS : 251 East Ohio St. Ste.1010

: Indianapolis, IN 46204

ATTENTION: Mr. Robert Fedorchak

SAMPLE MATRIX : Soil

ID MARKS : SB-3-(5-7')

PROJECT : IN17201

DATE SAMPLED: 23-NOV-1992

MISCELLANEOUS ANALYSES		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Solids	0.01 %	80.6 %
Analyzed using EPA 160.3	on 1-DEC-1002 by MEC	

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DALLAS

HOUSTON

DATE RECEIVED: 30-NOV-1992

REPORT NUMBER: D92-13620-3

REPORT DATE: 8-DEC-1992

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc. ADDRESS : 251 East Ohio St. Ste.1010

: Indianapolis, IN 46204

ATTENTION: Mr. Robert Fedorchak

SAMPLE MATRIX : Soil

ID MARKS : SB-4-(5-7')

: IN17201 PROJECT

DATE SAMPLED : 24-NOV-1992

PREPARATION METHOD : EPA 3550

PREPARED BY : TLR

PREPARED ON: 1-DEC-1992

ANALYSIS METHOD : EPA 8015

ANALYZED BY : MGD

ANALYZED ON: 3-DEC-1992

DILUTION FACTOR: 10

EXTRACTABLE TPH BY GAS CHROMATOGRAPHY		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	100 mg/Kg	150 mg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
o-Terphenyl (SS)	100 mg/Kg	71.3 %

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DALLAS

HOUSTON

DATE RECEIVED : 30-NOV-1992

REPORT NUMBER : D92-13620-3

REPORT DATE: 8-DEC-1992

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.

ADDRESS: 251 East Ohio St. Ste.1010

: Indianapolis, IN 46204

ATTENTION: Mr. Robert Fedorchak

SAMPLE MATRIX : Soil

ID MARKS : SB-4-(5-7')

PROJECT : IN17201

DATE SAMPLED : 24-NOV-1992 ANALYSIS METHOD : EPA 5030/8015

ANALYZED BY : RJD

ANALYZED ON: 4-DEC-1992

DILUTION FACTOR: 50

TRPH BY EPA METHOD MODIFIED 8015		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	2500 μg/Kg	100000 μg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Fluorobenzene	50.0 μg/Kg	81.0 %

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DALLAS

HOUSTON

DATE RECEIVED : 30-NOV-1992

REPORT NUMBER: D92-13620-3

REPORT DATE: 8-DEC-1992

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 251 East Ohio St. Ste.1010
: Indianapolis, IN 46204

ATTENTION: Mr. Robert Fedorchak

SAMPLE MATRIX : Soil

ID MARKS : SB-4-(5-7')

PROJECT : IN17201

DATE SAMPLED : 24-NOV-1992

MISCELLANEOUS ANALYSES		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Solids	0.01 %	77.7 %
Analyzed using EPA 160.3 on 1-DEC-1992	2 by MES	

NDRC Laboratories, Inc.



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**BEAUMONT** 

DALLAS

HOUSTON

DATE RECEIVED : 30-NOV-1992

REPORT NUMBER: D92-13620-4

REPORT DATE: 8-DEC-1992

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc. ADDRESS : 251 East Ohio St. Ste.1010

: Indianapolis, IN 46204

ATTENTION : Mr. Robert Fedorchak

SAMPLE MATRIX : Soil

ID MARKS : SB-5-(7-9')

PROJECT : IN17201

DATE SAMPLED: 24-NOV-1992

PREPARATION METHOD : EPA 3550

PREPARED BY : TLR
PREPARED ON : 1-DEC-1992

ANALYSIS METHOD : EPA 8015

ANALYZED BY : MGD

ANALYZED ON : 1-DEC-1992

DILUTION FACTOR: 1

EXTRACTABLE TPH BY GAS CHROMATOGRAPHY					
TEST REQUESTED	DETECTIO	ON LIMIT		RESUL	.TS
Total Petroleum Hydrocarbon	10	mg/Kg	<	10	mg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
o-Terphenyl (SS)	100 mg/Kg	74.7 %

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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED: 30-NOV-1992

REPORT NUMBER: D92-13620-4

REPORT DATE: 8-DEC-1992

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc. ADDRESS : 251 East Ohio St. Ste.1010

: Indianapolis, IN 46204

ATTENTION: Mr. Robert Fedorchak

SAMPLE MATRIX : Soil

ID MARKS : SB-5-(7-9')

PROJECT: IN17201
DATE SAMPLED: 24-NOV-1992 ANALYSIS METHOD: EPA 5030/8015 ANALYZED BY: RJD ANALYZED ON: 3-DEC-1992

DILUTION FACTOR: 1

TRPH BY EPA METHOD MODIFIED 8015		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	50 μg/Kg	510 μg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Fluorobenzene	50.0 μg/Kg	102 %

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**BEAUMONT** 

DALLAS

HOUSTON

DATE RECEIVED : 30-NOV-1992

REPORT NUMBER : D92-13620-4

REPORT DATE: 8-DEC-1992

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc. ADDRESS : 251 East Ohio St. Ste.1010

: Indianapolis, IN 46204

ATTENTION: Mr. Robert Fedorchak

SAMPLE MATRIX : Soil

ID MARKS : SB-5-(7-9') PROJECT : IN17201

DATE SAMPLED: 24-NOV-1992

TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Solids	0.01 %	76.0 %

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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED: 30-NOV-1992

REPORT NUMBER: D92-13620-5

REPORT DATE: 8-DEC-1992

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc. ADDRESS : 251 East Ohio St. Ste.1010

: Indianapolis, IN 46204

ATTENTION: Mr. Robert Fedorchak

SAMPLE MATRIX : Soil

ID MARKS : SB-6-(5-7')
PROJECT : IN17201
DATE SAMPLED : 24-NOV-1992

PREPARATION METHOD : EPA 3550

PREPARED BY : TLR

PREPARED ON: 1-DEC-1992

ANALYSIS METHOD : EPA 8015

ANALYZED BY : MGD

ANALYZED ON : 1-DEC-1992

DILUTION FACTOR: 1

EXTRACTABLE TPH BY GAS CHROMATOGRAPHY				
TEST REQUESTED	DETECTION LIMIT		RESUL	TS
Total Petroleum Hydrocarbon	10 mg/Kg	<	10	mg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
o-Terphenyl (SS)	100 mg/Kg	79.8 %

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BEAUMONT

**DALLAS** 

HOUSTON

DATE RECEIVED: 30-NOV-1992

REPORT NUMBER: D92-13620-5

REPORT DATE: 8-DEC-1992

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 251 East Ohio St. Ste.1010
: Indianapolis, IN 46204

ATTENTION: Mr. Robert Fedorchak

SAMPLE MATRIX : Soil

ID MARKS : SB-6-(5-7')

PROJECT : IN17201

DATE SAMPLED: 24-NOV-1992

ANALYSIS METHOD : EPA 5030/8015

ANALYZED BY : RJD

ANALYZED ON: 3-DEC-1992

DILUTION FACTOR: 1

TRPH BY EPA METHOD MODIFIED 8015			
TEST REQUESTED	DETECTION LIMIT		RESULTS
Total Petroleum Hydrocarbon	50 μg/Kg	<	50 μg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Fluorobenzene	50.0 μg/Kg	104 %

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DALLAS

HOUSTON

DATE RECEIVED: 30-NOV-1992

REPORT NUMBER: D92-13620-5

REPORT DATE: 8-DEC-1992

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc. ADDRESS : 251 East Ohio St. Ste.1010

: Indianapolis, IN 46204

ATTENTION : Mr. Robert Fedorchak

SAMPLE MATRIX : Soil

ID MARKS : SB-6-(5-7')
PROJECT : IN17201
DATE SAMPLED : 24-NOV-1992

MISCELLANEOUS ANALYSES		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Solids	0.01 %	80.9 %
Analyzed using EPA 160.3 on 1-DEC-1992	2 by MES	

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**BEAUMONT** 

DALLAS

HOUSTON

DATE RECEIVED : 30-NOV-1992

REPORT NUMBER: D92-13620-6

REPORT DATE: 8-DEC-1992

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 251 East Ohio St. Ste.1010
: Indianapolis, IN 46204
ATTENTION : Mr. Robert Fedorchak

SAMPLE MATRIX : Soil

ID MARKS : SB-7-(3-5') PROJECT : IN17201

DATE SAMPLED : 24-NOV-1992

PREPARATION METHOD : EPA 3550

PREPARED BY : TLR

PREPARED ON: 1-DEC-1992

ANALYSIS METHOD : EPA 8015

ANALYZED BY : MGD

ANALYZED ON: 1-DEC-1992

DILUTION FACTOR: 1

EXTRACTABLE TPH BY GAS CHROMATOGRAPHY		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	10 mg/Kg	28 mg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
o-Terphenyl (SS)	100 mg/Kg	70.4 %

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DALLAS

HOUSTON

DATE RECEIVED: 30-NOV-1992

REPORT NUMBER: D92-13620-6

REPORT DATE: 8-DEC-1992

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc. ADDRESS : 251 East Ohio St. Ste.1010

: Indianapolis, IN 46204

ATTENTION: Mr. Robert Fedorchak

SAMPLE MATRIX : Soil

ID MARKS : SB-7-(3-5') PROJECT : IN17201

DATE SAMPLED: 24-NOV-1992 ANALYSIS METHOD : EPA 5030/8015

ANALYZED BY : RJD

ANALYZED ON : 3-DEC-1992

DILUTION FACTOR: 1

TRPH BY EPA METHOD MODIFIED 8015		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	50 μg/Kg	530 μg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Fluorobenzene	50.0 µg/Kg	70.0 %

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DALLAS

HOUSTON

DATE RECEIVED: 30-NOV-1992

REPORT NUMBER: D92-13620-6

REPORT DATE: 8-DEC-1992

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 251 East Ohio St. Ste.1010
: Indianapolis, IN 46204

ATTENTION : Mr. Robert Fedorchak

SAMPLE MATRIX : Soil

ID MARKS : SB-7-(3-5')
PROJECT : IN17201
DATE SAMPLED : 24-NOV-1992

MISCELLANEOUS ANALYSES		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Solids	0.01 %	83.3 %
Analyzed using EPA 160.3 on 1-DEC-	1992 by MES	

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DALLAS

HOUSTON

DATE RECEIVED : 30-NOV-1992

REPORT NUMBER : D92-13620-7

REPORT DATE: 8-DEC-1992

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc. ADDRESS : 251 East Ohio St. Ste.1010

: Indianapolis, IN 46204

ATTENTION : Mr. Robert Fedorchak

SAMPLE MATRIX : Soil

ID MARKS : SB-8-(5-7')

PROJECT : IN17201

DATE SAMPLED : 24-NOV-1992

PREPARATION METHOD : EPA 3550

PREPARED BY : TLR

PREPARED ON: 1-DEC-1992

ANALYSIS METHOD : EPA 8015

ANALYZED BY : MGD

ANALYZED ON: 3-DEC-1992

DILUTION FACTOR: 10

EXTRACTABLE TPH BY GAS CHROMATOGRAPHY		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	100 mg/Kg	260 mg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
o-Terphenyl (SS)	100 mg/Kg	111 %

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DALLAS

HOUSTON

DATE RECEIVED: 30-NOV-1992

REPORT NUMBER : D92-13620-7

REPORT DATE: 8-DEC-1992

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 251 East Ohio St. Ste.1010
: Indianapolis, IN 46204

ATTENTION : Mr. Robert Fedorchak

SAMPLE MATRIX : Soil

ID MARKS : SB-8-(5-7')

PROJECT : IN17201

DATE SAMPLED: 24-NOV-1992 ANALYSIS METHOD : EPA 5030/8015

ANALYZED BY : RJD

ANALYZED ON: 4-DEC-1992

DILUTION FACTOR: 50

TRPH BY EPA METHOD MODIFIED 8015		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	2500 μg/Kg	60000 μg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Fluorobenzene	50.0 μg/Kg	72.0 %

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HOUSTON

DATE RECEIVED: 30-NOV-1992

REPORT NUMBER: D92-13620-7

REPORT DATE: 8-DEC-1992

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 251 East Ohio St. Ste.1010
: Indianapolis, IN 46204
ATTENTION : Mr. Robert Fedorchak

SAMPLE MATRIX : Soil

ID MARKS : SB-8-(5-7')
PROJECT : IN17201
DATE SAMPLED : 24-NOV-1992

TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Solids	0.01 %	84.1 %

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DALLAS

HOUSTON

DATE RECEIVED: 30-NOV-1992

REPORT NUMBER: D92-13620-8

REPORT DATE: 8-DEC-1992

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc. ADDRESS : 251 East Ohio St. Ste.1010

: Indianapolis, IN 46204 ATTENTION : Mr. Robert Fedorchak

SAMPLE MATRIX : Soil
ID MARKS : SB-9-(3-5')
PROJECT : IN17201
DATE SAMPLED : 25-NOV-1992

PREPARATION METHOD : EPA 3550

PREPARED BY : TLR

PREPARED ON: 1-DEC-1992

ANALYSIS METHOD : EPA 8015

ANALYZED BY : MGD

ANALYZED ON: 1-DEC-1992

DILUTION FACTOR: 1

EXTRACTABLE TPH BY GAS CHROMATOGRAPHY		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	10 mg/Kg	31 mg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
o-Terphenyl (SS)	100 mg/Kg	78.1 %

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DALLAS

HOUSTON

DATE RECEIVED: 30-NOV-1992

REPORT NUMBER : D92-13620-8

REPORT DATE: 8-DEC-1992

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc. ADDRESS : 251 East Ohio St. Ste.1010

: Indianapolis, IN 46204

ATTENTION : Mr. Robert Fedorchak

SAMPLE MATRIX : Soil

ID MARKS : SB-9-(3-5')
PROJECT : IN17201
DATE SAMPLED : 25-NOV-1992 ANALYSIS METHOD : EPA 5030/8015

ANALYZED BY : RJD ANALYZED ON : 4-DEC-1992

DILUTION FACTOR: 25

TRPH BY EPA METHOD MODIFIED 8015		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	1250 μg/Kg	27000 µg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Fluorobenzene	50.0 μg/Kg	76.0 %

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DALLAS

HOUSTON

DATE RECEIVED: 30-NOV-1992

REPORT NUMBER : D92-13620-8

REPORT DATE: 8-DEC-1992

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc. ADDRESS : 251 East Ohio St. Ste.1010

: Indianapolis, IN 46204

ATTENTION: Mr. Robert Fedorchak

SAMPLE MATRIX : Soil

ID MARKS : SB-9-(3-5')

PROJECT : IN17201

DATE SAMPLED: 25-NOV-1992

MISCELLANEOUS ANALYSES	Action to the second se	
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Solids	0.01 %	76.7 %
Analyzed using EPA 160.3 on 1-DEC-1992	2 by MES	

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#### SAMPLE PRESERVATION INFORMATION SHEET

Field Sampling □	Incoming Samples
------------------	------------------

No. of Coo	ler(s):		Temp	Derature of Co	ooler(s): 🔼	1		
SERVATIO	N INFORM	ATION				:		
Sample No.	Temperature of Sample	Sample Container	Volume	Preservation used *	Initial pH	Final pH	Bottles generated	Comments
<u></u>			~~~					
d'				Wiz-				
				20	<u> </u>			
					(01	ı		
					Z	>		
					7	<b>Y</b>		
								1

5 - NaOH to pH > 12

7 - 2 mL Zinc Acetate and NaOH to pH > 12

6 - Na<sub>2</sub>S<sub>2</sub>O<sub>2</sub> 0.008%

8 - None required

**GENERAL** 

1 - Cool to 4° C

 $2 - H_2SO_4$  to pH < 2

 $3 - HNO_3$  to pH < 2

4 - HCL to pH < 2



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DALLAS

HOUSTON

DATE RECEIVED: 30-NOV-1992

REPORT NUMBER: D92-13620

Analysis Method: EPA 160.3

MS/MSD RPD: ----

Duplicate RPD: 1.3

Method Blank: ----

Analysis Method: EPA 8000

MS/MSD RPD: 7.6

Method Blank: <10 mq/Kq

Extraction Method: EPA 3550

Duplicate RPD: ----

Extraction Method: ----

Average Spike Recovery: ----

Blank Spike Recovery: ----TCLP Spike Recovery: ----

Average Spike Recovery: 100

REPORT DATE: 8-DEC-1992

SUBMITTED BY: Geraghty & Miller, Inc.

LABORATORY ANALYSIS QUALITY CONTROL REPORT

ANALYSIS: Total Solids

Technician: MES

Sample Extracted: ----

QC Extracted: ----

Sample Analyzed: 12/1/92

QC Analyzed: 12/1/92

QC Sample Number: D92-13620-1

ANALYSIS: TPH

Technician: MGD

Sample Extracted: 12/1/92

QC Extracted: 12/1/92 Sample Analyzed: 12/1/92

QC Analyzed: 12/1/92

QC Sample Number: D92-13593-1

ANALYSIS: TPH

Technician: RJD

Sample Extracted: 12/3/92

QC Extracted: 12/4/92 Sample Analyzed: 12/3/92

QC Analyzed: 12/4/92

QC Sample Number: D92-13720-1

TCLP Spike Recovery: ----

Analysis Method: EPA 8015 Extraction Method: EPA 5030

MS/MSD RPD: 2.5 %

Average Spike Recovery: 79

Blank Spike Recovery: 77.9

Duplicate RPD: ----

Method Blank: <50

Blank Spike Recovery: 108

TCLP Spike Recovery: ----



Mail complete record within 30 days to: INDIANA DEPARTMENT OF NATURAL RESOURCES
Division of Water
2475 Directors Row

(Fill in completely)			Indianapolis	ectors Row , Indiana 46241 ber (317) 232-4160
County where drilled  JOhnson  Driving directions to the well locations space for a map on reverse side	Civil township Franklin on (include county road names, number	WELL LOCATION  Township  T12N  er, subdivisions lot number with co	Range R4E onsideration to intersectin	Section  14  ng, road and trip origination the

Home A	lvenue	7 331146	marian Froject,	Downtown Frankl	in			
					· ·			
Name of well ov	vner		OWNER	- CONTRACTOR				
Unoccup	ied - Renno	ovation				Telephon	e Number	
Address (Street	and number, city,	state)			1,	Com .		
1 77			· Donate ·	fr 1	ZIP code			
Name of building	contractor	lin Library	Project	$\int_{-\infty}^{t_{i_0}}$	1			
Landmar						Telephone	number	
Address (Street a	and number, city, s	tatal			* - ** -			
201 S F	marcon Cu	ide)		V- 2		ZIP code	81-9564	
Name of drilling	Contractor	ite 120, G	reenwood, IN		<b>5.</b>	46143		
				1		Telephone		
Address (Street a	ıl Industri nd number, city, si	es, Inc.		* n <sub>2</sub>				
						(317)	266–171	
Name of equipme	Hinois St	., P.O. Box	<u>&lt; 6106</u>			4		
				License number	Date of completion	46206	6-6106	
Kenneth	Davis			590	1			
				1 390	10/18/89			
Jse of well:	CONSTRI	UCTION DETAIL	S		WELLER			
					WELL LOG			
Home	$\Box$ Industry	☐ Test	☐ Irrigation	Formations: t	From	То		
		Clo	sed loop			(Feet)	(Feet)	
Public supply	☐ Stock	X Other (spec	city): geothermal	m				
ethod of drilling:	Rotary	☐ Rev. rotary	" germenial	Typical strati	graphy shown			
Cable tool	□Jet	· —	Other	1 '				
asing length	Material		Diameter	for the 2 hol	es completed			
N/A fe	et			on this lot.				
reen length	Material		inches Diameter	OIT LILLS TOL.				
N/A fe	et		*1					
reen slot size		Total depth of v	vell inches	Brown Clay			9	
N/A		190		_				
N/A pth of pump setti	ng		lear, cloudy, odor, etc.)	Gray Clay		9	89	
N/A			, 0,000, 000, 610.)					
e of pump	☐ Shallow-well	iet		Gravel		89	95	
Submersible	Deep-well jet							
	- sop wen jet	Other (spe	CITY): N/A	Gray Drift		95	175	
	WELL CA	PACITY TEST				-		
ck one	□Air	Test rate	•	Dark Gray Sandy	Shale	175	190	
Balling N/A	Pumping					1 2/3		
wdown	C : unping	Static level	pm hrs.			1 1		
N/A	4	1						
	Teet	(depth to water)	feet			1 1		
GROUTING IN	FORMATION	hadred a	100000			<del>                                     </del>		
rt material	Depth of grout	Sealing material	ANDONMENT			! !		
ntonite	From TD To 0	बागमु सम्राजा <u>वि</u>	Depth filled			1		
od of installation		Mathed c41:	From To			1 1		
essure	used 3	Method of installs	Number of bags					
ehy swear or affir	T under the	ties for perjury tha		(Additional space for well	lon on reverse side	m p	3.0.0	
information subn	ni, under the penal nitted herewith is , true, accurate an	ties for perjury that to the best of my	Signature of owner of	authorized representative	g on levelse Side)	T.D.	190	

By Courthouse location By Location accepted w/o verification by Field located Topo map County (continued from front side) Formations: type of material WELL LOG Date Date Township <u>کي</u> کے FROM Feet Feet 7 FOH ADMINISTHATIVE USE ONLY (well driller does not fill out) Range € Ft. W of EL Ft. S of NL Ft. E of WL Ft. N of SL SKETCH SHOWING LOCATION (Locate with reference to highways, intersecting county roads and distinctive landmarks.) Aquifer elevation Bedrock elevation Depth to bedrock Ground elevation 7 S U.T.M. Lot number Subdivision name m



Mall complete record within 30 days to:

INDIANA DEPARTMENT OF NATURAL RESOURCES
Division of Water
2475 Directors Row
Indianapolis Indiana 46241

(Fill in completely)	olis, Indiana 46241 umber (317) 232-4160						
County where drilled	V	VELL LOCATION					
Johnson	Civil township	Township Nee D HAP?	Range	Section			
Driving directions to the well local is space for a map on reverse single taken of the space for a map on reverse single taken of the space for the space of the	ation (include county road names, number de. 44 At FRANKLIN 90 We. Veet trun Left 150	r, subdivisions lot number with cons	ideration to intersectifruh R. 9nT.	ing, road and trip 90 to Te 120 we	origination e tru		
Name of well owner		ER - CONTRACTOR					
Address (Street and number, city, s	tion oil service street FRA	e INC.		(3/7) 138-9			
809~ove	er street FRA	enklin IN,		ZIP code			
Address (Street and number, city, s	tate)			Telephone number			
Name of drilling contractor	M1++11/e	Serite		ZIP code			
ddress (Street and number, city, st		Telephone number (8/Z) 988-7					
ame of equipment operator	NN 4 Box 160 A DSMITH	License number 210 ~ 190	Date of completion	474	48		
CONSTRU	JCTION DETAILS		WELL LOG	,			
Home Industry	☐ Test ☐ Irrigation	Formations: typ	Formations: type of material				
Public supply Stock	Other (specify):	SANdy CIA	И	(Feet)	(Fe		
Cable tool Jet	☐ Rev. rotary ☐ Bucket rig ☐ Other	SANd W/fine	Gravei	11	24		
67 feet Ste	Diameter 6 in	ches Gray Clay		24	65		
7 feet P/AS7	416	ches COATSC SAND GI	avel	65	72		
th of pump setting	Water quality (Clear, cloudy, odor, etc	c.)					
6 C e of pump □ Shallow-well			7- 30m				
Submersible Deep-well jet	10,23						
ck one	PACITY TEST  Test rate	100 ot 21					
Bailing Deumping down	Static level	s. 1000 5 15 15 15 15 15 15 15 15 15 15 15 15 1	3 6				
GROUTING INFORMATION	(depth to water) / f	eet	0)				
t material Depth of grout 7 SEAU From 0 To 65	Sealing material Depth filled	79.00	200				
od of installation Number of bags used 2	Method of installa- tion used	(Additional trans to					
eby swear or affirm, under the pena information submitted herewith is viedge and belief, true, accurate ar		(Additional space for well lo	oy on reverse side)	Date	******		

								Formations: type of material	WELL LOG	(continued from front side)	cation accepted w / o verification b	By Date	By Date	Field located	County Township
								Feet	FROM						(2 Z)
								Feet	10	-					
	) verstree	الد مع	* PATING	* * * * * * * * * * * * * * * * * * *			z	(Locate with reference to highways, intersecting	CKETON CHOWN	Ft. S of NL	Aquifer elevation	Ft. E of WL	Ft. N of SL	n	Range (Well drilled out)
44	FRANI			~				ice to highways, intersecting county roads and distinctive landmarks.)				U.T.M.	Lot number	Subdivision name	Section

Job No. C-7989 Pipe extends 5 feet above ground level. Location: Johnson Co. Ground Level Needham Twp. Sec. 12 1500° E. and 1280° N. of SW corner of Sec. 50' West of creek. Welded Pipe Tally Threaded Bottom piece 24 6" 10" Black Steel Pipe 11' 2" Wt. \_\_\_\_Lbs. Per Foot 21 611 Lead seal expanded against pipe Depth29 611 Total 381 2" Blank Tube Depth 33' 2" - Steel Drive Shoe. 10 ft. of \_ (Customer furnished screen xkxxx Cook Screen Opening \_080\*\* Depth 39 4 4 11 40 Bottom LAYNE TUBULAR WELL No. 3 For Static Level \_ INDIANA GAS & WATER COMPAN WEBB FIELD pumping level at 191 FRANKLIN, INDIANA after \_\_\_8 \_hours 35 min. NE NORTHERN Driller H. A. Smith INDIANA MISHAWAKA, Date Finished 3-4-58 OR DRIWARD DRAWN BY C-7989 Not drawn to scale APPROVED BY All depths measured from Ground Level DATE

FORMATION LOG

COMPLETE MUNICIPAL & INDUSTRIAL WATER SYSTEMS

TEST

X PERMANENT

WELL NO. 5 CITY Franklin

Owner Indiana Cities Water Corporation

Township Needham

Section 12-T12N-R4E

Location

Land Description 350' S. of #4 and 100' West of Drive

Street or Road 795' W. of County Road 400 E, 400' S. of Hurricane Creek

***		I FROM N	NATURAL (		2.) E 3.20 2.
1		I ROM I	HATURAL (	T CALONE	EVEL.
	Top Soil Clay Fine Sand	Depth to Top of Stratum	Depth to Depth to Depth to Strotum	Thickness of Stratum	Static Vyuler Lovel
	Top Soil				
	Clay	0'	4'	4	
	Fine Sand	4'	10'	6'	
	Medium fine sand, coarse gravel	10'	30'	20'	14'
1	Medium gravel	30'	32'	2 '	
	Medium fine sand, medium gravel	32'	35'	3'	
	Medium coarse sand, medium gravel	35'	40'	5'	
	Medium fine constant medium gravel	40'	45'	5'	
-	Medium fine sand, mixture of fine to coarse gravel	45'	50'	5'	
	Medium sand, medium coarse gravel	50'	55'	5'	
; -	Medium sand, fine coarse gravel	55'	60'	5'	
i	Medium coarse sand, medium gravel	60'	651	5'	
-	Medium coarse sand, fine-medium gravel	651	70'	51	
	Medium coarse sand	70'	75'	5'	
-	Fine to medium sand, fine gravel	75'	80'	5'	1
:	Mixture of fine to medium to coarse sand	80'	85'	51	
	Medium coarse sand, medium gravel	85'	87'	2	į
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					L	
Hole <u>48</u>	" Dia. Drille	ed by:R.	C.			
tary Hole	Grouted with	:				
_sing <u>16</u>	"OD from _	6'" above	grade to 5	7' below grade.	Weight	
1een <u>16</u>	" Set from		87 feet	Make Johnson Type	W.W.	
mping Test	1200 GPM	drawdown to	23 feet	after 6		Hours Pumping

#### WATER WELL LOG

	7	7	
FORMATIONS (Color, type of material, hardness, etc.)	From	То	
			COUNTY Topo Map The Arthur Topo Map The Arthur Topo Map By Courthouse Location By Courthouse Location By Location accepted w/o verification by
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d .			p \ Cate
			ept oc:
			ation
			1010 B
			By By By -
			ificatio
			<b>b</b> y
			Date Date
·			TWP.
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			1
			(Well RGE.
			dri Z
			iller iller
			FOR ADMINISTRATIVE USE ONLY  (Well drifler does not fill out)  (Fill of WL)  (Well drifler does not fill out)
,			SE ONLY II out) II out
	l		NLY  of EI  of SI  of WI
			, , , ,
		l	
			Tw. SE SEC 12  Ground Elevation 729  Depth to bedrock  Bedrock elevation 642 -  Aquifer elevation 642 -
			TELL TO BE
			S syati
70			on_ ck_ on_
·			14   19
			729
		I	
			Nu Nu
			Subdivision Name  REYNOLDS  6-29-79  Lot Number  Lot Number
			1 9 1/2 #72
			1 7 % Nam 5 %
			0   a   7
			Subdivision Name  REYNOLDS  6-29-79  Lot Number

900' North of Upper Shillywille SEY SEC. 12 TIZN R 4E Rd.

viće Supply, lite.

COMPLETE MUNICIPAL & INDUSTRIAL WATER SYSTEMS, 400'S. OF Hurricane (

FORMATION LOG OF WILL

T.W. # 79-R-1A

Oluming Dete		Finished <u>May 9, 1979</u> Well Number <u>Test Well</u>
		S.N Waiters
.mernelana	Cities Water (	Corp. Location 350' a of #4 & 100' W. of Drive (WATER
and the state of t		NETDHAM TOWNSHIP
TUTAL DEPTH	TH.CKNESS EACH STEATUM	FORMATION
Dr 41		Top Soil
- 10·	ē,	Clay
D: - 30;	201	Fine sand
321	2 '	Med. to fine sand & coarse gravel
351	3;	Med. gravel
50.	5 '	Coarse gravel & medium gravel, brown
5	5 1.	Coarse & medium brown gravel
- 50 · · ·	5:	Coarse 3 medium brown gravel
· - J:	5	Coarse & medium brown gravel
	5:	Very coarse gravel
- 351	5 ·	Fine gravel to medium sand
- 50	. 51	Very coarse and medium gravel
· = ga·	15.	Coarse, medium and fine sand
_ = = = = = = = = = = = = = = = = = = =	2 '	Coarse, medium and fine gravel
:	:	
:		PERM. WELL AT THIS LOCATION
·		TMB 9-17-79
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ailer Test:		
mping Test:		
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	(24)	

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			-INCORPORTED OF	
a	☐ TEST	INDIANAPOLIS	SHAWAKA EDANSING	
	□ PERMANENT		DRITTE RESOURCE	Jeb No. <u>23556</u>
	WELL LOG No	4 <u>CITY Franklin</u>		County Johnson
	Owner Indiana	Cities Water Corporat	100	Township Needham
	Walters	Well Field		Section 12-T12N-R4E
	Location At site	of #26 Survey		State_Indiana
	From Land Desc	ription Approximately 2	00' S. of Hurricane Cr	
	From Street or B	Road & 555' W. of Roa	d 400E	

FROM	NATURAL	GROUND	LEVEL
Depth to Top of Stratum	Depth to Bottom of Stratum	Thickness of Stratum	Static Water Level
0	12	12	
12	19	7	
19	22	3	
22	47	25	
47	55	8	
55	67	12	
67	71	4	
71	74	3	
74	98	24	
98	102	4	
	Depth to Top of Strotum  0 12 19 22 47 55 67 71 74	Depth to Top of Stratum   Depth to Bottom of Stratum     0	Top of Strotum   Strotum   Strotum   Strotum   Strotum   Strotum     0

Hole <u>40</u> "Dia Drilled by:	Cable Tool	Rotary	Jetting	
Did Dillied By. 2	Reverse Circ	Bucket	Auger	
Rotary Hole Grouted: Neat Cemer	nt Drilli	ng Mud	Other	
Casing "OD From	''above ground to_	feet below gr	ound. Weight	Pounds per foct
Screen 16 "Selfrom 78				
Pumping test 1225 GP	M drawdown to	feet after	hours pumpi	ng S.L. 12

Pari	SASING EXTENDS _	2 FEET ABOVE GROUND LEVEL	JOB NO23556
·	GROUND	LEVEL	DISTRICT <u>Indianapolis</u>
		36 "DIA. HOLE	LOCATION: <u>Franklin</u>
1	Δ. Δ. Δ.	4 CONCRETE SEAL	COUNTY Johnson  TOWNSHIP Needham
	DEPTH 16' A:	0 0	SECTION 12 T 12N R 4E
	0 0 0	CASING. 3/8 "WALL THICKNESS.	STATE Indiana  WELDED  CASING TALLY  THREADED
	0	0	BOTTOM
The state of the s	DEPTH 74' O	CONNECTION  20 FT. OF 16 II  SCREEN. OPENING #5  SILICA GRAVEL WALL  YDS. SIZE # 48	TOP  TOTAL  FILL USED FROM BOTTOM UP  SILICA GRAVEL PACK 98 TO 74 FT.
D	STATIC LEVEL12'	BOTTOM C	ORAVEL FILL 74 TO 16 FT. CONCRETE 16 TO 12 FT. Clay 12 0
	PUMPED <u>1225</u> G.P.M TYPE OF RIG <u>RC</u>	. AT FEET PUMPING LEVEL AFTE DRILLER H. Foster DATE CON MEASURED FROM GROUND LEVEL. NOT	1PLETED 4/16/75
F	GRA	AVEL WALL WELL NO. 4 ES WATER CORPORATION, FRANKLIN, IN	TVDE CC 1
1	SINGER	- LAYNE. WATER RESOUR	RCES DRAWING NUMBER SC-1
5/73			



237 W. MONROE STREET P.O. BOX 55 FRANKLIN, INDIANA 46131 (317) 738-4577

7BS7	( <	117) 730-43	/ /	
X FERMANENT DATE Oct. 2, 1987	Pro	ject No.	683-	F
KILL NO. House CITY Franklin	Cou	nty <u>Jo</u>	hnson	
Owner <u>Jackson</u>	Tow	nship <u>Ne</u>	<u>edham</u>	
	Sec	tion12	? T12N-R	4E
location Walter Farm	Sta	te	IN	
Land Description				
Street or Road 400 E.				
	FROM N	ATURAL G	ROUND LI	EVEL
FORMATION	Depih to Tap d Strutum	Dipth to Botton of Stratum	Inkliness of Stroium	State Vacian Lawet
Top Soil	0'	17'	17'	
Hard gray clay w/sand	17'	46'	29'	
Fine sand & med. gravel	46'	47'	1'	<del></del>
Hard Packed sand	47'	49'6"	2'6"	
Fine to coarse sand	49'6"	53'8"	4'2"	
Gritty clay	53'8"	75'	22'8	58'-0
Hard Packed fine sand	75'	99!	24'	
Coarse sand & gravél	99'	107'	8'	
ie6 " Dia. Drilled by: Cable tool				
sing 6 "OD from 2' above grade to 104	1			
reen <u>5</u> "Set from <u>104</u> to <u>109</u> feet Ma nping Test <u>15</u> GPM drawdown to <u>63</u> feet af				

Driller David Smith

								ਕ	(Continued from front side)  Formations: type of material  From  To	acopias mo valification by	By Date	ocation V	Ped C	ap Johnson 122		Comer Jackson - a lather town
S			₩.	23456	$\circ$	C. C		*	SKETCH SHOWING LOCATION  Locate with reference to highways, intersecting county roads, and distinctive landmarks.	Ft. S of NL Aquifer elevation	Ft. E of WL	Ft. N of SL Lot no.	Ground elevation $\mathcal{F}\mathcal{H}$ Subdivision name	4E NE "SE "SE Sec. 12	FOR ADMINISTRATIVE USE ONLY (Well driller does not fill out)	

 $\epsilon^i$ 

## WATER WELL RECORD

Describe in your own words the well location with respect to nearby towns, roads, streets or distinctive landmarks:  Byant add- East adams.
Dugger
Address:
Name of Well Drilling Contractor:
Address:
Name of Drilling Equipment Operator:
INFORMATION ON THE WELL
Completed depth of well: 5 / ft. Date well was completed: 9-17-57  Diameter of outside casing or drive pipe: //
Diameter of outside casing or drive pipe:
Diameter of outside casing or drive pipe:  Length: 54
Diameter of inside casing or liner: Length:
Diameter of Screen:Length:Slot size:  Type of Well: Drillod W C
Briven Other
For nome For industry For public supply
Cable Tools W Rotary Rotary Rotary
Static water level in completed well (Distance from ground to water level) 24 ft.  Bailer Test: Hours tast 1
Bailer Test: Hours tested Rate g.p.m. Drawdown ft. (Difference between Pumping Test: Hours tested Rate g.p.m.
Pumping Test: Hours testedRateg.p.m. Drawdownft. (Difference between static level and waterft. level at end of test)
Signature Orthy - Kost Steen 2-61

#### WATER WELL LOG

WATER WELL LOG			
FORMATIONS (Color, type of material, hardness, etc.)	From	То	Topo Map:  Well log elas Courthouse lo Field located Acc. w/o veri
Class	0	8	Map  Nap  log thou
Sand e Gravel	8	11	se 1.
Clan I	11	217	Rhair Control of the
Sand-Mud	47	49	Hand Hand elastication verification
Sand a Brack	24 0	5-11	By By By By By By By
2 and graves	17	37	
			1 1 1 1 1
			(Well TWP.
			(Well driller TWP. /2// R( ) 2/2 Date /2-64 Date /2-64 Date /2-64 Date /2-64
			rille
			er d
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			not not
			fill out)  fill out)  Ft W of  Ft N of  Ft S of
			W out
			of EL. of SL. of WL.
			<b>6</b>
			Ground Depth Bedrocl
			r k t e
			_\dagger SEC.
REMARKS:			2 SECelevation_co bedrock_celevation

#### INSTRUCTIONS

This Water Well Record form is designed to record the most essential data concerning a water well. We request that you be as accurate as possible in recording this information as it may be of great assistance in the planning and development of new water supplies.

An accurate location of the well is equally as important as an accurate well log. Please include all information possible in the space provided for well location.

(7)

## DIVISION OF WATER RESOURCES INDIANA DEPARTMENT OF CONSERVATION 609 STATE OFFICE BUILDING INDIANAPOLIS, INDIANA 46209 MElrose 3-6757

### WATER WELL RECORD

INFORMATION ON WELL LOCATION
County in which well was drilled: \ \ Color = 0.13
Congressional township: 12 N Range: 4E
Congressional township: 12 N Range: 4E Number of section: //  Describe in your own words the well location with respect to nearby towns, roads, streets
or distinctive landmarks: Aranklin - Unaham Rd.
Die Bill
new frich house
Name of owner: Elmer Sacduin Address: Frankslin
Name of Well Drilling Contractor: Sene Brown
Address: Franklin
Name of Drilling Equipment Operator:
Completed depth of walls to 3
Completed depth of well: 63 ft. Date well was completed: 7/59
Diameter of outside casing or drive pipe: Length:
plameter of inside casing or liner: 4"
Length: 62 Slot size:
Type of Well: Drilled Gravel Pack Driven Other
Use of Well: For home   For industry □ For public supply □ Stock □
method of Drilling: Cable Tools X Rotans C R. D. C
Static water level in completed well (Distance from ground to water level) / 9 ft.
Bailer Test: Hours tested Rote Parks
Bailer Test: Hours tested Rate g.p.m. Drawdown ft. (Difference between Pumping Test: Hours tested Rate Rate / static level and water
Pumping Test: Hours tested Rate _   D g.p.m. Drawdown ft. level at end of test)
· · · · · · · · · · · · · · · · · · ·
Signature Duller

WATER WELL LOG			
FORMATIONS (Color, type of material, hardness, etc.)	From	То	COUNTY: Topo Map: Well log clas Courthouse lo Field located Acc. w/o veri
Clay		57	0000
Glay Gravel & Sand	57	63	classified se located verification
			lassifie located red
·			red fied ted cation
			By B
			(Well TWP.  TWP.  TWP.  Date  Date  Date  Date
			(Well driller does not fill out)  TWP. 12 1/2 RGE. 4/E 5/E 1/2  Tup. 12 1/2 RGE. 4/E 5/E 1/2  Ft W of 276C Ft E of 25/C Ft S of 25/C Ft
			dri
			iller d  AL RGE  AL RGE
			doe
			1 2 1 1 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1
			# not fill #E 5 #E 5 #E 5 ##E
			Ft W Ft E
			]
			EL. St. WI.
			_½ <u>N</u> W Ground el Depth to Bedrock e Aquifer e
M/W c/			d elevation to bedrock ck elevatio
			'\ SEC levation_ bedrock_ elevation elevation
REMARKS:			n
Rouse			1 2 2 2

#### INSTRUCTIONS

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### WATER WELL RECORD

INFORMATION ON WELL LOCATION
County in which well was drilled: \otherse
Congressional township: 12 N Range: 4E
Congressional township:
or distinctive landmarks: R.R. Translelin - Nurucane Rd.
Tenant House - W. side - White = rame - Medham
- lane - lane - leadham
Name of Well Drilling Contractor H
Name of Well Drilling Contractor: Brown
Address:
Name of Drilling Equipment Operator:
INFORMATION ON THE WELL
Completed depth of well: \( \frac{1}{2} \) ft. Date well was completed: \( \frac{6}{20} \) \( 59 \)
Diameter of outside casing or drive pipe:Length:
Diameter of inside casing or liner:4"
Diameter of Screen: 3" Length: 4'6" Slot size:
Type of Well: Drilled (X) Gravel Pack  Driven  Other
Use of Well: For home  For industry  For public supply  Stock
Method of Drilling: Cable Tools X Rotary Rev. Rotary Jet Driven
Static water level in completed well (Distance from ground to water level) 25 ft.
Bailer Test: Hours testedRate 360g.p.m. Drawdown 733ft. (Difference between
Pumping Test: Hours testedRateg.p.m. Drawdown <u>1.33</u> ft. level at end of test)
Signature Dailo.
Signature Driller Collected by - Kent & Steen 3/61
Top your 3/61

#### WATER WELL LOG

WATER WELL LOG			
FORMATIONS (Color, type of material, hardness, etc.)	From	То	COUNTY: Topo Map: Well log class Courthouse loc Field located Acc. w/o verif
217 Hardpan		42	Y:_ Map: Nap: log hous
10'1 Sand, gas pocket	42	45	classified se located cated verification
10'1 Hardpan	45-	5-2	sifi cate
9'8 Sand gas pocket	52	55	tion
9'10 Hardpan (soft)	55	88	By B
9'10 Gravel	88	92	d 7.
static 25'		and the second seco	
			TWP
			driller d  12 N RGE  7/64  4-62
		and the second s	1 1 1 doe
			370 4 E
			1 1 1 1
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DEMARKS.			一社 ルル社 SEC
REMARKS:			
			45, 2

#### INSTRUCTIONS

This Water Well Record form is designed to record the most essential data concerning a water well. We request that you be as accurate as possible in recording this information as it may be of great assistance in the planning and development of new water supplies.

