DUNN CORPORATION

Engineers, Geologists, Environmental Scientists
12 Metro Park Road
Albany, New York 12205
Tel 518/458-1313
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December 13, 1991

FIRST CLASS MAIL

Mr. Doug Lindner
Northeast Solite Corp.
P.O. Box 437
Mt. Marion, New York 12456

RECEIVED
DEC 16 1991

Dear Mr. Lindner:

Subject: Groundwater Monitoring
Former IESI facility

At the request of the New York State Department of Environmental Conservation (NYSDEC), Region III, Dunn Corporation (DUNN, formerly Dunn Geoscience Corporation) performed groundwater monitoring on September 27, 1991, at the former Industrial Environmental Systems, Inc. (IESI) facility in accordance with the Work Plan submitted in DUNN's June 6, 1991 letter. Representing DUNN was Mr. Sander Bonvell, Manager of Chemistry Services, who was accompanied throughout the monitoring event by Mr. Doug Lindner (Northeast Solite Corp.) and Mr. Mauricio Roma-Hernandez (NYSDEC, Region III).

All analytical chemistry testing was performed by C.T.M. Analytical Laboratories, Ltd. (Latham, NY), a NYSDOH approved laboratory. A summary of all pertinent reported findings is presented in Table 1, herein, and quality control reports from the full data package have been included in the accompanying appendix.

Table 1 presents: a summary of compounds found in at least one of the sampling points; a comparison to groundwater regulatory standards or guidance values; and practical quantitation limits (i.e., reliable quantifiable lower reporting limits below which (trace) levels may be observed but whose concentrations may not be quantitatively accurate).

Appendix A presents several figures used to complement discussions in the text, and Appendix B contains laboratory reporting sheets for the quality control samples, a summary of which is described herein. Appendix C contains a copy of the chain-of-custody and a copy of Mr. Bonvell's field notes taken during the monitoring period.

ANALYTICAL FINDINGS

Testing on the groundwater samples was performed for petroleum hydrocarbons, volatile organics, and pesticides/PCBs.

Petroleum Hydrocarbons

Two different petroleum analyses were performed on each of the two (original plus duplicate) seep samples. There was only sufficient sample from UFT-1A to perform the

infra-red (EPA Method 418.1) petroleum hydrocarbon test, and not the petroleum identification test (i.e., a "fingerprint") as was performed for the two seep samples. In all three groundwater samples (UFT-1A and the two seep samples), no petroleum hydrocarbon was reported in any sample at or above the reporting/quantitation limit of 1 part per million (ppm). In the two seep samples there was evidence of something characteristic of a degraded light weight fuel oil, although there was no positive correlation to any of the following: gasoline, fuel oils #2, #4, and #6, kerosene or lubricating oil. For your reference, the chromatograms of the seep samples and that of the No. 4 fuel oil standard have been superimposed (Figure 1).

Volatile Organics

In terms of exceedance of groundwater standards, methylene chloride was the only volatile target list compound reported [in the seep] and confirmed by its duplicate. However, methylene chloride is such a ubiquitous laboratory contaminant due to its widespread, universal use throughout commercial environmental laboratories, that EPA data validation criteria state that any sample containing less than ten times that found in the accompanying lab method blank need not be reported and should be considered non-useable data. Acetone falls under this same category.

The laboratory results of the method blank analyzed with IESI samples show methylene chloride detected at 1.7 ppb (parts per billion = micrograms per liter) and acetone at 4.0 ppb. Therefore, methylene chloride results less than 17 ppb and acetone results less than 40 ppb are "theoretically" not a concern even though this substance is a "principal organic contaminant" with a groundwater standard of 5 ppb. However, in our opinion the excellent correlation between the duplicate seep results indicates that the methylene chloride is probably real (and would be seen as so by the regulators since both seep results are greater than ten times the method blank). The acetone levels in both seep samples are less than ten times the method blank, and were also found at similar concentrations in both the trip blank and method blank, and are not considered significant due to their being less than ten times the method blank and also being significantly less than the NYSDEC guidance level of 50 ppb.

The two trace level chlorinated ethanes that were reported in UFT-1A, and the trichloroethene reported in both seep samples may be real, although they were all below the groundwater standards and also below the quantitation limit. Their presence is most likely real based on the method used (mass spectrometry), but the actual reported concentrations are estimated. The values given in parentheses in Table 1 are estimated (and rounded off), taken from the raw data. In fact, the "actual" estimated values are even lower than that listed in the raw data, since low level chemical response factors (i.e., the sensitivity of the analytical instrument to the individual compound) are conventionally not used in the computation to determine concentration. Rather, response factor averages over the whole analytical range compared to levels about ten to twenty-five times higher than those observed were used.

Please note that tetrahydrofuran was not detected in well UFT-1A; even though it was detected at a trace level below the quantitation limit in one of the seep samples, it was reported at a very low concentration (well below the quantitation level), it was not confirmed by the duplicate, and is still significantly less than the NYSDEC guidance value.

Pesticides/PCBs

No polychlorinated biphenyls (PCBs) were reported in either the seep or its duplicate; there was insufficient sample from UFT-1A to perform the pesticide/PCB test.

The reporting of DDT in only one of the seep samples, coupled to the fact that the positive finding was just above the quantitation limit, cannot rule out a low level false positive or false negative. Following our evaluation of the data, and then in follow-up discussions with the laboratory it was agreed that the finding of DDT in the duplicate sample of the seep (X-1) is probably not real. However, due to protocol of the EPA analytical method the laboratory is obligated to report in the fashion they did.

Figure 2 shows the gas chromatogram of the 5 ppb mixed pesticide standard used for calibration during this study. Note the DDT peak at a retention time of 16.030 minutes; this is the center of a "window" (i.e., a band) of time (i.e., plus or minus a few seconds) in which such peaks in samples would be considered DDT. Figures 3 and 4, respectively, present the chromatograms of the seep sample and its duplicate, X-1. Note that DDT peaks were shown at retention times of 15.984 and 15.990 minutes, which the laboratory states are both within the DDT window. Under this protocol, any detected findings in the primary analysis must be confirmed by repeating the analysis under different chromatographic conditions. Only when the compound is found under both sets of chromatographic conditions is it reported as a confirmed finding. In the case of the confirmation seep (and duplicate) samples, the DDT peak was observed in both but at a trace, quantitatively unreliable concentration in the original sample that did not result in a confirmed finding (Figure 6). The chromatogram of the seep duplicate sample (X-1, Figure 7)) is nearly identical to the original seep sample, especially in the region of the DDT retention time, but the DDT peak is slightly larger; large enough, in fact, to register as a confirmed finding.

However, there are enough differences between the two analytical conditions to merit these findings as questionable. Under the primary conditions (Figures 3 and 4), note the more general, flatter baseline of the chromatograms relative to the confirmation conditions (Figures 6 and 7) which show a significantly greater number of peaks and a matrix which causes a very large rise in the baseline. The fact that such small peaks lie in this region of matrix interferences makes the identification and quantitation of them more dubious.

Quality Control

Appendix C contains laboratory reporting sheets, all of which show excellent quality control, for the following items:

Petroleum Hydrocarbons (EPA Method 418.1)

Control Recovery
Continuous Standard Recovery
Spike Recovery
Duplicate Relative Percent Difference

Volatile Organics (EPA Method 8240)

Method Blank
Spike Control
Matrix Spike (MS) and MS Duplicate
Surrogate Recovery

Pesticides/PCBs (EPA Method 8080)

Method Blank
Laboratory Control
Matrix Spike (MS) and MS Duplicate
Surrogate Recovery

All laboratory matrix spiking for volatile organics and pesticides/PCBs was performed on sample UFT-1A.

OBSERVATIONS AND RECOMMENDATIONS

Despite the correlation of the seep duplicate results, there is little evidence that methylene chloride is or has been a problem at the site. Except for a one time elevated seep level in early 1984, and similar findings in monitoring well DFT-2 at approximately the same time (before the well went permanently dry), there is no indication that methylene chloride is generally present in the seep. We have reviewed the history of site monitoring pertinent to methylene chloride; a summary of these results for the seep and wells pertinent to this current study is presented below.

