Superfund Records Center
SITE: Wells G+H
BREAK: 3.6
OTHER: 17091

D-583-7-5-11
Revision 1

WELLS G & H SITE
REMEDIAL INVESTIGATION REPORT
PART I
WOBURN, MASSACHUSETTS

TDD NO. F1-8607-07
NUS JOB NO. MA11RF
EPA SITE NO. MAD980732168
CONTRACT NO. 68-01-6699

VOLUME IV: APPENDICES C-G

FOR THE

REGION I
US EPA
WASTE MANAGEMENT DIVISION

OCTOBER 17, 1986

NUS CORPORATION
SUPERFUND DIVISION

SUBMITTED BY

JOANNE O'NEILL MORIN
PROJECT MANAGER
CHEMIST

ALAN K. ANGERS
ASSISTANT PROJECT MANAGER
GEOLOGIST

APPROVED BY

RICHARD G. DINITTO
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QUALITY ASSURANCE

APPENDIX C
ANALYTICAL DATA COLLECTED BY OTHER PARTIES

This appendix presents data collected by GeoEnvironmental at the W.R. Grace site, by Weston Geophysical Engineering at the Wildwood Conservation Corporation site, and by GeoEnvironmental, Weston Geophysical and EPA at locations throughout the study area. All data presented in the following tables have undergone a quality control review (data validation):

Table 1	W.R. Grace Groundwater Quality Data
Table 2	Mean Concentrations for W. R. Grace Groundwater Quality Data
Table 3	Wildwood Conservation Corporation Groundwater Quality Data
Table 4	Mean Concentrations for Wildwood Conservation Corporation Groundwater Quality Data
Table 5	Additional Study Area Groundwater Quality Data
Table 6	Mean Concentrations for Additional Study Area Groundwater Quality Data

TABLE 1. W.R. Grace Groundwater Quality Data (ppb)

Sampling Date		11-6-85	11-6-85	12-2-85	12-2-85	11-26-85	11-26-85	4-22-85	4-22-85	4-22-85	11-26-85	4-22-85	4-22-85	4-23-85	4-22-85	4-23-85	6-19-85	4-23-85	6-19-85
Sample Location		GW-1D	GW-1S	GW-2D	GW-2S	GW-5S	GW-5D	GW-6	GW-7D	GW-7S	GW-8	GW-9S	GW-10D	GW-10DD	GW-M10S	GW-11D	GW-11D	GW-11S	GW-11S
Lab		ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC
Traffic Report #	Detection Limit	J3031	J3032	K5949	K5947	K5762	K5763	H1407	H1397	H1396	K5775	H1395	H1405	H1406	H1404	H1401	J0427	H1400	J0426
Chloromethane	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**	--	**
Bromomethane	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**	--	**
Vinyl Chloride	10	--	--	--	--	--	--	--	--	14.7 J	--	--	--	--	--	--	**	--	**
Methylene Chloride	2.8	--	--	--	--	--	--	3.6 J	<2.8 J	<2.8 J	3.81 J	--	--	4.4 J	--	4.4 J	**	5 J	**
1,1-Dichloroethene	2.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**	--	**
1,1-Dichloroethane	4.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**	--	**
trans-1,2-Dichloroethene	1.6	--	--	--	--	--	--	5.1 J	--	306 J	--	--	--	--	--	227 J	**	76.2 J	**
Chloroform	1.6	--	--	--	--	--	--	--	--	--	--	--	--	3.4 J	--	--	**	--	**
1,2-Dichloroethane	2.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**	--	**
1,1,1-Trichloroethane	3.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**	--	**
Carbon Tetrachloride	2.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**	--	**
Bromodichloromethane	2.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**	--	**
1,1,2,2-Tetrachloroethane	6.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**	--	**
1,2-Dichloropropane	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**	--	**
trans-1,3-Dichloropropene	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**	--	**
Trichloroethene	1.9	--	--	--	--	--	--	6.6 J	<1.9 J	391 J	--	3.4 J	<1.9 J	--	--	106.9 J	**	131 J	**
Dibromochloromethane	3.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**	--	**
1,1,2-Trichloroethane	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**	--	**
Benzene	4.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**	--	**
cis-1,3-Dichloropropene	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**	--	**
2-Chloroethylvinylether	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**	--	**
Bromoform	4.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**	--	**
Tetrachloroethene	4.1	--	--	--	--	--	--	--	--	10 J	--	--	<4.1 J	--	--	--	**	--	**
Toluene	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**	--	**
Chlorobenzene	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**	--	**
Ethylbenzene	7.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**	--	**
Styrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Xylene	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**	--	**
Trichlorofluoromethane	10	--	--	--	--	--	--	--	<10 J	--	--	--	--	--	--	--	**	--	**
para-Chlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ortho-Chlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
meta-Chlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phthalate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