An accurate location of the well is equally as important as an accurate well log. Please include all information possible in the space provided for well location.



### WATER WELL RECORD

INFORMATION ON WELL LOCATION  County in which well was drilled:
Name of owner: <u>Mrs. Wellace Well</u> Address: <u>RR Frankslin</u> Name of Well Drilling Contractor: <u>Browns 20 all Dilling Service</u> Address: <u>Anankelin</u>
Name of Drilling Equipment Operator:  INFORMATION ON THE WELL  Completed depth of well: 94 ft. Date well was completed: 3 - 9 - 54
Diameter of inside casing or liner:
Dumping Test: Hours tested 2 Rate /6 g.p.m. Drawdown 756ft. (Difference between static level and water level at end of test)  Signature

WATER WELL LOG			
FORMATIONS (Color, type of material, hardness, etc.)	From	То	COUNTY: Topo Map: Topo Map: Well log classifie Courthouse located Field located Acc. w/o verificat
Hardpan	0	56	ooug p
Hardpan	56	60	classified se located cated verification
Sand Hardpan Sand & Gravel	60	90	Lax sific
Sand & Gravel	90	94	d d
			By By By
			We11   TWP   TWP
			727 F
			TWP
			dril
			Well driller does TWP. 12 11 RGE. 4  Date 7/6 4 Date
	`		does E 4
			not F
			SENE 2 Ou
			ਬਣਲਥ ।
			- ½ _ 5 E Ground ( Depth to Bedrock Aquifer
·			5 E  nd el  h to  ock e  fer e
			k SEC. evatio bedroc bevati
REMARKS:			マーネーラビー表 SEC Ground elevation Depth to bedrock Bedrock elevation _ Aquifer elevation _
61/22			3/1/5
			1 1 1 1

#### INSTRUCTIONS

This Water Well Record form is designed to record the most essential data concerning a water well. We request that you be as accurate as possible in recording this information as it may be of great assistance in the planning and development of new water supplies.

An accurate location of the well is equally as important as an accurate well log. Please include all information possible in the space provided for well location.

## WATER WELL RECORD

INFORMATION ON WELL LOCATION
County in which well was drilled:
Range: UF
Describe in your own words the well location with respect to nearby towns, roads, streets
or distinctive landmarks: <u>Franklin</u>
Name of owner: Mrs. Wallace Well- Address: BR4 Frankeli
have of well brilling Contractor: Waven E. Braun
Address: 1145 N. Main Franklin
Name of Drilling Equipment Operator:
INFORMATION ON THE WELL
Completed depth of well: 50 ft. Date well was completed: 5-27-53
Diameter of outside casing or drive pipe: 4"  Length: 48
Diameter of inside casing or lines:
Diameter of Screen:  Length:
Diameter of Screen: Length: 5' Slot size:
Type of Well: Drilled  Gravel Pack  Driven  Other
For nome X For industry  For public supply  Stock
Method of Drilling: Cable Tools Rotary Rev. Rctary Jet Driven
Static water level in completed well (Distance from ground to water level)
Partier lest: Hours testedRate_ g p m Droydown
Pumping Test: Hours tested 2 Rate 3 -4 g.p.m. Drawdownft. (Difference between static level and water ft. level at end of test)
Source
Signature Dullers Jag Collisted Ly - Kast & Steen 5-9
Date Kast & Steen 5-9

#### WATER WELL LOG

WATER WELL LOG			
FORMATIONS (Color, type of material, hardness, etc.)	From	То	COUNTY:
Clay & Grand Hardpan Sand & Gravel	č	30	Map: Map: log chouse loca
Hardpan	30	48	Caputy Classie 10ca ated verifi
Sand & Gravel	48	50	Thank Thank January Hassified Hocated Located Located
			in the least of assified se located cated verification
			n B B B
		ļ	(Well  TWP.  TWP.  Well  TWP.  TWP.
			(Well driller does not TWP. 13 N RGE. 4 E  Date 7/6 4  Date 100  Date 100  Date 100
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			100 400 4E
			fill out)  SW 2  Ft W of  Ft N of  Ft E of
			11 out) SN/2 Ft W of Ft N of Ft E of Ft S of
			ZENE
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			Ground (Depth to Bedrock
			SE and the cock
			ele ele c el el el
			才 SEC. evatic bedroc levati
REMARKS:			Ground elevation_Depth to bedrock_Bedrock elevation_Aquifer elevation
Well alow			11161
			+04
			+

#### INSTRUCTIONS

This Water Well Record form is designed to record the most essential data concerning a water well. We request that you be as accurate as possible in recording this information as it may be of great assistance in the planning and development of new water supplies.

An accurate location of the well is equally as important as an accurate well log. Please include all information possible in the space provided for well location.

As specified in Chapter 6 of the Acts of 1959, a copy of this report must be submitted within thirty days after the completion of a well to the Division of Water Resources, Indiana

Department of Conservation.

Mail complete record within 30 days to:

INDIANA DEPARTMENT OF NATURAL RESOURCE
Division of Water
2475 Directors Row
Indianapolis, Indiana 46241
Telephone number (317) 232-4160

(Fill in completely)

County where drilled		WELL LOCATION	4	
Johnson	Civil township	Township	Range	Section
Driving directions to the well locati	on (include county road names	Frankl	in	S 13

Turn North on Eastview Dr., Then go to Shelbyville Rd.turn right. Then go to first road to left, turn ,go over creek then pass water plant 1000 feet, new well #2 is 30' south of old #2 well.

Name of well own	ner		OWNER	· CONTRACTOR			
Indiar	a Cities	Water Co	rnoration (	7	_	Telepho	ne Number
Address (Street ar	nd number, city, s	tate)	orporation (	Franklin, Indian	a)	(317	-881-8
400 Ca	mby CT.	P.O. Box	427 Greenw	ood, Indiana 46	1.40	ZIP code	9
Name of building	contractor		121, Greenw	ood, indiana 46	142		
Add						Telephor	ne number
Address (Street an	d number, city, si	ate)				ZIP code	
Name of drilling co						Zir code	
Address (Street and	ontractor	-0.1				Telephon	ne number
Address (Street an	TRUMPERSITE	Elos - 1	10	_		, 0.00	c number
1000000	indiliber, City, St.	are)	.)			ZIP code	
Name of equipmen	t operator	(a,10)	-July				
	Wildman	/		License number	Date of completion		
	E, Chain	60 1		522	/9/89		
	CONSTRU	JCTION DETAILS					
Use of well:		The second second			WELL LOG		
☐ Home	Industry	X Test	☐ Irrigation	Formations: type	of material	From	То
_		21	- migation			(Feet)	(Feet)
Public supply Method of drilling:	Stock	Other (spec	ify):	Top soil			
_	Rotary	Rev. rotary		100 8011		0	1 1
Cable tool	Jet	☐ Bucket rig	Other	Gray Clay			
106'6" fee	Material 103 ' 0	11	Diameter	Tay Clay		<del>  1</del>	3
Screen length	Material		16"	es Light Gray Cla	v	3	6
	1		Diameter			+	-
30 fee Screen slot size	il argillite	Total depth of w	14" inche	s Soft Gray Clay	& Sand Mix	6	17
		111					
.15 .00 .	9	Water quality (C)	lear, cloudy, odor, etc.)	Gray Clay & gr	avel	17	21
80'		Clear					
ype of pump	Shallow-well	jet		Sand & Gravel		21	31
X_ Submersible		Other (spec	cify):				
				F. to M. Sand	& Gravel	31	35
heck one		PACITY TEST		Meande	-		
Bailing	Air	Test rate		M Sand & P Grav	vel	35	42
Bailing rawdown	☐ Pumping	901	pm6 hrs.	F. to M. Sand (	2	4.5	
		Static level		Sano (	iravel	42	50
	feet	(depth to water)	31'5" feet	F. to M. Sand		50	()
GROUTING IN	ORMATION	M/F1 ( 0 F					62
out material	Depth of grout	Sealing material	ANDONMENT	F. Sand & Clay	Linds	62	_65
Bentonite	From 25 <sub>To</sub> 5	Journal Material	Depth filled	_			0.5
ethod of installation	Number of bags	Method of Installa	From To Number of baos	F. M. Sand		65	76
	used 6	tion	used				
nereby swear or affirm	To Undon Ab	Ities for perjury that	Signature of owner o	(Additional space for well log f authorized representative			
ne information subm nowledge and belief.	true, accurate ar	to the best of my	Wayne Wil			Date	/00
			1 111	. amaii		6/9/	89

Location accepted w / o verification by By Courthouse location County continued from front side) Field located Торо тар Clay and P Gravel (CD) Clay and Gravel(CD) Gravel and Clay Ball Sand, Gravel and Clay Ball Sand & Gravel & Clay Sand & Gravel & Clay Lince Sand & Gravel Clay & Gravel Mix (D) Z . T H Sand & Clay Ball Σ. Sand & gravel & clay ball Sand Formations: type of material WELL LOG 109 107 104 103 101 FROM 96 92 88 76 Feet 80 78 1050 111 109 107 104 103 Feet 96 101 92 88 80 78 7 (well driller does not fill out) Ft. E of WL Ft. N of SL Ft. W of EL Ft. S of NL SKETCH SHOWING LOCATION (Locate with reference to highways, intersecting county roads and distinctive landmarks.) Aquifer elevation Bedrock elevation Depth to bedrock Ground elevation 127 S U.T.M. Lot number Subdivision name m

(11)

# DIVISION OF WATER RESOURCES INDIANA DEPARTMENT OF CONSERVATION 609 STATE OFFICE BUILDING INDIANAPOLIS, INDIANA 46209 MElrose 3-6757

## WATER WELL RECORD

Congressional township:	County in which well was drilled. O
Name of owner: Robert A. Tondal Address:  Name of well Drilling Contractor: Browns Well Drilling Service  Address: Arablin  Name of Drilling Equipment Operator:  INFORMATION ON THE WELL  Completed depth of well: 35 ft. Date well was completed:  Diameter of outside casing or drive pipe: 4 Length: 32  Diameter of inside casing or liner: Length: Slot size:  Type of Well: Drilled Gravel Pack Driven Other  Use of Well: For home For industry For public supply Stock Method of Drilling: Cable Tools Rotary Rev. Retary Jet Driven Static water level in completed well (Distance from ground to water level) 1 ft.  Bailer Test: Hours tested Rate g.p.m. Drawdown ft. (Difference between static level and water level and water g.p.m. Drawdown ft. level at end of test)	County in which well was drilled: Jahnson Civil Township:  Congressional township: /2 Range: 4/ F
Name of owner: Robert A. Tordal Address:  Name of Well Drilling Contractor: Browns Well Drilling Service  Address: The Sanklin  Name of Drilling Equipment Operator:  INFORMATION ON THE WELL  Completed depth of well: 35 ft. Date well was completed:  Diameter of outside casing or drive pipe: 4 Length: 32  Diameter of inside casing or liner: Length:  Diameter of Screen: Length: 5 ft. Slot size:  Type of Well: Drilled   Gravel Pack   Driven   Other  Use of Well: For home   For industry   For public supply   Stock    Method of Drilling: Cable Tools   Rotary   Rev. Retary   Jet   Driven    Static water level in completed well (Distance from ground to water level)   7 ft.  Bailer Test: Hours tested Rate g.p.m. Drawdown ft. (Difference between static level and water static level and water static level at end of test)	Describe in your own words the well location with respect to nearby terms
Name of owner: Robert A. Tordal  Name of Well Drilling Contractor: Browns Well Drilling Service  Address: Hanblin  Name of Drilling Equipment Operator:  INFORMATION ON THE WELL  Completed depth of well: 35 ft. Date well was completed:  Diameter of outside casing or drive pipe: 4 Length: 32  Diameter of inside casing or liner: Length: Slot size:  Type of Well: Drilled Gravel Pack Driven Other  Use of Well: For home For industry For public supply Stock Method of Drilling: Cable Tools Rotary Rev. Retary Jet Driven Static water level in completed well (Distance from ground to water level) 7 ft.  Bailer Test: Hours tested Rate g.p.m. Drawdown ft. (Difference between static level and water Pumping Test: Hours tested Rate g.p.m. Drawdown ft. level at end of test)	
Address: The Name of Drilling Equipment Operator:  INFORMATION ON THE WELL  Completed depth of well: 35 ft. Date well was completed:  Diameter of outside casing or drive pipe: 4 Length: 32  Diameter of inside casing or liner: Length: 5lot size:  Type of Well: Drilled Gravel Pack Driven Other  Use of Well: For home For industry For public supply Stock Method of Drilling: Cable Tools Rotary Rev. Rctary Jet Driven Static water level in completed well (Distance from ground to water level) / ft.  Bailer Test: Hours tested Rate g.p.m. Drawdown ft. (Difference between static level and water level) at end of test)	
Address: The Name of Drilling Equipment Operator:  INFORMATION ON THE WELL  Completed depth of well: 35 ft. Date well was completed:  Diameter of outside casing or drive pipe: 4 Length: 32  Diameter of inside casing or liner: Length: 5lot size:  Type of Well: Drilled Gravel Pack Driven Other  Use of Well: For home For industry For public supply Stock Method of Drilling: Cable Tools Rotary Rev. Rctary Jet Driven Static water level in completed well (Distance from ground to water level) / ft.  Bailer Test: Hours tested Rate g.p.m. Drawdown ft. (Difference between static level and water level) at end of test)	
Address: The Name of Drilling Equipment Operator:  INFORMATION ON THE WELL  Completed depth of well: 35 ft. Date well was completed:  Diameter of outside casing or drive pipe: 4 Length: 32  Diameter of inside casing or liner: Length: 5lot size:  Type of Well: Drilled Gravel Pack Driven Other  Use of Well: For home For industry For public supply Stock Method of Drilling: Cable Tools Rotary Rev. Rctary Jet Driven Static water level in completed well (Distance from ground to water level) / ft.  Bailer Test: Hours tested Rate g.p.m. Drawdown ft. (Difference between static level and water level) at end of test)	Name of owner: Robert A. Todd Address:
INFORMATION ON THE WELL  Completed depth of well: 35 ft. Date well was completed:  Diameter of outside casing or drive pipe: 4 Length: 32  Diameter of inside casing or liner: Length: Slot size:  Type of Well: Drilled Gravel Pack Driven Other  Use of Well: For home For industry For public supply Stock  Method of Drilling: Cable Tools Rotary Rev. Retary Jet Driven Static water level in completed well (Distance from ground to water level) ft.  Bailer Test: Hours tested Rate g.p.m. Drawdown ft. (Difference between static level and water Pumping Test: Hours tested Rate g.p.m. Drawdown ft. level at end of test)	of well brilling contractor: 1) Anna Well D.
INFORMATION ON THE WELL  Completed depth of well: 35 ft. Date well was completed:  Thin dispend A La.)  Diameter of outside casing or drive pipe: 4 Length: 32  Diameter of inside casing or liner: Length: Slot size:  Type of Well: Drilled Gravel Pack Driven Other  Use of Well: For home For industry For public supply Stock   Method of Drilling: Cable Tools Rotary Rev. Retary Jet Driven   Static water level in completed well (Distance from ground to water level) / ft.  Bailer Test: Hours tested Rate g.p.m. Drawdown ft. (Difference between static level and water level) are five for many files.  Pumping Test: Hours tested Rate g.p.m. Drawdown ft. level at end of test)	Address: The Norblin
INFORMATION ON THE WELL  Completed depth of well: 35 ft. Date well was completed:  Thin dispend A La.)  Diameter of outside casing or drive pipe: 4 Length: 32  Diameter of inside casing or liner: Length: Slot size:  Type of Well: Drilled Gravel Pack Driven Other  Use of Well: For home For industry For public supply Stock   Method of Drilling: Cable Tools Rotary Rev. Retary Jet Driven   Static water level in completed well (Distance from ground to water level) / ft.  Bailer Test: Hours tested Rate g.p.m. Drawdown ft. (Difference between static level and water level) are five for many files.  Pumping Test: Hours tested Rate g.p.m. Drawdown ft. level at end of test)	Name of Drilling Equipment Operator:
Completed depth of well: 35 ft. Date well was completed:    Completed depth of well: 35 ft. Date well was completed:   Completed depth of well: 32	INFORMATION ON THE WELL
Diameter of Screen:  Length:  Slot size:  Type of Well: Drilled Gravel Pack Driven Other  Use of Well: For home For industry For public supply Driven  Method of Drilling: Cable Tools Rotary Rev. Rctary Jet Driven  Static water level in completed well (Distance from ground to water level)  Failer Test: Hours tested Rate g.p.m. Drawdown ft. (Difference between static level and water level)  Pumping Test: Hours tested Rate g.p.m. Drawdown ft. level at end of test)	Completed depth of well: 33 ft. Date well was completed.
Diameter of Screen:  Length:  Slot size:  Type of Well: Drilled Gravel Pack Driven Other  Use of Well: For home For industry For public supply Driven  Method of Drilling: Cable Tools Rotary Rev. Rctary Jet Driven  Static water level in completed well (Distance from ground to water level)  Failer Test: Hours tested Rate g.p.m. Drawdown ft. (Difference between static level and water level)  Pumping Test: Hours tested Rate g.p.m. Drawdown ft. level at end of test)	Diameter of outside casing or drive pipe: 4
Type of Well: Drilled Gravel Pack Driven Other  Use of Well: For home For industry For public supply Stock   Method of Drilling: Cable Tools Rotary Rev. Retary Jet Driven   Static water level in completed well (Distance from ground to water level) // ft.  Bailer Test: Hours tested Rate g.p.m. Drawdown ft. (Difference between static level and water Pumping Test: Hours tested Rate g.p.m. Drawdown ft. level at end of test)	Diameter of inside casing or liner:
Use of Well: For home For industry For public supply Stock  Method of Drilling: Cable Tools Rotary Rev. Retary Jet Driven  Static water level in completed well (Distance from ground to water level) // ft.  Bailer Test: Hours tested Rate g.p.m. Drawdown ft. (Difference between static level and water Pumping Test: Hours tested Rate g.p.m. Drawdown ft. level at end of test)	Diameter of Screen: Length:
Use of Well: For home For industry For public supply Stock  Method of Drilling: Cable Tools Rotary Rev. Retary Jet Driven  Static water level in completed well (Distance from ground to water level) // ft.  Bailer Test: Hours tested Rate g.p.m. Drawdown ft. (Difference between static level and water Pumping Test: Hours tested Rate g.p.m. Drawdown ft. level at end of test)	Type of Well: Drilled Co.
Method of Drilling: Cable Tools Rotary Rev. Rctary Jet Driven Static water level in completed well (Distance from ground to water level) // ft.  Bailer Test: Hours tested Rate g.p.m. Drawdown ft. (Difference between static level and water level) rest: Hours tested Rate g.p.m. Drawdown ft. level at end of test)	
Static water level in completed well (Distance from ground to water level)  Bailer Test: Hours tested  Rate  g.p.m. Drawdown  ft. (Difference between static level and water level)  Pumping Test: Hours tested  Rate  g.p.m. Drawdown  ft. level at end of test)	For public supply O
Bailer Test: Hours testedRateg.p.m. Drawdownft. (Difference between static level and water Pumping Test: Hours testedRateg.p.m. Drawdownft. level at end of test)	nethod of Drilling: Cable Tools Rotary Dear But
Pumping Test: Hours testedRateg.p.m. Drawdownft. (Difference between static level and waterg.p.m. Drawdownft. level at end of test)	Static water level in completed well (Distance from ground to untural and
Rateg.p.m. Drawdownft. level at end of test)	Bailer Test: Hours tested Rate Rate Rate
	Pumping Test: Hours testedRateg.p.m. Drawdownft. (Difference between static level and waterft. level at end of test)
Signature <u>No Citations</u> Date	== at the tiresty
Date	Signature <u>Na Citations</u>
	Date

WATER WELL LOG			
FORMATIONS (Color, type of material, hardness, etc.)	From	То	COUNTY: Topo Map Well log Courthou Field lo Acc. w/o
Clay e Gravel	0	12	Yap:
Toald I an	12	32	104 11/21
Sand and Gravel	32	33	Shirt Soithie Soithie Iocated ed rificat
			16 1
penil note by Steen: 'delpen ment to limestone'	ed		By By
ment to limestone")			1 1 1 1 2 3 1
			TWP Date
			TWP
			9-6 12 K
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			T. A. ave.
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			Ground el Depth to Bedrock e
			elev elev ele
REMARKS:			= \$ SEC elevation_ o bedrock_ c elevation elevation

#### INSTRUCTIONS

This Water Well Record form is designed to record the most essential data concerning a water well. We request that you be as accurate as possible in recording this information as it may be of great assistance in the planning and development of new water supplies.

An accurate location of the well is equally as important as an accurate well log. Please include all information possible in the space provided for well location.



### WATER WELL RECORD

INFORMATION ON WELL LOCATION County in which well was drilled: Johnson Civil Township: Alanhlin Congressional township: 12 N Range: HE Number of section: 14 (Fill in as completely as possible) Describe in your own words the well location with respect to nearby towns, roads, streets or distinctive landmarks: Thanklin Walls 6 and well at Rumping Station Name of owner: Ond. Public Ser. Co Address: Name of Well Drilling Contractor: 1. B. Jomb Address: Calmel Name of Drilling Equipment Operator: \_\_\_\_ INFORMATION ON THE WELL Completed depth of well: 165 ft. Date well was completed: 12-22-39 Diameter of outside casing or drive pipe:\_\_\_\_\_\_Length:\_\_\_\_\_ Diameter of inside casing or liner:\_\_\_\_\_\_\_Length:\_\_\_\_\_\_ Diameter of Screen:\_\_\_\_\_Length:\_\_\_\_\_\_Slot size:\_\_\_\_\_ Type of Well: Drilled Gravel Pack Driven Other\_\_\_\_\_ Use of Well: For home For industry For public supply test Stock Method of Drilling: Cable Tools P Rotary Rev. Rotary Jet Static water level in completed well (Distance from ground to water level)\_\_\_\_\_ft. Bailer Test: Hours tested \_\_\_\_\_ Rate \_\_\_\_ g.p.m. Drawdown \_\_\_\_ f. (Difference between Pumping Test: Hours tested \_\_\_\_\_Rate\_\_\_\_g.p.m. Drawdown \_\_\_\_\_ft. level at end of test) static level and water

Signature A. B. Famb -- TMK 1-26-55

Date Copied by Well 4-65

WATER WELL LOG			
FORMATIONS (Color, type of material, hardness, etc.)	From	То	COUNTY: The second of the seco
Cinder fill	0	6	Map: log hous
Muck	6	17	old Cated veriff
Hard pan	17	25	The stand
Soft blue clay	25	41	tion d
Sand	41	41,6	######################################
Soft clay	41,/6	<u>660</u>	
Hard pan	60	66	
Yellow sandy muck	66	72	TWP. 12 M RGE. 4 E       Ft         Date 4-65       Ft         Date 5       Ft         Date 6       Ft
Blue muck	72	90	
Sandy blue hard pan	90	107	
Brown hard pan	107	115	RGE.
(Not given)	115	136	\$ no
Soft blue clay	136	141	
Brown shale	141	143	Ft W of Ft E of Ft S of
Blue shale, no water	143	165	
			SE SE. SI. WI. NI.
			Gr De Aq
			Shound ound pth t drock uifer
			-\frac{\tau}{2} \tau \tau \tau \tau \tau \tau \tau \tau
	·		elevation control bedrock control elevation elevation
REMARKS:			on I h
INSTRUCTIONS			il a
			<u>Ž</u>

This Water Well Record form is designed to record the most essential data concerning a water well. We request that you be as accurate as possible in recording this information as it may be of great assistance in the planning and development of new water supplies.

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### WATER WELL RECORD

INFORMATION ON WELL LOCATION
County in which well was drilled:
Congressional township: 12 N Range: 4E
and John Worlds the Well location with morned to
or distinctive landmarks: Thompsin Waln banch Test well # 3
on lot of David Hunter men 1/2 1t of
on lot of David Hunter near Vaught St, sous
Name of owner: Ind Public Ser, Co Address:
Name of Well Drilling Contractor: 1, R. Lamb.
Address: Carmel
Name of Drilling Equipment Operator:
Completed depth of well. /3 9
Completed depth of well: 138 ft. Date well was completed: 10-10-42
Diameter of outside casing or drive pipe:
Diameter of inside casing or liner:Length:
Diameter of Screen:Length:Slot size:
Type of Well: Drilled
Use of Well: For home For industry For public supply that Stock
Method of Drilling: Cable Tools ( Rotary Rev. Rotary  Jet  Driven )
Static water level in completed well (Distance from ground to water level) 35 ft.
Bailer Test: Hours tested Rate g.p.m. Drawdown f. (Difference between
Pumping Test: Hours testedRateg.p.m. Drawdownft. level at end of test)
Signature #18 Lomb 10-10-42

WATER WELL LOG			
FORMATIONS (Color, type of material, hardness, etc.)	From	То	COUNTY: Topo Map: Well log cy Courthouse Field locat Acc. w/o ve
Clay	1	18	TY: Holder Map: Map: Map
Gravel & clay	18	21	e la la veri
Clay	21	33	Classified se located ated verificati
Sandy hard pan	33	45	Classified se located verification
Sandy blue clay	45	73	By By
Fine sand	73	77.6	
Gravel fine (static level 35)	77.6	81	
Sand & gravel, very poor	81	84	TWP  Date Date Date Date Date
Sandy hard pan	84	95	
Sandy blue clay	95	115	H-63
Yellow clay	115	133	RGE
Sandy blue clay	133	136	
Shale ?	136	138	
			THE NEW L
			W of I W of I S of I
			SI. WI.
			Grou Dep Bed:
			Ground el Depth to Bedrock e Aquifer e
			elev o be eler eler
REMARKS:			Relevation elevation elevation elevation
ILLIAINO.			
			1 22
			11/1, 1
INSTRUCTIONS			ll F
			<i>d</i>

This Water Well Record form is designed to record the most essential data concerning a water well. We request that you be as accurate as possible in recording this information as it may be of great assistance in the planning and development of new water supplies.

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#### WATER WELL RECORD

INFORMATION ON WELL LOCATION County in which well was drilled: Johnson Civil Township: Hanplin Congressional township:\_\_ (Fill in as completely as possible)

Number of section: 14 Describe in your own words the well location with respect to nearby towns, roads, streets or distinctive landmarks: Annblin bin Mol # 2 Name of owner: Quad. Pub. Ser Co Address:\_\_\_\_\_ Name of Well Drilling Contractor: A B Lamb Address: Carme Name of Drilling Equipment Operator:\_\_\_\_\_ INFORMATION ON THE WELL Completed depth of well: 140 ft. Date well was completed: 10-10-42 Diameter of inside casing or liner: \_\_\_\_\_\_ Length: \_\_\_\_\_ Diameter of Screen:\_\_\_\_\_Length:\_\_\_\_\_Slot size:\_\_ Type of Well: Drilled 🛭 Gravel Pack 🗌 Driven 🗌 Other\_\_\_\_ Use of Well: For home | For industry | For public supply | Itself Stock | Method of Drilling: Cable Tools Rotary Rev. Rotary Jet [] Driven [ Static water level in completed well (Distance from ground to water level) 46 ft. Bailer Test: Hours tested \_\_\_\_\_ Rate \_\_\_\_ g.p.m. Drawdown \_\_\_\_ ft. (Difference between Pumping Test: Hours tested \_\_\_\_\_ Rate \_\_\_\_ g.p.m. Drawdown \_\_\_\_ ft. level at end of test) static level and water

Signature # R fame 10-10-42 by
Date IMA 1-26-54

WATER WELL LOG	-		
FORMATIONS (Color, type of material, hardness, etc.)	From	То	COUNTY: Topo Map Well log Courthou Field lo
soil	0	1	Map:  10g_thous
clay	1	10	lap: og old ouse lo located located
hardpan	10	16	Control of the located werification was a located with the located were financial of the located was a located when the located were financial of the located was a located when the located was a located was a located when the located was a located was a located when the located was a located was a located when the located was a located was a located when the located was a locat
sandy hardpan	16	27	
gravel	27	28	W W W W W   1
hardpan	28	36	
blue clay	36	48	TWP  TWP  Date  Date  Date  Date  Date
muddy sand	48	54	
hard gr. static 46'	54	57	uril.c. 12NR 4-63
sandy hard pan	57	62	
blue sandy clay	62	83	\$
fine muddy sand gravel, static level 46'	83	94	. c3.
hard sdy. formation with stks. of gr.	94	99.0	
very hd. sandy hardpan	99.6	106	out) W of W of E of S of
sandy hardpan with streaks of gravel	106	133	EI. SI. NI.
soft gritty clay	133	140	Gr. Bec. Aqu
			Sound oth oth life
			to be to be release to be
REMARKS:			elevation o bedrock elevation elevation
TUDITATINO:			
			11/4/
			11117

#### INSTRUCTIONS

This Water Well Record form is designed to record the most essential data concerning a water well. We request that you be as accurate as possible in recording this information as it may be of great assistance in the planning and development of new water supplies.

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## WATER WELL RECORD

East at 55	WAIER WELL RECORD
Courthouse - T. R.R.	INFORMATION
County in which well was do	illed: Johnson Civil Township:
a milon well was dr	illed: forman Civil Township:

Country in the Information on Well Location
county in which well was drilled.
County in which well was drilled: Johnson Civil Township:
Describe in your own word (Fill in as completely as possible)  Number of section: 14
or distinctive landmarks: Southbast Part of Manblin  muthbast country arross perh, just west
motherst council arran Dall
JRR. Just west
Name of owner: Alexander de los Address: Alanblin Name of Well Drilling Contractor: Dilling R
Name of Well Drilling Contractor: Dilden Bros.  Address:
Address:
Name of Drilling Equipment Operator:
INFORMATION
Completed depth of well: 8 ft. Date well was completed: 2-26-46  Diameter of outside casing or drive pipe:
Diameter of outside casing or drive wi
Tro pipe:
casing of liner:
length:
Driven O
ror industry  \lambda   For multi-
Cable Tools   Potame O P
Static water level in completed well (Distance for
Static water level in completed well (Distance from ground to water level) 30 ft.  Bailer Test: Hours tested Rate g.p.m. Drawdown ft. (Difference between Pumping Test: Hours tested P ft.
Pumping Test: Hours testedRateRep.m. Drawdownft. (Difference between static level and waterft. level at end of test)
Signature Drilly RW-12-50
Date
FOD WITH & Company Av. 76th 1

WATER WELL LOG			
FORMATIONS (Color, type of material, hardness, etc.)	From	То	COUNTY: Topo Map: Well log of Courthouse Field loca Acc. w/o
Soil	o	,	Map: log hous loc w/o
yellow Clay and Gritty dry Grand	8	18	1 2 2 2 1
Blue Landy hardpan	18	27	Copering Cop
Brown sandy clay	27	30	1 P kl
Brown sandy hardpan	30	37	By By
Blue sandy hardpan	37	47	
Blue clay - gretty	42	53	
Coarse gran sand and			TWP.
W. B. growel SW/30	33	56	12N R
Sand e bouldus	.56	58	
			es es
			100 / F. Inct
			NEZE M 6
			of EL. of WL. of NL.
			<b>1</b>
			Ground e Depth to Bedrock Aquifer
			d el to ck e
			& SEC
REMARKS:			Ground elevation
			1 1 2
			<u> </u>

#### INSTRUCTIONS

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MElrose 3-6757

### WATER WELL RECORD

County in which well was dealer and the county in which well well and the county in which well well and the county in which well are the county in th
County in which well was drilled: Johnson Civil Township:
Congressional township: Range: Number of section
(Fill in a name: Number of section:
Describe in your own words the well location with respect to nearby towns, roads, streets
or distinctive landward for the first to hear by towns, roads, streets
or distinctive landmarks: Inanklin
Name of Wall Drillian C
Name of Well Drilling Contractor: Butun's Will Airly.
Address:
Name of Drilling Equipment Operators
Name of Drilling Equipment Operator: Sunth
INFORMATION ON THE WELL
Completed depth of well:ft. Date well was completed:
Date Well was completed:
Diameter of outside casing or drive pipe:Length:
Diameter of inside casing or liner:Length:Length:
Diemotors 2.6
Diameter of Screen:Length:Slot size:
Type of Well: Drilled Gravel Pack Driven Other Luckan
Ise of Wolle Face On The Control of Wolle Fac
Use of Well: For home For industry For public supply Stock
Method of Drilling: Cable Tools  Rotary Rev. Retary Jet Driven
Static water level in completed well (Distance from ground to water level)ft.
Bailer Test: Hours tested Pate Tester Tester Hours tested Pate Tester Tester Hours tested Pate Tester Teste
Bailer Test: Hours testedRateg.p.m. Drawdownft. (Difference between
umping Test: Hours testedRateg.p.m. Drawdownft. level at end of test)
Tever at end of test)
Signature
Data

#### WATER WELL LOG

) From	То	COUNTY: Topo Map: Well log classifie Courthouse located Field located Acc. w/o verificat
C	82	Map: log thous loc w/o
82	86	classified classified se located verification
86	94/2	sifi cate fica
94/2	97	ed d
		By B
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		ound e. ound to pth to drock (uifer (
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24		
	82 86 945	82 82 86 942 943 97

#### INSTRUCTIONS

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## DIVISION OF WATER RESOURCES INDIANA DEPARTMENT OF CONSERVATION 311 WEST WASHINGTON STREET INDIANAPOLIS, INDIANA

### WATER WELL RECORD

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SSISSION OF THE STATE OF THE ST	એ. -

INFORMATION ON WELL LOCATION
County in which well was drilled: Johnson Civil Township:
Congressional township:
Congressional township:  Range:  Range:  Number of section:  Describe in your own words the well location with the section in your own words the well location with the section in your own words the well location with the section in your own words the well location with the section in your own words the well location with the section in your own words the well location with the section in your own words the well location with the section in your own words the well location with the section in your own words the well location with the section in your own words the well location with the section in your own words the well location with the section in your own words the well location with the section in your own words.
with respect to nearby towns, roads, streets
or distinctive landmarks: 1091 Gandes St. Franklin Ind
$O(1) = \frac{1}{1} \left( \frac{1}{1} \frac{1}{1} \frac{1}{1} \right)$
Name of owner: Carl Jaylor Address:
Name of Well Drilling Contractor: Bucois Well Rilling
Address: Franklin Ind
Name of Drilling Equipment Operator:
INFORMATION ON THE WELL
Completed depth of well: 63 ft. Date well was completed: fune 63
Disperson of subsidering the Date well was completed:
Diameter of outside casing or drive pipe: Length:
Diameter of inside casing or liner: Length:
Diameter of Screen: 3 Length: 3'4" Slot size: #18 Cook
Type of Well: Drilled
Use of Well: For home For industry For public supply Stock
Method of Drilling: Cable Tools Rotary Rev. Rotary Jet Driven
Static water level in completed well (Distance from ground to water level) 19 ft.
Bailer Test: Hours tested Rate g.p.m. Drawdown ft. (Difference between
Pumping Test: Hours tested / Rate 10 g.p.m. Drawdown 13 ft. level at end of test)
Signature

FOR WELL LOG SPACE USE REVERSE SIDE OF THIS SHEET

Date \_\_\_\_

	WATER WELL LOG			
FORMATIONS (Color, type	pe of material, hardness, etc.)	From	То	Topo. Map: El. of grn Depth to b Well Log p
	gollow lay	8	18	Y:_ Maj f gr to Log
	gieg "	15	48	
	gellow "	48	55	Surface ock:
	Giey .	55	58	by:
	Gravel	58	63	at well:
				740
				76 30
				TWP.
				Loc.  Courtl Field Place
				RGE. #E // Loc. accepted w/c Courthouse Loc. Field Located Placed in Master
				ACCEPT  ACCEPT  HOUSE  Locat  d in N
			26	WE Who we computed wo wouse Loc. Located in Master We Soos. A W.
			The same of the sa	Who w/o
			- 1	// verifi // verifi By By C Well Lo,  // 1.5
				NE ifficat
			622-	ion ion
				Yes_Date Date Date
EMARKS:			1	S     S
	2 2		1	
	226			7   7   7
	3/34 4		<u>_</u>	111

#### INSTRUCTIONS

This Water Well Record form is designed to record the most essential data concerning a water well. We request that you be as accurate as possible in recording this information as it may be of great assistance in the planning and development of new water supplies.

An accurate location of the well is equally as important as an accurate well log. Please include all information possible in the space provided for well location.

As specified in Chapter 6 of the Acts of 1959, a copy of this report must be submitted within thirty days after the completion of a well to the Division of Water Resources, Indiana Department of Conservation, 311 West Washington Street, Indianapolis, Indiana.

### DIVISION OF WATER RESOURCES INDIANA DEPARTMENT OF CONSERVATION 609 STATE OFFICE BUILDING INDIANAPOLIS, INDIANA 46209 MElrose 3-6757

### WATER WELL RECORD

INFORMATION	ON	WELT.	LOCATION
	-21	السلم فسنان السنان الا	TOWITON

THI ORDER TON ON WELL LOCATION
County in which well was drilled: Chusen Civil Township:
Congressional township: Range:
(Fill is as a section:
to hearby towns, roads, streets
or distinctive landmarks: Trankles
for shop.
Name of owner: W. B. Beron Address: 1145 N. Tracin St.
Name of Well Drilling Contractor: Jungung's Well bulg.
Address:
Name of Drilling Equipment Operator: Muagus Smett
Completed depth of walk and a second
Completed depth of well: 72 ft. Date well was completed: 3-62
Diameter of outside casing or drive pipe:Length:
Diameter of inside casing or liner:Length:
Diameter of Screening was Length:Slot size:
Type of Well: Drilled Gravel Pack Driven Other tublar
Use of Well: For home For industry For public supply Stock
Method of Drilling: Cable Tools  Rotary  Rev. Rctary  Jet  Driven
Static water level in completed well (Distance from ground to water level)ft.
Bailer Test: Hours tested Rate g.p.m. Drawdown ft. (Difference between
Pumping Test: Hours tested Rate Dg.p.m. Drawdown 2 ft. (Billerence between static level and wate level and wate pumping Test: Hours tested Rate Dg.p.m. Drawdown 2 ft. level at end of test)
Signature
Date

WATER WELL LOG		1	
FORMATIONS (Color, type of material, hardness, etc.)	From	То	COUNTY:,  Topo Map:,  Well log classifie Courthouse located Field located Field located Acc. w/o verificat
clay	0	69	TTY: Map: log thous d loc w/o
gravel + sand	69	72	classified classified se located cated verification
			ssifi
			led d
			By B
		-	TWP. /2 RGE. 4 NE 1  TWP. /2 RGE. 4 NE 2  Date 4/-64  Date 4/-64  Date 4/-64
	:		
		-	R R
			RGE :
			86 H
			Ft S Ft E S
			EL. SL. WI. NI.
		-	Ground Depth Bedrod Aquife
			Ground of Depth to Bedrock Aquifer
ì			二社
REMARKS:			on lon
0 0			7/43
3/25			[']   []

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### DIVISION OF WATER RESOURCES INDIANA DEPARTMENT OF CONSERVATION 609 STATE OFFICE BUILDING INDIANAPOLIS, INDIANA 46209 MElrose 3-6757

### WATER WELL RECORD

INFORMATION ON WELL LOCATION County in which well was drilled: Johnson Civil Township: The Nanhlin Describe in your own words the well location with respect to nearby towns, roads, streets or distinctive landmarks: The Manhlin 10 mich that well in Highland addelin. Name of owner: Ind. Pub-Co Address: Franklin Name of Well Drilling Contractor: A B Lomb Address: (arms) Name of Drilling Equipment Operator: \_\_\_\_ INFORMATION ON THE WELL Completed depth of well: \$5 ft. Date well was completed: 5-10-42

Set bollon of screen at 83. Diameter of inside casing or liner: \_\_\_\_\_\_ Length: \_\_\_\_ Use of Well: For home ☐ For industry ☐ For public supply ☑ Stock ☐ Method of Drilling: Cable Tools Rotary Rev. Rotary Jet D Driven [] Static water level in completed well (Distance from ground to water level) 23 Bailer Test: Hours tested \_\_\_\_\_ Rate \_\_\_\_ g.p.m. Drawdown \_\_\_\_ f. (Difference between Pumping Test: Hours tested 30 Rate 325g.p.m. Drawdown 55 ft. level at end of test) static level and water

Signature # R. Land Mog 10-1942

Date I.M.K. 1-26-45

FOR WELL LOG SPACE USE REVERSE SIDE OF THIS SHEET Copied by

WATER WELL LOG			
FORMATIONS (Color, type of material, hardness, etc.)	From	То	COUNTY:  Topo Map:  Well log did  Courthouse loc Field located Acc. w/o verif
Clay	0	16	Map: log- thous loc w/o
Blue hard pan	16	18	Control of the contro
Sand & Gravel water bearing	18	24 🤇	The Land
Blue clay	24	37	and the state of t
Brown hard pan, sm. sd. streaks	37	71	By By
Water gravel	71	83	
Boulders & mud	83	85	7 7 7
			TWP  TWP  Date Date Date Date Date
			driller  121/R  14-63
			RGE 4
			s not
			fill o
			of of ut)
			EL. SL. WI.
			Gro Dep Bed Aqu
		9	Ground e Depth to Bedrock Aquifer
			d elev to be ck ele er ele
			elevation obedrock elevation elevation
REMARKS:			4 7 b b 1 1
			rose t
TNSTRUCTIONS			1.
INSTRUCTIONS			V, Z,

This Water Well Record form is designed to record the most essential data concerning a water well. We request that you be as accurate as possible in recording this information as it may be of great assistance in the planning and development of new water supplies.