METHYLENE CHLORIDE MONITORING SUMMARY

UFT-1A	DFT-1	DFT-2	Seep
2/85, 3.6	2/85, 4.8	12/83, 80	4/84, 70
5/85, 4.8	5/85, 4.8	4/84, 190	2/85, 5.8
		6/84, 120	3/85, 1
			5/85, 2.8

Note: "5/85, 4.8" = May, 1985, 4.8 parts per billion (ppb)

We have also reviewed data reporting sheets from EnviroTest (Newburgh, NY) of seep samples submitted by Northeast Solite for volatile organics analysis by gas chromatography/mass spectrometry for the following dates:

Date	Reporting Limit (ppb)	Result (ppb)
12/2/86	1	ND
2/3/87	1	ND
6/11/87	1	ND
3/16/88	5	ND
4/9/90	5	U
5/1/91	5	U

ND = U = Not detected at or above the reporting limit

To evaluate the significance of these recent methylene chloride results and the impact on further site monitoring activities, we recommend that samples of seep be reanalyzed to determine accuracy and precision variability. It is important to determine whether these findings represent the overall quality of the seep or if they are temporal in nature (i.e., a recent release from within the bedrock formation).

A sample of seep water should be collected directly from the rock wall daily, for four days, for volatile organics analysis. In addition, a one-time sample of seep should be collected for pesticide analysis with concomitant sample cleanup at the laboratory to determine if the finding of DDT is realistic or artifactual as we suspect. If results indicate that groundwater standards are consistently exceeded, then we recommend that downgradient water quality be monitored. If downgradient water is unaffected, then periodic monitoring of the seep and the carbon treatment system should continue on a regular basis. If downgradient water is affected, then potential routes of exposure and/or further actions need to be evaluated.

Please don't hesitate to call me if you have any questions or comments regarding these issues. I apologize for the lateness of this report, but we have been working closely with the laboratory to obtain the necessary quality control raw data to scrutinize these findings appropriately.

Very truly yours,

DUNN CORPORATION

Sander I. Bonvell

Sander I. Bonvell
Manager of Chemistry Services

c: M. Roma-Hernandez
NYSDEC Region 3

Table 1
Summary of Groundwater Monitoring Data
Former Industrial Environmental Systems, Inc. Facility
September 27, 1991

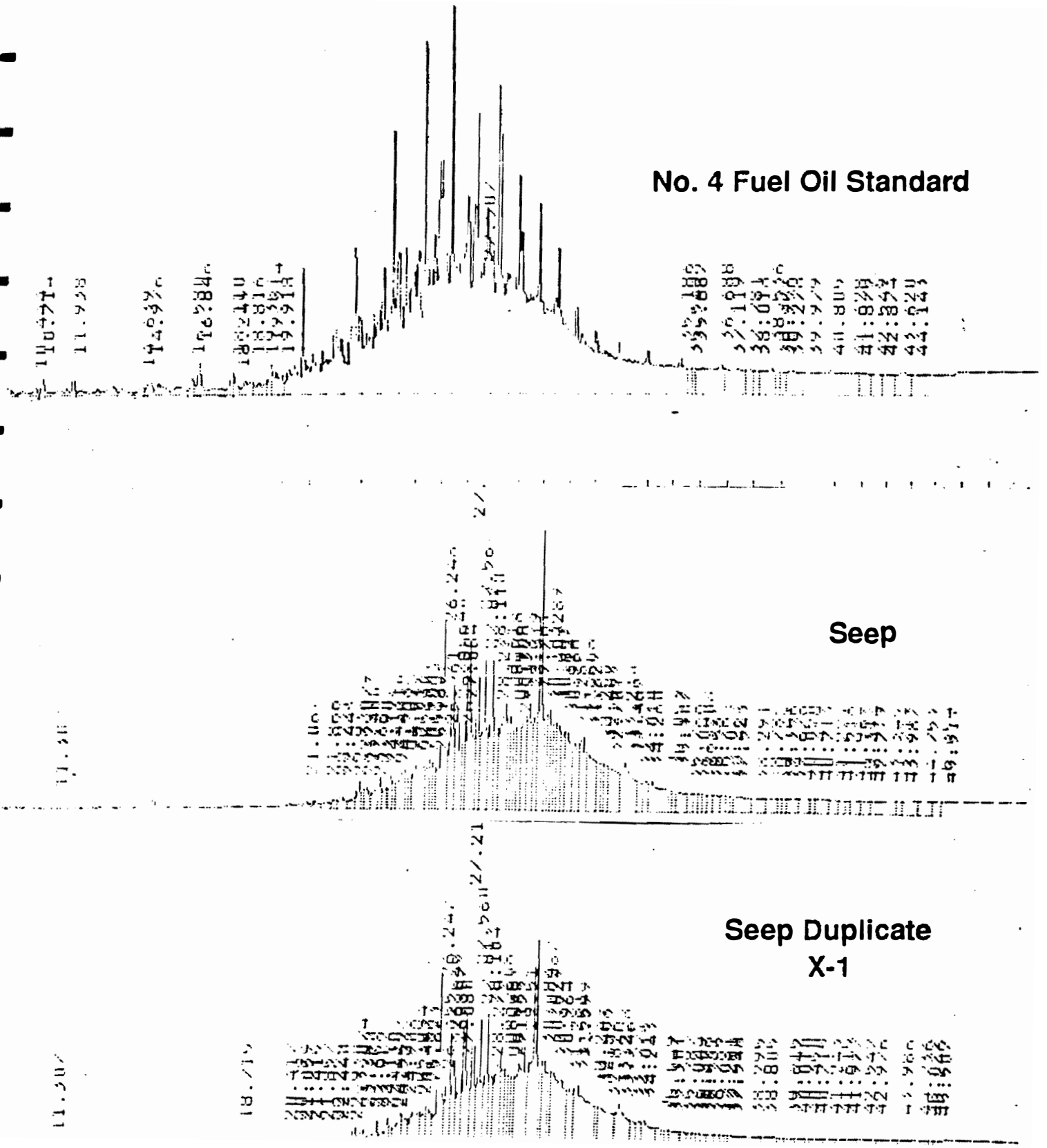
	Regulatory Standard*	PQL	UFT-1A	SEEP	X-1	Trip Blank	Method Blank
Volatile Organics							
Methylene Chloride	5	5	6	88	79	8	<PQL(1.7)
Trichloroethene	5	5	ND	<PQL(1)	<PQL(1)	ND	ND
1,2-Dichloroethane	5	5	<PQL(1.7)	ND	ND	ND	ND
Acetone	50gv	10	ND	<PQL(8)	<PQL(9)	<PQL(5)	<PQL (4)
1,1,2-Trichloroethane	5	5	<PQL(3)	ND	ND	ND	ND
Tetrahydrofuran	50gv	5	ND	ND	<PQL(1.8)	ND	ND
Petroleum Hydrocarbons	NA	1000	ND	ND	ND	NA	NA
Petroleum ID Scan	NA	NA	IS	ND	ND	NA	NA
Pesticides							
4,4' - DDT	"ND"	0.5	IS	ND	1.1	NA	NA
PCBs	0.1	0.5 ppb	IS	ND	ND	NA	NA