J - Quantitation is approximate due to quality control review.
-- - Indicates compound was not detected.
* - Value is rejected due to blank contamination identified in quality control review (data validation).
** - Value is rejected due to other contractual requirements identified in the quality control review.
BMDL - Below minimum detection limit.
NA - Not analyzed
Samples collected by GeoEnvironmental Consultants, Inc.

TABLE 1. W.R. Grace Groundwater Quality Data (ppb)

Sampling Date		10-02-85	11-14-85	12-21-85	10-02-85	11-14-85	12-21-85	10-10-85	11-27-85	10-10-85	11-14-85	10-10-85	11-14-85	11-27-85	12-21-85	10-10-85	11-14-85	11-27-85
Sample Location		GW-13D	GW-13D	GW-13D	GW-13S	GW-13S	GW-13S	GW-14D	GW-14D	GW-14S	GW-14S	GW-15D	GW-15D	GW-15D	GW-15D	GW-15S	GW-15S	GW-15S
Lab	Detection	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC
Traffic Report #	Limit	J3001	K5726	K0913	J3000	K5725	K0936	J2044	K5932	J2045	K5727	J2046	K5730	K5934	K0933	J2047	K5729	K5933
Chloromethane	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	10	--	--	--	439 J	1020 J	574	6410 J	211 J	129 J	1850 J	2390	<100 J	13900 J	**	5930	<100 J	3320 J
Methylene Chloride	2.0	6.4 J	<2.0 J	<2.0 J	4.6 J	80.6 J	<20	1390 J	5.11 J	39.6 J	<2.0 J	91.1 J	<20 J	2.07 J	9 J	711 J	<20 J	410 J
1,1-Dichloroethene	2.0	--	--	--	--	--	--	--	--	--	--	<20	<20 J	10 J	14.9 J	<140	<20 J	<200 J
1,1-Dichloroethane	4.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	1.6	--	--	--	503 J	830 J	566	9320 J	265 J	120 J	419 J	16000	12300 J	5690 J	**	7090	4510 J	6100 J
Chloroform	1.6	--	--	--	4.09 J	<16 J	<16	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	3.0	--	--	--	--	--	--	--	--	--	--	<30	<30 J	<3.0 J	4.37 J	--	--	--
Carbon Tetrachloride	2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	2.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	6.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropane	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	1.9	--	--	--	54.0 J	83.3 J	56	700 J	16.5 J	5.62 J	14.4 J	9690	4040 J	1460 J	702 J	460	<19 ?	<190 J
Dibromochloromethane	3.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	4.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloroethylvinylether	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	4.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	4.1	--	--	--	5.0 J	<41 J	<41	--	--	--	--	972	212 J	96.1 J	65.1 J	<210	<41 J	<410 J
Toluene	6	--	--	--	--	--	--	--	--	<6 J	11.6 J	23400 J	5790 J	2350 J	**	6450	3730 J	4810 J
Chlorobenzene	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	7.2	--	--	--	--	--	--	--	--	--	--	597 J	329 J	206 J	89 J	<360	234 J	<720 J
Styrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Xylene	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
para-Chlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ortho-Chlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
meta-Chlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phthalate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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-- - Indicates compound was not detected.
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** - Value is rejected due to other contractual requirements identified in the quality control review.
BMDL - Below minimum detection limit.
NA - Not analyzed

