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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
CENTRAL REGIONAL LABORATORY
839 BESTGATE ROAD
ANNAPOLIS, MARYLAND 21401
(301) 266-9180

DATE : May 2, 1989

SUBJECT: VOA Report for Dublin TCE

FROM : Daniel K. Donnelly (3ES21)
Chief, Laboratory Section

TO : Eric Johnson (3HW14)

I have enclosed the analysts report on Dublin TCE. If you should have any questions regarding this report, please give me a call.

DKD:jr

Enclosure
a/s

cc: Paul Wooldridge, Versar
Mark diFeliciantonio, CDM

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
CENTRAL REGIONAL LABORATORY
839 BESTGATE ROAD
ANNAPOLIS, MARYLAND 21401
(301) 266-9180

DATE : May 1, 1989

SUBJECT: VOC Analysis of Dublin TCE
Superfund Enforcement, (3/22/89 - 3/30/89), 890308-06-20

FROM : James Jerpe
Chemist

TO : Daniel K. Donnelly
Chief, Laboratory Section

THRU : John Austin
Team Leader, Organic Analysis Section

Water samples were analyzed by purge and trap of a 5 mL solution using a TRACOR Model 585 gas chromatograph with Hall 1000 HECD and 703 PID detectors in series. Equipment was calibrated with AccuStandard 502 commercial standards and 1-chloro-bromopropane and fluorobenzene internal standards. (Method 502.2)

Samples were taken 3/07/89 and analyzed 3/13 thru 3/17 in sequence. Positive trip blanks were reported as analyzed. These values were not subtracted from positive results.

QA sample WP 1278 Conc. 4 was analyzed per instructions and included in tabulated results.

Sample Description:

Lab No.:	Description
890308-06	Dublin TCE, Thompson Well No. 2 BT 129 Mill St., Sta. 14
890308-07	Dublin TCE, Farm Bureau BT 104 Mill St., Sta. 13
890308-08	Dublin TCE, Beauty Shop BT 104 Maple Ave., Sta. 6
890308-09	Dublin TCE, Beauty Shop AT 104 Maple Ave., Sta. 15
890308-10	Dublin TCE, Black BT 116 Elephant Rd., Sta. 16
890308-11	Dublin TCE, Dublin Post Office BT, Sta. 9
890308-12	Dublin TCE, Merick AT 153 N. Main St., Sta. 18
890308-13	Dublin TCE, Schmell BT 149 N. Main St., Sta. 11
890308-14	Dublin TCE, Schmell AT 149 N. Main St., Sta. 7
890308-15	Dublin TCE, Bucks County Bank BT 145 N. Main St., Sta. 1
890308-16	Dublin TCE, Bucks County Beer Distributor, Sta. 3
890308-17	Dublin TCE, First Federal AT 142 N. Main St., Sta. 2
890308-18	Dublin TCE, Jacobs Auto Supply NT, Sta. 10
890308-19	Dublin TCE, Rhine's Gulf AT, Sta. 4
890308-20	Dublin TCE, TB-01, Sta. 12

JJ:nt
cc: Peggy Zawodny
QCO

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Notes:

•Target compound concentrations were calculated using relative response factors based on commercially prepared standards from 2 different sources at concentrations of the magnitude anticipated in unknowns. (Nominal 20 micrograms per L). The standard procedures follow method 502.2, purge and trap with direct desorption of volatiles onto a wide bore (VOCOL) 120M capillary column.

•Calibration standards (Supelco, AccuStandard, in-house neat solutions traceable to EPA repository) are used daily and compared with a calibration file up-dated as required (20 ppb to 80 ppb levels for quantitation).

•A method blank is routinely analyzed prior to calibration. Processing samples is not continued if the blank is positive for analyte peaks. Values found in field blanks submitted are thus reported as received and may imply significant contamination.

•Samples are normally run in sequence and duplicated at appropriate dilutions as required. Results are reported regardless of variances. Between cycles, the trapping media is heated and flushed with carrier gas to avoid carry-over of analyte as prescribed by the published methodology.

Relatively high concentrations of analytes are confirmed by GC/MS analysis of a submitted duplicate or by the ratio of multiple detector responses. Detection limits are data published in the Federal Register for Method 502-2 and proven appropriate by these techniques.

•Recoveries of surrogates are calculated from either the theoretical true concentration of a commercial standard and/or in-house audit concentrations prepared per instructions. Results are tabulated in the final report.