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## DIVISION OF WATER RESOURCES INDIANA DEPARTMENT OF CONSERVATION 609 STATE OFFICE BUILDING INDIANAPOLIS, INDIANA 46209 MElrose 3-6757

### WATER WELL RECORD

INFORMATION ON WELL LOCATION County in which well was drilled:\_ Johnson Civil Township: Franklin Congressional township:\_\_\_ Range: 4 E Number of section:\_\_\_\_ (Fill in as completely as possible) Describe in your own words the well location with respect to nearby towns, roads, streets or distinctive landmarks: Landlin Wales 6 inch Alat well on Highland are East of younce Name of owner: Ind. Pub. Serv. Co. Address: Name of Well Drilling Contractor: A. R. Fumb Address: (as me Name of Drilling Equipment Operator:\_\_\_\_ INFORMATION ON THE WELL Completed depth of well: 160 ft. Date well was completed: July 21, 1942 Diameter of outside casing or drive pipe: \_\_\_\_\_ b \_\_\_\_ Length: \_\_\_\_\_ Diameter of inside casing or liner: \_\_\_\_\_\_ Length: \_\_\_\_\_ Diameter of Screen:\_\_\_\_\_Length:\_\_\_\_\_Slot size:\_\_\_\_\_ Type of Well: Drilled Gravel Pack Driven Other\_\_\_ Use of Well: For home For industry For public supply test Stock Method of Drilling: Cable Tools ₩ Rotary □ Rev. Rotary □ Jet [] Static water level in completed well (Distance from ground to water level)\_\_\_\_\_ Bailer Test: Hours tested \_\_\_\_\_ Rate \_\_\_\_ g.p.m. Drawdown \_\_\_\_ f. (Difference between Pumping Test: Hours tested \_\_\_\_\_ Rate \_\_\_\_ g.p.m. Drawdown \_\_\_\_ ft. level at end of test) static level and water Signature H. R. Jamb. July 21, 1942

FOR WELL LOG SPACE USE REVERSE SIDE OF THIS SHEET Copied by rule 4-65

WATER WELL LOG			
FORMATIONS (Color, type of material, hardness, etc.)	From	То	COUNTY:
Clay	0	10	Y:_ Yap: log nous loc
Dry Gr.	10	12	Y: A
Hard pan	12	25	Johnson Williams Charles Field verification Verification
Gr. formation, some water	25	27	tion day
Hard pan	27	35	By By
Sandy hard pan	35	42	
Gravel (static level 40')	42	50	
Soft yelow clay	50	78	wp. wp.
Gr.	78	84	ariller  12 MR  4-65
Blue clay	84	86	ler d WRGE
Gr.	86	88.6	
Sandy hard pan	88.6	95	not ##
Gravel	95	96	######################################
Blue clay	96	102	SEZE O
Gravel muddy	102	105	of EL of WL of NL
Blue clay	105	113	
Gravel muddy	113	123	
Fine muddy gravel	123	125	001
Hard gravel	125	129	======================================
Sandy clay REMARKS:	129	132	- \$ SEC levation_ bedrock_ elevation elevation
fine sand	132	153	1111
Hard pan	153	156	
Soft blue clay	156	160	1111

### INSTRUCTIONS

This Water Well Record form is designed to record the most essential data concerning water well. We request that you be as accurate as possible in recording this information as it may be of great assistance in the planning and development of new water supplies.

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## DIVISION OF WATER RESOURCES INDIANA DEPARTMENT OF CONSERVATION 609 STATE OFFICE BUILDING INDIANAPOLIS, INDIANA 46209 MElrose 3-6757

### WATER WELL RECORD

INFORMATION ON WELL LOCATION
County in which well was drilled: Johnson Civil Township: The Northern
Congressional township:  (Fill in as completely as possible)  Describe in your own words the well location with respect to possible to possible.
or distinctive landmarks: Whomblin Wales Wells & inch Test a
on Clurence Melley at NW Cos D N Wal &
and Clark sto.
Name of owner: Ind Public Service Co Address: Franklin
Name of Well Drilling Contractor: H. R. Lomb.
Address: Carmel.
Name of Drilling Equipment Operator:
INFORMATION ON THE WELL
Completed depth of well: 157 ft. Date well was completed: May 42
Diameter of outside casing or drive pipe: 62 Length:
Diameter of inside casing or liner: Length:
Diameter of Screen: Length: Slot size:
Type of Well: Drilled Gravel Pack Driven Other
Use of Well: For home For industry For public supply Stock
Method of Drilling: Cable Tools Rotary Day Day
Static water level in completed well (Distance from ground to water level)ft.
Bailer Test: Hours tested Rate g.p.m. Drawdown f. (Difference between
Pumping Test: Hours testedRateg.p.m. Drawdownft. (Difference between static level and waterft.)
Signature # R Fomb TM + 1-26-45

FOR WELL LOG SPACE USE REVERSE SIDE OF THIS SHEET

WATER WELL LOG			
FORMATIONS (Color, type of material, hardness, etc.)	From	То	COUNTY: Z Topo Map: Well log Courthous Field log Acc. w/o
Clay	1	20	
Sand & Gravel	20	26	e lo e lo ated veri:
Brown hard pan	26	32	Hamen Hamen Annie Contined ated verification
Sandy hard pan	32	65	tion tion
Muddy sand & gravel	65	70	By By By
Sandy hard pan	70	76	
Hard pan gravel streaks	76	78	
Sandy hard pan	78	88	TWP  TWP  Date  Date  Date  Date
Hard pan sand & gravel streaks	88	93	
Fine muddy sand	93	101	driller 12 N R
Muddy sand and gravel	101	110	RGE
Good gravel (static level 50')	110	116	s not
Hard pan	116	120	' #
Hard pan	120	123	
Large muddy gravel (no raise of wt.)	123	125	out) W of W of E of
Hard pan	125	132	EL. SL. WL.
Sandy Hard pan	132	137	
Soft gritty clay	137	157	round erepth to edrock quifer
			* SECelevation_ co bedrock_ celevation elevation
REMARKS:			on
			2

### INSTRUCTIONS

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## DIVISION OF WATER RESOURCES INDIANA DEPARTMENT OF CONSERVATION 609 STATE OFFICE BUILDING INDIANAPOLIS, INDIANA 46209 MElrose 3-6757

### WATER WELL RECORD

INFORMATION ON WELL LOCATION
County in which well was drilled: Civil Township.
Congressional township: 12 N Range: 4E
Congressional township: Range: 4E Number of section: 3  Describe in your own words the well location with respect to nearby towns, roads, streets or distinctive landmarks.
or distinctive landmarks:
Name of owner: Charles Barber Address: St. Rt. 44 - Frankel
Name of Well Drilling Contractor: Charles Davis
Address: RI Shell 100
Address: R( Shellywille  Name of Drilling Equipment Operator:
Name of Drilling Equipment Operator:
Completed depth of and a first formation on the Well
Completed depth of well: 63 ft. Date well was completed: 1956
practical of outside casing or drive pipe: 4
Length:
Length: 2 Slot size: # 30
Type of Well: Drilled Gravel Pack Driven Other
ose of well: For home   For industry   For public supply
Cable Tools   Rotary   Rev. Potent
Static water level in completed well (Distance from ground to
Pumping Test: Hours tested / Rate / g.p.m. Drawdownft. (Difference between static level and water level at end of test)
Signature N a on o
Date Steen 3/5-9
David

FOR WELL LOG SPACE USE REVERSE SIDE OF THIS SHEET

### WATER WELL LOG

WATER WELL LOG			
FORMATIONS (Color, type of material, hardness, etc.)	From	То	COUNTY: Topo Map: Well log clas Courthouse lo Field located Acc. w/o veri
Fill & Tapsoil	0	Z	COUNTY: The many of the country of the country of the country of the court of the c
Fill & Tapsoil Clay Sandy Clay	g 2	20	classified se located sated verification
Sandy Clay	20	35	lassifie located ted
Sand & Gravel	3 <i>5</i>	39	
Clay	39	60	By By By By
Land & Gravel	60	63	TWP.  TWP.  Date  TWP.
			TWP TWP Date Date Date Date Date
			1 1 1 dri
			Well driller d TWP. 12 N RGE  Date 7/64 Date 6-0-60 Date 6-0-60 Date
			doe
			(Well driller does not TWP. 12 N RGE. 4 € Date 7/64 250 Date 6-20-60 Date 6-20-60
			1 1 1 1 2 1 2 1
			fill out)  SE  Ft W of  OF Ft N of  Ft S of
			1
			NI.
			E ₹. Gro Gro Dep Bed Aqu
			ound el ound el pth to drock e
			elev o be ele
			√ % SEC elevation_ to bedrock_ k elevation r elevation
REMARKS: Jacobamps Peatty & lus.			, , , , , , , , , , , , , , , , , , ,
63 S. Water &t.			730
Franklin, Ind.			

### INSTRUCTIONS

This Water Well Record form is designed to record the most essential data concerning a water well. We request that you be as accurate as possible in recording this information as it may be of great assistance in the planning and development of new water supplies.

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## DIVISION OF WATER RESOURCES INDIANA DEPARTMENT OF CONSERVATION 609 STATE OFFICE BUILDING INDIANAPOLIS, INDIANA 46209 MElrose 3-6757

### WATER WELL RECORD

INFORMATION ON WELL LOCATION
County in which well was drilled: Johnson Civil Township
Congressional township: 12 N
County in which well was drilled:  Congressional township:  Congressional township:  (Fill in as completely as possible)  Describe in your own words the well location with respect to nearby towns roads at a location.
Describe in your own words the well location with respect to nearby towns, roads, streets or distinctive landmarks:
or distinctive landmarks:
Name of Well Drilling Contractor (1) Address: R.R. Franklin
Name of Well Drilling Contractor: Charles Address: R.R. Franklin  Address:
Address:
Name of Drilling Equipment O.
Name of Drilling Equipment Operator:
INFORMATION ON THE
Completed depth of well: 63 ft. Date well was send to
or drive pine:
- 1 indice casing or liner.
Diameter of Screen: 3 2
Diameter of Screen: 3 2 Length: Length: Slot size: # 36
Gravel Pack Driven O
for industry For public and
Rotary Rev. Retary
Static water level in completed well (Distance from The Distance f
Rate /4 g n m D1
Tumping Test: Hours testedRateg.p.m. Drawdownft. (Difference between static level and water ft. level at end of test)
Date Steen-Kast 2-5-9
FOR WELL 100 Date Steen - Knot 2-5-9

FOR WELL LOG SPACE USE REVERSE SIDE OF THIS SHEET

WATER WELL LOG			
FORMATIONS (Color, type of material, hardness, etc.)	From	То	COUNTY: ( ) 2 f
Japanil	0	1	TY:( Map:_ log of thouse d loca d loca w/o v
Clay	l	15	
Land	/5-	21	Ruca Ruca Ruca Rucated Rucated Rucated
Clay	21	45-	
Sand & Gravel 3 gpm	45	47	By A By A
_ Clay	47	59	Dean Dean
Sand & Gravel	59	63	(W
			TWP. 12 VR TWP. 12 VR  TWP. 12 VR  Date 7/6 4 Date 4/0/6 Date 4/0/6
			dri11 12 12 14 14 17 16 17 16 17 17 18 18 18 18 18 18 18 18 18 18 18 18 18
			P C C C C C C C C C C C C C C C C C C C
			E no
·			
			SENE W OF
			of EL. of WL. of NL.
			Ground e. Depth to Bedrock (Aquifer (
			SW ½  Ind elev  The to be  Tock ele  fer ele
			* SEC elevation _ to bedrock _ c elevation elevation c elevation
DEMARKS			k SECevation evation bedrock levation levation
REMARKS:			
			.

### INSTRUCTIONS

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## DIVISION OF WATER RESOURCES INDIANA DEPARTMENT OF CONSERVATION 609 STATE OFFICE BUILDING INDIANAPOLIS, INDIANA 46209 MElrose 3-6757

### WATER WELL RECORD

INFORMATION ON WELL LOCATION  County in which well was drilled:  Civil Township:  Congressional township:  (Fill in as completely as possible)  Describe in your own words the well location with respect to nearby towns, roads, streets or distinctive landmarks:  Bab Bryant Control L-M Supply Control
Name of owner: Analytic Homes Inc. Address: Analytica  Name of Well Drilling Contractor: Thompson for Fort Sons  Address: Re Shellywille  Name of Drilling Equipment Operator:
INFORMATION ON THE WELL  Completed depth of well: /3 / ft. Date well was completed: // / / / / / / Length:  Diameter of outside casing or drive pipe: // Length:  Diameter of inside casing or liner: // Length:  Diameter of Screen: Length: Slot size:  Type of Well: Drilled Gravel Pack Driven Other  Use of Well: For home For industry For public supply Stock  Method of Drilling: Cable Tools Rotary Rev. Retary Jet Driven  Static water level in completed well (Distance from ground to water level) ft.  Bailer Test: Hours tested Rate g.p.m. Drawdown ft. (Difference between static level and water Pumping Test: Hours tested Rate g.p.m. Drawdown ft. level at end of test)
Signature Dullen Log  Date Keet 1959

FOR WELL LOG SPACE USE REVERSE SIDE OF THIS SHEET

WATER WELL LOG			
FORMATIONS (Color, type of material, hardness, etc.)	From	То	COUNTY: Topo Map: Well log cl Courthouse Field locat Acc. w/o ve
Zellow Rock Clay	0	32	Map: log chous loc. w/o
Granel, Clay of Mud	32	35-	ap: Handala  ap: Handala  og classified  ouse located  located  located  located  located
Sandy Gray Clay	3.5-	43	Assifie located rificat
Clay & some Francel	43	46	ed trion
Gray Sandy Clay	46	70	By Lo
Fine Yellow Sand & Clay	70	78	Jan John J
Landy Gray Clay	78	87	
Black State	<b>8</b> 7	125	(Well TWP
? Stone	125-	126	driller   12/1/ R(   7/64
Blue Shale	126	/3/	
			does
			E not
			fill 
- tolls last of 1	inter		S E N Ou
			tt) - ½ of EL of SL of WL of NL
Nased.			B D G
7. 3			tund (round (epth toedrock quifer
			# <del>   </del>
REMARKS:			ion_ ion_ ock_ ion_ ion_
E Tocc ary			1500 14
7			1 1/2 6

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## DIVISION OF WATER RESOURCES INDIANA DEPARTMENT OF CONSERVATION 609 STATE OFFICE BUILDING INDIANAPOLIS, INDIANA 46209 MElrose 3-6757

### WATER WELL RECORD

INFORMATION ON WELL LOCATION
County in which well was drilled: Civil Township:
Congressional township:  Range: LE Number of section: 14
(Fill in as completely as possible)
and the words the well location with respect to nearby towns, roads, stroots
or distinctive landmarks: Mean arms Ind.
Name of owner: Claschorn Address:
Name of Well Drilling Contractor: Sene Brown
Address:
Name of Drilling Equipment Operator:
INFORMATION ON THE WELL
Completed depth of well: 63 ft. Date well was completed: 9/2/59
brameter of outside casing or drive pipe:
Diameter of inside casing or liner:
Diameter of Screen: 3" drap Length: 4'6" Slot size:
Type of Well: Drilled  Gravel Pack Driven Other
Use of Well: For home  For industry  For public supply  Stock
Method of Drilling: Cable Tools ♥ Rotary □ Para Data □
Static water level in completed well (Distance from ground to water level) 25 ft.
Bailer Test: Hours tested 2 Rate 15-36g.p.m. Drawdown ft. (Difference between
Pumping Test: Hours tested 2 Rate 16 g.p.m. Drawdownft. (Difference between static level and water
Pumping Test: Hours tested 2 Rate 16 g.p.m. Drawdown 7 31 ft. level at end of test)
Signature Ariller
Signature Ariller  Date Kost y Steen 3/61
FOD WELL TOO COACE THE

FOR WELL LOG SPACE USE REVERSE SIDE OF THIS SHEET

WATER WELL LOG	<b>T</b>		
FORMATIONS (Color, type of material, hardness, etc.)	From	То	COUNTY: Topo Map: Well log clas Courthouse lo Field located Acc. w/o veri
Sand		15	Map: Map: log hous locum/o
Sand Hardpan Gravel	/5-	5-2	clas e lo ated veri
Gravel	5-2	63	classified classified se located verification
			By S
			TWP  TWP  Date  TWP  Date  True  Two are a series of the control o
			(Wel:  TWP  TWP  Date  Date  Date
			TWP
			(Well driller does  TWP. /2 RGE.  ) 1/2
			ler do RGE
			0 0 0 ot
			fill out)  Ft W of  Ft N of  Ft S of
			• • • • • • • • • • • • • • • • • • • •
			EI. SI. WI.
			E ½ - Grou Dept Bedi Aqui
			Ground e Ground to Depth to Bedrock (
			EX NEL & SEC. Ground elevation Depth to bedrock Bedrock elevatio Aquifer elevatio
REMARKS:			SEC levation_ bedrock_ elevation elevation

### INSTRUCTIONS

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### DIVISION OF WATER RESOURCES INDIANA DEPARTMENT OF CONSERVATION 609 STATE OFFICE BUILDING INDIANAPOLIS, INDIANA 46209 MElrose 3-6757

### WATER WELL RECORD

### INFORMATION ON WELL LOCATION

INFORMATION ON WELL LOCATION
County in which well was drilled:
Congressional township:    Civil Township:   Civil Township:   Number of section: 14     Describe in your own words the well location with respect to nearby towns, roads, streets
Range: 4 Number of section: 14
Describe in your own words the well location with respect to nearby towns, roads, streets or distinctive landwarks.
or distinctive landmarks: <u>Nameton Ave.</u> . <u>NE</u>
Name of owner: <u>Jann Brulaur</u> Gray Address: <u>Frankslin</u> Name of Well Drilling Contractor: <u>Jany Sans</u> ,  Address: R 6 Shelle '00
Name of Well Drilling Contractor:
Address: R 6 Shelly wille  Name of Drilling Equipment Operate
Name of Drilling Equipment O
Name of Drilling Equipment Operator:
INFORMATION ON THE WELL
Completed depth of well:
Diameter of outside casing or drive pipe:Length:
Diameter of inside casing and:
Diameter of inside casing or liner:Length:
Length:Slot circle
Type of Well: Drilled Gravel Pack Driven Other
Use of Well: For home For industry For public supply Stock
Method of Drilling: Cable Tools Rotary Rev. Retary Jet Driven
Static water level in . Rotary Rev. Rotary Jet Driven
Static water level in completed well (Distance from ground to water level)ft.
Rateg.p.m. Drawdown ft (D: 00
Pumping Test: Hours testedRate _25 g.p.m. Drawdownft. (Difference between static level and water
g.p.m. Drawdownft. level at end of test)
Date Kast 195 9  FOR WELL LOG SPACE USE REVERSE SUPERIOR STATE OF SPACE USE REVERSE SUPERIOR STATE OF
Date Kast 1959
FOR WELL LOG SPACE USE REVERSE SIDE OF THE

FOR WELL LOG SPACE USE REVERSE SIDE OF THIS SHEET

WATER WELL LOG			
FORMATIONS (Color, type of material, hardness, etc.)	From	То	Topo Map: Well log Courthous Field loc Acc. w/o
			000000
			lass lass loc ted erif
			classified the located verification
	·		Well (Well of Well of
			(Well of Well
			12/4
			3E
			so the state of th
			1 out
			of EL. Cof SL. I of WL. Fof NL. A
			C 2 2 C C C C C C C C C C C C C C C C C
			Ground el Depth to Bedrock e Aquifer e
			SEC elevation o bedrock c elevation elevation
REMARKS:		·	SEC
25 gpm with 47 drap pipe			1 1 1 1
			`

### INSTRUCTIONS

This Water Well Record form is designed to record the most essential data concerning a 2 water well. We request that you be as accurate as possible in recording this information as it may be of great assistance in the planning and development of new water supplies.

An accurate location of the well is equally as important as an accurate well log.

Please include all information possible in the space provided for well location.

As specified in Chapter 6 of the Acts of 1959, a copy of this report must be submitted & within thirty days after the completion of a well to the Division of Water Resources, Indiana Department of Conservation.

			•			

LIQUID WASTE REMOVAL, INC. P.O. Box 795 • Greenwood, IN 46142 (317) 881-9754 • FAX (317) 889-0383

# JOB WORK ORDER

19534

cus	THE SATISFACTORY PLETION OF THE AS DESCRIBED WORK			FUEL OIL TANK.	CUTTING AND REMOVAL OF ABOVE GROUND	CLEANING, WASTE DISPOSAL	COMMENTS			JOB LOCATION	FRANKLIN, IN 46131	ARVIN EXHAUST NORTH AMERICAN	JERRY KEAN	WORK ORDERED BY	323708 317-736-7111	P.O. # PHONE #
CUSTOMER COPY	I HEREBY ACKNOWLEDGE SIGNATURE THE SATISFACTORY COM- PLETION OF THE ABOVE DESCRIBED WORK		TRANSPORTATION CHARGE:		LABOR:				DRUMS:			BULK VOLUME:	LABORATORY ANALYSIS	WASTE DISPOSAL	TRANSPORTATION	TYPE OF SERVICE
	D.	TOTAL AMOUNT										CHARGES	<u> </u>	TRUCK #	DATE > 1017	STARTING
	DATE O	\$8,390.00	# \$	)) \$9		 ₩	\$	 <del>(S</del>		 	# <del>69</del>		OUT	TIME	ž	TIME
	DATE COMPLETED												□ [ <sub>R</sub>	] AM	] [ <u>}</u>	AM

GENERATORS WASTE PROFILE AND REQUEST FOR SPECIAL WASTE VERIFICATION NOTICE
(To be completed by generator and submitted to disposal facility prior to initial disposal of each regulated special waste)
(SEE INSTRUCTION BEFORE BEGINNING)

THIS VERIFICA CHANGE.	ATION NOTICE IS A F	ESULT OF A SI	SNIFICANT RAW MATER Insult 329 IAC 10-8.1-7(c))	BIAL CHANGE OR A PROCESS
CATEGORY OF	I MAOTE			
(required by 329 L	AC 10-8 1-7(bye)	A NOTE: If C	ategory A, waste must be cer	tified by IDEM
,	(S 10-0.1-7(b)(6))	B VERIFICAT	TON/PROFILE NO. 541	404
GENERATOR	Name: ARVIN	EXHAUST	Systems - Fran	aklin Plant
	Mailing Address: /CC	21 North	HURRICANE :	Street
	City: FRANKLIN	State:	. / .	Phone No. 3/7-736-7///
(this information Is required by	Generation Location; Street Address:	SAME		
329 IAC 10-8,1-7(a))	EPA Identification Number	per FND O	06 414 782	State: Zip;
DISPOSAL FACILITY	Name of Disposal Facili	y Twin Bri	dgES	Opp No. 32-2
INFORMATION	Location of Disposal Fac	cility DANVIlle	, IN	Upp No
WASTE NAME	DIESE   FUEL	Slubar		
AMOUNT OF WAS	TE Enter total est	Imated annual amo	unt of waster	
DESCRIPTION OF	One-time only PROCESS AND RAW M	disposal: 💢	YES DNO	her original
CICHNOCT D+	Above grand	Diesel Fa	JEL TANK, which	
SPECIAL	,	is needed, please t	use back side or additional sh	ect of paper)
REQUIREMENTS	Is waste subject Check all that a	at to special handling	g requirements of 329 IAC 10	-8.1-12? □YES XNO
	□ Generates fuoi	tive dust	(200 140 10 1	•
	··~ or capable	ULUERING DESE	/200140 40 4	
			(329 IAC 10-8.1-12(e) (329 IAC 10-8.1-12(g)) (329 IAC 10-8.1.12(h))	·· · · · · ·
IF CHECKED	Hazardous was	te that was delicted	form rogulations (one to	10.04.45%
PLEASE PROVIDE DOCUMENTATION	Assigned by co	mmissioner as Cate	gory B waste (329 IAC 10	10-6.1-12(I)) LR 1-7(b) (7)
	□ Waste that has	been rendered non	TIGESTUDES. NOTE: 150, W	l-8.1-7(b) (7)) aste is considered Category A e certified by IDEM,
ENCLOSURES	Documentation	used to make the w	(anto determina)	900 (AA AA E. )
				y 329 IAC 10-7.1.
	- Sanip	IIII and Analysis P	ian .	
	Analy	lical <del>re</del> sults	y Control documentation	
CERTIFICATION TI	his waste described in the	ne documentarios	2000-201-1-1-1-1-1	
de	Fined in 329 IAC 10-2-1	79. This waste is a	eccompanying this request for	or verification is a special waste as scribed in 40 CFR 261, nor is it any
UL	ner type of unauthorized	wasta If applicat	יים אולים	SUIDED IN 40 CFR 261, nor is It any
at.	ly changes occur in th	a charmotari Le II.	TO CONTRACT OF THE PARTY OF THE	FIX 40 1.4U(C) Of equivalent rules 15
✓ N(	anagement prior to provi	ding the weets to H	Control and Contention Str	DFR 261.20(c) or equivalent rules. If all notify the Contractor or Waste agement. The information submitted
	to the best of my knowle	dge, true, accurate	and complete.	igement. The information submitted
X W W	1 DAN	Douchen	ENVIR Come	4/2/1000
Generator Signature Precautions, Condition	(type o	r print name)	ENVIL COOKE,	7/2//1717 /Dato/
	*			
Special Wasta Decision	200			
Technical Manager Sig		oved Die:	approved	
			Date	<del></del>
Landfill Representativ	e (Optional)		Date	

4:42 FAX 3177452 4/21/1999

Profile/Verification Number: 541404

RE: Sampling Plan for (Gen. Name) ARVIN EXHAUST - FRANKLIN PLANT

The waste (waste name) Diesel Fiel Slidge from (generator name) Anvin Exhaust located at (address)/od Humicane Street was sampled by taking (# of) 3 scoops using a disposable scoop to fill a Zez sized glass container with a Teflon lined lid. These samples were taken from the following locations (describe horizontal and vertical location if in a pile or box)

First of Munical of Tank - Circles Deep - 12 inches inside Tank.

This waste was generated over (provide approximate time period) 2 days and is representative of the waste produced. This waste is currently stored in a (describe type and size of container) Tank

This representative sample was collected on (date) April 1999 by (sampler) Murithual Mones and given to (person or lab) Environmental Service Group for analysis of the following parameters (describe all test parameters) TCLP Benzene, Flash Point, Paint Filter

### CERTIFICATE OF ANALYSIS

Liquid Waste Removal P.O. Box 795 Greenwood, Indiana 46142

Attn: Gary Bush Invoice Number:

Order #: 99-04-480 Date: 04/19/99 11:03

Work ID: 99-05 A.E.F.P. Sludge Sample

Date Received: 04/15/99
Date Completed: 04/16/99
Client Code: LIQUID\_WASTE

### SAMPLE IDENTIFICATION

Sample Sample

Number Description
01 99-05 Tank-A.S.T.

Sample
Number

Sample

Description

This report may not be reproduced except in full, without the written approval of the laboratory. All results relate only

to the items tested.

This report contains a total number of pages:

Certified By



TEST RESULTS BY SAMPLE

Sample: 01AR 99-05 Tank-A.S.T.

Collected: 04/14/99 Category: SLUDGE

Test Description	Result	<u>Limit</u>	<u>Units</u>	Analyzed	By
Flashpoint By PMCC	>160	73	degrees F	04/16/99	BR
Paint Filter Test	FAIL			04/16/99	BR
TCLP Benzene	80.00	25	ug/L	04/16/99	RCB
TCLP ZHE Prep for VOCs	04/15/99				JLM

## ESC <u>aboratories</u>

5933 West 71<sup>st</sup> Street \* Indianapolis, IN 46278 Phone (317) 290-1471 \* Fax (317) 290-1670

# CHAIN OF CUSTODY RECORD

Client Name:	RSC Work Order #.		
WASCK	OShhobb		
Project Name:	7 P		
Sampler(s) Signature		Number	
E	STATION LOCATION ID	ol Containers	Comments C = Cool 4°
1 7/1/88 80 ×	Tank-AS.T.		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
	, J.		
Relinquished By: Date / Time	Received By: Da	Date / Time	Additional Information:
Market In History	JUN 31/2	15/22 200	Turn Around Time: Normal Rush Report Due:
Rélinquished By: / Date / Time	Reveived By: Da	Date / Time	Are samples suspected to be: Flammable Corrosive Toxic
Relinquished By: Date / Time	Received By: Da	Date / Time	Were samples received intact and properly preserved? Yes No
			Temp. Blank°C
kmg\newcoc\xls			

### QA DATA REPORTING FORMS

### **Cover Letter**

Client:

Liquid Waste

**ESG Lab Number:** 

9904480

Analysis:

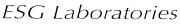
Ignitability (Method 1010)

**QA Narrative:** 

The Level III QC Data for the Ignitability test only includes a Check Standard. The QC data was found to be within acceptable control limits.

Submitted By:

Karen Groleau Technical Director



A Member of THE ASTBURY GROUP

### INITIAL AND CONTINUING CALIBRATION VERIFICATION

WORK ORDER: 9904480

ANALYTE	Date of Analysis	True	ICV Found	%Rec	Found	CCV %Rec	Found	%Rec
Ignitability	4/16/99	81-90	88	Pass				
	4							
	***************************************							
}								
oncentration un	ita: ma/l	۹>	N ()					

Concentration units: mg/L (ppm) TOX (ng)

Control Limits: Metals - 90-110% \* Pre-distilled or Digested ICV's and CCV's Control Limit: 80-120%

NA = Not Applicable \*\* Outside the Control Limits

Definition: ICV's and CCV's are calibration standards that verifies that the initial calibration curve is linear and accurate. No data can be reported if the ICV or CCV is outside the specified control limits.

Ignitability Check Standard is Xylene, and has a Flash Point Range between 81-90 F. f:\kg\QAcover\rev2

### QA DATA REPORTING FORMS

### Cover Page

Client:

Liquid Waste

**ESG** Lab Number:

9904480

Analysis:

TCLP Benzene (Method 1311 and 8260)

### QA/QC Narrative:

The Level III QA/QC package includes summary QC data for Initial Calibrations, Calibrations Standards, GC/MS Tune Report, Method Blanks, Matrix Spike and Duplicate Data, Surrogate and Internal Standard Report. All QC data was found to be within acceptable control limits.

Submitted By:

Karen Groleau Technical Director





### Generated for Environmental Service Group, Inc.

		Initial Calibration Report		Last u	odate:	Mon Feb	22 15:02	:10 199	9	- -	
Data File	e:	C:\DATA\022299\	03010	01.D		Min avo	RRF for S	PCC (#) =	=		
Operator		0.10,11,110222001	Ray Bisc			avg	,,,,,			10	
Date Ac			22-Feb 1999			Chloromethane 0.					
Method	•	•	FULL_VOC.M			1,1-Dichloroethan Chlorobenzene 0.3					
Sample Name:			40 ppb VOC Check					30			
•		Information:	Daily Cal					Bromofo		roothone C	20
Bottle N			5	ibiation C	INECK			1,1,2,2-	retrachio	roethane C	7.30
		of Compounds Screened:				May BCD	\ f== CCC	(*) 2 <i>(</i>	0.00/-/15	00/1	
TOTAL ING	mber	or Compounds Screened:	65			Max KSD	) for CCC	(*) = 30	7.0% (15	.0%)	
Level1		0301001.D	Level4			0901007	7.D				
Level2		0601004.D	Level5			1101009	D.D				
Level3	L06	0701005.D	Level6	L200		1201010	).D				
Results:			RF1	RF2	RF3	RF4	RF5	RF6	AVG	RSD	Warn-
	Nu	Compound Name	L005	L030	L060	L100	L150	L200	RF		ing
											]
	1	Dichlorodifluoromethan	0.179	0.333	<del>2</del> م (0.245	0.318	90.182)	-1.000	0.043	0.0%	29.0% QUAD
SP ok	2	Chloromethane	0.267	0.260	0.228	0.229	0.195		0.231	12.5%	
CC ok	3	Vinyl chloride	0.306	0.314	0.305	0.284	0.272		0.292	6.4%	
	4	Bromomethane	0.314	0.321	0.296	0.313	0.289		0.303	5.1%	
	5	Chloroethane	0.128	0.164	0.130	0.144	0.134		0.139	9.8%	
	6	Trichlorofluoromethane	0.811	0.679	0.656	0.643	0.571		0.652	14.2%	
	7	Ethyl ether	0.236	0.183	0.179	0.189	0.196		0.199	10.7%	
	8	Acrolein	10.036	0.030	0.031	0.030	0.031		0.031	8.4%	
CC ok	9	1,1-Dichloroethene	0.504	0.480	0.463	0.460	0.429		0.459	6.9%	
	10	1,1,2-Trichloro-1,2,2-tri	0.748	0.627	0.613	0.615	0.598		0.632	9.3%	
	11	lodomethane	0.495	0.595	0.626	0.656	0.607	0.594	0.595	9.1%	
	12	Carbon disulfide	0.842	0.768	0.756	0.792	0.722	0.706	0.764	6.4%	
	13	Acetone	0.076	0.079	0.066	0.067	0.059	0.061	0.068	11.9%	
а	14	Allyl Chloride	-1.000	0.000	0.000	0.000	0.000	0.000	####	-100.0%	
	15	Methylene chloride	0.446	0.370	0.366	0.410	0.378	0.364	0.389	8.4%	
	16	trans-1,2-Dichloroethen	0.444	0.407	0.395	0.427	0.392	0.388	0.409	5.4%	
	17	Acrylonitrile	0.064	0.058	0.061	0.070	0.064	0.064	0.064	6.3%	
	18	Methyl-tert-butyl ether	0.851	0.741	0.726	0.835	0.786	0.784	0.787	6.2%	
SPok	19	1,1-Dichloroethane	0.703	0.656	0.640	0.676	0.607	0.590	0.645	6.6%	
а	20	Chloroprene	-1.000	0.000	0.000	0.000	0.000		####	-100.0%	
	21	Vinyl acetate	0.788	<b>0</b> .741	0.722	0.816	0.770	0.742	0.763	4.6%	
	22	cis-1,2-Dichloroethene	0.509	0.502	0.503	0.513	0.468	0.459	0.492	4.6%	
	23	2-Butanone	0.027	0.031	0.031	0.033	0.030		0.030	6.5%	
	24	Ethyl acetate	0.035	0.038	0.034	0.039	0.037	0.036	0.036	4.7%	
а	25	Methacrylonitrile	-1.000	0.000	.0.000	0.000	0.000	0.000	####	-100.0%	
CC ok	26	Chloroform	0.832	0.823	0.814	0.840	0.775	0.763	0.808	3.9%	
	27	1,1,1-Trichloroethane	0.664	0.642	0.648	0.678	0.662	0.665	0.660	2.0%	
	28	Dibromofluoromethane	0.703	0.686	0.702	0.706	0.650		0.681	4.3%	
	29	Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000		1.000	0.0%	
	30	Carbon Tetrachloride	0.628	0.629	0.646	0.678	0.665		0.653	3.3%	
	31	Benzene 📆	0.890	0.835	0.843	0.841	0.806		0.837	3.7%	
	32	1,2-Dichloroethane	0.447	0.434	0.444	0.451	0.431	0.434	0.440	1.9%	

	File:	C:\DATA\022299\	0222V	0C3.D						
	Num	Compound Name	RF1	RF2	RF3	RF4	RF5	RF6	AVG	RSD
	F		L005	L030	L060	L100	L150	L200	RF	
		T								
	33	1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000		1.000	
	34	Trichloroethene	0.383	0.384	0.387	0.389	0.375		0.383	
CC ok	35	1,2-Dichloropropane	0.364	0.347	0.349	0.349	0.334		0.346	3.3%
	36	Dibromomethane	0.362	0.336	0.335	0.342	0.315		0.334	5.4%
а	37	Methyl methacrylate	-1.000	0.000	0.000	0.000	0.000		####	-100.0%
	38	Bromodichloromethane	0.750	0.747	0.758	0.770	0.746		0.753	1.3%
	39	2-Nitropropane	0.102	0.097	0.105	0.116	0.111		0.107	6.4%
	40	2-Chloroethyl vinyl ethe	0.198	0.197	0.203	0.228	0.208		0.208	5.7%
	41	cis-1,3-Dichloropropene	0.584	0.562	0.563	0.572	0.544		0.562	2.8%
	42	4-Methyl-2-Pentanone	0.316	0.299	0.286	0.307	0.281		0.296	4.7%
	43	Toluene-d8	0.958	0.902	0.930	0.914	0.892		0.914	2.9%
CC ok	44	Toluene	0.931	0.907	0.921	0.915	0.872		0.904	2.6%
	45	trans-1,3-Dichloroprope	0.527	0.527	0.529	0.546	0.520	0.525	0.529	1.7%
	46	1,1,2-Trichloroethane	0.322	0.327	0.324	0.331	0.318	0.313	0.322	2.0%
	47	Ethyl methacrylate	0.493	0.479	0.479	0.511	0.474	0.474	0.485	3.0%
	48	Tetrachloroethene	0.553	0.477	0.480	0.477	0.464		0.490	6.5%
	49	2-Hexanone	0.201	0.210	0.218	0.231	0.213	0.219	0.215	4.7%
	50	Dibromochloromethane	0.696	0.709	0.716	0.740	0.716	0.730	0.718	2.2%
а	51	1,2-Dibromoethane	-1.000	0.000	0.000	0.000	0.000	0.000	####	-100.0%
	52	Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.0%
SP ok	53	Chlorobenzene	0.846	0.839	0.852	0.861	0.838	0.860	0.849	1.2%
а	54	1,1,1,2-Tetrachloroetha	-1.000	0.000	0.000	0.000	0.000	0.000	####	-100.0%
CC ok	55	Ethylbenzene	1.408	1.396	1.404	1.393	1.309	1.342	1.375	2.9%
	56	p,m-Xylenes	0.518	0.468	0.467	0.460	0.410	0.405	0.455	9.2%
	57	o-Xylene	0.507	0.462	0.470	0.470	0.409	0.400	0.453	9.0%
	58	Styrene	0.880	0.793	0.814	0.808	0.716	0.707	0.786	8.3%
SP ok	59	Bromoform	0.453	0.476	0.488	0.522	0.499	0.509	0.491	5.0%
	60	4-Bromofluorobenzene	0.850	0.809	0.848	0.844	0.807	0.812	0.828	2.5%
	61	1,2,3-Trichloropropane	0.455	0.476	0.472	0.499	0.466	0.470	0.473	3.1%
SP ok	62	1,1,2,2-Tetrachloroetha	0.653	0.661	0.654	0.678	0.629	0.631	0.651	2.9%
а	63	trans-1,4-dichloro-2-But	-1.000	0.000	0.000	0.000	0.000	0.000	####	-100.0%
а	64	Pentachloroethane	-1.000	0.000	0.000	0.000	0.000	0.000	####	-100.0%
	65	1,3-Dichlorobenzene	0.926	0.869	0.861	0.813	0.658	0.646	0.796	14.7%
	66	1,4-Dichlorobenzene	0.884	0.839	0.833	0.786	0.622	0.623	0.764	15.0%
	67	1,2-Dichlorobenzene	0.842	0.804	0.786	0.749	0.602	0.590	0.729	14.7%
а	68	1,2-Dibromo-3-chloropr	-1.000	0.000	0.000	0.000	0.000	0.000	####	-100.0%
а	69	1,2,4-Trichlorobenzene	-1.000	0.000	0.000	0.000	0.000	0.000	####	-100.0%