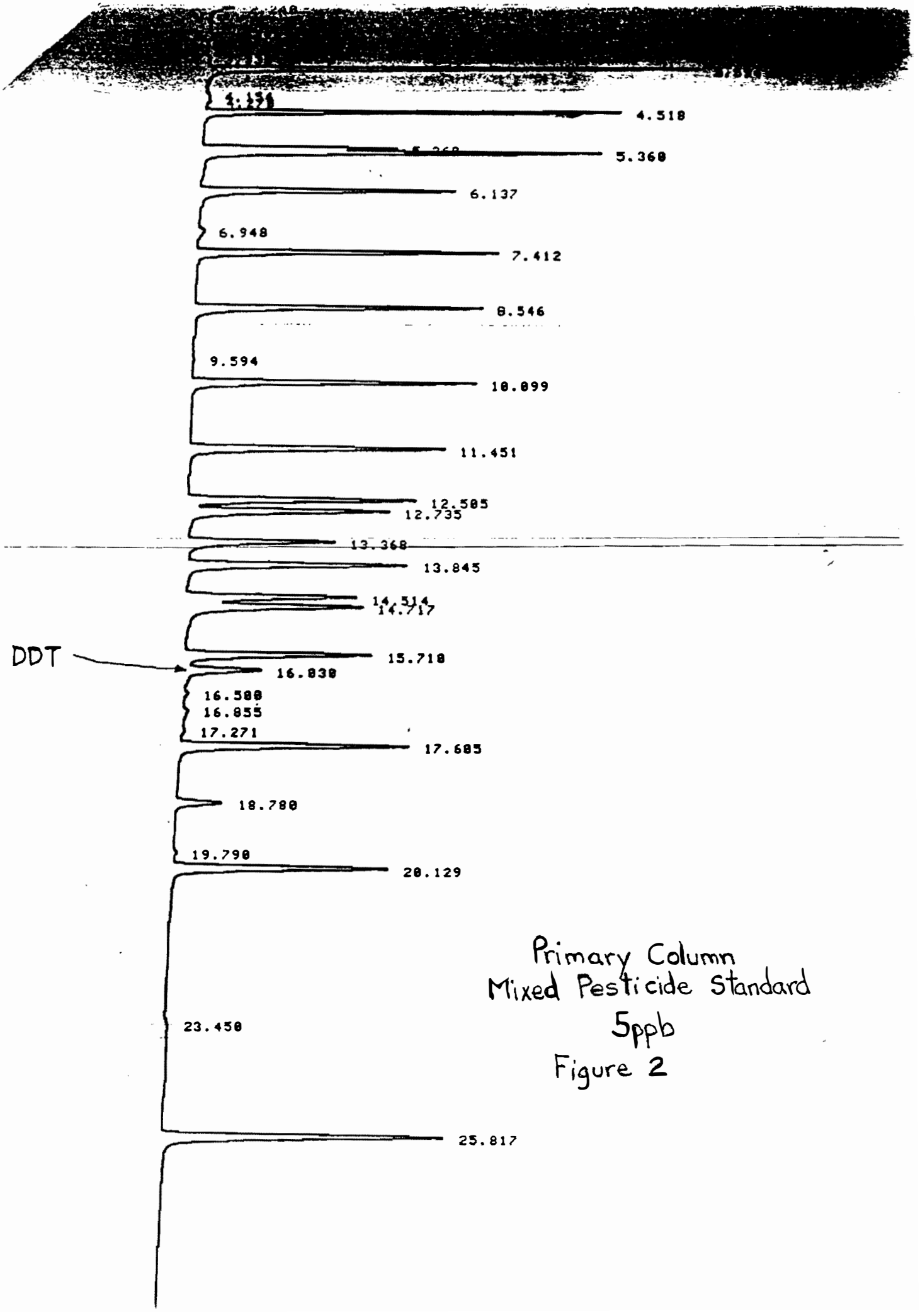
1. ND = Not Detected
2. "ND" = Any detectable level is considered in exceedance of the regulations.
3. IS = Insufficient Sample, no analysis performed.
4. PQL = Practical Quantitation Limit
5. X-1 is the duplicate of the seep sample.
6. gv = guidance value
7. A generic, non-specific test indicating substances containing carbon-hydrogen bonds which would be evident in the presence of petroleum.
8. A fingerprint scan showing component patterns.
9. Values in parentheses indicate an estimated concentration below the quantifiable reporting limit.
10. < = less than
11. All units in parts per billion or micrograms per liter (ug/L).
12. NA = Not Analyzed or Not Applicable

*Water Quality Regulations for Surface Water and Groundwaters, 6NYCRR, Part 703 (September 1, 1991).

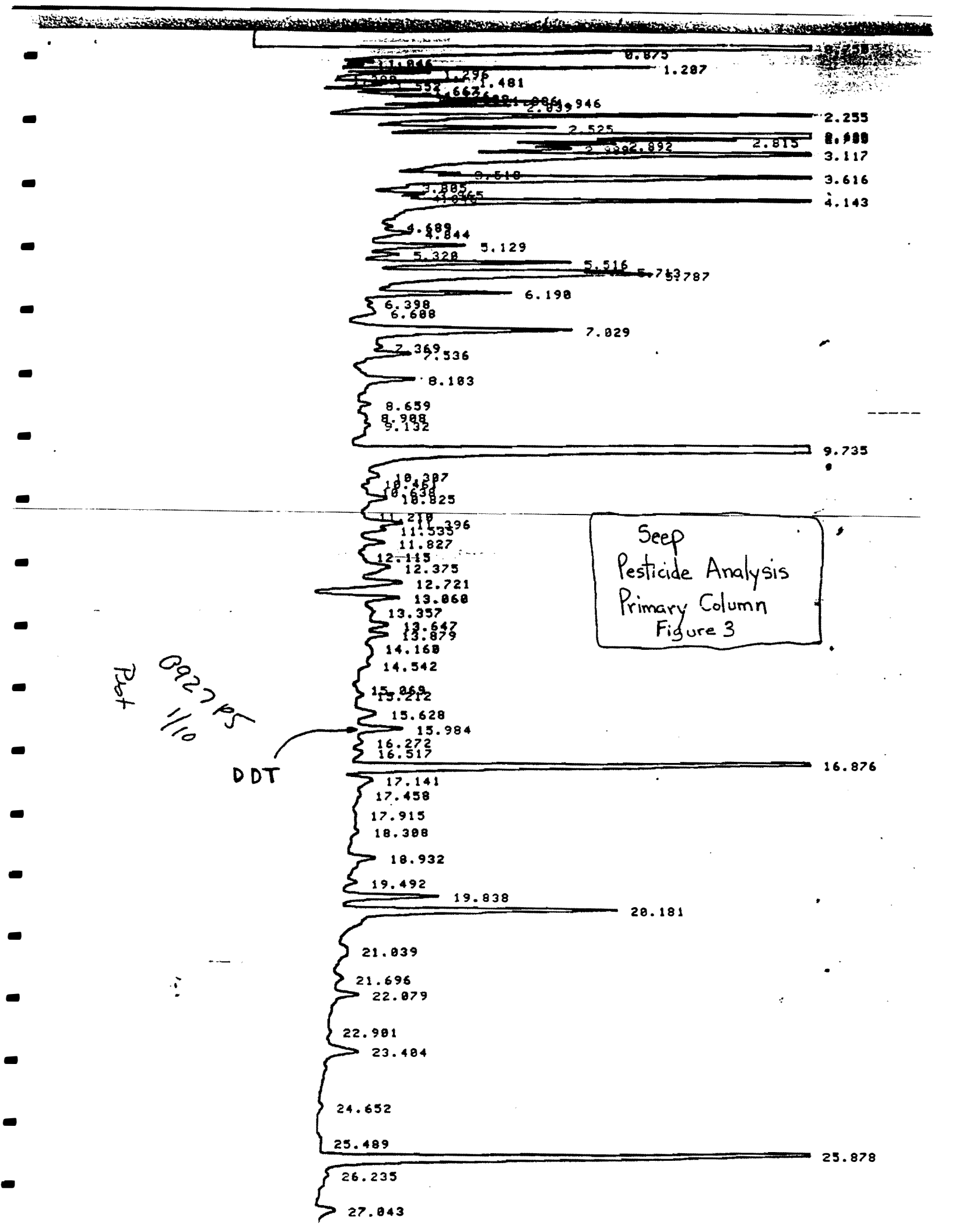
APPENDIX A

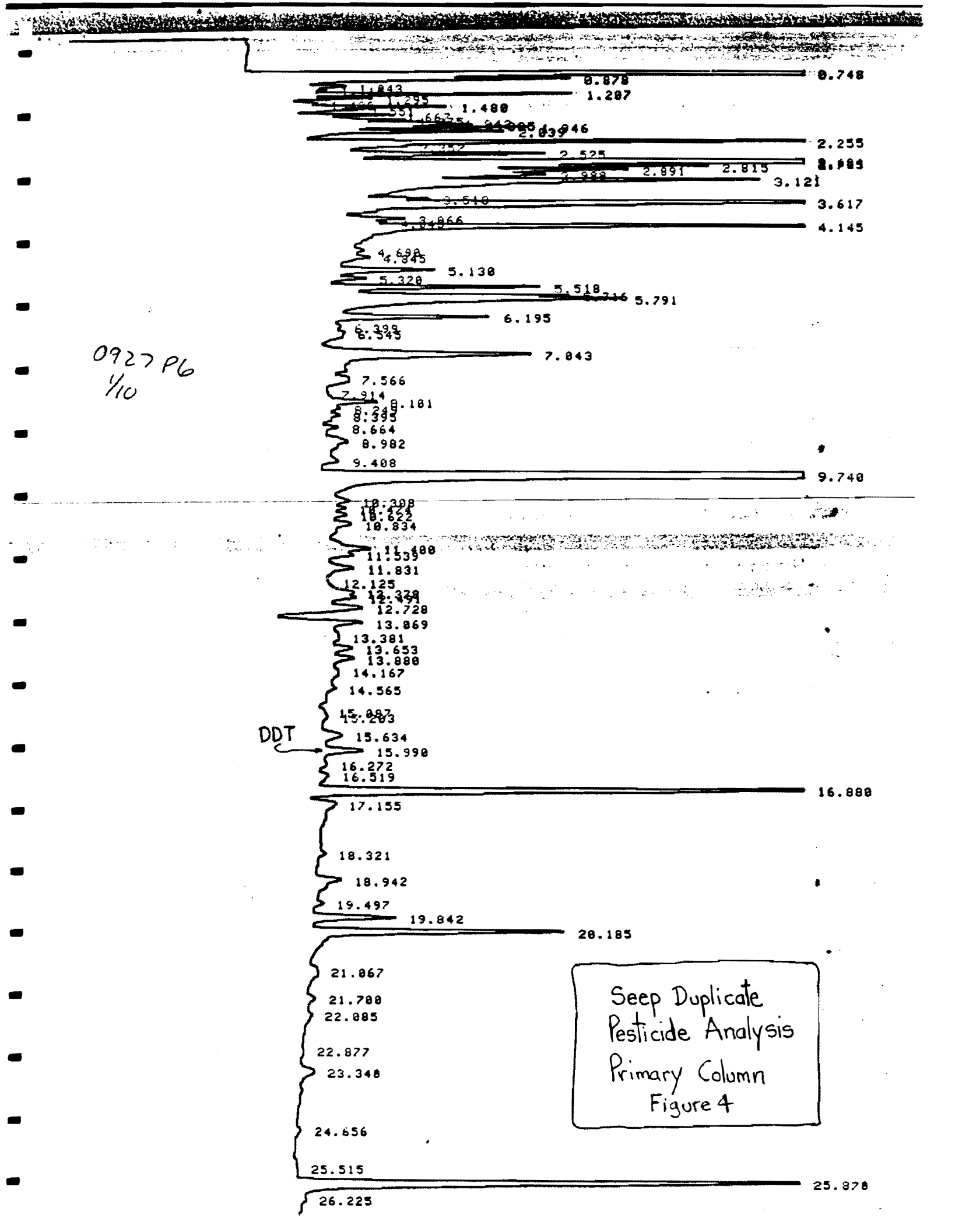
Figure 1
Comparative Hydrocarbon Fingerprints