TABLE 1. W.R. Grace Groundwater Quality Data (ppb)

Sampling Date		12-21-85	11-01-85	11-01-85	11-26-85	12-20-85	11-01-85	11-26-85	12-21-85	11-01-85	11-26-85	12-21-85	11-01-85	12-02-85	12-20-85	11-01-85	12-02-85	12-20-85
Sample Location		GW-15S	GW-16D	GW-16S	GW-16S	GW-16S	GW-17D	GW-17D	GW-17D	GW-17S	GW-17S	GW-17S	GW-18D	GW-18D	GW-18D	GW-18S	GW-18S	GW-18S
Lab	Detection	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC
Traffic Report #	Limit	K8932	K4155	K4154	K5771	K5967	K4152	K5773	K8929	K4153	K5772	K8928	K4163	K5952	K5722	K4162	K5951	K5721
Chloroethane	10	**	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
Bromomethane	10	**	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
Vinyl Chloride	10	**	<10 J	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
Methylene Chloride	2.8	**	11.5 J	<2.8	4.8 J	<2.8 J	<2.8 J	3.98 *	**	<2.8 J	3.09 J	<2.8 J	7.4 J	<2.8 J	<2.8 J	6.6 J	<2.8 J	<2.8
1,1-Dichloroethene	2.8	**	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	4.7	**	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	1.6	**	70.6 J	--	--	--	--	--	**	<1.6 J	2.33 J	<1.6 J	--	--	--	--	--	--
Chloroform	1.6	**	--	--	--	--	--	--	**	--	--	--	--	--	--	5.27 J	<1.6 J	<1.6
1,2-Dichloroethane	2.8	**	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	3.8	**	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	2.8	**	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
Bromodichloromethane	2.2	**	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	6.9	**	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	6	**	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropane	10	**	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
Trichloroethene	1.9	**	516 J	<1.9	<1.9 J	5.17 J	--	--	**	--	--	--	--	--	--	<1.9 J	<1.9 J	13.5
Dibromochloromethane	3.1	**	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	5	**	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
Benzene	4.4	**	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	5	**	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
2-Chloroethylvinylether	10	**	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
Bromoform	4.7	**	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
Tetrachloroethene	4.1	**	<4.1 J	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
Toluene	6	**	<6 J	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
Chlorobenzene	6	**	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
Ethylbenzene	7.2	**	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
Styrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Xylene	10	**	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	10	**	<10	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
para-Chlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ortho-Chlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
meta-Chlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phthalate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

J - Quantitation is approximate due to quality control review.
-- - Indicates compound was not detected.
* - Value is rejected due to blank contamination identified in quality control review (data validation).
** - Value is rejected due to other contractual requirements identified in the quality control review.
BMDL - Below minimum detection limit.
NA - Not analyzed
Samples collected by GeoEnvironmental Consultants, Inc.

TABLE 1. W.R. Grace Groundwater Quality Data (ppb)