### Calibration is VALID.

System Performance Compounds: OK. 5 out of 5 OK. Calibration Check Compounds: 6 out of 6

a Appendix IX extra compounds
\*\* Compounds NOT Calibrated

### Daily Calibration Check Report

40 ug/L

Data File:

C:\DATA\041699\ 0416VOC.D

Operator:

Date Acquired:

Last Calibration Update:

Method File:

Sample Name:

Miscellaneous Information:

Bottle Number:

Total Number of Compounds Screened:

Ray Bische

16 Apr 99 11:05 am Fri Apr 16 11:37:38 1999

FULL\_VOC.M

40 ppb VOC Check Daily Calibration Check

> 2 69

Min avg RRF for SPCC (#) =

Chloromethane 0.10 1,1-Dichloroethane 0.10 Chlorobenzene 0.30 Bromoform 0.10

1,1,2,2-Tetrachloroethane 0.30

Max RSD for CCC (\*) = 30.0% (15.0%)

Results:

Results:			Calib	Avg	Calc	Calc	RRF	20%	
	Num	Compound Name	Amt	RRF	RRF	Amt	RPD	Limit	hck:
	1	Dichlorodifluoromethane	40	0.4532	0.0000	0.00	200%	***	
SP ok	2	Chloromethane	40	0.2306	0.2290	39.72	1%		
CC ok	3	Vinyl chloride	40	0.2920	0.2628	36.00	11%		1 1
	4	Bromomethane	40	0.3028	0.2495	32.95	19%		
	5	Chloroethane	40	0.1385	0.1156	33.37	18%		
	6	Trichlorofluoromethane	40	0.6519	0.6186	37.95	5%		1 1
	7	Ethyl ether	40	0.1989	0.1901	38.24	5%		1 1
	8	Acrolein	40	0.0309	0.0000	0.20	200%	* * *	1 1
CC ok	9	1,1-Dichloroethene	40	0.4592	0.4183	36.44	9%		
	10	1,1,2-Trichloro-1,2,2-trifluoro	40	0.6317	0.5974	44.40	6%		1 1
	11	lodomethane	40	0.5954	0.5170	34.73	14%		
	12	Carbon disulfide	40	0.7644	0.6730	35.22	13%		1 1
	13	Acetone	40	0.0680	0.0782	46.00	-14%		1 1
а	14	Allyl Chloride	40	#######	0.0130	0.00	200%	* * *	
	15	Methylene chloride	40	0.3890	0.3673	37.77	6%		
	16	trans-1,2-Dichloroethene	40	0.4088	0.3425	33.51	18%		
	17	Acrylonitrile	40	0.0636	0.0586	36.87	8%		
	18	Methyl-tert-butyl ether	40	0.7872	0.6631	33.70	17%		1 1
SP ok	19	1,1-Dichloroethane	40	0.6454	0.5613	34.79	14%		
а	20	Chloroprene	40	#######	0.0588	0.00	200%	* * *	
	21	Vinyl acetate	40	0.7631	0.6812	35.70	11%		
	22	cis-1,2-Dichloroethene	40	0.4925	0.4228	34.34	15%		
	23	2-Butanone	40	0.0304	0.0277	36.54	9%		
	24	Ethyl acetate	40	0.0365	0.0321	41.29	13%		
а	25	Methacrylonitrile	40	#######	0.0023	0.00	200%	***	
CC ok	26	Chloroform	40	0.8077	0.7068	35.00	13%		
	27	1,1,1-Trichloroethane	40	0.6599	0.5630	34.12	16%		
	28	Dibromofluoromethane	50	0.6810	0.6817	50.05	0%	SURR	
	29	Pentafluorobenzene	40	1.0000	1.0000	40.00	0%	ISTD	*
	30	Carbon Tetrachloride	40	0.6528	0.5427	33.25	18%		
	31	Benzene	40	0.8371	0.7508	35.87	11%		
	32	1,2-Dichloroethane	40	0.4401	0.3406	30.96	25%	***	
	33	1,4-Difluorobenzene	40	1.0000	1.0000	40.00	0%	ISTD	
	34	Trichloroethene	40	0.3830	0.3481	36.35	10%		
CC ok	35	1,2-Dichloropropane	40	0.3460	0.2902	33.54	18%		
	36	Dibromomethane	40	0.3340	0.2804	33.57	17%		
а	37	Methyl methacrylate	40	#######	0.0000	0.00	200%	***	
ĺ	38	Bromodichloromethane	40	0.7530	0.6402	34.01	16%		
[	39	2-Nitropropane	40	0.1075	0.0776	27.44	32%	***	
	40	2-Chloroethyl vinyl ether	40	0.2081	0.1849	35.53	12%		
l	41	cis-1,3-Dichloropropene	40	0.5616	0.5040	35.90	11%		
	42	4-Methyl-2-Pentanone	40	0.2956	0.2379	32.20	22%	***	*
ĺ	43	Toļuene-d8	50	0.9141	0.8418	46.05	8%	SURR	
CC ok	44	Toluene	40	0.9042	0.7766	34.36	15%		
	45	trans-1,3-Dichloropropene	40	0.5290	0.4498	34.01	16%		

File:	C:\DATA\041699\		OC.D					
Num	Compound Name	Calib Amt	Avg RRF	Calc RRF	Calc Amt	RPD	Type:	chck:
								1 1
	4							
48		40	0.4898	0.4781	39.04			
49	2-Hexanone	40	0.2152	0.1889	35.11			
50	Dibromochloromethane	40	0.7178	0.6296	35.08			
51	1,2-Dibromoethane	40	#######	0.0000	0.00		***	
52	Chlorobenzene-d5	40	1.0000	1.0000	40.00	0%	ISTD	
53	Chlorobenzene	40	0.8492	0.7788	36.68	9%		
54	1,1,1,2-Tetrachloroethane	40	#######	0.0000	0.00	200%	***	1 1
55	Ethylbenzene	40	1.3754	1.2187	35.44	12%		
56	p,m-Xylenes	80	0.4548	0.4503	79.21	1%		
57	o-Xylene	40	0.4529	0.4422	39.05	2%		
58	Styrene	40	0.7863	0.7745	39.40	2%		1 1
59	Bromoform	40	0.4912	0.4271	34.78	14%		
60	4-Bromofluorobenzene	50	0.8282	0.8170	49.32	1%	SURR	1 1
61	1,2,3-Trichloropropane	40	0.4730	0.4378	37.03	8%		
62	1,1,2,2-Tetrachloroethane	40	0.6510	0.6280	38.58	4%		1 1
63	trans-1,4-dichloro-2-Butene	40	#######	0.0000	0.00	200%	***	
64	Pentachloroethane	40	#######	0.0000	0.00	200%	***	
65	1,3-Dichlorobenzene	40	0.7955	0.7809	39.27	2%		
66	1,4-Dichlorobenzene	40	0.7645	0.7696	40.27	-1%		
67	1,2-Dichlorobenzene	40	0.7288	0.7186	39.44	1%		
68	1,2-Dibromo-3-chloropropane	40	#######	0.0000	0.00	200%	***	
69	1,2,4-Trichlorobenzene	40	#######	0.0000	0.00	200%	* * *	
	Num  46 47 48 49 50 51 52 53 54 55 66 57 58 59 60 61 62 63 64 65 66 67 68	Num Compound Name  46 1,1,2-Trichloroethane 47 Ethyl methacrylate 48 Tetrachloroethene 49 2-Hexanone 50 Dibromochloromethane 51 1,2-Dibromoethane 52 Chlorobenzene-d5 53 Chlorobenzene 54 1,1,1,2-Tetrachloroethane 55 Ethylbenzene 56 p,m-Xylenes 57 o-Xylene 58 Styrene 59 Bromoform 60 4-Bromofluorobenzene 61 1,2,3-Trichloropropane 62 1,1,2,2-Tetrachloroethane 63 trans-1,4-dichloro-2-Butene 64 Pentachloroethane 65 1,3-Dichlorobenzene 66 1,4-Dichlorobenzene 67 1,2-Dichlorobenzene	Num         Compound Name         Calib Amt           46         1,1,2-Trichloroethane         40           47         Ethyl methacrylate         40           48         Tetrachloroethene         40           49         2-Hexanone         40           50         Dibromochloromethane         40           51         1,2-Dibromoethane         40           52         Chlorobenzene-d5         40           53         Chlorobenzene         40           54         1,1,1,2-Tetrachloroethane         40           55         Ethylbenzene         40           56         p,m-Xylenes         80           57         o-Xylene         40           58         Styrene         40           59         Bromoform         40           60         4-Bromofluorobenzene         50           61         1,2,3-Trichloropropane         40           62         1,1,2,2-Tetrachloroethane         40           63         trans-1,4-dichloro-2-Butene         40           64         Pentachloroethane         40           65         1,3-Dichlorobenzene         40           66         1,4-Dichlorobenzene	Num         Compound Name         Calib Ant         Avg RRF           46         1,1,2-Trichloroethane         40         0.3224           47         Ethyl methacrylate         40         0.4851           48         Tetrachloroethene         40         0.4898           49         2-Hexanone         40         0.2152           50         Dibromochloromethane         40         0.7178           51         1,2-Dibromoethane         40         #######           52         Chlorobenzene-d5         40         1.0000           53         Chlorobenzene         40         0.8492           54         1,1,1,2-Tetrachloroethane         40         #######           55         Ethylbenzene         40         1.3754           56         p,m-Xylenes         80         0.4548           57         o-Xylene         40         0.4529           58         Styrene         40         0.7863           59         Bromoform         40         0.4912           60         4-Bromofluorobenzene         50         0.8282           61         1,2,3-Trichloropropane         40         0.4730           62         1,1,2,2-Tetrachl	Num         Compound Name         Amt         Arg         Calc           46         1,1,2-Trichloroethane         40         0.3224         0.2822           47         Ethyl methacrylate         40         0.4851         0.4428           48         Tetrachloroethene         40         0.4898         0.4781           49         2-Hexanone         40         0.2152         0.1889           50         Dibromochloromethane         40         0.7178         0.6296           51         1,2-Dibromoethane         40         0.7178         0.6296           51         1,2-Dibromoethane         40         1.0000         1.0000           52         Chlorobenzene-d5         40         1.0000         1.0000           53         Chlorobenzene         40         0.8492         0.7788           54         1,1,1,2-Tetrachloroethane         40         ########         0.0000           55         Ethylbenzene         40         1.3754         1.2187           56         p,m-Xylenes         80         0.4548         0.4503           57         o-Xylene         40         0.7863         0.7745           59         Bromoform         40	Num         Compound Name         Calib Amt         Avg RRF         Calc RRF         Calc Amt           46         1,1,2-Trichloroethane         40         0.3224         0.2822         35.01           47         Ethyl methacrylate         40         0.4851         0.4428         36.52           48         Tetrachloroethene         40         0.4898         0.4781         39.04           49         2-Hexanone         40         0.2152         0.1889         35.11           50         Dibromochloromethane         40         0.7178         0.6296         35.08           51         1,2-Dibromoethane         40         1.0000         1.0000         0.00           52         Chlorobenzene-d5         40         1.0000         1.0000         40.00           53         Chlorobenzene         40         0.8492         0.7788         36.68           54         1,1,2-Tetrachloroethane         40         ########         0.0000         0.00           55         Ethylbenzene         40         1.3754         1.2187         35.44           56         p,m-Xylenes         80         0.4548         0.4503         79.21           57         o-Xylene	Num         Compound Name         Calib Amt         Avg RRF         Calc Amt         RPD           46         1,1,2-Trichloroethane         40         0.3224         0.2822         35.01         13%           47         Ethyl methacrylate         40         0.4851         0.4428         36.52         9%           48         Tetrachloroethene         40         0.4898         0.4781         39.04         2%           49         2-Hexanone         40         0.2152         0.1889         35.11         13%           50         Dibromochloromethane         40         0.2152         0.1889         35.11         13%           50         Dibromochloromethane         40         0.7178         0.6296         35.08         13%           51         1,2-Dibromoethane         40         40.7178         0.6296         35.08         13%           51         1,2-Dibromoethane         40         #########         0.0000         0.00         200%           52         Chlorobenzene-d5         40         1.0000         1.0000         40.00         0%           53         Chlorobenzene         40         0.8492         0.7788         36.68         9%	Num Compound Name

Calibration check is OK.

System Performance Check:

5 out of 5 ok.

Calibration Check:

6 out of 6 ok.

### **SURR SUMMARY REPORT:**

50 ug/L

FILE:

C:\DAT 0416VOC.D

	Compound Name:		R.T.:	Area:	Avg Calib	Calc	%	%			
					Area	Result	Rec	Area			
28	Dibromofluoromethane		4.01	4435600	3777087	50.05	100%	117%	ok	86% -	118%
43	Toluene-d8	47	8.58	6645467	6010945	46.05	92%	111%	ok	88% -	110%
60	4-Bromofluorobenzene		14.58	5317000	4661801	49.32	99%	114%	ok	86% -	115%

### ISTD SUMMARY REPORT:

40 ug/L

FILE:

C:\DATA\0 0416VOC.

	Compound Name:	R.T.:	Area:	Avg Calib	Calc	%	%
	ž			Area	Result	Rec	Area
29	Pentafluorobenzene	4.20	5205111	4378455	40.00	100%	119%
33	1,4-Difluorobenzene	5.51	6315374	5226700	40.00	100%	121%
52	Chlorobenzene-d5	11.76	5206203	4483994	40.00	100%	116%

a Appendix IX extra compound

<sup>\* \*</sup> Compounds NOT Calibrated

### Environmental Service Group, Inc.

### Purgeable Volatile Organics Summary Report

Data File: Operator:

Date Acquired:
Method File:
Sample Name:

Miscellaneous Information:

Bottle Number:

Total Number of Compounds Screened:

C:\DATA\041699\

0416VOC.D

Ray Bische

16 Apr 99 11:05 am FULL\_VOC.M 40 ppb VOC Check

Daily Calibration Check 2

69

### Results:

	Nu	Compound Name	R.T.	Area	Amount	Units	Type:	ND	BQL	σr
		,								
	1	Dichlorodifluoromethane	0.00	0	0.00	ug/L	_			
	2	Chloromethane	1.06	1191977	39.72	ug/L	J		•	*
	3	Vinyl chloride	1.11	1368037	36.00	ug/L	_		*	•
	4	Bromomethane	1.25	1298570	32.95	ug/L	4		•	•
	5	Chloroethane	1.30	601564	33.37	ug/L	_		•	•
	6	Trichlorofluoromethane	1.43	3219828	37.95	ug/L	4		•	•
	7	Ethyl ether	1.63	989684	38.24	ug/L	J		•	•
	8	Acrolein	0.00	0	0.00	ug/L	4	•		ļ
	9	1,1-Dichloroethene	1.73	2177274	36.44	ug/L	4		*	•
		1,1,2-Trichloro-1,2,2-trifluoroethane	1.74	3109707	37.83	ug/L	_		•	•
		lodomethane	1.81	2690850	34.73	ug/L	1 1		*	*
1		Carbon disulfide	1.84	3503245	35.22	ug/L	]		*	•
- 1	13	Acetone	1.81	406804	46.00	ug/L	-		*	+
a		Allyl Chloride	2.07	67546	0.00	ug/L	_	*		
		Methylene chloride	2.07	1911767	37.77	ug/L	1 1		•	*
ļ		trans-1,2-Dichloroethene	2.28	1782574	33.51	ug/L	1 1		•	*
- 1		Acrylonitrile	2.28	304981	36.87	ug/L	1 1		•	•
		Methyl-tert-butyl ether	2.34	3451679	33.70	ug/L	] [		•	•
1		1,1-Dichloroethane	2.65	2921878	34.79	ug/L	]		•	*
а		Chloroprene	2.28	306101	0.00	ug/L	]	•		
I		Vinyl acetate	2.79	3545548	35.70	ug/L	] [		•	*
		cis-1,2-Dichloroethene	3.29	2200931	34.34	ug/L	J		•	•
		2-Butanone	3.42	144427	36.54	ug/L	] [		•	*
		Ethyl acetate	3.54	167103	35.19	ug/L	] [		•	*
а		Methacrylonitrile	3.53	11829	0.00	ug/L	] [	•		
	26	Chloroform	3.77	3679079	35.00	ug/L	] [		*	•
L	27	1,1,1-Trichloroethane	3.94	2930482	34.12	ug/L	] [		*	•
L	28	Dibromofluoromethane 🐟	4.01	4435600	50.05	ug/L	SURR	•		-
	29	Pentafluorobenzene	4.20	5205111	40.00	ug/L		-	•	-
L	30	Carbon Tetrachloride	4.20	2824874	33.25	ug/L	] [		•	*
	31	Benzene	4.56	4741506	35.87	ug/L	] [		•	•
L		1,2-Dichloroethane	4.63	2151018	30.96	ug/L	] [		•	*
L		1,4-Difluorobenzene	5.51	6315374	40.00	ug/L	ISTD [	•	•	•
	34	Trichloroethene	5.94	2198340	36.35	ug/L	] [		*	*
	35	1,2-Dichloropropane	6.36	1832419	33.54	ug/L	] [		•	•
		Dibromomethane	6.61	1770718	33.57	ug/L	] [		*	•
а [		Methyl methacrylate	0.00	0	0.00	ug/L		٠		
	38	Bromodichloromethane	7.08	4043212	34.01	ug/L	] [		٠	*
		2-Nitropropane 🦈 ्	7.60	490031	28.88	ug/L	] [		•	*
	40	2-Chloroethyl vinyl ether	7.95	1167411	35.53	ug/L			•	•
		cis-1,3-Dichloropropene	8.08	3182640	35.90	ug/L	] [		•	٠
	42	4-Methyl-2-Pentanone	8.60	1502676	32.20	ug/L	] [		•	•
		Toluene-d8	8.58	6645467	46.05	ug/L	SURR	-	-	-

44	Toluene	8.73	4904696	34.36	ug/L			•	•
45	trans-1,3-Dichloropropene	9.41	2840506	34.01	ug/L	7		•	•
46	1,1,2-Trichloroethane	9.75	1782263	35.01	ug/L			•	•
47	Ethyl methacrylate	9.87	2305556	36.52	ug/L	7		•	•
48	Tetrachloroethene	9.90	2488990	39.04	ug/L			•	•
49	2-Hexanone	10.52	983375	35.11	ug/L			•	•
50	Dibromochloromethane	10.53	3277928	35.08	ug/L	]		•	•
51	1,2-Dibromoethane	0.00	0	0.00	ug/L		•		
52	Chlorobenzene-d5	11.76	5206203	40.00	ug/L	ISTD	•	-	-
53	Chlorobenzene	11.81	4054463	36.68	ug/L			•	•
54	1,1,1,2-Tetrachloroethane	0.00	0	0.00	ug/L	]	•		
55	Ethylbenzene	12.21	6344683	35.44	ug/L			•	•
56	p,m-Xylenes	12.52	4688897	79.21	ug/L			•	•
57	o-Xylene	13.38	2301951	39.05	ug/L			•	•
58	Styrene	13.45	4032153	39.40	ug/L			•	•
59	Bromoform	13.74	2223449	34.78	ug/L			*	•
60	4-Bromofluorobenzene	14.58	5317000	49.32	ug/L	SURR		-	-
61	1,2,3-Trichloropropane	15.10	2279507	37.03	ug/L			•	
62	1,1,2,2-Tetrachloroethane	15.17	3269387	38.58	ug/L			•	•
63	trans-1,4-dichloro-2-Butene	0.00	0	0.00	ug/L		*		
64	Pentachloroethane	0.00	0	0.00	ug/L		٠		
65	1,3-Dichlorobenzene	17.08	4065651	39.27	ug/L	[		•	•
66	1,4-Dichlorobenzene	17.32	4006875	40.27	ug/L			*	•
67	1,2-Dichlorobenzene	18.14	3741144	39.44	ug/L			•	•
68	1,2-Dibromo-3-chloropropane	0.00	0	0.00	ug/L		٠		
69	1,2,4-Trichlorobenzene	0.00	0	0.00	ug/L	7 i	*		Ī

	SURR SUMMARY REPORT:		. 50	ug/L						
	FILE:	C:\DA	TA\041699\	0416VOC.D						
	Compound Name:	Area:	Avg Calib	Calculated	%	%				
			Area	Result	Rec	Area				
28	Dibromofluoromethane	4435600	3777087	50.05	100%	117%	ok	86%	-	118%
43	Toluene-d8	6645467	6010945	46.05	92%	111%	ok	88%	-	110%
60	4-Bromofluorobenzene	5317000	4661801	49.32	99%	114%	ok	86%	-	115%

	••	
ISTD SUMMARY REPORT:	40	ug/L

FILE:

### C:\DATA\041699\ 0416VOC.D

	Compound Name:	R.T.:	Area:	Avg Calib	Calculated	%	%
				Area	Result	Rec	Area
29	Pentafluorobenzene	4.20	5205111	4378455	40.00	100%	119%
	1,4-Difluorobenzene	5.51	6315374	5226700	40.00	100%	121%
52	Chlorobenzene-d5 -	11.76	5206203	4483994	40.00	100%	116%

a Appendix IX extra compounds
\*\* Compounds NOT Calibrated

File: C:\DATA\041699\0416VOC.D

Operator: Ray Bische

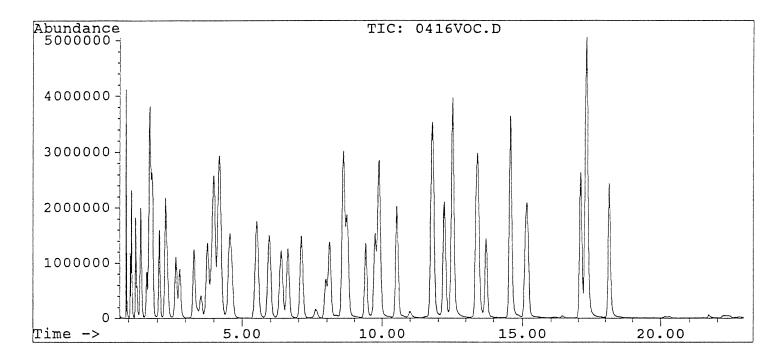
Date Acquired: 16 Apr 99 11:05 am

Method File: FULL VOC.M

Sample Name: 40 ppb VOC Check

Misc Info: Daily Calibration Check

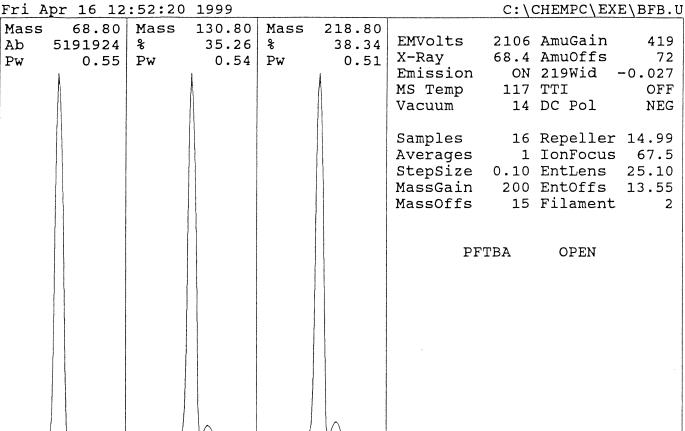
Vial Number : 2
Multiplier : 1

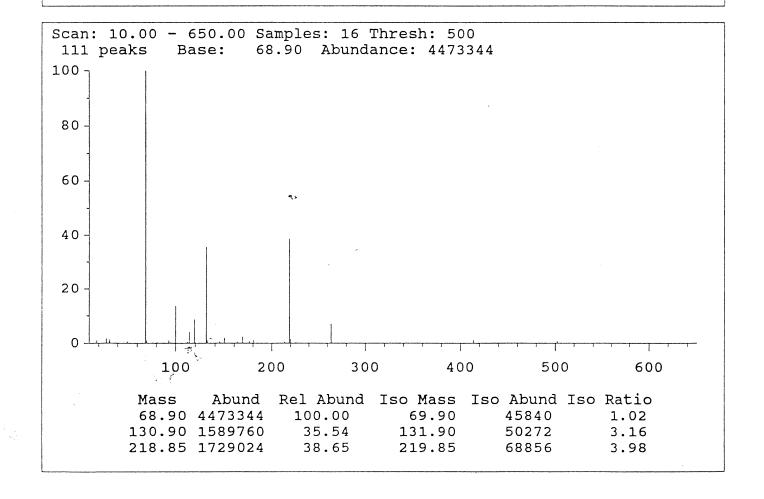


Number of compounds in database: 69

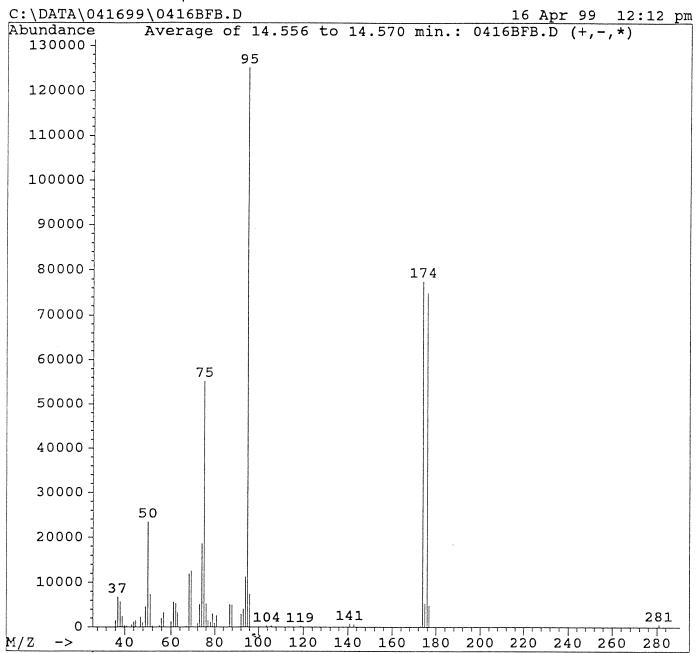
GC/MS Tune Data

RUS





Res



Peak Apex is scan: 1943

Average of 3 scans: 1942,1943,1944 minus background scan 1914

	Target Mass	Comparison Mass	Lower Limit,%	Upper Limit,%	Relative Abundance, %	Result     Pass/Fail
	50	95	15	40	18.7	PASS
1	75	95	30	60	44.1	PASS
	95	≢ <sub>\</sub> 95	100	100	100.0	PASS
1	96	95	5	9	5.9	PASS
	173	174	0	· 2	0.4	PASS
	174	95	50	100	61.9	PASS
	175	174	5	9	6.9	PASS
	176	174	95	101	96.6	PASS
	177	176	5	9	6.4	PASS

# **BLANK DATA**

### Environmental Service Group, Inc.

### Purgeable Volatile Organics Summary Report

Data File:

Operator: Date Acquired:

Method File:

Sample Name:

Miscellaneous Information:

Bottle Number:

Total Number of Compounds Screened:

C:\DATA\041699\

0416BLK.D

Ray Bische

16 Apr 99 1:11 pm

FULL\_VOC.M

Blank

Daily Quantitation Blank

69

### Results:

Nu	Compound Name	R.T.	Area	Amount	Units	Type:	ND	BQL	σL
	T								
1	Dichlorodifluoromethane	0.00	0	0.00	ug/L		•		
2	Chloromethane	1.09	24285	0.87	ug/L		•		
3	Vinyl chloride	0.00	0	0.00	ug/L		•		
4	Bromomethane	1.25	11272	0.31	ug/L		•		
5	Chloroethane	0.00	0	0.00	ug/L		٠		
6	Trichlorofluoromethane	1.73	110358	1.40	ug/L		•		
7	Ethyl ether	1.60	2818	0.12	ug/L	7	*		
	Acrolein	1.26	2736	0.73	ug/L	7	•		
9	1,1-Dichloroethene	1.70	2805	0.05	ug/L	7	٠		
10	1,1,2-Trichloro-1,2,2-trifluoroethane	1.73	110358	1.44 %	ug/L	7		• 7	
11	lodomethane	0.00	0	0.00	ug/L	7	•		
12	Carbon disulfide	1.80	4305	0.05	ug/L	7	•		
13	Acetone	1.78	100225	12.17 8	ug/L			• V	
14	Allyl Chloride	0.00	0	0.00	ug/L	7	•		
15	Methylene chloride	2.04	10227	0.22	ug/L	1	•		
16	trans-1,2-Dichloroethene	2.25	1625	0.03	ug/L		٠		
17	Acrylonitrile	0.00	0	0.00	ug/L		٠		
18	Methyl-tert-butyl ether	2.29	12843	0.13	ug/L	1	•		
19	1,1-Dichloroethane	0.00	0	0.00	ug/L	7	•		
20	Chloroprene	0.00	0	0.00	ug/L	7	•		
21	Vinyl acetate	2.82	100619	1.09	ug/L	1	•		
22	cis-1,2-Dichloroethene	0.00	0	0.00	ug/L	1	*		
23	2-Butanone	3.37	1154	0.31	ug/L	1	•		
24	Ethyl acetate	0.00	0	0.00	ug/L	1	•		
	Methacrylonitrile	0.00	0	0.00	ug/L	1	•		
	Chloroform	0.00	0	0.00	ug/L	1	•		
27	1,1,1-Trichloroethane	0.00	0	0.00	ug/L	1	•		
	Dibromofluoromethane	3.97	4239437	51.36	ug/L	SURR		-	-
29	Pentafluorobenzene	4.16	4848597	40.00	ug/L	ISTD			
30	Carbon Tetrachloride	4.16	17538	0.22	ug/L	1	•		
31	Benzene	4.50	1592	0.01	ug/L	1	•		
32	1,2-Dichloroethane	4.16	20775	0.34	ug/L	1	•		
33	1,4-Difluorobenzene		5607925	40.00	ug/L	ISTD			
34	Trichloroethene	0.00	0	0.00	ug/L	ا ۵۰۰	•		
	1,2-Dichloropropane	0.00	0	0.00	ug/L	1	•		-
_	Dibromomethane	0.00	0	0.00	ug/L	1	•		
	Methyl methacrylate	0.00	0	0.00	ug/L	1 1	•		
	Bromodichloromethane	0.00	0	0.00	ug/L	1 }			
	2-Nitropropane	7.53	671	0.04	ug/L	┨			
	2-Chloroethyl vinykether	0.00	0	0.00	ug/L ug/L	1 }	-		
	cis-1,3-Dichloropropene	0.00	<u>o</u>	0.00	ug/L	1 }	-		
	4-Methyl-2-Pentanone	8.55	32944	0.79	ug/L	<b>┤</b>			
	Toluene-d8	8.56	5968523	46.58	ug/L	SURR	<del></del>		
******		0.00		70.00	ug/L	120111	- 1	<u>-</u>	

44	Toluene	8.70	4233	0.03	ug/L		•		T
45	trans-1,3-Dichloropropene	0.00	0	0.00	ug/L	7	٠		T
46		0.00	0	0.00	ug/L		•		
47	Ethyl methacrylate	9.90	6430	0.11	ug/L		•		
48	Tetrachloroethene	9.88	55892	0.98	ug/L		•		
49	2-Hexanone	0.00	0	0.00	ug/L		٠		
50	Dibromochloromethane	0.00	0	0.00	ug/L		•		
51	1,2-Dibromoethane	0.00	0	0.00	ug/L		•		
52	Chlorobenzene-d5	11.74	4671448	40.00	ug/L	] ISTD		-	-
53	Chlorobenzene	11.79	2969	0.03	ug/L		٠		
54	1,1,1,2-Tetrachloroethane	0.00	0	0.00	ug/L	] [	•		
55	Ethylbenzene	12.51	12891	0.08	ug/L		•		
56	p,m-Xylenes	12.50	3236	0.06	ug/L		٠		
57	o-Xylene	0.00	0	0.00	ug/L		•		
58	Styrene	13.43	1254	0.01	ug/L		٠		
59	Bromoform	0.00	0	0.00	ug/L		•		
60	4-Bromofluorobenzene	14.55	4922953	50.90	ug/L	SURR		-	I
61	1,2,3-Trichloropropane	0.00	0	0.00	ug/L		•		
62	1,1,2,2-Tetrachloroethane	0.00	0	0.00	ug/L		•		
63	trans-1,4-dichloro-2-Butene	0.00	0	0.00	ug/L		•		
64	Pentachloroethane	17.26	563407	0.00	ug/L		٠		
65	1,3-Dichlorobenzene	17.10	4918	0.05	ug/L	] [	•		
66	1,4-Dichlorobenzene	17.28	5028	0.06	ug/L		•		
67	1,2-Dichlorobenzene	0.00	0	0.00	ug/L		•	l	
68	1,2-Dibromo-3-chloropropane	0.00	0	0.00	ug/L	_] [	٠		
69	1,2,4-Trichlorobenzene	0.00	0	0.00	ug/L		*		

SURR SUMMARY REPORT:	50 ug/L	

FILE:

### C:\DATA\041699\ 0416BLK.D

	Compound Name:	Area:	Avg Calib	Calculated	%	%				
			Area	Result	Rec	Area				
28	Dibromofluoromethane	4239437	3777087	51.36	103%	112%	ok	86%	-	118%
43	Toluene-d8	5968523	6010945	46.58	93%	99%	ok	88%	-	110%
60	4-Bromofluorobenzene	4922953	4661801	50.90	102%	106%	ok	86%	-	115%

ISTD SUMMARY	REPORT:	 40 ug/L

FILE:

### C:\DATA\041699\ 0416BLK.D

	Compound Name:	R.T.:	Area:	Avg Calib	Calculated	%	%
				Area	Result	Rec	Area
29	Pentafluorobenzene	4.16	4848597	4378455	40.00	100%	111%
33	1,4-Difluorobenzene	5.49	5607925	5226700	40.00	100%	107%
52	Chlorobenzene-d5	11.74	4671448	4483994	40.00	100%	104%

a Appendix IX extra compounds
\*\* Compounds NOT Calibrated

File: C:\DATA\041699\0416BLK.D

Operator: Ray Bische

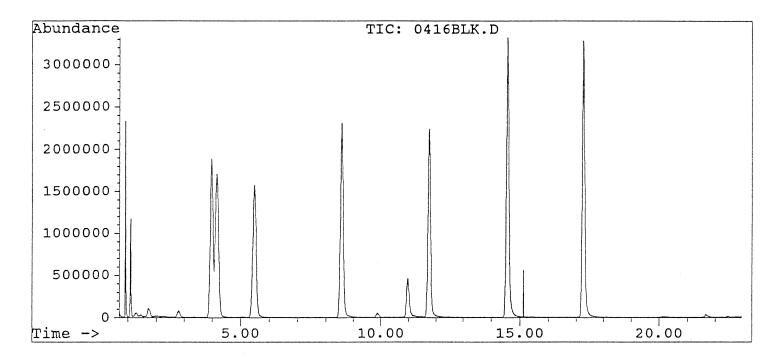
Date Acquired: 16 Apr 99 1:11 pm

Method File: FULL VOC.M

Sample Name: Blank

Misc Info: Daily Quantitation Blank

Vial Number : 3
Multiplier : 1



Number of compounds in database: 69



### Environmental Service Group, Inc.

Total Characteristic Leaching Procedure for Volatile Organics via PATGC/MS

DATA:\033099\1001010.D Data File: (Spike)

Ray Bische Operator:

30-Mar-99 Date Acquired: 10:29 PM

TCLP Method File:

Sample Name: 99003809-01A

Miscellaneous Information: NSVCLP solid, Sp-Dp, dil = 5.00 10

Bottle Number:

Total Number of Compounds Screened: 16 Spike: 25

5.000 Dilution:

Results:

			Spike		Matrix	%
chck:	Num	Compound Name	Amt	Sample	Spike	Rec
	1	Vinyl Chloride	125	0.00	119.01	95%
	2	1,1-Dichloroethene	125	0.00	124.81	100%
	3	2-Butanone (MEK)	125	204.00	417.93	171%
	5	Chloroform	125	0.00	130.86	105%
	7	Carbon Tetrachloride	125	0.00	114.66	92%
	8	Benzene	125	0.00	127.66	102%
	9	1,2-Dichlorethane	125	0.00	139.42	.112%
	11	Trichlorothene	125	0.00	126.09	101%
	13	Tetrachloroethene	125	0.00	123.04	98%
	15	Chlorobenzene	125	0.00	119.58	96%

DATA:\033099\1101011.D Data File: (Spike-Duplicate)

Ray Bische Operator:

Date Acquired: 30-Mar-99 11:12 PM

Method File: **TCLP** 

Sample Name: 99003809-01A

NSVCLP solid, Sp-Dp, dil = 5.00 Miscellaneous Information:

Bottle Number: 11

16 25 Spike: Total Number of Compounds Screened: 5.000

Dilution:

Results:

			Spike		Matrix	%	% Rec
chck:	Num	Compound Name	Amt	Sample	Spike	Rec	RPD
			3*				
	1	Vinyl Chloride	125	0.00	121.39	97%	-2%
	2	1,1-Dichloroethene	125	0.00	119.97	96%	4%
	3	2-Butanone (MEK)	125	204.00	391.50	150%	13%
	5	Chloroform	125	0.00	134.45	108%	-3%
	7	Carbon Tetrachloride	125	0.00	118.70	95%	-3%
	8	Benzene	125	0.00	130.29	104%	-2%
	9	1,2-Dichlorethane	125	0.00	137.02	110%	2%
	11	Trichlorothene	125	0.00	124.96	100%	1%
	13	Tetrachloroethene	125	0.00	121.92	98%	1%
	15	Chlorobenzene -	125	0.00	120.21	96%	-1%



### Environmental Service Group, Inc.

### Purgeable Volatile Organics Summary Report

Data File:

Operator: Date Acquired:

Method File: Sample Name:

Sample Name:

Miscellaneous Information:

Bottle Number:

Total Number of Compounds Screened:

C:\DATA\041699\

0416B.D

Ray Bische

16 Apr 99 3:11 pm

FULL\_VOC.M

9904480-01A Liquid Waste

BENCLP sludge, dil = 5.00

3

69

### Results:

Nu	Compound Name	R.T.	Area	Amount	Units	Type:	ND	BOT	QL
	·								
1	Dichlorodifluoromethane	0.00	0	0.00	ug/L	_	•		
2	Chloromethane	0.96	16104	2.87	ug/L		•		
3	Vinyl chloride	1.39	1282	0.18	ug/L		•		
4	Bromomethane	1.15	7766	1.05	ug/L		•		
5	Chloroethane	1.32	996	0.30	ug/L				
6	Trichlorofluoromethane	1.67	41408	2.61	ug/L		•		
7	Ethyl ether	1.61	33408	6.91	ug/L			•	
8	Acrolein	1.55	3867	5.15	ug/L		•		
9	1,1-Dichloroethene	1.66	7397	0.66	ug/L		*		
10	1,1,2-Trichloro-1,2,2-trifluoroethane	1.67	41408	2.70	ug/L		•		
11	lodomethane	1.72	5242	0.36	ug/L	7	•		
12	Carbon disulfide	1.74	10833	0.58	ug/L	7	•	1	
13	Acetone	1.84	276877	167.53	ug/L	7 1			•
14	Allyl Chloride	2.05	26823	0.00	ug/L	7			
	Methylene chloride	2.03	35225	3.72	ug/L	1	•		
	trans-1,2-Dichloroethene	2.25	3657	0.37	ug/L		•		
	Acrylonitrile	0.00	0	0.00	ug/L	1	+		İ
	Methyl-tert-butyl ether	2.34	109517	5,72	ug/L			•	
19		2.63	3628	0.23	ug/L	1		<b></b>	
	Chloroprene	0.00	0	0.00	ug/L	1	•		
	Vinyl acetate	2.84	86703	4.67	ug/L	1			
		3.30	3280	0.27	ug/L	- I	*	<b>-</b>	
	2-Butanone	3.42	107298	145.28	ug/L	1		•	
	Ethyl acetate	3.50	895	1.01	ug/L	-	+	<b></b>	
	Methacrylonitrile	3.45	3747	0.00	ug/L	-	•		
	Chloroform	3.77	70232	3.58	ug/L	-	*	-	
	1,1,1-Trichloroethane	3.91	2705	0.17	ug/L	-	•		
	Dibromofluoromethane	3.99	4117623	49.73	ug/L	SURR	_		-
		4.18	4863477	40.00	ug/L	ISTD		-	
		4.20	26051	1.64 /		1310		-	
-		4.53	1782568	80.07	ug/L ug/L	-		-	-
	1,2-Dichloroethane	4.62	47435	4.05	ug/L	-	-		
	1,4-Difluorobenzene	5.49	5318794	40.00	ug/L	ISTD		<b>-</b>	-
	Trichloroethene	5.96	2240	0.22	ug/L	7 1310 1			-
	1,2-Dichloropropane	0.00	0	0.00	ug/L	-		-	
		0.00	- 0	0.00		-			
	Dibromomethane	7.02			ug/L	-		<b> </b>	
	Methyl methacrylate		6121	0.00	ug/L	-		<b> </b>	
	Bromodichloromethane	0.00	0	0.00	ug/L	-			•
	2-Nitropropane	7.45	80119	28.03	ug/L	-		•	
	2-Chloroethyl vinÿl,ether	0.00	0	0.00	ug/L	-	•		
	cis-1,3-Dichloropropene	0.00	0	0.00	ug/L	-	•		
	4-Methyl-2-Pentanone	8.71	258400	32.87	ug/L	┩ │		•	•
43	Toluene-d8	8.59	5916959	48.68	ug/L	SURR		1 1	ı