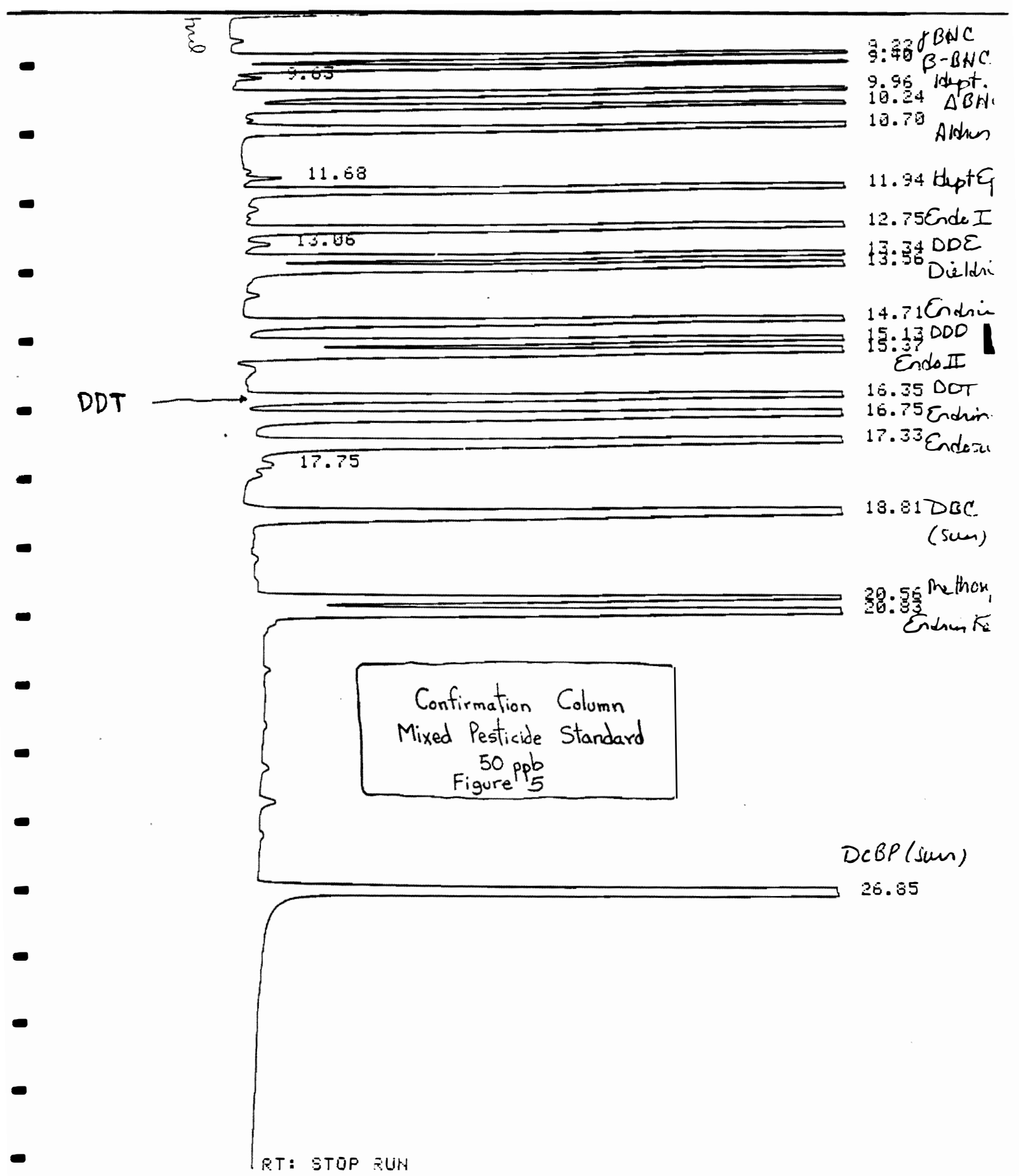




Primary Column
Mixed Pesticide Standard
5ppb
Figure 2

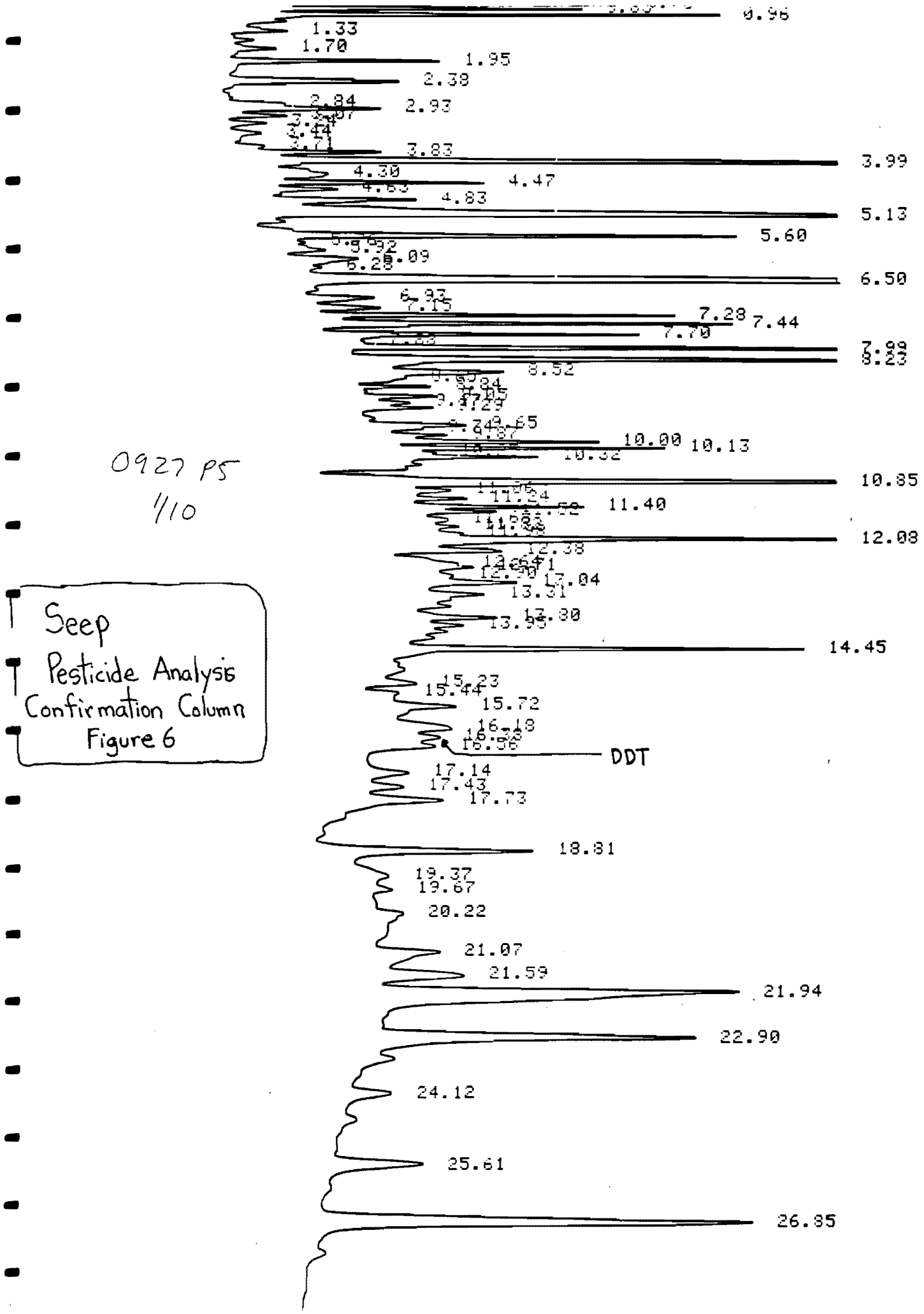

0.875
1.287
1.481
2.946
2.255
2.525
2.815
3.117
3.616
4.143
4.689
4.844
5.129
5.328
5.516
6.198
6.398
6.688
7.029
7.369
7.536
8.183
8.659
8.988
9.132
9.735
10.307
10.825
11.396
11.535
11.827
12.115
12.375
12.721
13.060
13.357
13.647
13.879
14.168
14.542
15.212
15.628
15.984
16.272
16.517
16.876
17.141
17.458
17.915
18.308
18.932
19.492
19.838
20.181
21.039
21.696
22.079
22.981
23.484
24.652
25.489
25.878
26.235
27.043
DDT
Seep
Pesticide Analysis
Primary Column
Figure 3
Post
0927 pS
1/10


0.748
0.878
1.287
1.488
2.255
2.525
2.891
2.815
3.121
3.617
4.145
5.130
5.791
6.195
7.043
7.566
8.101
8.664
8.982
9.408
9.740
10.308
10.622
10.834
11.400
11.831
12.125
12.728
13.869
13.381
13.653
13.880
14.167
14.565
15.203
DDT
15.634
15.990
16.272
16.519
16.880
17.155
18.321
18.942
19.497
19.842
20.185
21.067
21.700
22.085
22.877
23.348
24.656
25.515
25.878
26.225
0927 P6
1/10
Seep Duplicate
Pesticide Analysis
Primary Column
Figure 4



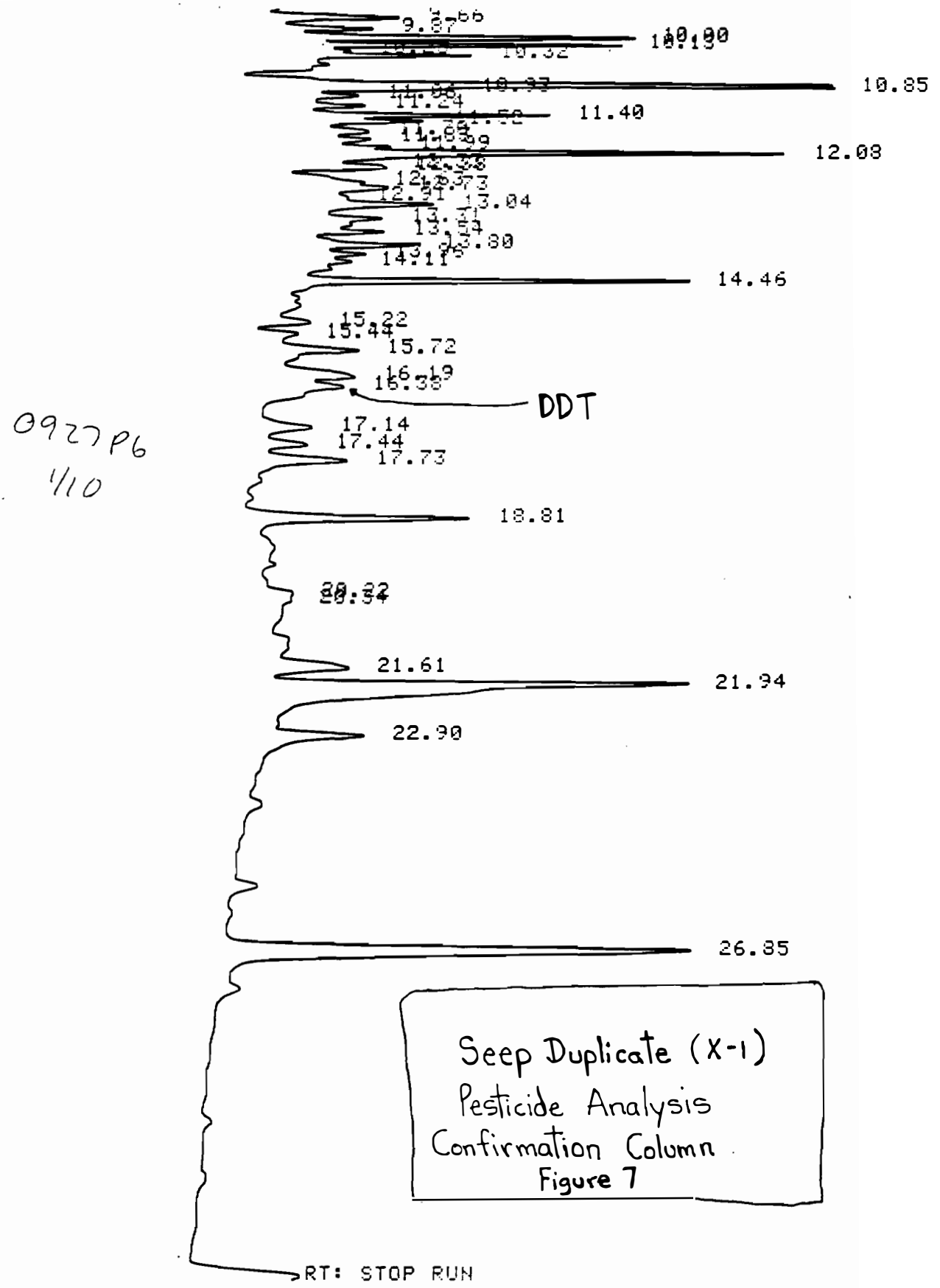
[hp] 5880A SAMPLER INJECTION @ 08:37 OCT 9, 1991
SAMPLE # : ID CODE :
53
AREA % COMPENSATED ANALYSIS

RT	AREA	TYPE	AREA %



0927 P5
1/10

Seep
Pesticide Analysis
Confirmation Column
Figure 6



0927 P6
1/10

Seep Duplicate (X-1)
Pesticide Analysis
Confirmation Column
Figure 7

[hp] 5880A SAMPLER INJECTION @ 10:34 OCT 9, 1991
SAMPLE # : ID CODE :
55
AREA % COMPENSATED ANALYSIS

RT	AREA	TYPE	AREA %
0.61	3051.55	VV	9.049

APPENDIX B

CTM ANALYTICAL LABORATORIES, LTD.
QA/QC SUMMARY