Sampling Date		12-20-85	11-15-85	11-27-85	12-20-85	11-15-85	11-15-85	12-02-85	12-20-85	12-20-85	12-20-85	11-01-85	11-26-85	11-01-85	11-26-85	12-21-85	10-31-85
Sample Location		GW-19D	GW-19M	GW-19M	GW-19M	GW-19S	GW-19S	GW-19S	GW-19S	GW-19S	GW-19S	GW-20D	GW-20D	GW-20M	GW-20M	GW-20M	GW-20S
Lab	Detection	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC
Traffic Report #	Limit	K5723	K5744	K5931	K5968	K5743	K8682	K5945	K5924	K5923	K5724	K4859	K5778	K4858	K5777	K8925	K4861
Chloroethane	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoethane	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	2.8 J	<2.8 J	<2.8 J	7.51 J	<2.8 J	<2.8 J	16.6 J	<2.8	<140 J	<2.8 J	<2.8 J	18.6 J	4.6 J	13.9 J	4.62 J	<2.8	24.8 J
1,1-Dichloroethene	2.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	4.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	1.6	--	--	--	--	90.9 J	84.4 J	160	169 J	112 J	129 J	--	--	<1.6 J	3.89 J	31.3	<1.6
Chloroform	1.6 J	--	2.22 J	<1.6 J	<1.6 J	1.72 J	<1.6 J	<1.6	<80 J	<1.6 J	<1.6 J	11.7 J	<1.6 J	--	--	--	--
1,2-Dichloroethane	2.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	3.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	2.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	2.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	6.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropane	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	1.9 J	23.2 J	<1.9 J	9.22 J	11.1 J	7710 J	5390 J	6020	6080 J	7020 J	8340 J	15.8 J	6.98 J	28.3	41.8 J	313	133
Dibromochloromethane	3.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	4.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloroethylvinylether	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	4.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	4.1	--	--	--	--	58.4 J	44.3 J	78	<210 J	73.9 J	81.8 J	--	--	<4.1	<4.1 J	4.32	<4.1
Toluene	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	7.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Xylene	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
para-Chlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ortho-Chlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
meta-Chlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phthalate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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** - Value is rejected due to other contractual requirements identified in the quality control review.
BMDL - Below minimum detection limit.
NA - Not analyzed
Samples collected by GeoEnvironmental Consultants, Inc.

TABLE 1. W.R. Grace Groundwater Quality Data (ppb)

Sampling Date		11-26-85	04-23-85	11-15-85	11-06-85	10-23-85	11-06-85	11-15-85	10-02-85	11-06-85	12-21-85	10-02-85	11-06-85	11-01-85	11-06-85	11-01-85	11-06-85
Sample Location		GW-20S	GW-21	GW-21	GW-21D	GW-21S	GW-21S	GW-22	GW-22D	GW-22D	GW-22D	GW-22S	GW-22S	GW-23D	GW-23D	GW-23S	GW-23S
Lab	Detection	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC
Traffic Report #	Limit	K5776	H1410	K5752	J3034	K4158	J3033	K5753	J3005	J3036	K8915	J3004	J3035	K4159	J3030	K4156	J3029
						/ csl^(righ)(right)											
Chloroethane	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoethane	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	10	--	--	--	--	--	--	--	74.1 J	<100	72.5 J	17.2 J	15 J	--	--	--	--
Methylene Chloride	2.8	4.8 J*	--	--	34.5 J	<2.8 J	24.3 J	19.2 J	11.2 J	58.3 J	<2.8 J	12 J	57.1 J	<2.8 J	20.7 J	--	--
1,1-Dichloroethene	2.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	4.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	1.6	86.3 J	143.6 J	131 J	--	--	--	<1.6 J	1550 J	1280	1020 J	603 J	513 J	765 J	359	313 J	207
Chloroform	1.6	--	--	--	--	<1.6 J	4.31	--	--	--	--	--	--	<1.6 J	2.37	--	--
1,2-Dichloroethane	2.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	3.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	2.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	2.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	6.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropane	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	1.9	1010 J	246.3 J	204 J	<1.9	--	--	<1.9 J	673 J	1450	1170 J	462 J	566 J	214 J	118	83.8 J	77.3
Dibromochloromethane	3.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	4.4	--	--	--	--	--	--	<4.4 J	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloroethylvinylether	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	4.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	4.1	14.6 J	30.7 J	21.7 J	--	--	--	<4.1 J	50.8 J	<41	45.3 J	24 J	24.7 J	--	--	--	--
Toluene	6	--	--	--	--	--	--	<6 J	--	--	--	--	--	--	--	--	--
Chlorobenzene	6	--	--	--	--	--	--	<6 J	--	--	--	--	--	--	--	--	--
Ethylbenzene	7.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Xylene	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
para-Chlorobenzene		NA															
ortho-Chlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
meta-Chlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phthalate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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BMDL - Below minimum detection limit.
NA - Not analyzed
Samples collected by GeoEnvironmental Consultants, Inc.