	44	Toluene	8.73	9880396	410.90	ug/L			•	•
	45	trans-1,3-Dichloropropene	0.00	0	0.00	ug/L		•		
	46	1,1,2-Trichloroethane	9.52	63749	7.44	ug/L			•	
	47	Ethyl methacrylate	9.91	4175	0.37	ug/L		٠		
	48	Tetrachloroethene	9.92	69305	6.15	ug/L	]		•	
	49	2-Hexanone	10.45	85791	17.33	ug/L			•	
	50	Dibromochloromethane	0.00	0	0.00	ug/L	]	•		
а	51	1,2-Dibromoethane	0.00	0	0.00	ug/L	]	•		
	52	Chlorobenzene-d5	11.76	4602360	40.00	ug/L	ISTD		-	-
	53	Chlorobenzene	11.79	11188	0.57	ug/L	] [	٠		
а	54	1,1,1,2-Tetrachloroethane	0.00	0	0.00	ug/L	] [	٠		
	55	Ethylbenzene	12.21	4537357	143.36	ug/L	] [		•	•
	56	p,m-Xylenes	12.51	5179542	494.92	ug/L			•	٠
	57	o-Xylene	13.38	2837091	272.19	ug/L			*	•
	58	Styrene	13.38	142652	7.88	ug/L			•	
	59	Bromoform	0.00	0	0.00	ug/L	] [	•		
	60	4-Bromofluorobenzene	14.57	4680349	49.11	ug/L	SURR	-	-	-
	61	1,2,3-Trichloropropane	0.00	0	0.00	ug/L	] [	•		
	62	1,1,2,2-Tetrachloroethane	15.40	24338	1.62	ug/L	] [	•		
а	63	trans-1,4-dichloro-2-Butene	17.00	11709	0.00	ug/L	] [	•		
а	64	Pentachloroethane	16.60	212135	0.00	ug/L	] [	*		
	65	1,3-Dichlorobenzene	17.06	9026	0.49	ug/L	] [	*		
	66	1,4-Dichlorobenzene	17.31	6519	0.37	ug/L	] [	*		
	67	1,2-Dichlorobenzene	18.11	10140	0.60	ug/L	] [	•		
а	68	1,2-Dibromo-3-chloropropane	20.75	7426	0.00	ug/L	] [	•		
а	69	1,2,4-Trichlorobenzene	21.86	12685	0.00	ug/L		*		

	SURR SUMMARY REPORT:		- 50	ug/L						
	FILE: C:\DAT			0416B.D						
	Compound Name:	Avg Calib Area	Calculated Result	% Rec	% Area					
28	Dibromofluoromethane	4117623	3777087	49.73		109%	ok	80%	_	112%
43	Toluene-d8	5916959	6010945	48.68	97%		ok	81%	-	117%
60	4-Bromofluorobenzene	4680349	4661801	49.11	98%	100%	ok	74%	-	121%
h										

40 ug/L

	FILE: C:\DATA\041699\ 0416B.D						
	Compound Name:	R.T.:	Area:	Avg Calib Area	Calculated Result	% Rec	% Area
29	Pentafluorobenzene	4.18	4863477	4378455	40.00	100%	111%
33	1,4-Difluorobenzene	5.49	5318794	5226700	40.00	100%	102%
52	Chlorobenzene-d5	11.76	4602360	4483994	40.00	100%	103%

a Appendix IX extra compounds

ISTD SUMMARY REPORT:

<sup>\*\*</sup> Compounds NOT Calibrated

File: C:\DATA\041699\0416B.D

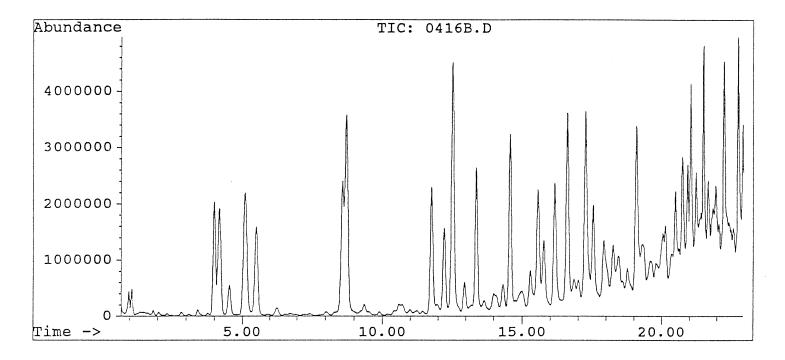
Operator: Ray Bische

Date Acquired: 16 Apr 99 3:11 pm

Method File: FULL VOC.M

Sample Name: 9904480-01A Liquid Waste Misc Info: BENCLP sludge, dil=5.00

Vial Number : 3
Multiplier : 1



Number of compounds in database: 69

3 cupm UCIA

# TCLP EXTRACTION DATA per SW-846 1311

Date & Time IN:	04/15/99	1:45 pm (3:00
-4- 0 Time 017	411. 100	1.16

Sample Wt: 100g/10g/\_\_\_\_g

Date & Time OUT: OHIG 9 8:15am

Ext.Fld Vol: 2000 ml / \_\_\_\_mL

Extraction for: Metals & SVOA / VOA

Temp: <u>250</u> C

SAMPLE No#	% SOUDS	INITAL pH	FINAL pH	Extract. fluid # and It's pH	pH after Extraction
9904421-01A	1009	9.41	1.83	#1497	
9904421-02A	100%	5.57	1.82		
9904440-01A	100 %	8.46	1.83	<b>\</b>	
TioH	<del>10070</del>				
9964486 -01A	100 = 7				
			·		
		- 0. - 0. - 0.			
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		. 1		•	. A.
					, 12-5-5 1-3-6 1-2-7
	٩٠	:		·	2 Torge

DMMENTS:	fleid made	4115149 -5	LM		
The state of				The transport of the second subjection and the second seco	

Rev.1.10793.kg1



Indianapolis Division 6964 Hillsdale Ct. Indianapolis, IN 46250

Tel: (317) 842-4261 Fax: (317) 842-4286

### ANALYTICAL REPORT

Ms. Debra Chelf ARVIN INDUSTRIES 1531 13th Street Columbus, IN 47201

10/23/1998

Job No.: 98.07140

Page 2 of 2

Date Received: 10/14/1998

Job Description: WEEKLY OIL AND GREASE (FRANKLIN)

Sample Numbe	r / Sample I.D.	Result	Flaq	Sample Date/ Units	Analyst &  Date Analyzed	Method	Reporting Limit
221228	AF-129(1)	r	`	10/14/1998	e de la companya de l		
Oil & Greas	se, Hydrocarbon	310.0		mg/L	cls / 10/19/1998	EPA-1664	<5.
221229	AF-130(2)			10/14/1998			
Oil & Greas	se	1800		mg/L	lma / 10/22/1998	EPA 1664	<5.

Oir Compressor Condensate duscharging to outfall ## (1DEM #1, which is Granklin 1, 3, 3 combined). Started this discharge in larly Nov. 1998.



Indianapolis Division 6964 Hillsdale Ct. Indianapolis, IN 46250

Tel: (317) 842-4261 Fax: (317) 842-4286

### ANALYTICAL REPORT

Ms. Debra Chelf ARVIN INDUSTRIES 1531 13th Street Columbus, IN 47201

10/23/1998

NET Job Number: 98.07140

Page 1 of 2

Enclosed are the Analytical Results for the following samples submitted to NET, Inc. Indianapolis Division for analysis:

Project Description: WEEKLY OIL AND GREASE (FRANKLIN)

Sample	Sample Description	Date	Date
Number		Taken	Received
221228	AF-129(1)	10/14/1998	10/14/1998
221229	AF-130(2)	10/14/1998	10/14/1998

National Environmental Testing, Inc. certifies that the analytical results contained herein apply only to the specific samples analyzed.

Reproduction of this analytical report is permitted only in entirety.

Project Representative

Lan Barres

ININCITAIN	INALIGINAL	ENVIRONMENTAL	TESTING INC	
				Ì
		-		
		Π		
			4	
	_	-		

# CHAIN OF CUSTODY RECORD

REPORT TO: DAJ BOSCHE	INVOICE TO: DAJ BOUCKER	P.O. NO. 312488	NET QUOTE NO.	To assist us in selecting the proper method	Is this work being conducted for regulatory compliance monitoring? Yes No	Is this work being conducted for regulatory enforcement action?  No
ARVIN EYK	812-379-3545 FAX 812-379-3841	ATION FRO	AANAGER	ANALYSES	1921) 1502	# and Type of Containers
® TESTING, INC.	ADDRESS - C	PROJECT NAME/LOC/	PROJECT MANAGER	Bouchen (	SIGNATURE	SIGNATURE

To assist us in selecting the proper method Is this work being conducted for regulatory	compliance monitoring?  Is this work being conducted for regulatory enforcement action?  No	Which regulations apply: RCRA NPDES Wastewater UST Drinking Water Other None	COMMENIS					TEMPERATURE UPON RECEIPT: 4, 1 C Bottles supplied by NET? (CES) NO	DATE 10-14-95	LO/14/68 1820 RECEIVED FOR NEWS.
ANALYSES	# and Type of # Containers	MATRIX GRAB  COMP  HCI  HUO3  H2SO4  OTHER  OTHER	<b>M</b>	X				OOC SEALS PRESENT AND INTACT? YES / NO VOLATILES FREE OF HEADSPACE? YES / NO	RETURN SAMPLE REMAINDER TO CLIENT VIA	Mille 10/14/98 METHOUISHED BY: DE PARTILIPER.
SAMPLED BY BOUCHER SIGNATURE		DATE TIME SAMPLE ID/DESCRIPTION	My 8:00 AF- 45 129	1/4 8:00 AF-130				CONDITION OF SAMPLE: BOTTLES INTACT? YES NO FIELD FILTERED? YES NO	SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA	REMARKS:  DATE TIME RECEIVED BY:  10-14-79-7-004 7/12 7  METHOD OF SHIPMENT  REMARKS:



Lubes / Coolants
Sampling Results

# SAFETY-KLEEN SAMPLE ANALYSIS REPORT Water Services -- Discharge Systems Report

SAMPLE DESCRIPTION:

PAGE 1

**REPORT DATE: 08-27-98** 

S-K REPRESENTATIVE: RICK WEAVER

**BRANCH #: 407602** 

**CONTROL** #: 1805488-9 SURVEY #: WS001464D

LAB #: 9805488

**CUSTOMER#:** 

ORDINANCE REGION:

Generator: ARVIN

1001 HURRICANE ST FRANKLIN, IN 46131 (317)346-2851

Attention: DAN BOUCHER

The enclosed Discharge Monitoring Analysis performed on the sample in question has identified certain parameter(s) which DID EXCEED permit/local ordinance limits on the dates in which these respective tests were conducted. Those parameter(s) are as follows: Oil & Grease, Total Cyanide.

The enclosed analysis report identifies concentration levels of specific pollutants in the sample only for the dates stated and according to the methods listed. Local ordinance limits may have been used if permit limits were not available. Safety-Kleen makes no representations, and hereby disclaims all representations, expressed or implied, other than as expressly stated in the attached analysis report for the dates listed. In addition, the analysis report does not absolve the generator from any liability that may arise in connection with the violation of any applicable regulatory requirements.

If you have any questions regarding the above analysis, please contact Customer Service at (773)825-7338.

12555 W. Old Higgins Rd. Elk Grove Village, IL 60007 Telephone: (773) 825-7338

Analyte	Date Analyzed	EPA Method	Ordinance Limit Result
1,1,1,2-Tetrachloroethane	08-05-98	8240	<1.00
1,1,1-Trichloroethane	08-05-98	8240	<1.00
1,1,2,2-Tetrachloroethane	08-05-98	8240	<1.00
1,1,2-Trichloroethane	08-05-98	8240	<1.00
1,1-Dichloroethane	08-05-98	8240	<1.00
1,2,3-Trichlorobenzene	08-05-98	8240	<1.00
1,2,3-Trichloropropane	08-05-98	8240	<1.00
1,2,3-Trimethylbenzene	08-05-98	8240	<1.00
1,2,4-Trichlorobenzene	08-05-98	8240	<1.00
1,2,4-Trimethylbenzene	08-05-98	8240	<1.00
1,2-Dibromo-3-Chloropropa	08-05-98	8240	<1.00
1,2-Dibromoethane	08-05-98	8240	<1.00
1,2-Dichlorobenzene	08-05-98	8240	<1.00
1,2-Dichloroethene(total)	08-05-98	8240	<1.00
1,2-Dichloropropane	08-05-98	8240	<1.00
1,3,5-Trimethylbenzene	08-05-98	8240	<1.00
1,3-Dichlorobenzene	08-05-98	8240	<1.00
1,3-Dichloropropane	08-05-98	8240	<1.00
1,4-Dichloro,2-Butene	08-05-98	8240	<1.00
1-Chlorobutane	08-05-98	8240	<1.00
1-Nitropropane	08-05-98	8240	<10.00
2,2-Dichloropropane	08-05-98	8240	<1.00
2-Chloroethylvinyl Ether	08-05-98	8240	<1.00
2-Chlorotoluene	08-05-98	8240	<1.00
2-Hexanone	08-05-98	8240	<2.00
2-Nitropropane	08-05-98	8240	<10.00
4-Chlorotoluene	08-05-98	8240	<1.00
4-Isopropyltoluene	08-05-98	8240	<1.00
4-Methyl-2-Pentanone	08-05-98	8240	<1.00
Acetone	08-05-98	8240	
Acctonitrile	08-05-98	8240	37.7
Acrylonitrile	08-05-98	8240	<10.00 <1.00
Allyl Chloride	08-05-98	8240	
Benzyl Chloride	08-05-98	8240	<1.00 <1.00
Bromobenzene	08-05-98	8240	<1.00
Bromochloromethane	08-05-98	8240	<2.00
Bromodichloromethane	08-05-98	8240	<1.00
Bromoform	08-05-98	8240	<1.00
Bromomethane	08-05-98	8240	<1.00
Carbon Disulfide	08-05-98	8240	<1.00
Chloroethane	08-05-98	8240	<1.00
Chloromethane	08-05-98	8240	<1.00
Cyclohexanone	08-05-98	8240	<8.00

Control #: 1805488-9 Survey #: WS001464D			PAGE 3
Dibromochloromethane	08-05-98	8240	ARVIN
Dibromomethane	08-05-98	8240	<1.00
Dichlorodifluoromethane	08-05-98	8240	<1.00
Diethyl ether	08-05-98	8240	<1.00 <1.00
Ethyl Methacrylate	08-05-98	8240	<1.00
Ethylbenzene	08-05-98	8240	<1.00
Нехапе	08-05-98	8240	<1.00
Iodomethane	08-05-98	8240	<1.00
Isopropylbenzene	08-05-98	8240	<1.00
Methacrylonitrile	08-05-98	8240	<1.00
Methyl Methacrylate	08-05-98	8240	<1.00
Methyl-t-butyl ether	08-05-98	8240	<1.00
Methylene Chloride	08-05-98	8240	<1.00
Naphthalene	08-05-98	8240	<1.00
O-Xylene	08-05-98	8240	<1.00
Pentachloroethane	08-05-98	8240	<1.00
Styrene	08-05-98	8240	<1.00
Tetrahydrofuran	08-05-98	8240	<1.00
Toluene	08-05-98	8240	<1.00
Trichlorofluoromethane	08-05-98	8240	<1.00
Vinyl Acetatc	08-05-98	8240	<2.00
Xylenes(total)	08-05-98	8240	<1.00
cis-1,2-Dichloroethene	08-05-98	8240	<1.00
cis-1,3-Dichloropropene	08-05-98	8240	<1.00
iso-Butanol	08-05-98	8240	<200
m+p-Xylenes	08-05-98	8240	<1.00
n-Butylbenzene	08-05-98	8240	<1.00
n-Propylbenzene	08-05-98	8240	<1.00
sec-Butylbenzene	08-05-98	8240	<1.00
tert-Butylbenzene	08-05-98	8240	<1.00
trans-1,2-Dichloroethene	08-05-98	8240	<1.00
trans-1,3-Dichloropropene	08-05-98	8240	<1.00
Benzene	08-05-98	8240	<1.00
Carbon Tetrachloride	08-05-98	8240	<1.00
Chlorobenzene	08-05-98	8240	<1.00
Chloroform	08-05-98	8240	2.00
1,4-Dichlorobenzene	08-05-98	8240	<1.00
1,2-Dichloroethanc	08-05-98	8240	<1.00
1,1-Dichloroethylene	08-05-98	8240	<1.00
Hexachlorobutadiene	08-05-98	8240	<1.00
Hexachloroethane	08-05-98	8240	<1.00
Methyl Ethyl Ketone	08-05-98	8240	<2.00
Tetrachloroethylene Trichloroethylene	08-05-98	8240	<1.00
Vinyl Chloride	08-05-98	8240	<1.00
v myr Chioride	08-05-98	8240	<1.00

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Control #: 1805488-9 Survey #: WS001464D

PAGE 4
ARVIN

### CONTAMINATED MATERIAL FEED

	Date	EPA	Ordinance Limit Result
Analyte	Analyzed .	Method	ppm ppm Units
Extractable Organics	07-29-98	413.1	27900 ppm
Total Suspended Solids	07-28-98	160.2	39200 ppm
рН	07-28-98	9040	7.5

# METALS IN DISCHARGE MONITORING

Analyte	Date Analyzed	EPA Method	Ordinance Lin	nit Result ppm
Copper	07-29-98	6010	0.743	0.088
Nickel	07-29-98	6010	6.5103	<0.060
Zinc	07-29-98	6010	29.4332	0.510
Arsenic	07-29-98	6010	2.1435	<0.100
Cadmium	07-29-98	6010	0.323	<0.010
Chromium	07-29-98	6010	7.302	0.013
Lead	07-29-98	6010	0.5935	<0.080

# MISCELLANEOUS DISCHARGE MONITORING

	Date	EPA	Ordinance Limit	
Analyte	Analyzed	Method	mg/L Result	Units
Ammonia-Nitrates	08-04-98	350.2	48	mg/L
Biological Oxygen Demand	08-04-98	405.1	8940	
Chemical Oxygen Demand	08-06-98	410.4	8550	
Oil & Grease	07-29-98	413.1	100 344	
Total Chloride	08-05-98	325.3	0.6	
Total Dissolved Solids	07-28-98	160.1	19813	ppm
Total Suspended Solids	07-28-98	160.2	2660	
Total Cyanide	07-29-98	335.2	0.1962 1.17	ppm
Total Sulfide	08-05-98	376.1	300	ppm

### MISCELLANEOUS

	Date	EPA	Ordinance Limit		
Test	Analyzed	Method	ppm Result Units		
Phosphate, Total	08-05-98	365.2	<1.4 ppm		
Total PCB	08-05-98	NONE	<1.0		

Control #: 1805488-9 Survey #: WS001464D

PAGE 5 ARVIN

# SEMI-VOLATILES

Analyte	Date Analyzed	EPA Method	Ordinance Limit Result
1,2,4-Trichlorobenzene	08-05-98		ppm ppm Unit
1,2-Dichlorobenzene	08-05-98	8270	<1.00 mg/
1,3-Dichlorobenzene	08-05-98	8270	<1.00 mg/
2,4-Dichlorophenol	08-05-98	8270	<1.00 mg/
2,4-Dinitrophenol	08-05-98	8270	<1.00 mg/l
2,6-Dinitrotoluene	08-05-98	8270	<5.00 mg/l
2-Chloronaphthalene		8270	<1.00 mg/l
2-Chlorophenol	08-05-98	8270	<1.00 mg/l
2-Methylnaphthalene	08-05-98	8270	<1.00 mg/l
2-Nitroaniline	08-05-98	8270	<1.00 mg/l
2-Nitrophenol	08-05-98	8270	<1.00 mg/l
3,3'-Dichlorobenzidine	08-05-98	8270	<1.00 mg/l
3-Nitroaniline	08-05-98	8270	<1.00 mg/l
	08-05-98	8270	<1.00 mg/l
4,6-Dinitro-2-methylphenol	08-05-98	8270	<5.00 mg/l
4-Bromophenyl-phenylether	08-05-98	8270	<1.00 mg/L
4-Chloro-3-Methylphenol	08-05-98	8270	<1.00 mg/L
4-Chloroaniline	08-05-98	8270	<1.00 mg/L
4-Chlorophenyl-phenylether	08-05-98	8270	<1.00 mg/L
4-Nitroaniline	08-05-98	8270	<1.00 mg/L
4-Nitrophenol	08-05-98	8270	<5.00 mg/L
Acenaphthene	08-05-98	8270	<1.00 mg/L
Acenaphthylene	08-05-98	8270	<1.00 mg/L
Aniline	08-05-98	8270	<1.00 mg/L
Anthracene	08-05-98	8270	<1.00 mg/L
Benzo(a)Anthracene	08-05-98	8270	<1.00 mg/L
Benzo(a)pyrene	08-05-98	8270	<1.00 mg/L
Benzo(b)fluoranthene	08-05-98	8270	<1.00 mg/L
Benzo(g,h,i)perylene	08-05-98	8270	<1.00 mg/L
Benzo(k)fluoranthene	08-05-98	8270	<1.00 mg/L
Benzyl Alcohol	08-05-98	8270	<1.00 mg/L
Bis(2-chlorocthoxy)mcthanc	08-05-98	8270	<1.00 mg/L
Bis(2-chloroethyl)ether	08-05-98	8270	<1.00 mg/L
Butylbenzylphthalate	08-05-98	8270	<1.00 mg/L
Chrysene	08-05-98	8270	<1.00 mg/L
Di-n-Butylphthalate	08-05-98	8270	<1.00 mg/L
Di-n-octylphthalate	08-05-98	8270	<1.00 mg/L
Dibcnzo(a,h)anthracene	08-05-98	8270	<1.00 mg/L
Dibenzofuran	08-05-98	8270	<1.00 mg/L
Diethylphthalate	08-05-98	8270	<1.00 mg/L
Dimethylphthalate	08-05-98	8270	<1.00 mg/L
Fluoranthene	08-05-98	8270	<1.00 mg/L
Fluorene	08-05-98	8270	<1.00 mg/L
Hexachlorocyclopentadiene	08-05-98	8270	<1.00 mg/L
Indeno(1,2,3-cd)pyrene	08-05-98	8270	<1.00 mg/L
Isophorone	08-05-98	8270	<1.00 mg/L
		: -	Continued on next page

Continued on next page

Control #: 1805488-9	> Hr-1 ar-3 ar-3 ar-3 ar-3 ar-3 ar-3 ar-3 ar-3		PAGE 6
Survey #: WS001464D			ARVIN
N-Nitrosodinpropylamine	08-05-98	8270	<1.00 mg/L
N-Nitrosodiphenylamine	08-05-98	8270	<1.00 mg/L
Naphthalene	08-05-98	8270	<1.00 mg/L
Phenanthrene	08-05-98	8270	<1.00 mg/L
Phenol	08-05-98	8270	<1.00 mg/L
Рутепе	08-05-98	8270	<1.00 mg/L
bis(2-Chloroisopropyl)ether	08-05-98	8270	<1.80 mg/L
bis(2-ethylhexyl)Phthalate	08-05-98	8270	<1.00 mg/L
2-Methylphenol	08-05-98	8270	<1.00 mg/L
3+4-Methylphenol	08-05-98	8270	<1.00 mg/L
1,4-Dichlorobenzene	08-05-98	8270	<1.00 mg/L
2,4-Dinitrotoluene	08-05-98	8270	<1.00 mg/L
Hexachlorobenzene	08-05-98	8270	<1.00 mg/L
Hexachlorobutadiene	08-05-98	8270	<1.00 mg/L
Hexachloroethane	08-05-98	8270	<1.00 mg/L
Nitrobenzene	08-05-98	8270	<1.00 mg/L
Pentachlorophenol	08-05-98	8270	<5.00 mg/L
Pyridine	08-05-98	8270	<1.00 mg/L
2,4,5-Trichlorophenol	08-05-98	8270	<1.00 mg/L
2,4,6-Trichlorophenol	08-05-98	8270	<1.00 mg/L

Centrol #: 1805488-9

Survey #: WS001464D

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ARVIN

Sample Description:

SAMPLE HANDLING DATES

Date Sampled:

07-23-98

Date Received:

07-27-98

LEACHING/EXTRACTION DATES

Method

Date

BNA Extraction:

3510

07-28-98

The analysis contained herein are performed to provide Safety-Kleen Corp. and its customers a means of determining compliant waste handling practices that are consistent with applicable permits and processing capability.



# SAFETY-KLEEN SAMPLE ANALYSIS REPORT Water Services - Recycle Systems Report

SAMPLE DESCRIPTION:

**PAGE** 

COOLANT

REPORT DATE:

8/27/98

S-K REPRESENTATIVE: RICK WEAVER

**BRANCH #:** 407602

CONTROL #:

1805491-5

SURVEY #:

WS001464

LAB #:

9805491

Generator:

**CUSTOMER #:** 

ARVIN

101 HURRICANE ST. FRANKLIN, IN 46131

(317) 346-2851

Attention:

DAN BOUCHER

The enclosed Safety-Kleen report contains the analyses required to calculate the size of the system and service interval required.

This calculation is only an estimate based on the sample obtained. It may be necessary to vary the system size or service interval after the unit has been in place for awhile.

If you have any question regarding the above analysis, please contact Customer Service at (773)825-7338

Continued on next page

P.O. Box 92050 Elk Grove Village, IL 60009-2050

Fax: (773) 825-7853

Safety-Kleen Corp. Technical Center

12555 W. Old Higgins Road Elk Grove Village, IL 60007 Telephone: (773) 825-7338

### CONTAMINATED MATERIAL FEED

	Date	EPA SW846	Results
Analyte	Analyzed	Method	mg/L Units
Oil & Grease	7/29/98	413.1	27900 ppm
Total Suspended Solids	7/28/98	160.2	39200 ppm
pН	7/28/98	9040	7.5
Flow Rate	7/28/98		60 mL/mir

### CONTAMINATED MATERIAL PERMEATE

	Date	EPA SW846	Results
Analyte	Analyzed	Method	mg/L Units
Oil & Grease	7/29/98	413.1	344 ppm
Total Suspended Solids	7/28/98	160.2	2660 ppm

### SYSTEM INFORMATION

Cleaner Manufacturer	N/A
Cleaner	N/A
Percent Organies Removed	99%
Percent Total Suspended Solids Removal	93%
Dump Frequency	5 days
Days Since Last Cleanout	3 days
Operating Temperature	72 F
Tank Size	110 gal
Contaminated Flow As Percent of Water	50%

Continued on next page

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PAGE.01

<sup>\*\*</sup> Less than 92% may not be recyclable due to low Total Organic Carbon recovery.

<sup>\*\*\*</sup> Less than 70% may result in lower than expected output from unit.

### SYSTEM SIZING INFORMATION

Estimated Service Interval:

Based on Combined Oil & Solids Results:

1-2 week(s)

Estimated System Size (number of Stacks):

Batch Process; single pass through Aqueous Processing Uni

stack (s)

Continual Recycling Process:

1 2

**Sample Description:** 

**COOLANT** 

### SAMPLE HANDLING DATES

**Date Sampled:** 

7/23/98

Date Received:

7/27/98

The analysis contained herein are performed to provide Safety-Kleen Corp. and its customers a means of determining compliant waste handling practices that are consistent with applicable permits and processing capability.

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PAGE.02



Mop water Sampling Results

# SAFETY-KLEEN SAMPLE ANALYSIS REPORT Water Services - Discharge Systems Report

SAMPLE DESCRIPTION:

PAGE 1

S-K REPRESENTATIVE: RICK WEAVER

BRANCH #: 407602

**REPORT DATE: 08-27-98** 

CUSTOMER #:

CONTROL #: 1805489-2 SURVEY#: WS001465D

LAB#: 9805489

ORDINANCE REGION:

Generator: ARVIN

1001 HURRICANE ST FRANKLIN, IN 46113

(317)346-2851

Attention: DAN BOUCHER

The enclosed Discharge Monitoring Analysis performed on the sample in question has identified certain parameter(s) which DID EXCEED permit/local ordinance limits on the dates in which these respective tests were conducted. Those parameter(s) are as follows: Oil & Grease.

The enclosed analysis report identifies concentration levels of specific pollutants in the sample only for the dates stated and according to the methods listed. Local ordinance limits may have been used if permit limits were not available. Safety-Kleen makes no representations, and hereby disclaims all representations, expressed or implied, other than as expressly stated in the attached analysis report for the dates listed. In addition, the analysis report does not absolve the generator from any liability that may arise in connection with the violation of any applicable regulatory requirements.

If you have any questions regarding the above analysis, please contact Customer Service at (773)825-7338.

Continued on next page

12555 W. Old Higgins Rd. Elk Cirove Village, IL 60007 Telephone: (773) 825-7338

Control #: 1805489-2 Survey #: WS001465D

PAGE 2
ARVIN

Analyte	Date Analyzed	EPA Method	Ordinance Limit Result
1,1,1,2-Tetrachloroethane	08-04-98	. 8240	
1,1,1-Trichloroethanc	08-04-98	8240	<0.050
1,1,2,2-Tetrachloroethane	08-04-98	8240	<0.050
1,1,2-Trichloroethane	08-04-98	8240	<0.050
1,1-Dichloroethane	08-04-98	8240	<0.050
1,2,3-Trichlorobenzene	08-04-98	8240	<0.050
1,2,3-Trichloropropane	08-04-98		<0.050
1,2,3-Trimethylbenzene	08-04-98	8240	<0.050
1,2,4-Trichlorobenzene	08-04-98	8240 8240	<0.050
1,2,4-Trimethylbenzene	08-04-98		<0.050
1,2-Dibromo-3-Chloropropa	08-04-98	8240	<0.050
1,2-Dibromoethane	08-04-98	8240	<0.050
1,2-Dichlorobenzene	08-04-98	8240	<0.050
1,2-Dichloroethcne(total)	08-04-98	8240	<0.050
1,2-Dichloropropane	08-04-98	8240	<0.050
1,3,5-Trimethylbenzene	08-04-98	8240	<0.050
1,3-Dichlorobenzene	08-04-98	8240	<0.050
1,3-Dichloropropane	08-04-98	8240	<0.050
1,4-Dichloro,2-Butene	08-04-98	8240	<0.050
1-Chlorobutane	08-04-98	8240	<0.050
1-Nitropropane	08-04-98	8240	<0.050
2,2-Dichloropropane	08-04-98	8240	<0.500
2-Chloroethylvinyl Ether		8240	<0.050
2-Chlorotoluene	08-04-98	8240	<0.050
2-Hexanone	08-04-98	8240	<0.050
2-Nitropropane	08-04-98	8240	<0.100
4-Chlorotoluene	08-04-98	8240	<0.500
4-Isopropyltoluene	08-04-98	8240	<0.050
4-Methyl-2-Pentanone	08-04-98	8240	<0.050
Acetone	08-04-98	8240	<0.050
Acetonitrile	08-04-98	8240	0.215
Acrylonitrile	08-04-98	8240	<0.500
Allyl Chloride	08-04-98	8240	<0.050
Benzyl Chloride	08-04-98	8240	<0.050
Bromobenzene	08-04-98	8240	<0.050
Bromochloromethane	08-04-98	8240	<0.050
Bromodichloromethane	08-04-98 08-04-98	8240	<0.100
Bromoform		8240	<0.050
Bromomethane	08-04-98 08-04-98	8240	<0.050
Carbon Disulfide	08-04-98	8240	<0.050
Chlorocthane		8240	<0.050
Chloromethane	08-04-98	8240	<0.050
Cyclohexanone	08-04-98	8240	<0.050
7 11-11-11-11-11-11-11-11-11-11-11-11	08-04-98	8240	<0.400

Control #: 1805489-2 Survey #: WS001465D			PAGE 3
Dibromochloromethane	08-04-98	8240	ARVIN
Dibromomethane	08-04-98	8240	<0.050
Dichlorodifluoromethane	08-04-98	8240	<0.050
Diethyl ether	08-04-98	8240	<0.050
Ethyl Methacrylate	08-04-98	8240	<0.050
Ethylbenzene	08-04-98	8240	<0.050
Hexane	08-04-98	8240	<0.050
Iodomethane	08-04-98	8240	<0.050
Isopropylbenzene	08-04-98	8240	<0.050
Methacrylonitrile	08-04-98		<0.050
Methyl Methacrylate	08-04-98	8240	<0.050
Mcthyl-t-butyl ether	08-04-98	8240	<0.050
Methylene Chloride	08-04-98	8240	<0.050
Naphthalene	08-04-98	8240	<0.050
O-Xylene	08-04-98	8240	<0.050
Pentachloroethane	08-04-98	8240	<0.050
Styrene		8240	<0.050
Tetrahydrofuran	08-04-98	8240	<0.050
Toluene	08-04-98	8240	<0.050
Trichlorofluoromethane	08-04-98	8240	<0.050
Vinyl Acetate	08-04-98	8240	<0.050
Xylenes(total)	08-04-98	8240	<0.100
cis-1,2-Dichloroethene	08-04-98	8240	<0.050
cis-1,3-Dichloropropene	08-04-98	8240	<0.050
iso-Butanol	08-04-98	8240	<0.050
m+p-Xylenes	08-04-98	8240	<10.00
n-Butylbenzenc	08-04-98	8240	<0.050
n-Propylbenzene	08-04-98	8240	<0.050
sec-Butylbenzene	08-04-98	8240	<0.050
	08-04-98	8240	<0.050
tert-Butylbenzene	08-04-98	8240	<0.050
trans-1,2-Dichloroethene	08-04-98	8240	<0.050
trans-1,3-Dichloropropenc	08-04-98	8240	<0.050
Benzene	08-04-98	8240	<0.050
Carbon Tetrachloride	08-04-98	8240	<0.050
Chlorobenzene	08-04-98	8240	<0.050
Chloroform	08-04-98	8240	<0.050
1,4-Dichlorobenzene	08-04-98	8240	<0.050
1,2-Dichloroethane	08-04-98	8240	<0.050
1,1-Dichloroethylene	08-04-98	8240	<0.050
Hexachlorobutadiene	08-04-98	8240	<0.050
Hexachloroethane	08-04-98	8240	<0.050
Methyl Ethyl Ketone	08-04-98	8240	3.22
Tctrachloroethylene	08-04-98	8240	<0.050
Trichloroethylene	08-04-98	8240	<0.050
Vinyl Chloride	08-04-98	8240	<0.050

Control #: 1805489-2
Survey #: WS001465D

PAGE 4
ARVIN

# CONTAMINATED MATERIAL FEED

Analyte	Date Analyzed	EPA Method	Ordinance Limit Result ppm ppm Units
Extractable Organics	07-29-98	413.1	
Total Suspended Solids	07-28-98	160.2	
pН	07-28-98	9040	
		7010	6.6

# METALS IN DISCHARGE MONITORING

Analyte	Date Analyzed	EPA Method	Ordinance Lin	nit Result ppm
Copper	07-29-98	6010	0.743	
Nickel	07-29-98	6010	6.5103	0.011
Zinc	07-29-98	6010	··	<0.060
Arsenic	07-29-98	6010	29.4332	0.066
Cadmium	07-29-98	6010	2.14	<0.100
Chromium	07-29-98		0.323	<0.010
Lead		6010	7.3	< 0.010
Leau	07-29-98	6010	0.5935	<0.080

# MISCELLANEOUS DISCHARGE MONITORING

Analyte	Date Analyzed	EPA Method	Ordinance Limit mg/L	Result	Units
Ammonia-Nitrates	08-04-98	350.2			
Biological Oxygen Demand	08-05-98	405.1		2.69	mg/L
Chemical Oxygen Demand	08-06-98	410.4		4550	mg/L
Oil & Grease	07-29-98	413.1		7610	ppm
Total Chloride	08-11-98	325.3		454	ppm
Total Dissolved Solids	07-28-98	160.1		283	mg/L
Total Suspended Solids	07-28-98	·		3429	ppm
Total Cyanide	07-29-98	160.2		373	ppm
Total Sulfide		335.2		<0.5	ppm
Total Suniue	08-05-98	376.1		92.7	ppm

# MISCELLANEOUS

Test	Date Analyzed	EPA Method	Ordinance Limit		<b>TT</b>
Phosphate, Total	08-11-98	365.2	ppm	Result	Units
Total PCB	08-11-98	NONE		$-\frac{<27.0}{<1.0}$	ppm

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Control #: 1805489-2 Survey #: WS001465D

PAGE 5 ARVIN

# SEMI-VOLATILES

Analyte	Date Analyzed	EPA Method	Ordinance Limit Result
1,2,4-Trichlorobenzene	08-06-98	8270	ppm ppm Units
1,2-Dichlorobenzene	08-06-98	8270	<1.00 mg/L
1,3-Dichlorobenzene	08-06-98	8270	<1.00 mg/L
2,4-Dichlorophenol	08-06-98	8270	<1.00 mg/L
2,4-Dinitrophenol	08-06-98	8270	<1.00 mg/L
2,6-Dinitrotolucne	08-06-98	8270	<5.00 mg/L
2-Chloronaphthalene	08-06-98	8270	<1.00 mg/L
2-Chlorophenol	08-06-98	8270	<1.00 mg/L
2-Methylnaphthalene	08-06-98	8270	
2-Nitroaniline	08-06-98	8270	<1.00 mg/L
2-Nitrophenol	08-06-98	8270	<1.00 mg/L
3,3'-Dichlorobenzidine	08-06-98	8270	<1.00 mg/L
3-Nitroaniline	08-06-98	8270	<1.00 mg/L
4,6-Dinitro-2-methylphenol	08-06-98	8270	<1.00 mg/L
4-Bromophenyl-phenylcther	08-06-98	8270	<5.00 mg/L
4-Chloro-3-Methylphenol	08-06-98	8270	<1.00 mg/L
4-Chloroaniline	08-06-98	8270	1.17 mg/L
4-Chlorophenyl-phenylether	08-06-98	8270	<1.00 mg/L
4-Nitroaniline	08-06-98	8270	<1.00 mg/L
4-Nitrophenol	08-06-98	8270	<1.00 mg/L
Acenaphthene	08-06-98	8270	<5.00 mg/L
Acenaphthylene	08-06-98	8270	<1.00 mg/L
Aniline	08-06-98	8270	<1.00 mg/L
Anthracene	08-06-98	8270	<1.00 mg/L
Benzo(a)Anthracene	08-06-98	8270	<1.00 mg/L
Benzo(a)pyrene	08-06-98	8270	<1.00 mg/L
Benzo(b)fluoranthene	08-06-98	8270	<1.00 mg/L
Benzo(g,h,i)perylene	08-06-98	8270	<1.00 mg/L
Benzo(k)fluoranthene	08-06-98	8270	<1.00 mg/L
Benzyl Alcohol	08-06-98	8270	<1.00 mg/L
Bis(2-chloroethoxy)methane	08-06-98		<1.00 mg/L
Bis(2-chloroethyl)cther	08-06-98	8270 8270	<1.00 mg/L
Butylbenzylphthalate	08-06-98	8270	<1.00 mg/L
Chrysene	08-06-98	8270	<1.00 mg/L
Di-n-Butylphthalate	08-06-98	8270	<1.00 mg/L
Di-n-octylphthalate	08-06-98	8270	<1.00 mg/L
Dibenzo(a,h)anthracenc	08-06-98	8270	<1.00 mg/L
Dibenzofuran	08-06-98	8270	<1.00 mg/L
Diethylphthalate	08-06-98	8270	<1.00 mg/L
Dimethylphthalate	08-06-98	8270	<1.00 mg/L
Fluoranthene	08-06-98	8270	<1.00 mg/L
Fluorene	08-06-98	8270	<1.00 mg/L
Hexachlorocyclopentadiene	08-06-98	8270	<1.00 mg/L
Indeno(1,2,3-cd)pyrene	08-06-98	8270	<1.00 mg/L
Isophorone	08-06-98	8270	<1.00 mg/L

Control #: 1805489-2			
Survey #: WS001465D			PAGE
N-Nitrosodinpropylamine	08-06-98	8270	ARV
N-Nitrosodiphenylamine	08-06-98	8270	<1.00 mg
Naphthalene	08-06-98	8270	
Phenanthrone	08-06-98	8270	
Phenol	08-06-98	8270	<1.00 mg
Pyrene	08-06-98	8270	<1.00 mg
bis(2-Chloroisopropyl)ether	08-06-98	8270	<1.00 mg
bis(2-ethylhexyl)Phthalate	08-06-98	8270	<1.80 mg
2-Methylphenol	08-06-98	8270	1.15 mg
3+4-Methylphenol	08-06-98	8270	<1.00 mg
1,4-Dichlorobenzene	08-06-98	8270	<1.00 mg
2,4-Dinitrotoluenc	08-06-98	8270	<1.00 mg
Hexachlorobenzene	08-06-98	8270	<1.00 mg <1.00 mg
Hexachlorobutadienc	08-06-98	8270	<u> </u>
Hexachloroethane	08-06-98	8270	<1.00 mg <1.00 mg
Nitrobenzene	08-06-98	8270	
Pentachlorophenol	08-06-98	8270	
Pyridine	08-06-98	8270	<del></del>
2,4,5-Trichlorophenol	08-06-98	8270	<1.00 mg/
2,4,6-Trichlorophenol	08-06-98	8270	<1.00 mg/

P.08/08

Control #: 1805489-2

Survey #: WS001465D

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ARVIN

Sample Description:

SAMPLE HANDLING DATES

Date Sampled:

07-23-98

Date Received:

07-27-98

LEACHING/EXTRACTION DATES

Method

**Date** 

**BNA** Extraction:

3510

07-28-98

The analysis contained herein are performed to provide Safety-Kleen Corp. and its customers a means of determining compliant waste handling practices that are consistent with applicable permits and processing capability.