INORGANICS

DUNN GEOSCIENCE
12 METRO PARK ROAD
ALBANY, NY 12205
ATTENTION: SANDER BONVELL

CTM PROJECT: 91.00946
CTM TASK #: 910927P

PARAMETER	CONTROL % RECOVERY	CONTINUOUS STD % RECOVERY	SPIKE % REC	RPD % DUPLICATE	BLANK ppm
OIL & GREASE(418)	101	106	101	6	<1.0

CTM ANALYTICAL LABORATORIES, LTD.
VOLATILE ORGANICS
EPA METHOD 8240
BLANK

DUNN GEOSCIENCE
12 METRO PARK LANE
ALBANY, NY 12205
ATTENTION: SANDER BONVELL

CTM PROJECT #: 91.00946
CTM Task #: 910927P
Matrix: WATER
DATE RUN: 9/11/91

COMPOUND	RESULT	P.Q.L.	UNITS
CIS-1,2-DICHLOROETHENE	ND	5	MCG/L
CHLOROMETHANE	ND	10	MCG/L
VINYL CHLORIDE	ND	10	MCG/L
BROMOMETHANE	ND	10	MCG/L
CHLOROETHANE	ND	10	MCG/L
1,1-DICHLOROETHENE	ND	5	MCG/L
METHYLENE CHLORIDE	<PQL	5	MCG/L
ACETONE	<PQL	10	MCG/L
CARBON DISULFIDE	ND	5	MCG/L
TRANS-1,2-DICHLOROETHENE	ND	5	MCG/L
1,1-DICHLOROETHANE	ND	5	MCG/L
CHLOROFORM	ND	5	MCG/L
1,1,1-TRICHLOROETHANE	ND	5	MCG/L
CARBON TETRACHLORIDE	ND	5	MCG/L
VINYL ACETATE	ND	10	MCG/L
BENZENE	ND	5	MCG/L
1,2-DICHLOROETHANE	ND	5	MCG/L
2-BUTANONE (MEK)	ND	10	MCG/L
TRICHLOROETHENE	ND	5	MCG/L
1,2-DICHLOROPROPANE	ND	5	MCG/L
BROMODICHLOROMETHANE	ND	5	MCG/L
2-CHLOROETHYLVINYLETHER	ND	5	MCG/L
CIS-1,3-DICHLOROPROPENE	ND	5	MCG/L
TOLUENE	ND	5	MCG/L
TRANS-1,3-DICHLOROPROPENE	ND	5	MCG/L
1,1,2-TRICHLOROETHANE	ND	5	MCG/L
TETRACHLOROETHENE	ND	5	MCG/L
DIBROMOCHLOROMETHANE	ND	5	MCG/L
4-METHYL-2-PENTANONE (MIBK)	ND	10	MCG/L
2-HEXANONE	ND	10	MCG/L
CHLOROBENZENE	ND	5	MCG/L
ETHYLBENZENE	ND	5	MCG/L
M&P XYLENES	ND	5	MCG/L
O- XYLENES	ND	5	MCG/L
STYRENE	ND	5	MCG/L
BROMOFORM	ND	5	MCG/L
1,1,2,2-TETRACHLOROETHANE	ND	5	MCG/L
TETRAHYDROFURAN	ND	5	MCG/L