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U. S. Environmental Protection Agency, Region III, Central Regional Laboratory

Project No.: Dublin TCE, Superfund Enforcement

Sample No.:	890308-06	890308-07	Duplicate 890308-07	890308-08
	ppb	ppb	ppb	ppb
Cis-1,2-Dichloroethylene	-	2.9	5.8	-
Chloroform	1.4	2.3	3.6	1.5
1,1,1-Trichloroethane	-	11.1	12.2	-
Trichloroethylene	46.8	476.	348.	75.9

Sample No.:	890308-09	890308-10	890308-11	890308-12
	ppb	ppb	ppb	ppb
Cis-1,2-Dichloroethylene	1.3	-	-	-
Chloroform	1.9	1.8	1.7	1.6
1,1,1-Trichloroethane	-	-	20.7	-
Trichloroethylene	230.	4.4	6.7	-
1,2-Dichloropropane	-	-	6.3	-
Tetrachloroethylene	-	1.2	-	-

Sample No.:	Duplicate 890308-12	890308-13	890308-14	Duplicate 890308-14
	ppb	ppb	ppb	ppb
Cis-1,2-Dichloroethylene	-	1.9	-	-
Chloroform	2.1	1.6	1.2	2.0
1,1,1-Trichloroethane	-	-	-	-
Trichloroethylene	4.0	49.0	3.1	8.0

Sample No:	890308-16	Duplicate 890308-16	890308-17	890308-18
	ppb	ppb	ppb	ppb
Cis-1,2-Dichloroethylene	3.0	7.2	1.1	-
Chloroform	1.8	2.5	-	1.3
1,1,1-Trichloroethane	3.2	3.8	-	20.5
Trichloroethylene	102.	245.	3.6	5.7
1,2-Dichloropropane	-	-	-	5.5

Sample No:	890308-19	890308-20	Blank
	ug/L	ug/L	ug/L
Cis-1-2-Dichloroethylene	-	-	-
Chloroform	1.2	5.6J	-
1,1,1-Trichloroethane	-	-	-
Trichloroethylene	11.1	-	-

J: Trip Blank/significant concentration of analyte.

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U.S. Environmental Protection Agency, Region III, Central Regional Laboratory

Project No.: Dublin TCE, Superfund Enforcement

	WP1278/4 ppb	True ppb	95% Confidence Limit
Chloroform	14.4	18.2	9.8-25.4
1,1,1-Trichloroethane	1.8	1.7	0.0-3.2
Carbon Tetrachloride	4.1	3.7	0.0-7.0
1,2-Dichloroethane	1.4	2.5	0.9-4.5
Trichloroethylene	1.7	1.3	0.0-3.2
Bromodichloromethane	1.4	1.2	0.0-4.1
Tetrachloroethylene	3.3	2.2	1.3-3.7
Dibromochloromethane	3.1	3.0	0.3-6.3
Bromoform	5.0	4.2	2.3-7.1

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U.S. Environmental Protection Agency, Region 3, Central Regional Lab

QUANTITATION LIMITS

VOLATILES - STANDARD EQUATABLE

CAS #		Water ug/L
75-71-8	Dichlorodifluoromethane	1
74-87-3	Chloromethane	1
75-01-4	Vinyl Chloride	1
74-83-9	Bromomethane	1
75-00-3	Chloroethane	1
75-69-4	Trichlorofluoromethane	1
75-35-4	1,1-Dichloroethylene	1
75-09-2	Methylene Chloride	1
156-60-5	Trans-1,2-Dichloroethylene	1
75-34-3	1,1-Dichloroethane	1
156-59-2	Cis-1,2-Dichloroethylene	1
65-66-3	Chloroform	1
71-55-6	1,1,1-Trichloroethane	1
56-23-5	Carbon Tetrachloride	1
71-43-2	Benzene	1
107-0602	1,2-Dichloroethane	1
79-01-6	Trichloroethylene	1
78-87-5	1,2-Dichloropropane	1
75-27-4	Bromodichloromethane	1
100-75-8	2-Chloroethylvinylether	1
10061-2-6	Trans-1,3-Dichloropropene	1
108-88-3	Toluene	1
10061-1-5	Cis-1,3-Dichloropropene	1
79-00-5	1,1,2-Trichloroethane	1
127-18-4	Tetrachloroethylene	1
142-28-9	1,3-Dichloropropane	1
124-48-1	Dibromochloromethane	1
108-90-7	Chlorobenzene	1
630-20-6	1,1,1,2-Tetrachloroethane	1
100-41-4	Ethylbenzene	1
75-47-6	O-xylene	1
100-42-4	Styrene	1
75-25-2	Bromoform	1
98-82-8	Isopropylbenzene	1
108-86-1	Bromobenzene	1
79-34-5	1,1,2,2-Tetrachloroethane	1

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QUANTITATION LIMITS (Continued)