## SAFETY-KLEEN SAMPLE ANALYSIS REPORT Water Services - Recycle Systems Report

**SAMPLE DESCRIPTION:** 

PAGE

MOP WATER

REPORT DATE:

8/27/98

S-K REPRESENTATIVE: RICK WEAVER

BRANCH #: 407602

CONTROL #:

1805492-7

SURVEY #:

LAB #:

WS001465 9805492

CUSTOMER #:

Generator:

**ARVIN** 

101 HURRICANE ST. FRANKLIN, IN 46113

(317) 346-2851

Attention:

DAN BOUCHER

The enclosed Safety-Kleen report contains the analyses required to calculate the size of the system and service interval required.

This calculation is only an estimate based on the sample obtained. It may be necessary to vary the system size or service interval after the unit has been in place for awhile.

If you have any question regarding the above analysis, please contact Customer Service at (773)825-7338

Continued on next page

### CONTAMINATED MATERIAL FEED

	Date	EPA SW846	Results
Analyte	Analyzed	Method	mg/L Units
Oil & Grease	7/29/98	413.1	1010 ppm
Total Suspended Solids	7/28/98	160.2	2810 ppm
pH	7/28/98	9040	6.6
Flow Rate	7/28/98		68 mL/min

# CONTAMINATED MATERIAL PERMEATE

	Date	EPA SW846	Results
Analyte	Analyzed	Method	mg/L Units
Oil & Grease	5/4/98	413.1	454 ppm
Total Suspended Solids	5/4/98	160.2	373 ppm

### SYSTEM INFORMATION

Cleaner Manufacturer	N/A
Cleaner	N/A
Percent Organies Removed	55%
Percent Total Suspended Solids Removal	87%
Dump Frequency	1 day
Days Since Last Cleanout	1 day
Operating Temperature	72 F
Tank Size	500 gal
Contaminated Flow As Percent of Water	50%

Continued on next page

1 773 825 7850

PAGE.01

<sup>\*\*</sup> Less than 92% may not be recyclable due to low Total Organic Carbon recovery.

<sup>\*\*\*</sup> Less than 70% may result in lower than expected output from unit.

# SYSTEM SIZING INFORMATION

Estimated Service Interval:

Based on Combined Oil & Solids Results:

2-6 week(s)

Estimated System Size (number of Stacks):

Batch Process; single pass through Aqueous Processing Uni

5 stack (s)

Continual Recycling Process:

38

## Sample Description:

MOP WATER

## SAMPLE HANDLING DATES

Date Sampled:

7/23/98

Date Received:

7/27/98

The analysis contained herein are performed to provide Safety-Kleen Corp. and its customers a means of determining compliant waste handling practices that are consistent with applicable permits and processing capability.

AUG 27 '98 21:23

1 773 825 7850

PAGE.02



# SAFETY-KLEEN SAMPLE ANALYSIS REPORT Water Services -- Discharge Systems Report

SAMPLE DESCRIPTION:

PAGE 1

**REPORT DATE: 08-27-98** 

S-K REPRESENTATIVE: RICK WEAVER

BRANCH #: 407602

CONTROL #: 1805487-7 SURVEY #: WS001466D

LAB #: 9805487

CUSTOMER #:

**ORDINANCE REGION:** 

Generator: ARVIN

1001 HURRICANE ST FRANKLIN, IN 46131

(317)346-2951

Attention: DAN BOUCHER

The enclosed Discharge Monitoring Analysis performed on the sample in question has identified certain parameter(s) which DID EXCEED permit/local ordinance limits on the dates in which these respective tests were conducted. Those parameter(s) are as follows: Copper.

The enclosed analysis report identifies concentration levels of specific pollutants in the sample only for the dates stated and according to the methods listed. Local ordinance limits may have been used if permit limits were not available. Safety-Kleen makes no representations, and hereby disclaims all representations, expressed or implied, other than as expressly stated in the attached analysis report for the dates listed. In addition, the analysis report does not absolve the generator from any liability that may arise in connection with the violation of any applicable regulatory requirements.

Safety-Kleen Corp. Technical Center

If you have any questions regarding the above analysis, please contact Customer Service at (773)825-7338.

Analyte	Date Analyzed	EPA Method	Ordinance Limit Result	
1,1,1,2-Tetrachloroethane	08-04-98	. 8240	<0.050	
1,1,1-Trichloroethane	08-04-98	8240	<0.050	
1,1,2,2-Tetrachloroethane	08-04-98	8240	<0.050	
1,1,2-Trichloroethanc	08-04-98	8240	<0.050	
1,1-Dichloroethane	08-04-98	8240	<0.050	
1,2,3-Trichlorobenzene	08-04-98	8240	<0.050	
1,2,3-Trichloropropane	08-04-98	8240	<0.050	
1,2,3-Trimethylbenzenc	08-04-98	8240	<0.050	
1,2,4-Trichlorobenzene	08-04-98	8240	<0.050	
1,2,4-Trimethylbenzene	08-04-98	8240	<0.050	
1,2-Dibromo-3-Chloropropa	08-04-98	8240	<0.050	
1,2-Dibromoethane	08-04-98	8240	<0.050	
1,2-Dichlorobenzene	08-04-98	8240	<0.050	
1,2-Dichloroethene(total)	08-04-98	8240	<0.050	
1,2-Dichloropropane	08-04-98	8240	<0.050	
1,3,5-Trimethylbenzene	08-04-98	8240	* * * ********************************	
1,3-Dichlorobenzene	08-04-98	8240	<0.050	
1,3-Dichloropropane	08-04-98	8240	<0.050	
1,4-Dichloro,2-Butene	08-04-98	8240	<0.050	
1-Chlorobutane	08-04-98	8240	<0.050	
1-Nitropropane	08-04-98	8240	<0.050	
2,2-Dichloropropane	08-04-98	8240	<0.500	
2-Chloroethylvinyl Ether	08-04-98	8240	<0.050	
2-Chlorotoluene	08-04-98	8240	<0.050	
2-Hexanone	08-04-98	8240 8240	<0.050	
2-Nitropropane	08-04-98		<0.100	
4-Chlorotoluene	08-04-98	8240	<0.500	
4-Isopropyltoluene	08-04-98	8240	<0.050	
4-Methyl-2-Pentanone		8240	<0.050	
Acetone Acetone	08-04-98	8240	<0.050	
Acetonitrile	08-04-98	8240	0.302	
Acrylonitrile	08-04-98	8240	<0.500	
Allyl Chloride	08-04-98	8240	<0.050	
Benzyl Chloride	08-04-98	8240	<0.050	
Bromobenzene	08-04-98	8240	<0.050	
Bromochloromethane	08-04-98	8240	<0.050	
Bromodichloromethane	08-04-98	8240	<0.100	
Bromoform	08-04-98	8240	<0.050	
Bromomethane	08-04-98	8240	<0.050	
Carbon Disulfide	08-04-98	8240	<0.050	
	08-04-98	8240	<0.050	
Chloroethane	08-04-98	8240	<0.050	
Chloromethane	08-04-98	8240	<0.050	
Cyclohexanone	08-04-98	8240	<0.400	

ontrol #: 1805487-7 Survey #: WS001466D			PA
Dibromochloromethane	08-04-98	2242	<i>j</i>
Dibromomethane	08-04-98	8240	<0.050
Dichlorodifluoromethane	08-04-98	8240	<0.050
Diethyl ether	08-04-98	8240	<0.050
Ethyl Methacrylate	08-04-98	8240	<0.050
Ethylbenzene	08-04-98	8240	<0.050
Hexane	08-04-98	- 8240	<0.050
Iodomethane	08-04-98	8240	<0.050
Isopropylbenzene		8240	<0.050
Methacrylonitrile	08-04-98	8240	<0.050
Methyl Methacrylate	08-04-98	8240	<0.050
Methyl-t-butyl ether	08-04-98	8240	<0.050
Methylene Chloride	08-04-98	8240	<0.050
Naphthalene	08-04-98	8240	<0.050
O-Xylene	08-04-98	8240	<0.050
Pentachloroethane	08-04-98	8240	<0.050
Styrene	08-04-98	8240	<0.050
Tetrahydrofuran	08-04-98	8240	<0.050
Toluene	08-04-98	8240	<0.050
Trichlorofluoromethane	08-04-98	8240	<0.050
Vinyl Acetate	08-04-98	8240	<0.050
Xylenes(total)	08-04-98	8240	<0.100
cis-1,2-Dichloroethene	08-04-98	8240	<0.050
cis-1,3-Dichloropropene	08-04-98	8240	<0.050
iso-Butanol	08-04-98	8240	<0.050
m+p-Xylenes	08-04-98	8240	<10.00
n-Butylbenzene	08-04-98	8240	<0.050
n-Propylbenzene	08-04-98	8240	<0.050
sec-Butylbenzene	08-04-98	8240	<0.050
tert-Butylbenzene	08-04-98	8240	<0.050
trans-1,2-Dichloroethene	08-04-98	8240	<0.050
trans-1,3-Dichloropropene	08-04-98	8240	<0.050
Benzene	08-04-98	8240	<0.050
Carbon Tetrachloride	08-04-98	8240	<0.050
Chlorobenzene	08-04-98	8240	<0.050
Chloroform	08-04-98	8240	<0.050
1,4-Dichlorobenzene	08-04-98	8240	<0.050
1,2-Dichloroethane	08-04-98	8240	<0.050
1,1-Dichloroethylene	08-04-98	8240	<0.050
Hexachlorobutadiene	08-04-98	8240	<0.050
Hexachloroethane	08-04-98	8240	<0.050
Methyl Ethyl Ketone	08-04-98	8240	<0.050
Tetrachloroethylene	08-04-98	8240	<0.100
Trichloroethylene	08-04-98	8240	<0.050
Vinyl Chloride	08-04-98	8240	<0.050
· mys Canorado	08-04-98	8240	<0.050

Control #: 1805487-7 Survey #: WS001466D

# CONTAMINATED MATERIAL FEED

Analyte	Date Analyzed	EPA Method	Ordinance Limit Result ppm ppm Units
Extractable Organics	07-29-98	413.1	410 ppm
Total Suspended Solids	07-28-98	160.2	426 ppm
рН	07-28-98	9040	5.2

# METALS IN DISCHARGE MONITORING

Analyte	Date Analyzed	EPA Method	Ordinance Lim	t Result
Copper	07-28-98	6010	0.743	4.36
Nickel	07-28-98	6010	6.5103	<0.060
Zinc	07-28-98	6010	29.4332	0.336
Arsenic	07-28-98	6010	2.1435	<0.100
Cadmium	07-28-98	6010	0.323	<0.010
Chromium	07-28-98	6010	7.302	<0.010
Lead	07-28-98	6010	0.5935	<0.080

# MISCELLANEOUS DISCHARGE MONITORING

	Date	EPA	Ordinance Limit	
Analyte	Analyzed	Method	mg/L Resul	Units
Ammonia-Nitrates	08-04-98	350.2	0.82	
Biological Oxygen Demand	08-04-98	405.1		3 mg/L
Chemical Oxygen Demand	08-06-98	410.4	218	
Oil & Grease	07-29-98	413.1		2 ppm
Total Chloride	08-05-98	325.3	<0.	
Total Dissolved Solids	07-28-98	160.1	23	
Total Suspended Solids	07-28-98	160.2		
Total Cyanide	07-29-98	335.2	0.1962 <0.	
Total Sulfide	08-02-98	376.1	0.1902 <0. <1.	<u> </u>

# MISCELLANEOUS

<b>m</b>	Date	EPA	Ordinance Limit			
Test	Analyzed	Method	ppm	Result	Units	
Phosphate, Total	08-05-98	365.2	<del>romania de la esta a de la compania</del>	<1.4	ppm	
Total PCB	08-05-98	NONE		<1.0		

# SEMI-VOLATILES

	Date	EPA	Ordinance Limit Result
Analyte	Analyzed	Method	ppm ppm Units
1,2,4-Trichlorobenzene	07-29-98	8270	<0.100 mg/L
1,2-Dichlorobenzene	07-29-98	8270	<0.100 mg/L
1,3-Dichlorobenzene	07-29-98	8270	<0.100 mg/L
2,4-Dichlorophenol	07-29-98	8270	<0.100 mg/L
2,4-Dinitrophenol	07-29-98	8270	<0.500 mg/L
2,6-Dinitrotoluene	07-29-98	8270	<0.100 mg/L
2-Chloronaphthalene	07-29-98	8270	<0.100 mg/L
2-Chlorophenol	07-29-98	8270	<0.100 mg/L
2-Methylnaphthalene	07-29-98	8270	<0.100 mg/L
2-Nitroaniline	07-29-98	8270	<0.100 mg/L
2-Nitrophenol	07-29-98	8270	<0.100 mg/L
3,3'-Dichlorobenzidine	07-29-98	8270	<0.100 mg/L
3-Nitroaniline	07-29-98	8270	<0.500 mg/L
4,6-Dinitro-2-methylphenol	07-29-98	8270	<0.500 mg/L
4-Bromophenyl-phenylether	07-29-98	8270	<0.100 mg/L
4-Chloro-3-Methylphenol	07-29-98	8270	0.534 mg/L
4-Chloroaniline	07-29-98	8270	<0.100 mg/L
4-Chlorophenyl-phenylether	07-29-98	8270	<0.100 mg/L
4-Nitroaniline	07-29-98	8270	<0.100 mg/L
4-Nitrophenol	07-29-98	8270	<0.500 mg/L
Acenaphthene	07-29-98	8270	<0.100 mg/L
Acenaphthylene	07-29-98	8270	<0.100 mg/L
Anilinc	07-29-98	8270	<0.100 mg/L
Anthracene	07-29-98	8270	<0.100 mg/L
Benzo(a)Anthracene	07-29-98	8270	
Вепло(а)рутепе	07-29-98	8270	
Benzo(b)fluoranthene	07-29-98	8270	
Benzo(g,h,i)perylene	07-29-98	8270	
Benzo(k)fluoranthene	07-29-98	8270	
Benzoic Acid	07-29-98	8270	
Benzyl Alcohol	07-29-98	8270	The state of the s
Bis(2-chloroethoxy)methane	07-29-98	8270	<0.100 mg/L
Bis(2-chloroethyl)ether	07-29-98	8270	<0.100 mg/L
Butylbenzylphthalate	07-29-98	8270	<0.100 mg/L
Chrysene	07-29-98	8270	<0.100 mg/L
Di-n-Butylphthalate	07-29-98	8270	<0.100 mg/L
Di-n-octylphthalate	07-29-98	8270	<0.100 mg/L
Dibenzo(a,h)anthracene	07-29-98	8270	<0.100 mg/L
Dibenzofuran	07-29-98	8270	<0.100 mg/L
Diethylphthalate	07-29-98	8270	<0.100 mg/L
Dimethylphthalate	07-29-98	8270	<0.100 mg/L
Fluoranthene	07-29-98	8270	<0.100 mg/L
Fluorene	07-29-98	8270	<0.100 mg/L
Hexachlorocyclopentadiene	07-29-98	8270	<0.100 mg/L
Indeno(1,2,3-cd)pyrene	07-29-98	8270	<0.100 mg/L
		02/V	<0.100 mg/L

Control #: 1805487-7			PAGE 6
Survey #: WS001466D			ARVIN
Isophorone	07-29-98	8270	<0.100 mg/l
N-Nitrosodinpropylamine	07-29-98	8270	<0.100 mg/l
N-Nitrosodiphenylamine	07-29-98	8270	<0.100 mg/l
Naphthalene	07-29-98	8270	<0.100 mg/l
Phonanthrene	07-29-98	8270	<0.100 mg/L
Phenol	07-29-98	. 8270	<0.100 mg/L
Pyrene	07-29-98	8270	<0.100 mg/L
bis(2-Chloroisopropyl)ether	07-29-98	8270	<0.100 mg/L
bis(2-ethylhexyl)Phthalate	07-29-98	8270	<0.100 mg/L
2-Methylphenol	07-29-98	8270	<0.100 mg/L
3+4-Methylphenol	07-29-98	8270	<0.100 mg/L
1,4-Dichlorobenzene	07-29-98	8270	<0.100 mg/L
2,4-Dinitrotoluene	07-29-98	8270	<0.100 mg/L
Hexachlorobenzene	07-29-98	8270	<0.100 mg/L
Hexachlorobutadiene	07-29-98	8270	<0.100 mg/L
Hexachloroethane	07-29-98	8270	<0.100 mg/L
Nitrobenzene	07-29-98	8270	<0.100 mg/L
Pentachlorophenol	07-29-98	8270	<0.500 mg/L
Pyridine	07-29-98	8270	<0.100 mg/L
2,4,5-Trichlorophenol	07-29-98	8270	<0.100 mg/L
2,4,6-Trichlorophenol	07-29-98	8270	<0.100 mg/L

Control #: 1805487-7
Survey #: WS001466D
ARVIN
Sample Description:

SAMPLE HANDLING DATES

Date Sampled:

07-23-98

Date Received:

07-27-98

LEACHING/EXTRACTION DATES

Method

Date

BNA Extraction:

3510

07-28-98

The analysis contained herein are performed to provide Safety-Kleen Corp. and its customers a means of determining compliant waste handling practices that are consistent with applicable permits and processing capability.



# SAFETY-KLEEN SAMPLE ANALYSIS REPORT Water Services - Recycle Systems Report

SAMPLE DESCRIPTION:

**PAGE** 

1

OIL

REPORT DATE:

8/27/98

S-K REPRESENTATIVE: RICK WEAVER

BRANCH #: 407602

CONTROL #:

1805486-5

SURVEY #:

LAB#:

WS001466

CUSTOMER #:

9805486

Generator:

**ARVIN** 

101 HURRICANE ST. FRANKLIN, IN 46131

(317) 346-2851

Attention:

DAN BOUCHER

The enclosed Safety-Kleen report contains the analyses required to calculate the size of the system and service interval required.

This calculation is only an estimate based on the sample obtained. It may be necessary to vary the system size or service interval after the unit has been in place for awhile.

If you have any question regarding the above analysis, please contact Customer Service at (773)825-7338

Continued on next page

P.O. Box 92050

# CONTAMINATED MATERIAL FEED

	Date	EPA SW846	Results
Analyte	Analyzed	Method	mg/L Units
Oil & Grease	7/29/98	413.1	410 ppm
Total Suspended Solids	7/28/98	160.2	426 ppm
pH	7/28/98	9040	5.2
Flow Rate	7/28/98		41 mL/min

# CONTAMINATED MATERIAL PERMEATE

	Date	EPA SW846	Results
Analyte	Analyzed	Method	mg/L Units
Oil & Grease	7/29/98	413.1	52 ppm
Total Suspended Solids	7/28/98	160.2	28 ppm

# SYSTEM INFORMATION

Cleaner Manufacturer	N/A
Cleaner	N/A
Percent Organics Removed	87%
Percent Total Suspended Solids Removal	93%
Dump Frequency	1 day
Days Since Last Cleanout	4 days
Operating Temperature	72 F
Tank Size	55 gal
Contaminated Flow As Percent of Water	50%

Continued on next page

AUG 27 '98 21:43

1 773 825 7850

PAGE.01

<sup>\*\*</sup> Less than 92% may not be recyclable due to low Total Organic Carbon recovery.

<sup>\*\*\*</sup> Less than 70% may result in lower than expected output from unit.

# SYSTEM SIZING INFORMATION

Estimated Service Interval:

Based on Combined Oil & Solids Results:

8-12 week(s)

Estimated System Size (number of Stacks):

Batch Process; single pass through Aqueous Processing Uni

stack (s)

Continual Recycling Process:

1

## Sample Description:

OIL

# SAMPLE HANDLING DATES

Date Sampled:

7/23/98

Date Received:

7/27/98

The analysis contained herein are performed to provide Safety-Kleen Corp. and its customers a means of determining compliant waste handling practices that are consistent with applicable permits and processing capability.

AUG 27 '98 21:44

1 773 825 7850

PAGE.02



# Indiana Engineering & Geological Services

GROUP, INC.

(317) 773-5020 FAX (317) 773-5046 Toll Free - (888) 773-IEGS

15211 HERRIMAN BOULEVARD NOBLESVILLE, IN 46060-4230

Arvin Industries, Inc Attention: Mr. Danny Boucher 1001 North Hurricane St. Franklin, IN 46131

August 12, 1998

RE:

Geoprobe® Sampling

IEGS Project No. 0898A

Dear Mr. Boucher:

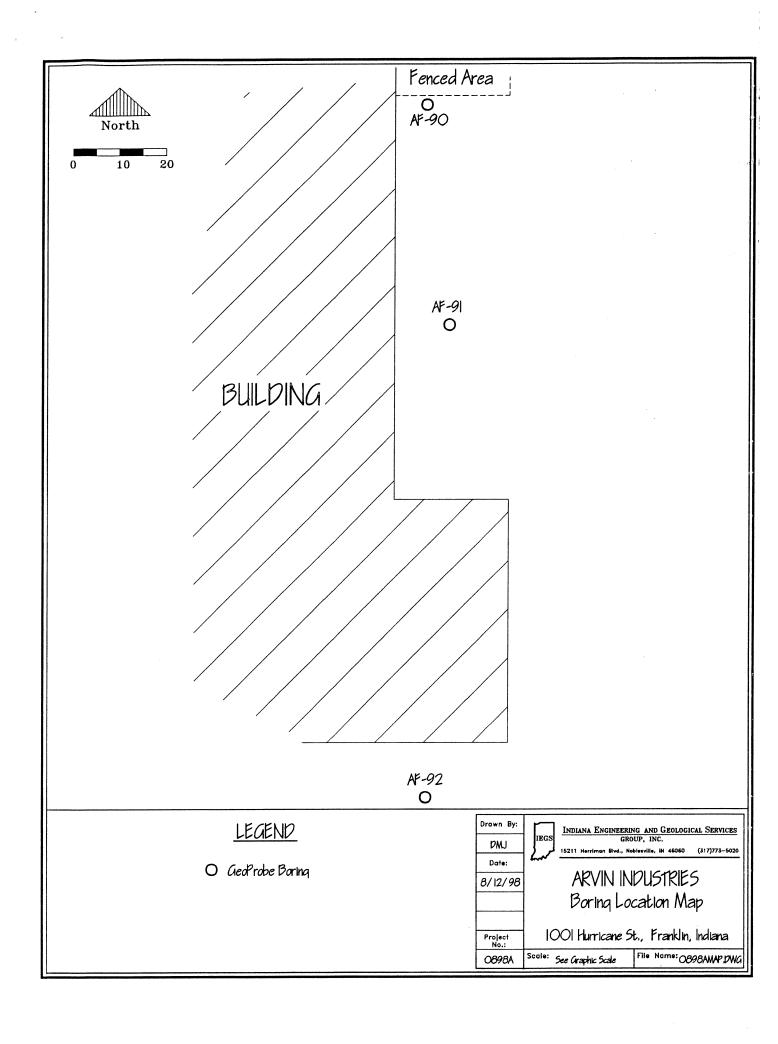
Accompanying this letter please find the boring location map and boring logs from the recently completed Geoprobe® sampling conducted at your facility. I trust you will find this information in order. Also enclosed are copies of the Chain of Custody documentation for the samples submitted to NET at your request.

Please feel free to call should have any questions or need additional assistance.

Sincerely,

David M. Johnson

Attachment



Project No: 0898A

Log of Borehole: AF-90

LB = Large Bore

Location: 1001 Hurricane St.

City, State: Franklin, IN Geologist: Sean McVey

Depth Lithology	Description	Recovery	Sample Number	Sample Type	Symbol	Volatile Organic Concentration ppm 5 15 25 35 45 55	Comments
2	GRAVEL AND SAND With pieces of concrete. CLAY Brown with no odor.  Dark brown/gray, moist.		·				
5	SANDY CLAY With some small gravel. CLAY Brown, moist, with black stain at 5.0 ft.to 5.5 ft		AF-90-6	MC			Sample taken for TPH analysis at 11:00.
9	With gravel, very moist.  SAND Brown, very moist with some clay.  CLAY Brown, very dense.		AF-90-10	МС			Sample taken for chromium analysis at 11:02.
13-11-11-11-11-11-11-11-11-11-11-11-11-1	End of Borehole  Drilling Contracto			die		•	Boring plugged with bentonite.

Drilling Method: Geoprobe Direct Push

Date Drilled: 08/07/98

Project No: 0898A

Log of Borehole: AF-91

Location: 1001 Hurricane St.

City, State: Franklin, IN Geologist: Sean McVey

Depth Lithology	Description	Recovery	Sample Number	Sample Type	Symbol	Volatile Organic Concentration ppm 5 15 25 35 45 55	Comments	
-XXXX	GRAVEL AND SAND				И			
1	SANDY CLAY Brown with gravel.  CLAY Brown, dense, with small gravel.		AF-91-2	мс		49	Sample taken for TPH	
3 ====	Black and brown at 2.0 ft.  Brown, dense, with some small gravel at 3.0 ft.		7.1. 3.1.2		Ø		analysis at 12:00.  Sample taken for TPH	
	SAND AND GRAVEL		AF-91-4	MC			analysis at 12:10.	
5 6 7 7 8 8 9	Black, moist, with some clay.  CLAY  Brown, very dense.							
10—	End of Borehole		AF-91-10	МС			Sample taken for chromium analysis at 12:15.  Boring plugged	
13—1 13—1 14—1	End of boreliole						with bentonite.	
	Drilling Contracto	or: IEG	ss			MC = Macro Core		
JIE	GS Drilling Method:	Geopro		'ush		LB = Larg		
6~~	Date Drilled: 08/0	07/98						

Project No: 0898A

Location: 1001 Hurricane St.

Log of Borehole: AF-92

Eddadii. 1001 Hamoune

City, State: Franklin, IN

Geologist: Sean McVey

Depth	Description	Recovery	Sample Number	Sample Type	Symbol	Volatile Organic Concentration ppm 5 15 25 35 45 55	Comments
1-	GRAVEL AND SAND					0 5 <u>0</u> .3	
3	CLAY Dark gray, with strong odor.		AF-92-4	MC	A TANA A	29.6	Sample taken for TPH analysis at 14:00.
9 10 11 12 12	SANDY CLAY Brown, very moist.  CLAY Brown, very dense.		AF-92-10	мс		11.9	Sample taken for chromium analysis at 14:15.  Boring plugged
13-	End of Borehole						with bentonite.

IEGS

Drilling Contractor: IEGS

Drilling Method: Geoprobe Direct Push

Date Drilled: 08/07/98

MC = Macro Core

LB = Large Bore

NATIONAL ENVIRONMENTAL	CHAIN OF CUSTODY RECORD	BEDORT TO. DA Boschor
® TESTING, INC.	ADDRESS 1001 N. HURBICANE TEAURING THE PHONE 317 346-2859 FRX 317-346-2819 PROJECT NAME (100)	16/3/ INVOICE TO: DAN BOSE 32
	PROJECT NUMBER	OTE NO.
SAMPLED BY BOUCHER	ANALYSES	
	SIGNATURE # and Type of Containers	compliance monitoring?  Yes No Lead to regulatory  Yes No Lead of the monitoring of
DATE TIME SAMPLE ID/DESCRIPTION	ХІЯТАМ ВАЯБ ЧМОО НОВИ ВОВОД БОИН НИОЗДНОЗДНОЗДНОЗДНОЗДНОЗДНОЗДНОЗДНОЗДНОЗДН	Which regulations apply: RCRA NPDES Wastewater UST Drinking Water Other COMMENTS
8/15811:00 AF-90		
16-70 84/8	X X X X X X X X X X X X X X X X X X X	
3/2 A 7:-92	X X	
	5=55	
	221	
	59,01	
ا المريد	11 / d	
	18 SH	
CONDITION OF SAMPLE: BOTTLES INTACT? YES / NO FIELD FILTERED? YES	COC SEALS PRESENT AND INTACT? YES / NO VOLATILES FREE OF HEADSPACE? YES / NO	TEMPERATURE UPON RECEIPT:  Bottles supplied by NET? (TES) / NO
SAMPLE REMAINDER DISPOSAL: REŢURN SAI	RETURN SAMPLE REMAINDER TO CLIENT VIA I REQUEST NET TO DISPOSE OF ALL SAMPLE REMAINDERS	DATE \$-7-98
PELINQUISHEDIAM DATE TIME	RECEIVED BY: DATE	TIME RECEIVED FOR NET BY:
METHOD OF SHIPMENT  16/5 Dep	REMARKS:	



REPORT TO: DAW BOUCKIER NET QUOTE NO. INVOICE TO:\_ P.O. NO. 1519h (77 NIT) 16131 PHONE 317 346 - 2851 FAX 317 PROJECT NAME ACCATION FIGHT PUBLIC PUBLIC CHAIN OF CUSTODY RECORD COMPANY HEVILD EXMAUST ADDRESS 100 1 N. HUPRICANJE FIRM PHONE 317 346 - 2851 FAX 31 PROJECT MANAGER PROJECT NUMBER\_

CAMPLED BY	17. N. A.				ANAIVOEC		
MCAN MICHAI	7), 11/1.						To assist us in selecting the proper method
	SIGNATURE		<u>'</u>				Is this work being conducted for regulatory Yes No Vontile Compliance monitoring?
(PRINT NAME) SIG	SIGNATURE	# and Type of Containers	81 h	MO			Is this work being conducted for regulatory enforcement action?  Yes No
DATE TIME SAMPLE ID/DESCRIPTION	XIRTAM BARD 9MOD	Н <sup>5</sup> 2О <sup>⊄</sup> НИО <sup>3</sup> И <sup>©</sup> ОН	нанто	Morning 12825			Which regulations apply: RCRA NPDES Wastewater UST Drinking Water Other None
317 1110 AF 70-6	X X	- ual	7	-			COMMENIS
37 162 AF 90-10	×	2	_	×			
2/7 1200 SF-91-2	×		2				
87 1211 AF-91-4	λ		_				
37 1215 AF-91-10	X		-	×			
25-10 202 L9	λ		2/				
17/215 44-92-10	¥		-	*			
87 2:34 ASBESTUS	52			4			
	2		-				
,						-	
						-	_
CONDITION OF SAMPLE: BOTTLES INTACT? (ES/NO FIELD FILTERED? YES/NO	ES/NO ES/NO	COC SEALS VOLATILES	PRESEN FREE OF	COC SEALS PRESENT AND INTACT? (ES) NO VOLATILES FREE OF HEADSPACE? (FE) NO	YES/NO	— ш	TEMPERATURE UPON RECEIPT: 2,2°C. Bottles supplied by NET? (YES)/ NO
SAMPLE REMAINDER DISPOSAL: RETURN SAM I REQUEST NI	RETURN SAMPLE REMAINDER TO CLIENT VIA	CLIENT VIA	AINDERS	Real	SHIVE.		DATE 7/3/98
RELINQUISHED, BY: , , , , , , , , , , , , , , , , , , ,	RECEIVED BY:			RELINQUISHED BY:		DATE	TIME RECEIVED FOR NET BY:
1:17 3 2 7:12	4					2/7/98	21:61
METHOD OF SHIPMENT	REMARKS:	80 N	200	NUSSTIGATION			



Tel: (317) 842-4261 Fax: (317) 842-4286

## ANALYTICAL REPORT

Mr. Dan Boucher ARVIN INDUSTRIES 1531 13th Street Columbus, IN 47201

07/31/1998

NET Job Number:

98.04955

Page 1 of 2

Enclosed are the Analytical Results for the following samples submitted to NET, Inc. Indianapolis Division for analysis:

Project Description: FRANKLIN PLANT

Sample Number	Sample Description		Date Taken	Date Received
213235 213236 213237	AF-79 AF-80 AF-81		07/20/1998 07/20/1998 07/20/1998	07/20/1998 07/20/1998 07/20/1998

National Environmental Testing, Inc. certifies that the analytical results contained herein apply only to the specific samples analyzed.

Reproduction of this analytical report is permitted only in its entirety.

Project Representative

Lan Barner



Tel: (317) 842-4261 Fax: (317) 842-4286

# **ANALYTICAL REPORT**

Mr. Dan Boucher ARVIN INDUSTRIES 1531 13th Street Columbus, IN 47201

07/31/1998

Job No.: 98.04955

Page 2 of 2

Date Received: 07/20/1998

Job Description: FRANKLIN PLANT

Sample Numbe	er / Sample I.D.		Sa	mple Date/	Analyst &	the state of the s	Reporting
Parameters	te t	Result	Flaq	Units	Date Analyzed	Method	Limit
213235	AF-79		07/2	0/1998			
Chromium,	ICP	19	q	mg/kg	psc / 07/28/1998	SW 6010	<0.50
TPH - GC/F	ID Volatile (NONAQ)	<20.		mg/kg	sat / 07/27/1998	SW 8015M	<20.
TPH - GC S	emiVolatile (NON-AQ)	21,000.	o,d1x100	mg/kg	jcb / 07/29/1998	SW 8015M	<2000.
TPH Extrac	tion-Nonaqueous	Complete			cjs / 07/23/1998	SW 8015M	Complete
213236	AF-80		07/2	0/1998			
Chromium,	ICP	6.2		mg/kg	psc / 07/28/1998	SW 6010	<0.50
TPH - GC/F	ID Volatile (NONAQ)	170	c,g	mg/kg	sat / 07/25/1998	SW 8015M	<20.
TPH - GC Se	emiVolatile (NON-AQ)	8,100.	a+od1x50	mg/kg	jcb / 07/29/1998	SW 8015M	<1000.
TPH Extract	tion-Nonaqueous	Complete			cjs / 07/23/1998	SW 8015M	Complete
213237	AF-81		07/20	0/1998			
Chromium,	ICP	17		mg/kg	psc / 07/28/1998	SW 6010	<0.50
TPH - GC/F	ID Volatile (NONAQ)	43	c,g	mg/kg	sat / 07/25/1998	SW 8015M	<20.
TPH - GC Se	emiVolatile (NON-AQ)	3,800.	o,d1x20	mg/kg	jcb / 07/29/1998	SW 8015M	<400.
TPH Extract	tion-Nonaqueous	Complete			cjs / 07/23/1998	SW 8015M	Complete



Tel: (317) 842-4261 Fax: (317) 842-4286

## KEY TO ABBREVIATIONS

<	Less than; when appearing in the results column indicates the analyte was not detected at or above the reported value.
mg/L	Concentration in units of milligrams of analyte per Liter of sample. Measurement used for aqueous samples. Can also be expressed as parts per million (ppm).
ug/L	Concentration in units of micrograms of analyte per Liter of sample. Measurement used for aqueous samples. Can also be expressed as parts per billion (ppb).
mg/kg	Concentration in units of milligrams of analyte per kilogram of sample. Measurement used for non-aqueous samples. Can also be expressed as parts per million (ppm).
ug/kg	Concentration in units of micrograms of analyte per kilogram of sample. Measurement used for non-aqueous samples. Can also be expressed as parts per billion (ppb).
a	Indicates the sample concentration was quantitated using a diesel fuel standard.
b	Indicates the analyte of interest was also found in the method blank.
c	Samples resembles unknown Hydrocarbon.
d1	Indicates the analyte has elevated reporting limit due to high concentration.
d2	Indicates the analyte has elevated reporting limit due to matrix.
e	Indicates the reported concentration is estimated.
f	Indicates the sample concentration was quantitated using a fuel oil standard.
g	Indicates the sample concentration was quantitated using a gasoline standard.
<b>h</b> '	Indicates the sample was analyzed past holding time.
i	Indicates the sample spike concentration was insufficient, due to high analyte concentration in the sample.
<b>j</b>	Indicates the reported concentration is below the Reporting Limit.
k	Indicates the sample concentration was quantitated using a kerosene standard.
1	Indicates an MS/MSD was not analyzed due to insufficient sample. An LCS duplicate has been provided.
m	Indicates the sample concentration was quantitated using a mineral spirits standard.
0	Indicates the sample concentration was quantitated using a motor oil standard.
p	Indicates the sample was post spiked due to sample matrix.
q	Indicates MS/MSD exceeded control limits. All other QCIs were in control.
r	Indicates the sample was received past holding time.
s	Indicates the sample concentration was quantitated using a stoddard solvent standard.
u ·	Indicates the sample was received improperly preserved and/or contained.
uj	indicates the result is under the reporting limit and considered an estimated concentration.
TCLP	Indicates the Toxicity Characteristic Leaching Procedure was performed for this analysis.
ICP GFAA	Indicates the analysis was performed using Inductively Coupled Plasma Spectroscopy.  Indicates the analysis was performed using Graphite Furnace Atomic Absorption Spectroscopy.
<b>\$</b>	Percent; To convert ppm to %, divide the result by 10,000.  To convert % to ppm, multiply the result by 10,000.
*	Reporting limits are elevated due to insufficient sample submitted by client.
Dry Weight	When indicated, the results are reported on a dry weight basis. The contribution of the moisture content in the sample is subtracted when calculating the concentration of the analyte.

moisture content in the sample is subtracted when calculating the concentration of the analyte.



# CHAIN OF CUSTODY RECORD

REPORT TO DAS BONCHEL

מחלכם	787	2 C	FAX 317 346-281	Fearlein Plant	
	COMPANY AZUIN EXHAUST	ADDRESS 1001 N. HURRICAN C	PHONE (S12) 346-2851	PROJECT NAME/LOCATION FRAM	PROJECT NUMBER

	PHONE (3/2) 346-285/ FAX 3/7 346-28/9	INVOICE TO: LAN DOJOLAR
	Fearbelin Plan	PO.NO. 3/4232
	PROJECT NUMBER	OTE NO.
SAMPLED BY 2	ANALYSES	To assist us in selecting the proper method
	SIGNATURE	Is this work being conducted for regulatory Yes
(PRINT NAME) SIG	SIGNATURE # and Type of Containers	se,
DATE TIME SAMPLE ID/DESCRIPTION	AATRIX GRAB HOI HOI HOO3 HOO4  ASOU THER	Which regulations apply: RCRA NPDES Wastewater UST Drinking Water Other None
20/2010 10 AF - 79		COMMENTS
1		- GRO + DRO
100 ST 10:15 11 F - 50	X X X X X X X X X X X X X X X X X X X	
18-7H 01:018662	X	
CONDITION OF SAMPLE: BOTTLES INTACT? YES / NO FIELD FILTERED? YES /	ES / NO COC SEALS PRESENT AND INTACT? YES / NO VOLATILES FREE OF HEADSPACE? YES / NO	TEMPERATURE UPON RECEIPT: 6.1 ° C Bottles supplied by NET (YES) NO
SAMPLE REMAINDER DISPOSAL: RETURN SAMI	RETURN SAMPLE REMAINDER TO CLIENT VIA	DATE 7-20-98
REMOUISHEDS: DATE TIME 7-20-78 10: 25	RELINOUISHED BY: DATE TO THE DATE TO THE PATE	TIME RECEIVED FOR NET BY:
METHOD OF SHIPMENT	REMARKS:	



Tel: (317) 842-4261 Fax: (317) 842-4286

## ANALYTICAL REPORT

Mr. Dan Boucher ARVIN INDUSTRIES 1001 N. Hurricane Franklin, IN 46131

08/13/1998

Sample No.: 215518 Job No.: 98.05591 P.O. NO.: 314232

Page 1

Sample Description:

ASBESTOS SAMPLE

Date Taken: 08/07/1998

Date Received: 08/07/1998

Asbestos, Bulk

Complete

ASBESTOS IDENTIFICATION

BULK SAMPLE ANALYSIS

<u>% By</u>	<u>Visual Estimation</u>
Sample Color	GR
FIBROUS ASBESTIFORMS Actinolite/Tremolite Amosite Anthophylite Chrysotile Crocidolite	ND ND ND ND 18 ND
Total Fibrous Asbestiforms	18
OTHER FIBROUS COMPONENTS Cellulose Fibrous Glass Synthetics	ND ND ND
Other	ND
NONFIBROUS COMPONENTS	82

All analyses are performed in accordance with EPA 40 CFR, Part 763, Appendix A to Subpart F using EPA's "Interim Method for the Determination of Asbestos in bulk Insulation Samples and/or the Test Method "Method for the Determination of Asbestos in Bulk Building Materials".

ND means less than 1%, and % refers to percent by volume.