P.Q.L. = PRACTICAL QUANTITATION LIMIT
ND=NOT DETECTED

CTM ANALYTICAL LABORATORIES, LTD.
VOLATILE ORGANICS
EPA METHOD 8240
CONTROL

DUNN GEOSCIENCE
12 METRO PARK ROAD
ALBANY, NY 12205
ATTENTION: SANDER BONVELL

CTM PROJECT #: 91.00946
CTM Task #: 910927P
Matrix: WATER
DATE RUN: 10/11/91

COMPOUND	SPIKE ADDED MCG/L	CONTROL CONC. MCG/L	CONTROL % REC	QUALITY CONTROL LIMITS
CIS-1,2-DICHLOROETHENE	50	49	98	75-125
CHLOROMETHANE	50	42	84	D-273
VINYL CHLORIDE	50	45	90	D-251
BROMOMETHANE	50	45	90	D-242
CHLOROETHANE	50	42	84	14-230
1,1-DICHLOROETHENE	50	39	78	D-234
METHYLENE CHLORIDE	50	39	78	D-221
ACETONE	50	50	100	57-130
CARBON DISULFIDE	50	43	86	83-117
TRANS-1,2-DICHLOROETHENE	50	45	90	54-156
1,1-DICHLOROETHANE	50	44	88	59-155
CHLOROFORM	50	48	96	51-138
1,1,1-TRICHLOROETHANE	50	46	92	52-162
CARBON TETRACHLORIDE	50	45	90	70-140
VINYL ACETATE	50	31	62	41-147
BENZENE	50	47	94	37-151
1,2-DICHLOROETHANE	50	52	104	49-155
2-BUTANONE (MEK)	50	59	118	67-119
TRICHLOROETHENE	50	49	98	71-157
1,2-DICHLOROPROPANE	50	53	106	D-210
BROMODICHLOROMETHANE	50	56	112	35-155
2-CHLOROETHYLVINYLETHER	50	51	102	D-305
CIS-1,3-DICHLOROPROPENE	50	56	112	D-227
TOLUENE	50	50	100	47-150
TRANS-1,3-DICHLOROPROPENE	50	55	110	17-183
1,1,2-TRICHLOROETHANE	50	57	114	52-150
TETRACHLOROETHENE	50	50	100	64-148
DIBROMOCHLOROMETHANE	50	56	112	53-149
4-METHYL-2-PENTANONE (MIBK)	50	58	116	80-124
2-HEXANONE	50	59	118	52-141
CHLOROBENZENE	50	49	98	37-160
ETHYLBENZENE	50	49	98	37-162
M&P XYLENES	100	93	93	80-120
O- XYLENES	50	48	96	80-120
STYRENE	50	48	96	90-113
BROMOFORM	50	51	102	45-169
1,1,2,2-TETRACHLOROETHANE	50	52	104	46-157
TETRAHYDROFURAN	50	60	120	**

P.Q.L. = PRACTICAL QUANTITATION LIMIT
ND=NOT DETECTED

** QC LIMITS ARE NOT AVAILABLE AT THIS TIME. CTM IS CURRENTLY WORKING TO ESTABLISH LIMITS FOR THIS COMPOUND.

CTM ANALYTICAL LABORATORIES, LTD.
VOLATILE ORGANICS
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY
EPA METHOD 8240

DUNN GEOSCIENCE
12 METRO PARK ROAD
ALBANY, NY 12205
ATTENTION: SANDER BONVELL

CTM PROJECT NO: 91.00946
CTM TASK NO: 910927P
MATRIX: WATER
* CTM SAMPLE NO: 927P-03
DATE RUN: 10/11/91

COMPOUND	SPIKE ADDED MCG/L	SAMPLE CONC. MCG/L	MS CONC. MCG/L	MS % REC.#	QC LIMITS REC.
1,1-DICHLOROETHENE	50	ND	47	94	61-145
TRICHLOROETHENE	50	ND	54	108	71-120
BENZENE	50	ND	49	98	76-127
TOLUENE	50	ND	51	102	76-125
CHLOROBENZENE	50	ND	55	110	75-130
TETRAHYDROFURAN	50	ND	102	102	**

COMPOUND	MSD CONC. MCG/L	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-DICHLOROETHENE	47	94	0	14	61-145
TRICHLOROETHENE	51	102	3	14	71-120
BENZENE	49	98	0	14	76-127
TOLUENE	49	98	4	13	76-125
CHLOROBENZENE	57	114	4	13	75-130
TETRAHYDROFURAN	111	111	8	**	**

COLUMN TO BE USED TO FLAG RECOVERY AND RPD VALUES WITH ASTERISK

~ VALUES OUTSIDE OF QC LIMITS

D=SPIKE COMPOUNDS DILUTED OUT

* A MATRIX SPIKE AND MATRIX SPIKE DUPLICATE WERE PERFORMED ON THIS SAMPLE.

**QC LIMITS ARE NOT AVAILABLE AT THIS TIME. CTM IS CURRENTLY WORKING TO ESTABLISH LIMITS FOR THIS COMPOUND.

CTM ANALYTICAL LABORATORIES, LTD.
VOLATILE ORGANICS
SURROGATE RECOVERY
EPA METHOD 8240

DUNN GEOSCIENCE
12 METRO PARK ROAD
ALBANY, NY 12205
ATTENTION: SANDER BONVELL

CTM PROJECT NO: 91.00946
CTM TASK NO: 910927P
DATE RUN: 9/11/91

LAB ID	S1 (TOL) #	S2 (BFB) #	S3 (DCE) #	TOTAL OUT
BLANK	106	94	100	0
CONTROL	102	94	102	0
927P-07	104	92	98	0
927P-01	102	100	98	0
927P-03	104	96	96	0
927P-06	108	92	100	0
927P-03 MS	104	100	98	0
927P-03 MSD	104	106	104	0

	QC LIMITS WATER	QC LIMITS SOIL
S1 (TOL) = TOLUENE-d8	(88-110)	(81-117)
S2 (BFB) = BROMOFLUOROBENZENE	(86-115)	(74-121)
S3 (DCE) = 1,2-DICHLOROETHANE-d4	(76-114)	(70-121)