VOLATILES-STANDARD EQUATABLE

CAS #		Water ug/L
96-18-4	1,2,3-Trichloropropane	1
103-65-1	N-Propylbenzene	1
95-49-8	2-Chlorotoluene	1
106-43-4	4-Chlorotoluene	1
108-67-8	1,3,5-Trimethylbenzene	1
98-06-6	Tert-Butylbenzene	1
93-63-6	1,2,4-Trimethylbenzene	1
135-98-8	Sec-Butylbenzene	1
541-73-1	1,3-Dichlorobenzene	1
106-46-7	1,4-Dichlorobenzene	1
99-87-6	P-Isopropyltoluene	1
95-50-1	1,2-Dichlorobenzene	1
104-51-8	N-Butylbenzene	1
96-12-8	1,2-Dibromo-3-Chloropropane	1
120-82-1	1,2,4-Trichlorobenzene	1
91-20-3	Naphthalene	1
87-68-3	Hexachlorobutadiene	1
87-61-6	1,2,3-Trichlorobenzene	1
594-20-7	2,2-Dichloropropane	1
563-58-6	1,1-Dichloro-1-propene	1
74-95-3	Dibromomethane	1
106-93-4	1,2-Dibromomethane	1
*	(M,P)-Xylene Isomers	1

AR401005

Versar INC.

CHAIN OF CUSTODY RECORD

Page 1 of 2

PROJECT NO.	PROJECT NAME
DTCE 15031.61	DTCE 15031.61

SAMPLERS: (Signature) Mark Becker, Dennis Shea

(Printed) Mark T. Becker, DENNIS R. SHEA

PARAMETERS: VOA*

INDUSTRIAL HYGIENE SAMPLE: Y / N

FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOA*					REMARKS
Station 14	3/6/89	1116		X	Thompson Wall N.2 BT 129 Mill St	2	X				89030806	Tag No. 3-1044810-11 ~~3-1044808-01~~
Station 13	3/6/89	1145		X	Farm Bureau BT 104 Mill St.	2	X				89030807	Tag No. 3-1044806-07
Station 6	3/7/89	1045		X	Beauty ~~Beauty~~ Shop BT 104 Maple Ave.	2	X				89030808	Tag No. 3-1044804-05
Station 15	3/7/89	1045		X	Beauty ~~Beauty~~ Shop AT 104 Maple Ave	2	X				89030809	Tag No 3-1044802-03
Station 16	3/7/89	1020		X	Black BT 116 Elephant Rd.	2	X				89030810	Tag No. 3-1044796-97
Station 9	3/6/89	1430		X	(DS) Dublin Post Office BT ~~Seaton NT Rickets Rd & Rt 313~~	2	X				89030811	Tag No 3-1044808-09
Station 18	3/6/89	1440		X	Merick AT 153 N. Main St	2	X				89030812	Tag No. 3-1044800-01
Station 11	3/6/89	1515		X	Schmell BT 149 N. Main St.	2	X				89030813	Tag No. 3-1044812-13
Station 7	3/6/89	1515		X	Schmell AT 149 N. Main St.	2	X				89030814	Tag No. 3-1044814-15
Station 1	3/6/89	1350		X	Bucks County Bank BT 145 N. Main St.	2	X				89030815	Tag No. 3-1044816-17
Station 3	3/6/89	1350		X	Bucks County Beer Distributor	2	X				89030816	Tag No. 3-1044818-19
Station 2	3/6/89	1412		X	First Federal AT 142 N. Main St	2	X				89030817	Tag No. 3-1044794-95

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Dennis R. Shea	3/8/89 1125				
(Printed) DENNIS R. SHEA		(Printed)	(Printed)		(Printed)

Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks
		Janet Robison	3-8-89 1125	VOA* Analyze quantitatively for trichloroethylene, tetrachloroethane, and vinyl chloride against drinking water standards.
(Printed)		(Printed) Janet Roberson		

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Distribution: Original Plus One Accompanies Shipment (white and yellow); Copy to Coordinator Field Files (pink).

Hand Delivered

900-04-11-0006

DTCE 15031.61 DTCE 15031.61

HYGIENE SAMPLE (N)

SAMPLERS: (Signature) Dennis Shea (Printed) DENNIS SHEA

FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOA*					REMARKS
Station 10	3/6/89	1415		X	Jacobs Auto Supply NJT	2	2				89030818	Tag No. 3-1044820-21
Station 4	3/6/89	1115		X	Rhine's Gulf AT	2	2				89030819	Tag No. 3-1044798-99
Station 12	3/8/89	1100		X	TB-01	2	2				89030820	Tag No. 3-1044822-23

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Dennis Shea	3/8/89 1125				
(Printed) DENNIS SHEA		(Printed)	(Printed)		(Printed)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) Janet Roberson	Date / Time 3/8/89 1125	Remarks VOA* Analyze quantitatively for trichloroethylene, tetrachloroethane and vinyl chloride against drinking water standards.	
(Printed)		(Printed) Janet Roberson			

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Distribution: Original Plus One Accompanies Shipment (white and yellow); Copy to Coordinator Field Files (pink).