Analyst: CF

Date of Analysis: 08/11/1998

Project Representative



# CHAIN OF CUSTODY RECORD

4		® TESTING, INC.	COMPANY HIKUIN EXLIAUST ADDRESS 100 1 N. HURRICANDE FIRMILIN IN 46131	REPORT TO: DAW ISQUENTEZ
			817 346 - 2851 FAX 317 346 281	.O.
				P.O. NO.
			PROJECT MANAGER	NET QUOTE NO.
SAMPLI	SKAL SKAL	SAMPLED BY MCURY	MI CLD	To assist us in selecting the proper method
(PRINT NAME)	ME)		SIGNATURE	Is this work being conducted for regulatory Yes No Yes
(PRINT NAME)	ME)	SIGNA	SIGNATURE # and Type of Containers	Yes
DATE	TIME	SAMPLE ID/DESCRIPTION	МАТЯІХ СОМР НСІ НОЗ Н2SO4 НОЗОН	Which regulations apply: RCRA NPDES Wastewater UST Drinking Water Other None
17	1/40	Acm-6		COMMENTS
2 K	1(67	1,		
2/3	802)	-16-	× ×	
18	1210	AF-91-4		
87	1215	DF-91-10	×	
27	2002	DF-52-4	X Z	
1,1	212	01-25-17		
50	2:30	4513E5705	× • • • • • • • • • • • • • • • • • • •	
-			20	
COND COND	CONDITION OF SAMPLE:	SAMPLE: BOTTLES INTACT? (ES / NO FIELD FILTERED? YES / NO	COC SEALS PRESENT AND INTACT? (ES) NO VOLATILES FREE OF HEADSPACE? ((ES)/ NO	TEMPERATURE UPON RECEIPT: 2,2%  Bottles supplied by NET? (FS) NO

PT1-ORIGINAL-WHITE PT2-NET PROJECT MANAGER-YELLOW PT3-CUSTOMER COPY-PINK

RECEIVED FOR NET BY

95/

90

DATE

DATE

RELINQUISHED BY:

RETURN SAMPLE REMAINDER TO CLIENT VIA I REQUEST NET TO DISPOSE OF ALL SAMPLE REMAINDERS

SAMPLE REMAINDER DISPOSAL:

RECEIVED BY:

00

METHOD OF SHIPM

RELINGUISHED BY

REMARKS:



Tel: (317) 842-4261 Fax: (317) 842-4286

August 14, 1998

Dear Valued Customer:

In compliance with Federal regulations pertaining to the use of Freon, be advised that NET-Indianapolis will no longer use this solvent in any of its processes. This change has been made effective August 12, 1998.

This means that Oil/Grease method changes from E-413.1 to E-1664. Method E-1664 calls for the use of hexane as the extraction solvent. The laboratory established reporting limit will stay at 5 mg/L.

Should you have any questions/ comments, please contact your Customer Service Representative.

Thank you for your business!

Tel: (317) 842-4261 Fax: (317) 842-4286

# ANALYTICAL REPORT

Mr. Dan Boucher ARVIN INDUSTRIES 1001 N. Hurricane Franklin, IN 46131

08/19/1998

NET Job Number: 98

98.05495

Page 1 of 3

Enclosed are the Analytical Results for the following samples submitted to NET, Inc. Indianapolis Division for analysis:

Project Description: FRANKLIN PLANT

Sample Number	Sample Desc	ription	Date Taken	Date Received
215223 215224 215225 215226 215227 215228	AF90-6 AF90-10 AF91-2 AF91-4 AF91-10 AF92-4		08/07/1998 08/07/1998 08/07/1998 08/07/1998 08/07/1998	08/07/1998 08/07/1998 08/07/1998 08/07/1998 08/07/1998 08/07/1998
215229	AF92-10		08/07/1998	08/07/1998

National Environmental Testing, Inc. certifies that the analytical results contained herein apply only to the specific samples analyzed.

Reproduction of this analytical report is permitted only in its entirety.

Project Representative

Tel: (317) 842-4261 Fax: (317) 842-4286

# ANALYTICAL REPORT

Mr. Dan Boucher ARVIN INDUSTRIES 1001 N. Hurricane Franklin, IN 46131

08/19/1998

Job No.: 98.05495

Page 2 of 3

Date Received: 08/07/1998

Job Description: FRANKLIN PLANT

Sample Number /	Sample I.D.			Sample Date/	Analyst &		Reporting	
Parameters		Result	Flaq	Units	Date Analyzed	Method	Limit	
215223	AF90-6			08/07/1998				
TPH (by IR) -	Solid	100		mg/kg	out / 08/17/1998	EPA 418.1M	<10.	
215224	AF90-10			08/07/1998				
Chromium, ICP		6.0		mg/kg	psc / 08/13/1998	SW 6010	<0.50	
215225	AF91-2			08/07/1998				
TPH (by IR) -	Solid	240		mg/kg	out / 08/17/1998	EPA 418.1M	<10.	
215226	AF91-4		(	08/07/1998				
TPH (by IR) -	Solid	120		mg/kg	out / 08/17/1998	EPA 418.1M	<10.	
215227	AF91-10		. (	08/07/1998				
Chromium, ICP		8.4		mg/kg	psc / 08/13/1998	SW 6010	<0.50	



Tel: (317) 842-4261 Fax: (317) 842-4286

# ANALYTICAL REPORT

Mr. Dan Boucher ARVIN INDUSTRIES 1001 N. Hurricane Franklin, IN 46131

08/19/1998

Job No.: 98.05495

Page 3 of 3

Date Received: 08/07/1998

Job Description: FRANKLIN PLANT

Sample Number	r / Sample I.D.	Result	Flaq	Sample Date/ Units	Analyst &  Date Analyzed	Method	Reporting Limit
215228	AF92-4			08/07/1998			
TPH (by IR)	- Solid	7600		mg/kg	out / 08/17/1998	EPA 418.1M	<10.
215229	AF92-10		!	08/07/1998			
Chromium, I	СР	8.9		mg/kg	psc / 08/13/1998	SW 6010	<0.50



REPORT TO: DAW BOUCHER INVOICE TO: 11 P.O. NO. 314232 NET QUOTE NO.	To assist us in selecting the proper method is this work being conducted for regulatory ves No Compliance monitoring?  Is this work being conducted for regulatory ves No Compliance monitoring?  Which regulations apply: RCRA NPDES Wastewater UST Drinking Water Other Other Comment action?  COMMENTS	TEMPERATURE UPON RECEIPT: Z, LC  Bottles supplied by NET? (ES) NO	DATE 7/6/68  TIME RECEIVED FOR NET BY:  8 19372 LONG STATE S	
CHAIN OF CUSTODY RECORD  COMPANY ARUIN EXCIPACING  ADDRESS 100 L N. HURRICANDE FRANKLIN ZN. 4613  PHONE \$12 346 - 2851  PROJECT NUMBER  PROJECT MANAGER	ANALYSES	TAND INTACT? XES / NO HEADSPACE? (FS)/ NO	E OF ALL SAMPLE REMAINDERS ROLL SAMPLE RELINQUISHED BY:    BATE	
NAL SONMENTAL NG, INC.	SAMPLED BY PRINT NAME)  DATE TIME SAMPLE ID/DESCRIPTION  SIGNATURE SAMPLE ID/DESCRIPTION  SIGNATURE SIGNAT	FIELD F SPOSAL:	- Per	

PT1. ORIGINAL WILITE DT9 NIET DD9 I CATALANIA CET CONTINUE DT9

IN UZ STIGATION



Tel: (317) 842-4261 Fax: (317) 842-4286

August 14, 1998

Dear Valued Customer:

In compliance with Federal regulations pertaining to the use of Freon, be advised that NET-Indianapolis will no longer use this solvent in any of its processes. This change has been made effective August 12, 1998.

This means that Oil/Grease method changes from E-413.1 to E-1664. Method E-1664 calls for the use of hexane as the extraction solvent. The laboratory established reporting limit will stay at 5 mg/L.

Should you have any questions/ comments, please contact your Customer Service Representative.

Thank you for your business!



Tel: (317) 842-4261 Fax: (317) 842-4286

## ANALYTICAL REPORT

Mr. Dan Boucher ARVIN INDUSTRIES 1001 N. Hurricane Franklin, IN 46131

08/13/1998

NET Job Number: 98.05160

Page 1 of 2

Enclosed are the Analytical Results for the following samples submitted to NET, Inc. Indianapolis Division for analysis:

Project Description: FRANKLIN PLANT

Sample Number	Sample Description	Date Taken	Date Received
214044	AF-85	07/28/1998	07/28/1998
214045	AF-86	07/28/1998	07/28/1998

National Environmental Testing, Inc. certifies that the analytical results contained herein apply only to the specific samples analyzed.

Reproduction of this analytical report is permitted only in its entirety.

Project Representative

Lan Barners



Tel: (317) 842-4261 Fax: (317) 842-4286

# **ANALYTICAL REPORT**

Mr. Dan Boucher ARVIN INDUSTRIES 1001 N. Hurricane Franklin, IN 46131

08/13/1998

Job No.: 98.05160

Page 2 of 2

Date Received: 07/28/1998

Job Description: FRANKLIN PLANT

Sample Numb	er / Sample I.D.	Result	Flaq	Sample Date/ Units	Analyst & Date Analyzed	Method	Reporting Limit
214044	AF-85			07/28/1998			
TPH (by II	R) - Solid ICP	21,000		mg/kg mg/kg	out / 08/03/1998 psc / 08/03/1998	EPA 418.1M SW 6010	<10. <0.50
214045	AF-86		.0	07/28/1998			
TPH (by IF		122		mg/kg mg/kg	out / 08/03/1998 psc / 08/03/1998	EPA 418.1M SW 6010	<10. <0.50

METHOU OF SHIPMENT REMARKS:	DATE TIME	INDER DISPOSAL:	CONDITION OF SAMPLE: BOTTLES INTACT? YES / NO FIELD FILTERED? YES ATO				18/18/11:30 AF-86	18/18/1134 AF- 85		DATE TIME SAMPLE ID/DESCRIPTION E	SIGNATURE		SAMPLED BY ROUCLES	PROJECT MANAGER	PROJECT	ADDRESS	ENVIRONMENTAL COMPANY	_
	Phase Relinguished By:	RETURN SAMPLE REMAINDER TO CLIENT VIA REQUEST NET TO DISPOSE OF ALL SAMPLE REMAINDERS	COC SEALS PRESENT AND INTACT? YES / NO VOLATILES FREE OF HEADSPACE? YES / NO				X	X	GRACO HILL NAME HAVE OTH TOTA	OH OO O	# and Type of Charles Charles Charles Ty 22	Petze		MANAGER	CATION TRAVEL PLAN	1001 N. Hudelcare	ARV J KX	CHAIN OF CLISTODY BECORD
	7/28/18 13:50 P. LON NET BY 7/38/90	DATE 7-27-98	TEMPERATURE UPON RECEIPT: 4.8°C. Bottles supplied by NET? (TES) NO						COMMENTS	NPDES Waste	egulator	Is this work being conducted for regulatory compliance monitoring?	To assist us in selecting the proper method	TE NO.	Po. No. 3/42	1 46/3/	REPORT TO: Day Boucher	



Tel: (317) 842-4261 Fax: (317) 842-4286

August 14, 1998

Dear Valued Customer:

In compliance with Federal regulations pertaining to the use of Freon, be advised that NET-Indianapolis will no longer use this solvent in any of its processes. This change has been made effective August 12, 1998.

This means that Oil/Grease method changes from E-413.1 to E-1664. Method E-1664 calls for the use of hexane as the extraction solvent. The laboratory established reporting limit will stay at 5 mg/L.

Should you have any questions/ comments, please contact your Customer Service Representative.

Thank you for your business!

Page 1

SHEET LARS/COL



## SHERRY LABORATORIES

REPORT Viox  TO 1001 N. Hurrican  Franklin, IN 46		PREPARED Sherry Laboratories/Columbus  BY 629 Washington Street  Suite 300  Columbus, Indiana 47201
CLIENT VIOX	CONTACT PAUL SAMPLES 1	PHONE (612) 375-0531 PAX 375-0731
FRACILITY 1001 N. Hurricans Franklin, IN 461	Certified by II	IF C-03-02 Col INF C-18-02 Mun INF C-02-02 Ftw FM-3-2 Col INF M-18-5 Mun  F Felate only to the samples tested.
MORK ID Air Compressor Ar TAKEN 6/20/00 TRANS Hand TYPE Other P.O. # 731156GM INVOICE under separate co	- ea	
SAMPLE IDENTIFICATION	THET COD	es and Miles used on this workerder
Air Compressor Area  Air Compressor Area-MS  Air Compressor Area-MSD  Air Compressor Area-Blan	AGTCLP Silver in TCLP ex- ASTCLP Arsenic in TCLP ex- RATCLP Barium in TCLP ex-	tract  tract  tract  stract  stract  stract  tract  tract  tract  tract  tract



### SHERRY LABORATORIES

LAB I.D. 0006720-01A DATE REPORTED: 07/10/00

SAMPLE DESCRIPTION AIR COMPRESSOR Area

DATE COLLECTED: 06/20/00

<u>Analyte</u>	imalys:	t Date Completed	Reference 1 Nothed	Detection <u>Limit</u>	RCPA Limit	Concentration (ppm)
Silver in TCLP extract	F <i>J</i> R	07/07/00	5 <b>W</b> 846-6010	0.1 ppm	5.0 ppma	<0.1
Arsenic in TCLP extract	FJR	07/07/00	9₩846-6010	0.2 ppm	5.0 ppm	<0.2
Barium in TCLP extract	FJR	07/07/00	8 <b>₩84</b> 6~6010	0.1 ppm	100 ppm	0.3
Cadmium in TCLP extract	fJR	07/07/00	SW846-6010	0.1 ppm	1.0 ppm	<0.1
Chromium in TCLP extract	PJR	07/07/00	SW846-6010	0.1 ppm	5.0 ppm	<0.1
Mercury in TCLP extract	FJR	06/30/00	SW846-7470	0.05 ppm	0.20 ppm	<0.05
Lead in TCLP extract	FJR	07/07/00	SW846-6010	0.1 ppm	5.0 ppm	<0.1
Selenium in TCLP extract	fjr	07/07/00	SW946-6010	0.2 ppm	1.0 ppm	<0.2
TCLP Preparation	FJR	06/26/00	SW846-1311			



LAB I.D. 9006729-01B

DATE REPORTED: 97/10/90

SAMPLE DESCRIPTION Air Compressor Ares-100

DATE COLLECTED: 06/20/00

<u>Amelyte</u>	Analyst Initials	Date Completed	Reference Method	Detection <u>Limit</u>	ECRA Linit	Componentration (ppm)
Silver in TCLF extract	РJR	07/07/00	SW846-6010	0.1 ppm	5.0 ppm	304
Arsenic in TCLP extract	PJR	07/07/00	SW846-6010	0.2 ppm	5.0 ppm	105%
Barium in TCLP extract	FJR	07/07/00	SW046-6010	0.1 ppm	100 ppm	1019
Cadmium in TCLP extract	FJR	07/07/00	SW846-6010	0.1 ppm	1.0 ppm	97%
Chromium in TCLP extract	FJR	07/07/00	SW846-6010	0.1 ppm	5.0 ppm	<b>31</b> 0
Mercury in TCLP extract	PJR	06/30/00	SW846-7470	0.05 ppm	0.20 ppm	K.O.A
Lead in TCLP extract	PJR	07/07/00	8W846~6010	0.1 ppm	5.0 ppm	984
Selenium in TCLP extract	F <i>J</i> R	07/07/00	8W846~6010	0.2 ppm	1.0 ppm	1034



LAB I.D. **9006729-91C** DATE REPORTED: **97/16/99** 

SAMPLE DESCRIPTION Air Compressor Area-MED

DATE COLLECTED: 06/20/95

lnalyta	Analys:	Complete	Reference Method	Detection <u>Limit</u>	ncra Limit	Concentration (ppm)
Silver in TCLP extract	FJR	07/07/00	SW846-6010	0.1 ppm	5.0 ppm	914
Arsenic in TCLP extract	FJR	07/07/00	8 <b>W84</b> 6-6010	0.2 рупц	5.0 ppm	106%
Barium in TCLP extract	FJR	07/07/00	SW846-6010	0.1 ppm	100 ppm	716
Cadmium in TCLP extract	FJR	07/07/00	SW846-6010	0.1 ppm	1.0 ppm	<b>914</b>
Chromium in TCLP extract	FJR	07/07/00	SW846-6010	0.1 ppm	S.O ppm	97%
Mercury in TCLP extract	PJR	06/30/00	SW846-7470	0.05 ppm	0.20 ppm	M.O.A
Lead in TCLF extract	FJR	07/07/00	SW846-6010	0.1 ppm	5.0 ppm	***
Selenium in TCLP extract	FJR	07/07/00	SW846-6010	0.2 ppm	1.0 ppm	1054



LAB I.D. <u>9006729-01D</u> DATE REPORTED: <u>97/10/90</u>

SAMPLE DESCRIPTION ALT Compressor Area-Blank DATE COLLECTED: 06/20/00

<u> </u>	Analyst	t Date	Reference	Detection	RCRA	Compentration
Analyte	Initial	Complete	Nethod	Linit	Limit	(ppm)
Silver in TCLP excract	FJR	07/07/00	6 <b>W8</b> 46-6010	0.1 ppm	5.0 ppm	<0.1
Arsenic in TCLP extract	FJR	07/07/00	SN846-6010	0.2 ppm	5.0 ppm	<0.2
Barium in TCLP extract	PJR	07/07/00	SW846-6010	0.1 ppm	100 ppm	<0.1
Cadmium in TCLP extract	FJR	07/07/00	SW846-6010	0.1 ppm	1.0 ppm	<0.1
Chromium in TCLP extract	FJR	07/07/00	SW846-6010	0.1 ppm	5.0 ppm	<0.1
Mercury in TCLP extract	FJR	06/30/00	SM846-7470	0. <b>05</b> ppm	0.20 ppm	<0.05
Lead in TCLP extract	FJR	07/07/00	SW846-6010	0.1 ppm	5.0 ppm	<0.1
Selenium in TCLP extract	FJR	07/07/00	SW846-6010	0.2 ppm	1.0 ppm	<0.2

Sieco, Inc. Engineers

SIECO

March 4, 1998

Mr. Jerry Kean Arvin Exhaust 1001 Hurricane St. Franklin, IN 46131 629 Washington Street P.O. Box 407 Columbus, Indiana 47202 Phone: 812-372-9911 FAX: 812-372-7190

Dear Mr. Kean

At the request of Arvin Exhaust, SIECO Inc. completed soil sampling and analysis at the facility located at 1001 Hurricane Street in Franklin to determine whether soil contamination exists from petroleum fluid storage and handling in the old mill area.

A Phase I Site Assessment was not performed or provided for the site. The investigation focused on the subsurface of the mill area located on the south end of the facility. Information provided indicated a history of milling machines in the room. For this reason the scope of the investigation was limited to sample analysis for total petroleum hydrocarbons (TPH).

The purpose of this investigation was to determine the presence of potential petroleum contaminants. This report was prepared to document sampling and analysis procedures and discuss analytical results of soil samples to the extent possible.

#### SAMPLING AND ANALYSIS PROCEDURES

On February 19, 1998 SIECO personnel completed sampling activities at the Site. Samples were obtained using a stainless steel hand auger. Five (5) inch cores were cut from the concrete floor by ABC Cutting Contractors so as to access the subsurface with the hand auger. Mr. Peter Newell of SIECO completed the boring and sampling activities and classified samples obtained. Samples were analyzed by Sherry Laboratories of Muncie, Indiana.

Borings were completed on the southeast side of the facility in the old mill area to determine the presence of petroleum contaminated soils. The locations of each of the borings are shown on the Site Diagram in Figure 1.

Samples were taken continuously from each boring in six (6) inch intervals. Samples were generally classified in one (1) foot intervals and field screened for organic vapors. Color, grain size, and other observations were completed for each sample. This information is shown on the soil boring logs along with HNu screening results, sample depths, and total depth of each boring. Boring logs are enclosed.

During the field event, proper sampling procedures were strictly followed. Samples to be submitted for laboratory analysis were collected in four ounce (4 oz.) glass containers with septa. After being filled, sample containers were packed on ice in coolers to maintain a 4°C sample temperature for proper preservation. To avoid possible cross contamination of samples, all reused sampling equipment was decontaminated with a phosphate-free detergent wash and tap water rinse prior to and following the collection of each sample. In

addition, disposable latex gloves were worn during the collection of samples. Proper chain of custody records were also initiated during the sampling event.

Samples were submitted to the laboratory to be analyzed for TPH using SW846 modified method 8015. TPH analyses include detection of gasoline and diesel range organic compounds. Laboratory reports are enclosed.

#### RESULTS

A total of six (6) soil probes were completed on the Site on December 5, 1997. Borings were completed to depths up to five feet. Boring locations are shown on the Site Diagram in Figure 1.

The following table summarizes the soil boring sample results for TPH:

Sample	Depth (ft)	TPH(ppm)	
B1-A	0.5 - 1.5	10,800	
B2-A	0.5 - 1.5	6,240	
B2-B	2.5 - 4.0	ND	
B3-A	2.5 - 3.5	ND	
B4-B	1.5	29,160	
B5-B	2.5 - 3.0	ND	
B5-C	3.5 - 5.0	ND	

ND = Not Detected.

B1 was taken forty-five (45) feet south of the north wall and eight (8) feet west of the east wall. Black water just below the concrete floor was initially noticed in the core hole. The soil sampled and submitted for TPH from the surface to 1.5 feet was a sandy loam with petroleum odor saturated with the water from the surface. The hand auger was driven to 2.5 feet before being obstructed from further advancement. Laboratory results indicate that 10,800 ppm TPH were found in this sample.

B2 was taken twenty eight (28) feet south of B1. No water was encountered in this boring. The two foot sandy loam strata was followed by a dark clay with a degraded petroleum odor. Two samples were submitted from this boring. The first sample from the top foot of the boring was found to contain 6,240 ppm total petroleum hydrocarbon. TPH was not detected in the sample submitted from the 2.5 to 4.0 feet. The hand auger was refused at four (4) feet.

B3 was located about 43 feet south of B2. A sample was submitted from the 2.5 to 3.5 foot interval. Although the sample had a mild petroleum odor, the laboratory did not detect TPH above the 10 ppm detection limit.

Located in the southwest corner of the room and thirty-seven feet west of B3, boring B4 was completed. The initial foot of strata was a brown sandy clay, which was followed by a dark, sandy clay with petroleum odor. An obstruction, believed to be PVC piping in the boring at 1.5 feet, impeded further advancement of the hand auger. The sample submitted

from the dark material at 1.5 feet was found to have the highest TPH in the series at 29,160 ppm.

North of B4 by forty (40) feet, boring B5 was completed to five (5) feet. Sandy loam comprised the first two feet of strata, followed by thin lens of black sand, cinders, and coal slag which was submitted for analysis as B5-B. The 3.5 to 5.0 feet sample was also submitted for TPH analysis. No TPH was found in either sample submitted.

The coring of B6, forty-two (42) feet north of B5, revealed loose packed gravel below the surface of the concrete. Hand borings were attempted through the gravel but later determined futile due to cave-in. The gravel was very clean and is believed to be more than one foot deep.

## CONCLUSIONS AND RECOMMENDATIONS

It is evident based upon the subsurface investigation and the laboratory results that former operations in the area have impacted the subsurface. Petroleum contamination was found within the first two (2) feet of soil. The highest concentration of TPH was found in boring B4 at 29,160 ppm. This sample was taken from 1.5 feet in depth. The total depth of TPH contamination could not be determined by the sampling performed; however, contamination is presumed to be limited to the upper two (2) feet of soil.

SIECO recommends that additional investigations be performed to determine the extent of petroleum contamination in this area. It may be in the best interest of Arvin to initiate floor demolition activities prior to additional sampling activities. The removal of the floor would aid in determining contamination limits and boring locations based on field observations. Additional sampling could also be completed prior to floor removal to determine the quantity of soil which will require petroleum waste disposal.

Deeper sampling for TPH contamination should be completed near boring locations B1 and B4. If petroleum contamination is found at depth, a groundwater sample should be collected for TPH analysis.

SIECO récommends that petroleum contaminated soil be removed from the site and disposed as a petroleum contaminated waste. Prior to soil removal a petroleum waste disposal permit should be obtained. Soil excavation and transportation to an appropriate landfill facility should be completed by properly trained personnel.

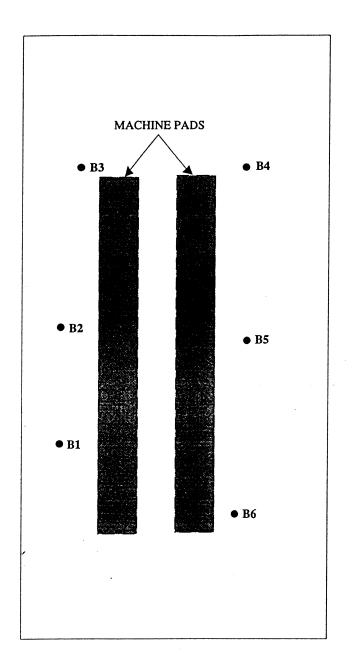
It is the interpretation of SIECO that knowledge of petroleum contamination at this site requires reporting to the IDEM for possible remediation of soil. It is likely that this incident would belong under the jurisdiction of the Emergency Response Branch of IDEM. Cleanup goals for this section regarding petroleum or other organic contamination is background or non-detect levels. It is the responsibility of the Client to report the findings of this investigation to the IDEM. Arvin may wish to consult legal counsel regarding this issue.

If you have any questions please call Bruce Rape or myself at (812) 372 - 9911.

Sincerely

Peter Newell

Environmental Scientist





SIECO, INC. Engineers 629 Washington Street Columbus, Indiana 47201 FIGURE 1

PROJECT # 9831900

APPROXIMATE SCALE 1" = 22'

HAND BORING LOCATIONS
MILL AREA
ARVIN EXHAUST
FRANKLIN, INDIANA



TEST REPORT

Work Order # 98-02-374

Received:	: 02/19/98	02/26/98 11:41:36
REPORT	Jim McNulty Sieco, Inc. 629 Washington Street P.O. Box 407 Columbus, IN 47202	PREPARED Sherry Laboratories/Columbus  BY 629 Washington Street  Suite 300  CERTIFIED BY  CONTACT PAUL  PHONE (812) 375-0531 FAX 375-0731
CLIENT	SIECOJ SAMPLE	s <u>7</u>
	Sieco, Inc.	Paul O. Gerth
FACILITY	629 Washington Street	Director
	Columbus, IN 47201	Certified by IN# C-03-02 Col IN# C-18-02 Mun IN# C-02-02 FtV
		IN# M-3-2 Col IN# M-18-5 Mun
TAKEN TRANS TYPE P.O. #	Arvin 2/19/98 Hand Soil under separate cover	
SAMPL	E IDENTIFICATION	TEST CODES and NAMES used on this workorder
01 B1-A		TPHFID TPH analysis by GC FID
02 B2-A		
03 B2-B		
04 B3-B		
05 B4-B		
06 B5-B		
07 B5-C		

SHERRY LABS/COL

TOTAL PAGES OF THIS REPORT : THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF SHERRY LABORATORIES



LAB I.D.

9802374-01A

DATE REPORTED: 02/26/98

SAMPLE DESCRIPTION B1-A

DATE COLLECTED: 02/19/98 08:45

Analyte	Analyst <u>Initials</u>	Date <u>Analyxed</u>	Reference <u>Method</u>	Detection <u>Limit</u>	Concentration (ppm)
TPH 8015M as Oil	SF	02/23/98	SW846-8015M	500 ppm	10800ppm



LAB I.D.

9802374-02A

DATE REPORTED: 02/26/98

SAMPLE DESCRIPTION B2-A

DATE COLLECTED: 02/19/98 09:10

<u>Analyte</u>	Analyst	Date	Reference	Detection	Concentration
	Initials	<u>Analyzed</u>	<u>Method</u>	<u>Limit</u>	(ppm)
TPH 8015M as Oil	SF	02/23/98	SW846-8015M	500 ppm	6240 ppm



LAB I.D.

9802374-03A

DATE REPORTED: 02/26/98

SAMPLE DESCRIPTION B2-B

DATE COLLECTED: 02/19/98 09:20

<u>Analyte</u>	Analyst <u>Initials</u>	Date <u>Analysed</u>	Reference Method	Detection <u>Limit</u>	Concentration (ppm)
TPH 8015M as California	SF	02/23/98	SW846-8015M	10 ppm	MD



LAB I.D.

9802374-04A

DATE REPORTED: 02/26/98

SAMPLE DESCRIPTION B3-B

DATE COLLECTED: 02/19/98 10:20

<u>Analyte</u>	Analyst <u>Initials</u>	Date <u>Analysed</u>	Reference Method	Detection <u>Limit</u>	Concentration (ppm)
TPH 8015M as California	SF	02/23/98	SW846-8015M	10 ppm	MD



LAB I.D.

9802374-05A

DATE REPORTED: 02/26/98

SAMPLE DESCRIPTION B4-B

DATE COLLECTED: 02/19/98 10:50

---

<u>Analyte</u>	Analyst Initials	Date <u>Analysed</u>	Reference Method	Detection <u>Limit</u>	Concentration (ppm)
TPH 8015M as Oil	SF	02/24/98	SW846-8015M	500 ppm	29160ppm



LAB I.D.

9802374-06A

DATE REPORTED: 02/26/98

SAMPLE DESCRIPTION B5-B

DATE COLLECTED: 02/19/98 11:10

<u>Analyte</u>	Analyst Initials	Date Analyzed	Reference <u>Method</u>	Detection <u>Limit</u>	Concentration (ppm)
TPH 8015M as California	SF	02/24/98	SW846-8015M	10 ppm	MD



LAB I.D.

9802374-07A

DATE REPORTED: 02/26/98

SAMPLE DESCRIPTION B5-C

DATE COLLECTED: 02/19/98 11:20

<u>Analyte</u>	Analyst	Date	Reference	Detection	Concentration
	Initials	Analyzed	<u>Method</u>	<u>Limit</u>	(ppm)
TPH 8015M as California	SF	02/24/98	SW846-8015M	10 ppm	MD

629 Washington St., Suite 300	TOO Industrial Da		2								
COLUMBUS IN 47201 812-375-0531 Fax 812-375-0731	For 19,471,7777	MUNCIE IN 47302 765-747-9000/800-874-3563	302 4-3563	LAF, 318-23	AYETT 5-0483/	LAFAYETTE LA 70508 18-235-0483/800-737-2378	[	110835 TU 918-23	ULSA 14-7111/	TULSA OK 74116 918-234-7111 / 800-324-5757 Ear 018 224 7152	50116 102 6 5757
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Contact Name:	Project #:		er/								
Phone/Fax:	Sampler's Signature:	nature:	umbe	of Co trix (							
Collection  Date Time Grab Comp	Sample Identification/Description	/Description	N	Type Ma					<u>`</u>	Comments, Remarks	ts/ :s
7-19 8:45	B1-A		10/	\$ \ \$ \ \$ \	/						
9:10	B2-A				(				7		
7.20	R2 - 3				:				<u>Q</u>		
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all samples submitted to Shewer submitted to Shewer submits with the client submits and su	Sherry Laboratories for analysis a submitting the samples.—Sherry L	are accepted on a custodial basis only. Laboratories reserves the right to retu	stodial basis onl the right to re	3	wnership o	Ownership of the material n unused sample portions.	al P.O. s. Number	ber			
celinquished by: (Signature)	Received by: (Signature)	$ \begin{array}{c c} \text{Date} & \text{Time} \\ \text{7-03} & \text{N-17} \end{array} $	Relinquished by: (Signature)	: (Signatur	e)	Received by	Received by: (Signature)	)		Date	Time
telinquished by: (Signature)	Received by: (Signature)	Date Time R	Relinquished by: (Signature)	: (Signatur	e)	Received by	Received by Laboratory: (Signature)	: (Signatu	re)	Date	Time
Matrix Codes DW = Drinking Water MW = Mo WW = Waste Water W = Water SO = Soil O = Oil	= Monitoring Well G = Glass er SL = Sludge P = Plastic	Shipping Conditions		Which Regulations Apply Drinking Water Other		Thank	t-you for usin The Source Envii	r using SHERRY LABOR ource for Metallurgical, Materic Environmental Testing Services	RY LA lurgical, A Testing Se	Thank-you for using SHERRY LABORATORIES  The Source for Metallurgical, Materials, &  Environmental Testing Services	RIES



ATTEN Dan Boucher REPORT Arvin Industries TO 1001 N. Hurricane Franklin, IN 46131  CLIENT ARVIN FRANKL SAMPLES 1 COMPANY Arvin Industries FFACILITY 1001 N. Hurricane Franklin, IN 46131  WORK ID FPO Dirt (Relog) TAKEN 12/12/97 TRANS Sherry TYPE Soil P.O. # INVOICE under separate cover  D1 1970 Dirt TPH 418 TPH analysis-IR Method	Page 1	SHE	RRY LABS/COL	TEST REPORT	Work Order # 98-01-043
REPORT Arvin Industries  TO 1001 N. Hurricane Franklin, IN 46131  CERTIFIED BY  CONTACT PAUL  CONTAC	Received	l: 01/06/98	01/07/98 1	6:49:30	
REPORT Arvin Industries  TO 1001 N. Hurricane Franklin, IN 46131  CERTIFIED BY  CONTACT PAUL  CONTAC			_		
REPORT Arvin Industries  TO 1001 N. Hurricane Franklin, IN 46131  CERTIFIED BY  COLUMBUS, Indiana 47201  ATTEN Paul O. Gerth  CONTACT PAUL  PHONE (812) 375-0531 FAX 375-0731  COMPANY Arvin Industries FACILITY 1001 N. Hurricane Franklin, IN 46131  CERTIFIED BY  CONTACT PAUL  PHONE (812) 375-0531 FAX 375-0731  Paul O. Gerth  Director  Certified by IN# C-03-02 Col IN# C-18-02 Mun IN# C-02-02 Ftw  IN# M-3-2 Col IN# M-18-5 Mun  WORK ID FFO Dirt (Relog)  TAKEN 12/12/97  TRANS Sherry  TYPE Soil P.O. #  INVOICE under separate cover  SAMPLE IDENTIFICATION  TEST CODES and NAMES used on this workorder	ATTEN	Dan Boucher		□ PREPARET	Sherry Laboratorios/Galumbur
TO 1001 N. Hurricane	REPORT	Arvin Industries	-(		
Franklin, IN 46131   CERTIFIED BY   Columbus, Indiana 47201	TO	1001 N. Hurricane	- Mux (	I KANT	
ATTEN   Paul   O.   Gerth		Franklin, IN 46131	CERTIFIED BY		
CONTACT PAUL PHONE (812) 375-0531 FAX 375-0731  CCLIENT ARVIN FRANKL SAMPLES 1  COMPANY Arvin Industries Paul O. Gerth  FACILITY 1001 N. Hurricane Franklin, IN 46131  Certified by IN# C-03-02 Col IN# C-18-02 Mun IN# C-02-02 FtW IN# M-3-2 Col IN# M-18-5 Mun  WORK ID FPO Dirt (Relog) TAKEN 12/12/97 TRANS Sherry TYPE Soil P.O. # INVOICE under separate cover  SAMPLE IDENTIFICATION  TEST CODES and NAMES used on this workorder				<b>ስ</b> ጥፑእ	
CLIENT   ARVIN FRANKL   SAMPLES   1			CONTACT DAIII.		
COMPANY Arvin Industries  FACILITY 1001 N. Hurricane  Franklin, IN 46131  Certified by IN# C-03-02 Col IN# C-18-02 Mun IN# C-02-02 Ftv IN# M-3-2 Col IN# M-18-5 Mun  WORK ID FPO Dirt (Relog)  TAKEN 12/12/97  TRANS Sherry  TYPE Soil  P.O. #  INVOICE under separate cover  TEST CODES and NAMES used on this workorder	CLIENT	ARVIN FRANKL SAMPLES		PHONE	(812) 375-0531 FAX 375-0731
### FACILITY 1001 N. Hurricane			-	Davil O. Comth	
Franklin, IN 46131  Certified by IN# C-03-02 Col IN# C-18-02 Mun IN# C-02-02 Ftv IN# M-3-2 Col IN# M-18-5 Mun  WORK ID FPO Dirt (Relog)  TAKEN 12/12/97  TRANS Sherry  TYPE Soil  P.O. #  INVOICE under separate cover  TEST CODES and NAMES used on this workorder					
WORK ID FPO Dirt (Relog)  TAKEN 12/12/97  TRANS Sherry  TYPE Soil  P.O. #  INVOICE under separate cover  SAMPLE IDENTIFICATION  TEST CODES and NAMES used on this workorder			Contified		
WORK ID FPO Dirt (Relog)  TAKEN 12/12/97  TRANS Sherry  TYPE Soil  P.O. #  INVOICE under separate cover  SAMPLE IDENTIFICATION  TEST CODES and NAMES used on this workorder		rankiin, in 40131	Certified b		
TAKEN 12/12/97 TRANS Sherry TYPE Soil P.O. # INVOICE under separate cover  SAMPLE IDENTIFICATION TEST CODES and NAMES used on this workorder	MODE TO	770 71 1 17		IN# M-3-2 Col I	N# M-18-5 Mun
TRANS Sherry  TYPE Soil  P.O. #  INVOICE under separate cover  SAMPLE IDENTIFICATION TEST CODES and NAMES used on this workorder			<del></del>		
TYPE Soil  P.O. #  INVOICE under separate cover  SAMPLE IDENTIFICATION TEST CODES and NAMES used on this workorder	TAKEN	12/12/97			
P.O. # INVOICE under separate cover  SAMPLE IDENTIFICATION TEST CODES and NAMES used on this workorder	TRANS	Sherry			
P.O. # INVOICE under separate cover  SAMPLE IDENTIFICATION TEST CODES and NAMES used on this workorder	TYPE	Soil			
SAMPLE IDENTIFICATION TEST CODES and NAMES used on this workorder					
SAMPLE IDENTIFICATION TEST CODES and NAMES used on this workorder	INVOICE	under separate cover			
That come mid Makes used on this workorder					
	SAMPLE	IDENTIFICATION	TRS'	T CODES and NAMES	used on this workers.
	01 FPO Di	rt T			moce our cuits workorder

TOTAL PAGES OF THIS REPORT:
THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL,
WITHOUT THE WRITTEN APPROVAL OF SHERRY LABORATORIES



LAB I.D. <u>9801043-01A</u> DATE REPORTED: <u>01/07/98</u>

SAMPLE DESCRIPTION FPO Dirt

DATE COLLECTED: 12/12/98 10:45

<u>Analyte</u>	Analyst Initials	Date Analyxed	Reference <u>Method</u>	Detection <u>Limit</u>	Concentration (ppm)
Tot. Petroleum Hydrocarbo	on BVD	01/07/98	EPA 418.1	1 ppm	72

DA	CR	1

SHERRY LABS/COL INVOICE INVOICE # Cot set INVOICED <u>01/07/98</u> LAB ID # 98-01-043

INVOICE	Arvin In	ndustrie	3	TERMS Net 30	REMI	T Sh	erry	Laborator	ies
TO	1001 N.	Hurrican	ne					x 2847	
	Franklir	1, IN 46	5131	THANK YOU FOR YOU	R BUSINESS				47307-0847
ATTEN	Dan Bouc	cher			ATTE	N Ac	count	s Receival	hle
								74-3563	
WORK ID	FPO Dirt	(Relog)			THOM	700	00) 8	74-3563	
		***************************************		(not set )					
REPORT	Arvin In	dustries							
			e	#301					
	Franklin								
		7							
ATTEN	Dan Bouc	her							
RECEIVED	01/06/98	CLIENT	ARVIN FRANKL						
REPORTED	01/07/98	PROJECT							
	<u>ID</u>	CODE	DESCRIPTION	REMAR	<u>PR</u>	EICE	<u>oty</u>	DISCOUNT	AMOUNT
TESTS		TPH418	TPH analysis-	IR Method	60	.00	1		60.00
									\$60.00
					TOTAL I	NVOI	CE AM	OUNT	\$60.00

# ☐ 31 Mecca Dr. LAENTELTELA 70508 317-747-9000/800-874-3563 2203 S. Madison St. MULTIC H. H. 47302 SHERRY LABORATORIES FORT WAYNE IN 46825 5738 Industrial Rd. 219-471-7000 629 Washington St., Suite 300 OLUMBUS IN 47201 812-375-0531

Fax 318-233-6540

Fax 317-747-0228

Fax 219-471-7777

Fax 812-375-0731

318-235-0483 / 800-737-2378

☐ 10835 E. Independence, Suite 102 918-234-7111 / 800-324-5757 TULSA OK 74116

9801045-14

Fax 918-234-7152

7011-107-	100			Comments/ Remarks					UPS/FedEx	Airborne/Sherry Hand/Mail		Date Time	Date Time
	Number 17	Tests Requested							n	Airb	P.O. Number	Received by: (Signature)	Received by Laboratory: (Signature)
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Thank-you for using SHERRY LABORATORIES

The Source for Metallurgical, Materials, &

Which Regulations Appl

] RCRA POTW

Shipping Conditions

Untainer Pypes

Ambient lced

P = Plastic G= Glass

MW = Monitoring Well
W = Water SL = Sludge
O = Oil OT = Other

ing Water

Environmental Testing Services



# ANALYTICAL AND QUALITY CONTROL REPORT

Mr. Tim Christopher ECOLOGICAL SYSTEMS, INC. 5232 W. 79th St. Indianapolis, IN 46268

07/26/2000

Job Number: 00.03679

Page 1 of 11

Enclosed is the Analytical and Quality Control reports for following samples submitted to the TestAmerica, submitted to the TestAmerica, Inc. Indianapolis Division. Project Description: ARVIN

Sample	Sample Description	Date	Time	Date
<u>Number</u>		<u>Taken</u>	<u>Taken</u>	<u>Received</u>
271042 271043 271044 271045 271046	1 NORTH WALL 2 WEST WALL 3 SOUTH WALL 4 EAST WALL NORTH END BASE	07/19/2000 07/19/2000 07/19/2000 07/19/2000 07/19/2000	10:00 10:00 10:00	07/20/2000 07/20/2000 07/20/2000

The Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

TestAmerica, Inc. certifies that the analytical results contained herein apply only to the specific samples analyzed.