COLUMN TO BE USED TO FLAG RECOVERY VALUES

* VALUES OUTSIDE OF REQUIRED QC LIMITS

D SURROGATES DILUTED OUT

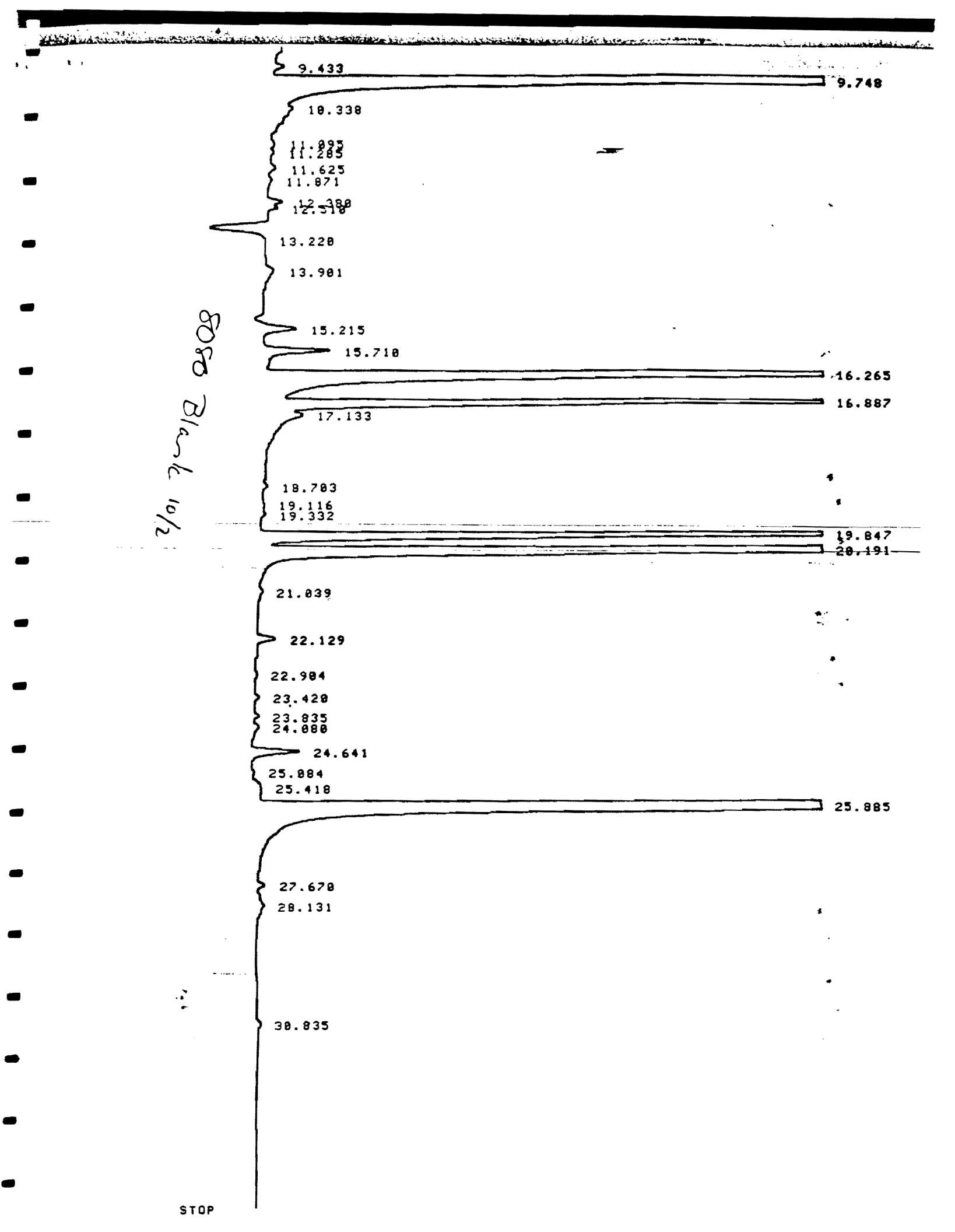
CTM ANALYTICAL LABORATORIES, LTD.
PESTICIDES AND PCB'S
EPA METHOD 8080
BLANK

DUNN GEOSCIENCE
12 METRO PARK LANE
ALBANY, NY 12205
ATTENTION: SANDER BONVELL

CTM PROJECT #:	91.00946
CTM Task #:	910927P
Date Received:	9/27/91
Date Ext.	10/2/91
Date Run:	10/4/91
Matrix:	WATER

COMPOUND	RESULT	P.Q.L.	UNITS
ALDRIN	ND	0.2	MCG/L
alpha-BHC	ND	0.2	MCG/L
beta-BHC	ND	0.2	MCG/L
gamma-BHC (LINDANE)	ND	0.2	MCG/L
delta-BHC	ND	0.2	MCG/L
CHLORDANE	ND	2.0	MCG/L
4,4'-DDT	ND	0.2	MCG/L
4,4'-DDE	ND	0.2	MCG/L
4,4'-DDD	ND	0.2	MCG/L
DIELDRIN	ND	0.2	MCG/L
ALPHA-ENDOSULFAN	ND	0.2	MCG/L
BETA-ENDOSULFAN	ND	0.2	MCG/L
ENDOSULFAN SULFATE	ND	0.2	MCG/L
ENDRIN	ND	0.2	MCG/L
ENDRIN ALDEHYDE	ND	0.2	MCG/L
HEPTACHLOR	ND	0.2	MCG/L
HEPTACHLOR EPOXIDE	ND	0.2	MCG/L
TOXAPHENE	ND	4.0	MCG/L
AROCLOR-1016	ND	0.5	MCG/L
AROCLOR-1221	ND	0.5	MCG/L
AROCLOR-1232	ND	0.5	MCG/L
AROCLOR-1242	ND	0.5	MCG/L
AROCLOR-1248	ND	0.5	MCG/L
AROCLOR-1254	ND	0.5	MCG/L
AROCLOR-1260	ND	0.5	MCG/L

P.Q.L. = PRACTICAL QUANTITATION LIMIT
ND = NOT DETECTED


9.433
9.748
10.338
11.095
11.285
11.625
11.871
12.380
12.518
13.220
13.901
15.215
15.718
16.265
16.887
17.133
18.783
19.116
19.332
19.847
20.191
21.039
22.129
22.984
23.420
23.835
24.080
24.641
25.084
25.418
25.885
27.670
28.131
30.835
STOP
8058 Blank 10/2

CTM ANALYTICAL LABORATORIES, LTD.
PESTICIDES AND PCB'S
EPA METHOD 8080
CONTROL

DUNN GEOSCIENCE
12 METRO PARK LANE
ALBANY, NY 12205
ATTENTION: SANDER BONVELL

CTM PROJECT NO: 91.00946
CTM TASK NO: 910927P
DATE RUN: 10/4/91

COMPOUND	ACTUAL CONC. MCG/ML	CONTROL CONC. MCG/ML	CONTROL % REC.	EPA-608 CONTROL LIMITS
ALPHA BHC	0.05	0.039	79	37-134
BETA BHC	0.05	0.044	87	17-147
GAMMA BHC	0.05	0.041	81	19-140
DELTA BHC	0.05	0.042	83	32-127
HEPTACHLOR	0.05	0.038	75	34-111
ALDRIN	0.05	0.038	76	42-122
HEPTACHLOR EPOXIDE	0.05	0.042	84	37-142
ENDOSULFAN I	0.05	0.040	81	45-153
DIELDRIN	0.05	0.041	82	36-146
P,P'-DDE	0.05	0.041	81	30-145
ENDRIN	0.05	0.045	90	30-147
ENDOSULFAN II	0.05	0.041	81	D-202
P,P'-DDD	0.05	0.041	83	31-141
ENDRIN ALDEHYDE	0.05	0.044	88	30-150
ENDOSULFAN SULFATE	0.05	0.045	90	26-144
P,P'-DDT	0.05	0.038	76	25-160
ENDRIN KETONE	0.05	0.047	93	60-140
METHOXYCHLOR	0.05	0.045	91	60-140

ND= NOT DETECTED

CTM ANALYTICAL LABORATORIES, LTD.
MATRIX SPIKE
PESTICIDES
EPA METHOD 8080

DUNN GEOSCIENCE
12 METRO PARK LANE
ALBANY, NY 12205
ATTENTION: SANDER BONVELL

CTM PROJECT NO: 91.00946
CTM TASK NO: 910927P
SAMPLE SPIKED: 925A-02
DATE RUN: 10/4/91

COMPOUND	SPIKE ADDED MCG/KG	SAMPLE CONC. MCG/KG	MS CONC. MCG/KG	MS % REC. #	QC LIMITS REC.
ALPHA BHC	0.05	0.000	0.037	75	37-134
BETA BHC	0.05	0.000	0.041	81	17-147
GAMMA BHC	0.05	0.000	0.038	76	19-140
DELTA BHC	0.05	0.000	0.039	78	32-127
HEPTACHLOR	0.05	0.000	0.037	74	34-111
ALDRIN	0.05	0.000	0.036	73	42-122
HEPTACHLOR EPOXIDE	0.05	0.000	0.039	79	37-142
ENDOSULFAN I	0.05	0.000	0.038	75	45-153
DIELDRIN	0.05	0.000	0.038	76	36-146
P,P'-DDE	0.05	0.000	0.038	76	30-145
ENDRIN	0.05	0.000	0.046	91	30-147
ENDOSULFAN II	0.05	0.000	0.038	76	D-202
P,P'-DDD	0.05	0.000	0.039	79	31-141
ENDRIN ALDEHYDE	0.05	0.000	0.042	83	30-150
ENDOSULFAN SULFATE	0.05	0.000	0.042	85	26-144
P,P'-DDT	0.05	0.000	0.038	76	25-160
ENDRIN KETONE	0.05	0.000	0.044	89	60-140
METHOXYCHLOR	0.05	0.000	0.047	95	60-140

COLUMN TO BE USED TO FLAG RECOVERY AND RPD VALUES WITH AN ASTERISK

* VALUES OUTSIDE OF QC LIMITS

& = SPIKE COMPOUNDS WERE DILUTED OUT.