TestAmerica Incorporated-Indianapolis Division is in compliance with the National Environmental Laboratory Accreditation Program (NELAP) Standards.

Reproduction of this analytical report is permitted only in its entirety.



Mr. Tim Christopher ECOLOGICAL SYSTEMS, INC. 5232 W. 79th St. Indianapolis, IN 46268

07/26/2000

Page 2 of 11

Job Number: 00.03679

Client Project ID: ARVIN

Analyte	Wet Wt. Result	Flag	Units	Reporting Limit	Date/Time Analyzed	Analyst Initials	Prep Batch No.	Run Batch No.	Method Reference
SAMPLE NO. 271042	SAMPLE DESC 1 NORTH WAI		ON						E TAKEN 00 10:00
TPH - GC/FID Volatile TPH - GC SemiVolatile TPH Extraction-Nonaque	(NON-AQ) 410	0, d1x2	mg/kg mg/kg	<20. <20. Complete	07/22/2000 07/21/2000 07/20/2000 0	20:07 tvs	651 651		SW 8015B SW 8015B SW 8015M
SAMPLE NO. 271043	SAMPLE DESC 2 WEST WALI	CRIPTIC	N	·			DATI	E-TIME L9/20(	E TAKEN 00 10:00
TPH - GC/FID Volatile ( TPH - GC SemiVolatile ( TPH Extraction-Nonaqueo	(NON-AQ) 270	a+o,d1x2	mg/kg mg/kg	<20. <20. Complete	07/22/2000 0 07/21/2000 2 07/20/2000 1	21:00 tvs		1541	SW 8015B SW 8015B SW 8015M
SAMPLE NO. 271044	SAMPLE DESC 3 SOUTH WAL	RIPTIO L	N						TAKEN 0 10:00
TPH - GC/FID Volatile ( TPH - GC SemiVolatile ( TPH Extraction-Nonaqueo	NON-AQ) 2,200	o, d1x20	mg/kg mg/kg	<20. <20. Complete	07/22/2000 0 07/21/2000 2 07/20/2000 1	1:52 tvs		1541 S	SW 8015B SW 8015B SW 8015M



Mr. Tim Christopher ECOLOGICAL SYSTEMS, INC. 5232 W. 79th St. Indianapolis, IN 46268

07/26/2000

Page 3 of 11

Job Number: 00.03679

Client Project ID: ARVIN

Analyte	Wet Wt. Result	Flag	Units	Reporting Limit	Date/Time Analyzed	Analyst Initials	Prep Batch No.	Run Batch No.	Met Ref	hod
	PLE DESCR AST WALL	RIPTIC	N					E-TIM 19/20		
TPH - GC/FID Volatile (NONAQ)	<20.		mg/kg	<20.	07/22/2000	09:21 tvs		1700	SW 80151	A
TPH - GC SemiVolatile (NON-AQ)	470	o, d1x5	mg/kg	<20.	07/21/2000		651		SW 8015	-
TPH Extraction-Nonaqueous	Complete			Complete	07/20/2000	14:00 ceg	651		SW 8015	
271046 NOR	PLE DESCR TH END BA	IPTIO SE	N				DATI	E-TIME 19/200	TAK 0 10	EN :00
Paint Filter	No Free Liqu				07/24/2000	10:20 cdk		492	SW 9095	
ICP METALS - TCLP	complete			complete	07/25/2000			1123	J JUJJ	
TCLP Metals Digest - ICP	Complete			Complete	07/25/2000		1045		W 3010	
Mercury-TCLP digestion	Complete			Complete	07/25/2000	11:30 sat	65			
Ignitability (Flash Point)	>200		Degree F	>200.	07/21/2000	11:15 sld		776	W 1010	
TCLP - Arsenic	<0.50		mg/L	<0.50	07/25/2000	08:15 out	1045	1090	W 6010	
TCLP - Barium	1.2		mg/L	<0.50	07/25/2000	08:15 out	1045		W 6010	
TCLP - Cadmium TCLP - Chromium	<0.10		mg/L	<0.010	07/25/2000	08:15 out	1045	1129	W 6010	
TCLP - Lead	<0.50		mg/L	<0.010	07/25/2000 (	08:15 out	1045	1135	W 6010	
	<0.50		mg/L	<0.080	07/25/2000 (	08:15 out	1045	1107	W 6010	
TCLP - Mercury TCLP - Selenium	<0.005		mg/L	<0.005	07/25/2000 1	15:05 sat	65	789 5	W 7470	
TCLP - Selver	<0.20		mg/L	<0.20	07/25/2000 (	08:15 out	1045	1123 8	W 6010	
TCLP Extraction	<0.10		mg/L	<0.10	07/25/2000 0	8:15 out	1045	1112 9	W 6010	
PCBs - NONAQUEOUS S-8082	Complete			Complete	07/20/2000 1	5:00 sat	1462	s	W 1311	
PCB-1016	<1.0		mg/kg	<1.0	07/24/2000 2	0:35 jas	513	657 S	C808 W	



Mr. Tim Christopher ECOLOGICAL SYSTEMS, INC. 5232 W. 79th St. Indianapolis, IN 46268

07/26/2000

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Job Number: 00.03679

Client Project ID: ARVIN

Analyte	Wet Wt. Result Fl	ag Units	Reporting Limit	Date/Time Analyzed	Analyst Initials	Prep Batch No.	Run Batch No.	Method Referenc
SAMPLE NO. 271046	SAMPLE DESCRI NORTH END BAS						E-TIME 19/2000	TAKEN 10:00
PCB-1221	<1.0	mg/kg	<1.0	07/24/2000	20:35 jas	513	657 SW	1 8082
PCB-1232	<1.0	mg/kg	<1.0	07/24/2000	-	513		8082
PCB-1242	<1.0	mg/kg	<1.0	07/24/2000	•	513		8082
PCB-1248	<1.0	mg/kg	<1.0	07/24/2000	-	513		8082
PCB-1254	<1.0	mg/kg	<1.0	07/24/2000	20:35 jas	513		8082
PCB-1260	<1.0	mg/kg	<1.0	07/24/2000	20:35 jas	513	657 SW	8082
Surrogate	105.	*		07/24/2000			657 SW	8082
PCB extraction (non-	-aqueous) Complete		Complete	07/24/2000	11:30 tld	513	SW	3540



# QUALITY CONTROL REPORT

Mr. Tim Christopher ECOLOGICAL SYSTEMS, INC. 5232 W. 79th St. Indianapolis, IN 46268

07/26/2000

Job Number: 00.03679

Page 5 of 11

The following samples were submitted to TestAmerica, Inc. Indianapolis Division for analysis:

Project Description: ARVIN

Sample	Sample Description	Date	Time	Date
Number		Taken	Taken	Received
271042 271043 271044 271045 271046	1 NORTH WALL 2 WEST WALL 3 SOUTH WALL 4 EAST WALL NORTH END BASE	07/19/2000 07/19/2000 07/19/2000 07/19/2000 07/19/2000	10:00 10:00 10:00	07/20/2000 07/20/2000 07/20/2000

Approved by:



# OUALITY CONTROL REPORT CONTINUING CALIBRATION VERIFICATION

Mr. Tim Christopher ECOLOGICAL SYSTEMS, INC. 5232 W. 79th St. Indianapolis, IN 46268

07/26/2000

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Analyte	Prep Batch No.	Run Batch No.	CCV True Value	CCV Conc Found	CCV <b>t</b> Rec	Flag	Dáte Analyzed
TCLP - Mercury PCBs - NONAQUEOUS S-8082		789	0.0075	0.00763	102		07/25/2000
PCB-1016		657	0.250	0.218	87		07/24/2000
PCB-1016		657	0.250	0.239	96		07/24/2000
PCB-1260		657	0.250	0.230	92		07/24/2000
PCB-1260		657	0.250	0.220	88		07/24/2000
TPH - GC/FID Volatile (NONAQ)		1700	50.	52.8	106		07/24/2000
TPH - GC/FID Volatile (NONAQ)		1700	50.	49.3	99		
TPH - GC/FID Volatile (NONAQ)		1700	50.	43.8	88		07/22/2000
TPH - GC Semivolatile (NON-AQ)		1541	500	459	92	a.	07/22/2000
TPH - GC SemiVolatile (NON-AQ)		1541	500	461	92		07/21/2000
TPH - GC SemiVolatile (NON-AQ)		1541	500	466	93	0	07/21/2000
TPH - GC SemiVolatile (NON-AQ)		1541	500	478	96	a O	07/22/2000 07/22/2000



# QUALITY CONTROL REPORT BLANKS

Mr. Tim Christopher ECOLOGICAL SYSTEMS, INC. 5232 W. 79th St. Indianapolis, IN 46268

07/26/2000

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•	Prep	Run					
	Batch	Batch	Blank			Reporting	Date
Analyte	No.	No.	Value	Flag	Units	Limit	Analyzed
TCLP - Arsenic	1045	1090	<0.50				
TCLP - Barium	1045	1130			mg/L	<0.50	07/25/2000
TCLP - Cadmium	1045		<1.00		mg/L	<0.50	07/25/2000
TCLP - Chromium		1129	<0.100		mg/L	<0.010	07/25/2000
TCLP - Lead	1045	1135	<0.500		mg/L	<0.010	07/25/2000
	1045	1107	<0.500		mg/L	<0.080	07/25/2000
TCLP - Mercury	65	789	<0.005		mg/L	<0.005	07/25/2000
TCLP - Selenium	1045	1123	<0.20		mg/L	<0.20	07/25/2000
TCLP - Silver	1045	1112	<0.10		mg/L	<0.10	07/25/2000
PCBs - NONAQUEOUS S-8082					_		,,
PCB-1016	513	657	<1.0		mg/kg	<1.0	07/24/2000
PCB-1221	513	657	<1.0		mg/kg	<1.0	07/24/2000
PCB-1232	513	657	<1.0		mg/kg	<1.0	07/24/2000
PCB-1242	513	657	<1.0		mg/kg	<1.0	07/24/2000
PCB-1248	513	657	<1.0		mg/kg	<1.0	07/24/2000
PCB-1254	513	657	<1.0		mg/kg	<1.0	
PCB-1260	513	657	<1.0				07/24/2000
Surrogate	513	657	91		mg/kg	<1.0	07/24/2000
TPH - GC/FID Volatile (NONAO)	3.3	1700			*		07/24/2000
TPH - GC SemiVolatile (NON-AQ)	653		<20		mg/kg	<20.	07/21/2000
	651	1540	<20		mg/kg	<20.	07/19/2000
	651	1543	<20		mg/kg	<20.	07/24/2000
TPH - GC SemiVolatile (NON-AQ)	651	1544	<20		mg/kg	<20.	07/25/2000



# QUALITY CONTROL REPORT LABORATORY CONTROL STANDARD

Mr. Tim Christopher ECOLOGICAL SYSTEMS, INC. 5232 W. 79th St. Indianapolis, IN 46268

07/26/2000

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Analyte	Prep Batch No.	Run Batch No.	LCS True Conc	LCS Conc Found	LCS % Rec.	LCS Dup. Conc Found	LCS Dup.	RPD	Flag	Date Analyzed
Ignitability (Flash Point)		776	81	81	100					07/21/2000
TCLP - Arsenic	1045	1090	1.000	1.12	112					07/25/2000
TCLP - Barium	1045	1130	10.00	10.3	103					07/25/2000
TCLP - Cadmium	1045	1129	1.000	1.16	116					07/25/2000
TCLP - Chromium	1045	1135	5.000	5.18	1.04					07/25/2000
TCLP - Lead	1045	1107	5.000	5.21	104					07/25/2000
TCLP - Mercury	65	789	0.005	0.00578	116					07/25/2000
TCLP - Selenium	1045	1123	1.000	1.13	113					07/25/2000
TCLP - Silver	1045	1112	1.000	0.973	97					07/25/2000
PCBs - NONAQUEOUS S-8082										07/25/2000
PCB-1016	513	657	2.50	2.26	90					07/24/2000
PCB-1260	513	657	2.50	2.21	88					07/24/2000
Surrogate	513	657	0.50	0.426	85					07/24/2000
TPH - GC/FID Volatile (NON		1700	50.	60.6	121	61.8	124	2		
TPH - GC SemiVolatile (NON	651	1540	214	273	128		***	2		07/21/2000
TPH - GC SemiVolatile (NON	651	1541	214	218	102					07/19/2000
TPH - GC SemiVolatile (NON	651	1544	214	255	119					07/21/2000
										07/25/2000



#### OUALITY CONTROL REPORT MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Mr. Tim Christopher ECOLOGICAL SYSTEMS, INC. 5232 W. 79th St. Indianapolis, IN 46268

07/26/2000

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Analyte	Prep Batch No.	Run Batch No.	Conc. Spike Added	Sample Result	Conc. MS Result	MS * Rec.	Conc. MSD Result	MSD * Rec.	RPD	Flag	Date Analyzed	Sample Spiked
TCLP - Mercury	65	789	0.050	<0.005	0.0580	116	0.0574	115	1		07/25/2000	271046
TCLP - Mercury	65	789	0.050	<0.005	0.0579	116	0.0591	118	2.1		07/25/2000	271232
PCBs - NONAQUEOUS S-808	3											271232
PCB-1016	513	657	2.50	<1.0	2.36	94	2.19	88	7.5		07/24/2000	271232
PCB-1260	513	657	2.50	<1.0	2.23	89	1.94	78	14		07/24/2000	271232
TPH - GC/FID Volatile (N	ī	1700	49.3	<20.	61.1	124	58.8	119	3.8		07/21/2000	270751
TPH - GC SemiVolatile (N	651	1540	213	52	269	102	264	100	1.9		07/20/2000	270876



#### PROJECT NARRATIVE

JOB NUMBER: 00.03679

SAMPLE:

Blank

ANALYSIS: PCBs

Blank was spiked twice with surrogate. Surrogate recovery for blank calculated based on double spike. JAS



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#### **KEY TO ABBREVIATIONS**

- Less than; when appearing in the result column, indicates analyte not detected at or above the Reporting Limit.
- Percent; To convert ppm to %, divide result by 10,000. To convert % to ppm, multiply the result by 10,000.
- \* Indicates the Reporting Limit is elevated due to insufficient sample volume.
- mg/L Part per million; Concentration in units of milligrams of analyte per Liter of aqueous sample.
- ug/L Part per billion; Concentration in units of micrograms of analyte per Liter of aqueous sample.
- mg/kg Part per million; Concentration in units of milligrams of analyte per kilogram of non-aqueous sample.
- ug/kg Part per billion; Concentration in units of micrograms of analyte per kilogram of non-aqueous sample.
- Indicates the sample concentration was quantitated using a diesel fuel standard.
- b Indicates the analyte of interest was also found in the method blank.
- Sample resembles unknown Hydrocarbon.
- dw When indicated, the result is reported on a dry weight basis. The contribution of the moisture content in the sample has been subtracted when calculating the concentration.
- d1 Indicates the analyte has elevated Reporting Limit due to high concentration.
- d2 Indicates the analyte has elevated Reporting Limit due to matrix.
- Indicates the reported concentration is estimated.
- g Indicates the sample concentration was quantitated using a gasoline standard.
- h Indicates the sample was analyzed past recommended holding time.
- i Insufficient spike concentration due to high analyte concentration in the sample.
- j Indicates the reported concentration is below the Reporting Limit.
- k Indicates the sample concentration was quantitated using a kerosene standard.
- 1 Indicates an MS/MSD was not analyzed due to insufficient sample. An LCS / LCS Duplicate provided for precision.
- Indicates the sample concentration was quantitated using a mineral spirits standard.
- Indicates the sample concentration was quantitated using a motor oil standard.
- P Indicates the sample was post spiked due to sample matrix.
- Indicates MS/MSD exceeded control limits. The associated sample may exhibit similar matrix bias.
  All other quality control indicators are in control.
- Indicates the sample was received past recommended holding time.
- u Indicates the sample was received improperly preserved and/or improperly contained.
- uj Indicates the result is below the Reporting Limit and is considered estimated.
- Indicates the BOD dilution water blank depletion was between 0.2 and 0.5 mg/L.



Mr. Tim Christopher ECOLOGICAL SYSTEMS, INC. 4910 W. 86th St. Indianapolis, IN 46268

08/04/2000

Job Number: 00.03892

Page 1 of 3

Enclosed are the Analytical Results for the following samples submitted to TestAmerica, Inc. Indianapolis Division for analysis:

Project Description: ARVIN

Sample	Sample Description	Date	Date
Number		Taken	Received
271812	6N	07/28/2000	07/31/2000
271813	6S	07/28/2000	07/31/2000
271814	6E	07/28/2000	07/31/2000
271815	6W	07/28/2000	07/31/2000

TestAmerica, Inc. certifies that the analytical results contained herein apply only to the specific samples analyzed.

Reproduction of this analytical report is permitted only in its entirety.

Project Representative



Mr. Tim Christopher ECOLOGICAL SYSTEMS, INC. 4910 W. 86th St. Indianapolis, IN 46268

08/04/2000

Job No.: 00.03892 Page 2 of 3

Date Received: 07/31/2000 Job Description: ARVIN

Sample Number / Sample I.D. Parameters	Wet Wt. Result	Flaq	Sample Date/ Units		lyst e & Time Analyzed	Method	Reporting Limit
271812 6N		0	7/28/2000				
TPH - GC SemiVolatile (NON-AQ) TPH Extraction-Nonaqueous	1,400 Complete	oid1x1	00 mg/kg	tvs ceg	08/04/2000 09:55 08/01/2000 13:00	SW 8015B SW 8015M	<20. Complete
271813 6S		01	7/28/2000				
TPH - GC SemiVolatile (NON-AQ) TPH Extraction-Nonaqueous	130 Complete	<b>o</b>	mg/kg	tvs ceg	08/04/2000 10:48 08/01/2000 13:00	SW 8015B SW 8015M	<20. Complete
271814 6E		07	/28/2000				
TPH - GC SemiVolatile (NON-AQ) TPH Extraction-Nonaqueous	13,000 Complete	o,d1x10	0 mg/kg	tvs ceg	08/04/2000 07:16 08/01/2000 13:00	SW 8015B SW 8015M	<20. Complete
271815 6W		07	/28/2000				
TPH - GC SemiVolatile (NON-AQ) TPH Extraction-Nonaqueous	10,000 Complete	o,d1x10	0 mg/kg	tvs ceg	08/04/2000 08:09 08/01/2000 13:00	SW 8015B SW 8015M	<20. Complete



Page 3 of 3

#### **KEY TO ABBREVIATIONS**

- Less than; when appearing in the result column, indicates analyte not detected at or above the Reporting Limit.
- Percent; To convert ppm to %, divide result by 10,000. To convert % to ppm, multiply the result by 10,000.
- Indicates the Reporting Limit is elevated due to insufficient sample volume.
- mg/L Part per million; Concentration in units of milligrams of analyte per Liter of aqueous sample.
- ug/L Part per billion; Concentration in units of micrograms of analyte per Liter of aqueous sample.
- mg/kg Part per million; Concentration in units of milligrams of analyte per kilogram of non-aqueous sample.
- ug/kg Part per billion; Concentration in units of micrograms of analyte per kilogram of non-aqueous sample.
- Indicates the sample concentration was quantitated using a diesel fuel standard.
- b Indicates the analyte of interest was also found in the method blank.
- c Sample resembles unknown Hydrocarbon.
- dw When indicated, the result is reported on a dry weight basis. The contribution of the moisture content in the sample has been subtracted when calculating the concentration.
- dl Indicates the analyte has elevated Reporting Limit due to high concentration.
- d2 Indicates the analyte has elevated Reporting Limit due to matrix.
- Indicates the reported concentration is estimated.
- g Indicates the sample concentration was quantitated using a gasoline standard.
- h Indicates the sample was analyzed past recommended holding time.
- i Insufficient spike concentration due to high analyte concentration in the sample.
- j Indicates the reported concentration is below the Reporting Limit.
- k Indicates the sample concentration was quantitated using a kerosene standard.
- Indicates an MS/MSD was not analyzed due to insufficient sample. An LCS / LCS Duplicate provided for precision.
- Indicates the sample concentration was quantitated using a mineral spirits standard.
- Indicates the sample concentration was quantitated using a motor oil standard.
- p Indicates the sample was post spiked due to sample matrix.
- Indicates MS/MSD exceeded control limits. The associated sample may exhibit similar matrix bias.
  All other quality control indicators are in control.
- Indicates the sample was received past recommended holding time.
- u Indicates the sample was received improperly preserved and/or improperly contained.
- uj Indicates the result is below the Reporting Limit and is considered estimated.
- Indicates the BOD dilution water blank depletion was between 0.2 and 0.5 mg/L.



INTERNAL CONTROL NUMBER

538927

				W A			TICKET N	UMBER
05430 W	ICAL SYST MIKE SCOT . BETH ST	ΓT	(CSI)	E ATTN:	MIKE	SYSTEMS SCOTT	<del>V416360</del> , INC.	(CSI)
INDIAN	APOLIS	IN	46268	INDIA	W. 86T NAPOLI	H 51.	***	
AND DAILE SANS CO.	RENTRYMIME	OPER SEXIT	JIME特許 美OPE	R. GROSS W	VEIGHT (**)	TAR WE	IGHT THE STATE	46268 ENET WEIGHT
1 2 to m	16:01	16:0	ì	97200 LI		34420 L	ŀ	860 LB)
VERICLE NUMBER	we vericie	TXPE執行		Manually	32-L			
	ľ	<b>†</b>	ATE NUMBER	法	bidi. Amm	TRANSAC	fibh 编号	5,43,012,9,5
EC01420	Rolloff	-10.						
QUANTITY	*** WC. 252	e?4e ∴ n De	ESCRIPTIONORI	GIN CONTRACTOR	alo de l'en	FINITS &	INT DRICE	THUOMATON
26.4300	16 SPEC	IAL WASTE			ı		- dini-Frace	SAMOUNI
	MARI				Tor 190.			
			2019					1 d - 20 e e
certify, under oath or affin enerated in the above coun ic Indiana Department of E					olid waste was facility as requi	red by		
DRIVER NAME				MM		ŀ	- P	
PRINT		S	IGNATURE	MU I			DOCUMENT TOTAL	
						cus	TOMER CO	Рү



538959

TICKET NUMBER X COL856946 ECOL856946 COLOGICAL SYSTEMS, INC. (CSI) ECOLOGICAL SYSTEMS, INC. TTN: MIKE SCOTT ATTN: MIKE SCOTT 430 W. BETH ST. 5430 W. 86TH ST. NDIANAPOLIS IN 46268 INDIANAPOLIS DATE SENTRY TIME OPER. 46268 NET WEI 07/28/2000 9:09 19:10 92100 LB) **丼3340 LB)(** 4876@ LB Manually EC0420 Rolloff 20 QUANTITY WC 建筑 ACCIDENTIONORIGIN ACCIDENTION OF ACCIDENT ACCIDENTS OF UNIT PRICE 24.3800 16 SPECIAL WASTE ON 100.00% MARION I certify, under oath or affirmation and subject to the penalty of perjury under IC 35-44-2-1, that the largest part of the solid waste was generated in the above counties. I also certify that I am not depositing any hazardous waste or unlawful material to this facility as required by the Indiana Department of Environmental Management and the Environmental Protection Agency. DRIVER NAME DOCUMENT PRINT TOTAL SIGNATURE

CUSTOMER COPY



538919

TICKET NUMBER

05430 W.	CAL SYSTI TIKE SCOT BETH ST	T .	(CSI)	磁 H A U L E R	ECOLAS ECOLOG ATTN: 5430 W	ICAL MIKE . 867	SYSTEM SCOTT IH ST.	2 <del>041653</del> S, INC.	(CSI)	ą.
NDI ANG	APOLIS	IN IN	46268	OPER.	GROSS W	EIGHT	TAR	VEIGHT AND	ANET !	WEIGHT
/28/2000	5:31	15:		(	19040 LE anually		3198Ø		7060	
FHICLE NUMBERS	rua Vevici e	TYPE HAR WA	PLATE NUMBE	H SE H	19.55m	declar	TRANS	ACTION	*****	2.人为老
FC0148	Rolloff	. в								
QUANTITY	wc s	#625 (15) #XXX	DESCRIPTION	VORIGIN	1762(4) 19	<b>等的方</b>	<b>STINU</b>	UNIT PR	ICE WYW	MOUNT
3. 5300	Tirmation and subject	CIAL WASTE	ry under IC 35-44-g any hazardous w	2-1, that the	largest part of the	1 C	ON Ø. ØØ%			
the Indiana Department of DRIVER NAME	of Environmental Mar	nagement and the Envi	SIGNATUR		Sun C	Ü		DOCUI TOT		
PRINT			SIGNATUR				7	CUSTOME	R COFY	- 12

#### INTERNAL CONTROL NUMBER

538967

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TECOLOGI			INC.	(CSI)					SYSTEMS, SCOTT		(CSI)	
O5430 W.		57.	7 K E	47 O. O					H ST.	<b>.</b>		
DATERSS	FENTRY TI	ME# OPER	IN 以物版EX	<u>46268</u> Гатие 🕸			I ANAF		TAR WEI	IN GHT級語	_ <u>46268</u> 秒秒NET WI	EIGHT
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/EHICZENUMBER!	waide.	CLE:TYPE	Gerson 156500	DISATE NUI	1 .	12.57.5	•	m(seem	1 2 21 3		<u> </u>	<del>( )                                   </del>
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EC01420	Rollo	off	20									_
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20.3700	16 SF	ECIAL	WASTE					ofr	N			
	MA	RION						160	. 00%			
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											ŀ	
l certify, under oath or affingenerated in the above country in the linding Department of	nties. I also cer	tify that I am no	t depositing a	any hazardous	waste or unla	e largest part o	f the solid	waste wa	quired by			
DRIVER NAME	- A VIALIBLE		THE SHIFTED	mmenan i ivici	LION ARCINO.		10			DOCUMENT TOTAL	<b>T</b>	
PRINT			······································	SIGNATU	REAV	10ul	<u> </u>	7				

**CUSTOMER COPY** 

Special Waste Petroleum Disposal Notification
Company Name: Anum Technical Contact: Tim Christopher (E
Franklin IN
Waste Information  Waste Name:  Category (Circle One):  Oil Contamn And Soil (per 329 IAC 10-8.1-4(a))
Verification No. (If Applicable):  O 72800P/  Date spill, release, leak or clean-out occurred:  Location, including county where spill, release, leak, or clean-out occurred:
I hereby certify that the above information is true and accurate to the best of my knowledge.  TERRY LEAN 7-18-00  Signature (print or type) Date  ENUIRO CORDINATOR  Title
CLEAN-UP CONTRACTOR INFORMATION (if applicable)  Company Name: FSI Jul., Telephone No.: 3/7-874-0074  Facility Address: 5440 W. 79th ST.  INDIAN APOUS, IN
TRANSPORTER INFORMATION  Company Name: ST Telephone No.: 3/7-47/-15/0  Driver's Signature Date
Site Name:  DISPOSAL SITE INFORMATION  OPP No.: Volume/Weight: 26.  7-28-60
Authorized Signature Date

novahola)

(continued on back)

# Disposal Facility Verification Notice

Landfill		Name of Landfill:	South Side	Landfill, Inc.	Opp No. 49-1
Informatio		Location of Landfill:		ucky Avenue s, Indiana 46221	
		Telephone No:	(317)247-6		
Generator	Arvin		Generator	Arvin	
	1001 Hurricane Street Franklin, IN 46131		Location	1001 Hurricane Stree Franklin, IN 46131	et
Telephone	No:				
Waste Nam	ne(s)			Volume/ Weight	Verification No.(s)
Oil Contai	minated Soil			60 Cubic Yards	072800P1
	(ATTACH AD	DITIONAL SHEET IF NEC	ESSARY)		
Verification	Special Wast	e		**	
Notice		otice for this waste. I have	e determined t	hat the waste describe	ed in this
		n is a special waste as de			
		iste as described in 40 CF			
	· ·	aste described in this docu			
		landfill. The request for v	rentication of the	nis waste is APPROVE	=U <sup>-</sup> .
		truction, and operating mulgated under 329 IAC 1	10-8 1-2(c) Sc	with Side I andfill has h	reen given
		approval to accept certain			
		permitted areas containing			
	1	1/	•		
	-1	1200			
	Vu.		Scott Fitzge		28-Jul-00_ Date
•	Signature	U	(THE OR)	PRINT NAME)	Date
	Administrator				
	Title				
	equest for Special Waste				
<b>Non-Accept</b>		ed the analytical requirem			
ė		otice for this waste. I have			
	reason(s) desc	n is NOT ACCEPTED for a	isposai at uie	adove-trained factoring	ioi bie
	reason(s) desi	wined points i			
					D-1-
	Signature		(TYPE OR F	PRINT NAME)	Date
	Administrator				:
	Title		<del></del>		
				Page 1 o	f2

Pursuant to Solid Waste Rule 329 IAC 10-28-21 (Facility responsibility for special waste disposal), 329 IAC 10-8.1-9 (The special waste certification process; generator responsibilities), 329 IAC 10-8.1-7(d) (The special waste verification process; generator responsibilities) and 329 IAC 10-8.1-13 (Petroleum-contaminated spill waste), all special waste delivered for disposal shall be accompanied by a disposal notification. Regulatory citations require generators to provide the disposal facility with a written disposal notification for each load of special waste to be disposed. The solid waste disposal facility shall check each load of special waste with the information provided on this form with the Special Waste Certification or the Special Waste Verification Notice. An original signature must appear on the disposal notification for the first load of the waste. The signature on the disposal notifications for subsequent loads of the same waste may be photocopied; however, those photocopied signatures will be considered to have the same authority as the original signature.

Please check	the appropriate	box (to be com	pleted by	Generator)
			P	,

- 1. No changes have been made to any relevant raw material or to the waste generating process since the last shipment of waste.
- 2. The following change(s) to a relevant raw material or to the waste generating process has occurred since the last shipment of the waste.

  (describe change below) (attach additional sheet if necessary)

#### Please check the appropriate box (only applies if Box 2 is checked above)

I have determined the change could not have led to a change in regulatory status; and I did not repeat the waste determination for this waste.
 I have repeated the waste determination and have determined this change did not cause a change in regulatory status.
 I have repeated the waste determination and have determined this change caused a change in the regulatory status of the waste. I have received from the owner, operator, or permittee of the MSWLF or non-MSWLF an updated

verification notice that reflects the change in regulatory status.

This form has been provided by IDEM for Generator use, and contains all regulatory requirements under 329 IAC 10-8.1-7 (d), (e) and 329 IAC 10-8.1-13.

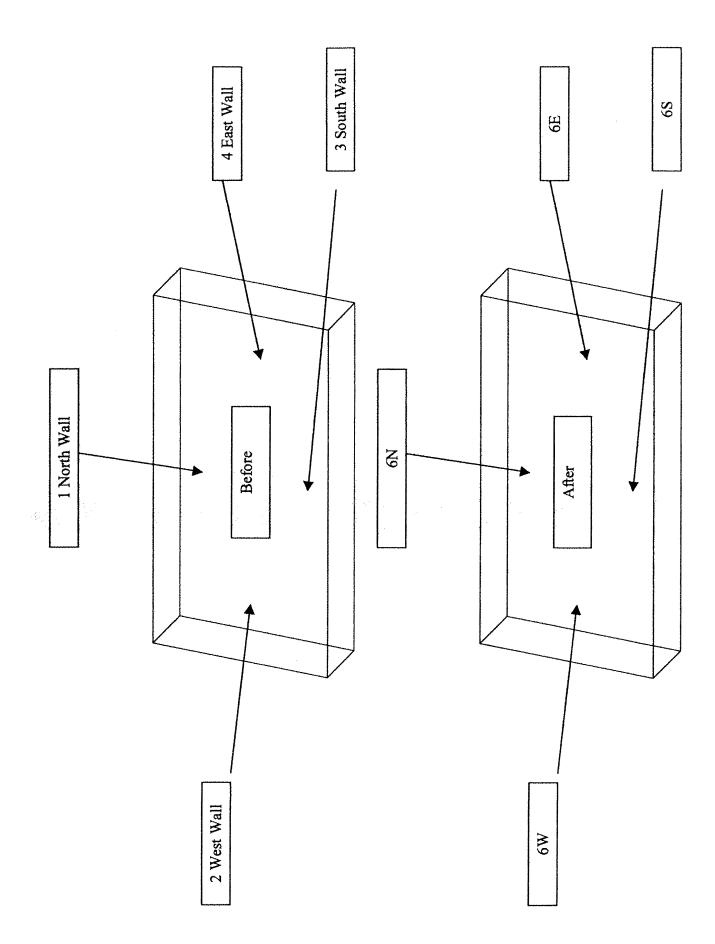
Optional items have been included to assist the MSWLF and non-MSWLF in complying with 329 IAC 10-8.1-8.

Generators may use their own Special Waste Petroleum Disposal Notification, as long it complies with all regulatory requirements in the above mentioned citations.

Disposal Facilities may make corrections to this Disposal Notification ONLY in the Generator Information and Transporter Information areas. Such as, Generator Name, Transporter Name, Mailing Address, Telephone No., and Technical Contact.

Changes may also be make in the Certification No., Verification No., and Volume/Weight of the Waste Information Section.

INFORMATION MUST HAVE BEEN PREVIOUSLY SUBMITTED BY GENERATOR NOT LEFT BLANK





starting to slowly odd Muniater acid - strong relaction



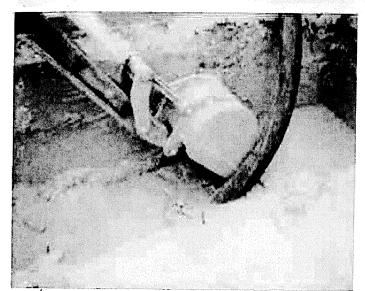
Granklia 11-36-99 Pit mixing approx 1/5-3/3" rain fell previoley night a that much water standing on top of pit Contents.



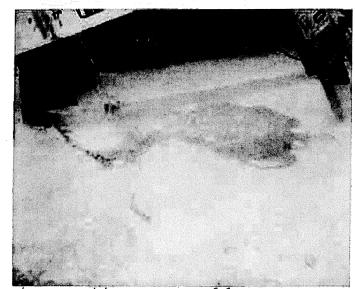
Guenklin 11-26-99 Jule 55-gal Jum 30 boume Muriate and lowered pH to only 11.6.



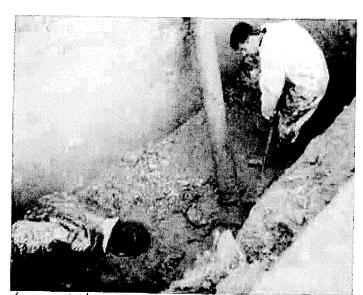
Granklin 11-26-99 Pit missing leagues white moteral is Colcum Hydroside



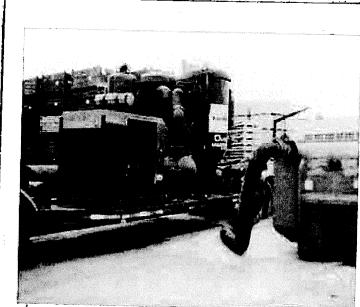
Gronklin 11-26-99 Suckingant the Dit. Chunks of Concrete kept plugging 4" line



Granklin 11-36-99 More acid-leventually entiredium heat, bubbling vapor



Granded over to 6" post-horder to handle but worked better



Granklin 11-56-99 The Cureo Super Sucker"



Granklin 11-36-99-19 wery nich clear sit in good condition Joo bod it will be filled with stone of Covered with concrete

PRODU	MCGOWAN INSURANCE GROUP		I THIS CER				
INSURE	1850 Market Tower 10 West Market Street	P, INC.	HOLDER.	THIS CERTIFICATI E COVERAGE AFI	ED AS A MATTER OF INI IGHTS UPON THE CERT E DOES NOT AMEND, EX FORDED BY THE POLICII	FICAT	E OR
INSURI		6204-2972	COMPANY	COMPANIES A	FFORDING COVERAGE		
INSURI			COMPANY	COMMERCE & I	NDUSTRY INS.		
	Spill Recovery of Indiana, Inc.		COMPANY <b>B</b>	MONROE GUAR	ANTY INSURANCE		
	P.O. Box 34337		COMPANY		,		
	Indianapolis IN 46	2340337	COMPANY				**************************************
COVE	RAGES		D			Tito Opping	
CEF	RTIFICATE MAY BE ISSUED OR MAY P	OF INSURANCE LISTED BELOW HAVE DUIREMENT, TERM OR CONDITION OF A ERTAIN, THE INSURANCE AFFORDED E POLICIES. LIMITS SHOWN MAY HAVE	ANY CONTRACT OR OTHER  SY THE POLICIES DESCRIB	R DOCUMENT WITH F	E FOR THE POLICY PERIOD		
₩ TR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMI	TS	
A	GENERAL LIABILITY	8194156	06/03/97	06/03/98	GENERAL AGGREGATE	\$	2,000,000
	X COMMERCIAL GENERAL LIABILITY				PRODUCTS - COMP/OP AGG	\$	2,000,000
	CLAIMS MADE X OCCUR				PERSONAL & ADV INJURY	\$	2,000,000
L	OWNER'S & CONTRACTOR'S PROT				EACH OCCURRENCE	\$	2,000,000
Ľ	X CONTRACTOR POLLUTION LIAB				FIRE DAMAGE (Any one fire)	\$	50,000
_					MED EXP (Any one person)	\$	5,000
<b>^</b>  ^	ANY AUTO	CA5052721	06/03/97	06/03/98	COMBINED SINGLE LIMIT	\$	2,000,000
7	ALL OWNED AUTOS  SCHEDULED AUTOS  HIRED AUTOS				BODILY INJURY (Per person)	\$	
2	X NON-OWNED AUTOS				BODILY INJURY (Per accident)	\$	
	ARAGE LIABILITY				PROPERTY DAMAGE	\$	
H	ANY AUTO				AUTO ONLY - EA ACCIDENT	\$	
$\vdash$	- ANT AUTO				OTHER THAN AUTO ONLY:		
-						\$	
E.	XCESS LIABILITY				Et all against the	\$	
-	UMBRELLA FORM				EACH OCCURRENCE	\$	
-	OTHER THAN UMBRELLA FORM				AGGREGATE	\$	
w	ORKERS COMPENSATION AND				V I WC STATU- I JOTH-	\$	V(L) 30 11 (4.0) 24 (1.0) 25 (2.0)
E	MPLOYERS' LIABILITY	MG 208723W-98	04/40/00	04 /40 /00	X WC STATU- TORY LIMITS ER		500 000
	HE PROPRIETOR/ X INCL	WG 200723W-96	01/18/98	01/18/99	EL EACH ACCIDENT	\$	500,000
	ARTNERS/EXECUTIVE FFICERS ARE:				EL DISEASE - POLICY LIMIT	\$	500,000
O	THER Professional Liability	8194156	06/03/97	06/03/98	EL DISEASE - EA EMPLOYEE  Claims Made	\$	2,000,000
SCRIP	TION OF OPERATIONS/LOCATIONS/VEHICLES	S/SPECIAL ITEMS ed-Owners, Contractors, Lessee	(CG 20 10)				
j,000	O Combined Deductible applie	s to General Liability, Pollu	ution Liability and	Professional L	iability		
			•		·		
ERTIF	FICATE HOLDER		CANCELLATION	1		77.	
		The second secon	<ul> <li>List on the construction and administration redulation of fragility.</li> </ul>	F 77	POLICIES BE CANCELLED BEFORI	THE	
An	vin Industries		3		COMPANY WILL ENDEAVOR TO I		
Att	n: Tom Linneweber				CERTIFICATE HOLDER NAMED TO		FT.
	01 N. Hurricane anklin IN	46204			L IMPOSE NO OBLIGATION OR LI		
114	errun IV	46321			GENTS OR REPRESENTATIVES.		
		a-4131	AUTHORIZED REPR				
		n -	Sheila K. Frede	erick, CIC			
ACOF	RD 25-S (1/95)				© ACORD CORPO	יידא מו	ON 1099