CTM ANALYTICAL LABORATORIES, LTD.
MATRIX SPIKE DUPLICATE
PESTICIDES
EPA METHOD 8080

DUNN GEOSCIENCE
12 METRO PARK LANE
ALBANY, NY 12205
ATTENTION: SANDER BONVELL

CTM PROJECT NO: 91.00946
CTM TASK NO: 910927P
SAMPLE SPIKED: 925A-02
DATE RUN: 10/4/91

COMPOUND	CONC. MCG/KG	MSD % REC. #	% RPD #	CONTROL LIMITS RPD	CONTROL LIMITS REC.
ALPHA BHC	0.034	68	9	25	37-134
BETA BHC	0.038	76	6	25	17-147
GAMMA BHC	0.035	71	7	25	19-140
DELTA BHC	0.036	72	7	25	32-127
HEPTACHLOR	0.033	67	10	25	34-111
ALDRIN	0.034	67	8	25	42-122
HEPTACHLOR EPOXIDE	0.037	74	5	25	37-142
ENDOSULFAN I	0.036	71	5	25	45-153
DIELDRIN	0.036	73	5	25	36-146
P,P'-DDE	0.037	73	5	25	30-145
ENDRIN	0.043	85	7	25	30-147
ENDOSULFAN II	0.037	74	4	25	D-202
P,P'-DDD	0.038	77	3	25	31-141
ENDRIN ALDEHYDE	0.041	81	2	25	30-150
ENDOSULFAN SULFATE	0.041	82	4	25	26-144
P,P'-DDT	0.035	69	9	25	25-160
ENDRIN KETONE	0.043	86	3	25	60-140
METHOXYCHLOR	0.044	88	8	25	60-140

COLUMN TO BE USED TO FLAG RECOVERY AND RPD VALUES WITH AN ASTERISK

* VALUES OUTSIDE OF QC LIMITS

& = SPIKE COMPOUNDS WERE DILUTED OUT.

CTM ANALYTICAL LABORATORIES, LTD.
SURROGATE RECOVERY
PESTICIDES AND PCB'S

DUNN GEOSCIENCE
12 METRO PARK ROAD
ALBANY, NY 12205
ATTENTION: SANDER BONVELL

CTM PROJECT NO.:	91.00946
CTM TASK NO.:	910927P
DATE RUN:	10/4/91
MATRIX:	WATER

LAB ID	S1	% REC.	TOTAL OUT
BLANK	0.075	75	0
CONTROL	0.080	80	0
925A-02 MS	0.095	95	0
925A-02 MSD	0.087	87	0

S1 = 2,4,5,6-TETRACHLORO-M-XYLENE
(CONC. IS 0.1 MCG/ML)

COLUMN TO BE USED TO FLAG RECOVERY VALUES

* VALUES OUTSIDE OF REQUIRED QC LIMITS

D SURROGATES DILUTED OUT

CTM ANALYTICAL LABORATORIES, LTD.
SURROGATE RECOVERY
PESTICIDES AND PCB'S

DUNN GEOSCIENCE
12 METRO PARK ROAD
ALBANY, NY 12205
ATTENTION: SANDER BONVELL

CTM PROJECT NO.:	91.00946
CTM TASK NO.:	910927P
DATE RUN:	10/7/91
MATRIX:	WATER

LAB ID	S1	% REC.	TOTAL OUT
** 927P-05	0.162	162	0
** 927P-06	0.126	126	0

** PLEASE NOTE THAT THE SURROGATES WERE DILUTED 1 TO 10.

S1 = 2,4,5,6-TETRACHLORO-M-XYLENE
(CONC. IS 0.1 MCG/ML)

COLUMN TO BE USED TO FLAG RECOVERY VALUES

* VALUES OUTSIDE OF REQUIRED QC LIMITS

D SURROGATES DILUTED OUT

APPENDIX C

9109274

DUNN GEOSCIENCE CORP.
12 Metro Park Road
Albany, N.Y. 12205 (518) 458-1313

Client Name: Northeast Solite
Project No.: 00257-00726
Site Location: Mt. Marion, NY
Sampler: Sander Bonvell

DGC Contact: Sander Bonvell
Laboratory Contact: Elaine Gerber
Lab Identification: CTM Analytical
Date Report Required: 4 weeks TAT

	Sample Identification	Date	Time	Sample Matrix	Collection Vessel	Lowering Device	# Sample Containers	Presery.	Comp. or Grab	Comment
01	UFT-1A	9/27/91	11[05]	Water	Bailer	Nylon	3 VOA		G ✓	EPA 8240 plus tetrahydrofuran as a calibrated standard (Note: use vial 1, 2 and 3 in that order if needed)
02	UFT-1A	9/27/91	11[14]	Water	Bailer	Nylon	1x1L		G	EPA 418.1 and GC/FID scan for petroleum hydrocarbons
03	Seep	9/27/91	11[50]	Water	Plastic Container		3 VOA		✓	EPA 8240 plus tetrahydrofuran as a calibrated standard
04	Seep	9/27/91	12[33]	Water	" "		2x1L clear glass		G ✓	EPA 418.1 and GC/FID scan for petroleum hydrocarbons
05	Seep	9/27/91	12[45]	Water	" "		2x1L amber glass		G ✓	EPA 8080 for pesticides and PC
07	Trip Blank	-	-	Water	-	-	3 VOA		✓	EPA 8240 plus tetrahydrofuran as a calibrated standard

	Name	Affiliation	Date	Time
Relinquished by:	Sander Bonvell	DUNN	9/27/91	1545
Received by:				
Relinquished by:				
Received by:				

Received by Laboratory: [illegible] 9/27 345pm
Samples Intact & Properly Preserved: (Yes) or No
Laboratory Comments:

FORM5

September 27, 1991 Northeast Site
IESI facility.

Well UFT-1A

Well is improperly labelled as "UFT-1".
Well opened at 18^{26} am, no extraordinary conditions.

Measurements taken from top of steel:
Water level = 7'-4¾" = 6'7¼" = 6.60'
Well Bottom = 8' 2⅛" = 8.18'

Difference: 8.18'-6.60' = 1.58' x 0.163 = 0.26 gallons

(Note: Inadvertantly may have given water level reading of 6.06' to NYSDEC., and 2.12' difference for 0.34 gal).

Samples were collected in 3 VOA vials:

Vial 1 = No bubbles
Vial 2 = No bubbles, highly turbid visually
Vial 3 = 1 bubble approximately 1/64" in diameter (·).

After sampling VOAs, the Petroleum ID 1 liter bottle was filled about 1/4 full and then only 25-30 mls of water could be obtained from each bailer "full".

When ~~attempting~~ to collect Pest/PCBs, only a few mls at a time (no > 10 ml) could be obtained from each bailer full.

DET-2

Well dry at 11' 11 3/4" from top of PVC. Ground to top of riser ≈ 25 7/8".

Tip of water level probe when it hit dirt at bottom of well was basically dry with just a very slight tinge of water.

...ubles
...bles, highly turbid visibly
...ble approximately 1/64" in
...ter (·).

VOAs, the Petroleum ID
... filled about 1/4 full
25-30 mls of water could be
...ach bailer "full".

... to collect Pest/PCBs,
...t a time (no > 10 ml) could
...om each bailer full.

...' 11¾" from top of PVC.
...of riser ≈ 25⅞".

...evel probe when it hit
...t well was basically dry
...y slight tinge of water.

Seep

Collection of VOAs (seep) and blind duplicate (X-1) at 11^{38}-11^{50}. Collected from (directly) single seep approximately 5' above collection trough.

	Seep	X-1
Vial 1	No bubbles	No bubbles
Vial 2	" "	" "
Vial 3	" "	1 bubble about size of tip of #10 sewing needle. NYSDEC says ~0.1 mm dia.

In order to collect larger volumes of water for the remaining samples, the top of a plastic Deer Park water bottle was cut off with a knife and the bottom container (with handle) was pressed/molded against the rock. This had NYSDEC approval.

Doug Lindner held the plastic collection device against the rock and transferred it to Sander Bonnell to fill the sample containers.

Petroleum hydrocarbons were collected between 12^{10} - 12^{33}.

Pesticide / PCBs were collected 12^{33} - 12^{45}.

12^{56} pm : Well UFT-1A revisited

Water level (top of steel) =
8'-2¼" = 7'9¾" = 7.81' ⇒

0.37' ⇒ 0.06 gal.

In an attempt to resample VOAs, all we got was brown sediment/water, very muddy/turbid.