TABLE 1. W.R. Grace Groundwater Quality Data (ppb)

Sampling Date		10-10-85	11-26-85	12-21-85	10-10-85	11-26-85	12-21-85	10-31-85	11-14-85	12-21-85	10-22-85	11-14-85	12-21-85	10-01-85	10-22-85	11-14-85	10-01-85	10-22-85
Sample Location		GW-24D	GW-24D	GW-24D	GW-24S	GW-24S	GW-24S	GW-25D	GW-25D	GW-25D	GW-25S	GW-25S	GW-25S	GW-26D	GW-26D	GW-26D	GW-26S	GW-26S
Lab	Detection	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC
Traffic Report #	Limit	J2849	K5767	K8934	J2848	K5766	K8935	K4860	K5738	K8931	J2839	K5737	K8930	J2997	K4314	K5740	J2996	K4315
Chloromethane	10	--	--	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--
Bromomethane	10	--	--	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--
Vinyl Chloride	10	56 J	45.2 J	50.1 J	90.5 J	102 J	115	--	--	**	1500 J	2600 J	1140 J	--	--	--	21 J	12.1
Methylene Chloride	2.8	6.52 J	6.19 J	<2.8 J	<2.8 J	4.6 J	<2.8	3.62 J	11.3 J	**	4.57 J	<2.8 J	27 J	20.5 J	<2.8 J	<2.8 J	26.6 J	17.2
1,1-Dichloroethene	2.8	--	--	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--
1,1-Dichloroethane	4.7	--	--	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	1.6	199 J	331 J	333 J	252 J	385 J	513	--	--	**	933 J	1010 J	*527 J	--	--	--	64 J	86.3
Chloroform	1.6	5.59 J	<1.6 J	<1.6 J	--	--	--	--	--	**	--	--	--	--	--	--	--	--
1,2-Dichloroethane	2.8	--	--	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	3.8	--	--	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--
Carbon Tetrachloride	2.8	--	--	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--
Bromodichloromethane	2.2	--	--	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	6.9	--	--	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--
1,2-Dichloropropane	6	--	--	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropane	10	--	--	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--
Trichloroethene	1.9	153 J	270 J	201 J	198 J	304 J	195	--	--	**	78.9 J	70.4 J	27.1 J	--	--	--	14.7 J	12.1
Dibromochloromethane	3.1	--	--	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	5	--	--	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--
Benzene	4.4	--	--	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	5	--	--	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--
2-Chloroethylvinylether	10	--	--	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--
Bromoform	4.7	--	--	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--
Tetrachloroethene	4.1	--	--	--	--	--	--	--	--	**	4.71 J	<4.1 J	<4.1 J	--	--	--	--	--
Toluene	6	--	--	--	<6 J	<6 J	6.9	--	--	**	36 J	246 J	1110 J	--	--	--	<6 J	<6
Chlorobenzene	6	--	--	--	--	--	--	--	--	**	<6 J	6.11 J	<6 J	--	--	--	--	--
Ethylbenzene	7.2	--	--	--	--	--	--	--	--	**	--	--	--	--	--	--	13.3 J	<7.2
Styrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Xylene	10	--	--	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--
Trichlorofluoromethane	10	--	--	--	--	--	--	--	--	**	--	--	--	--	--	--	--	--
para-Chlorobenzene																		
ortho-Chlorobenzene		NA	NA	NA	NA	NA	NA	--	NA	NA	5.7 J	NA	NA	NA	NA	NA	--	41.2
meta-Chlorobenzene		NA	NA	NA	NA	NA	NA	--	NA	NA	--	NA	NA	NA	NA	NA	--	18.6
Barium		NA	NA	NA	NA	NA	NA	--	NA	NA	--	NA	NA	NA	NA	NA	--	6.51
Iron		NA	NA	NA	NA	NA	NA	--	NA	NA	--	NA	NA	NA	NA	NA	NA	NA
Phthalate		NA	NA	NA	NA	NA	NA	--	NA	NA	--	NA	NA	NA	NA	NA	NA	NA
Manganese		NA	NA	NA	NA	NA	NA	<10	NA	NA	--	NA	NA	NA	NA	NA	NA	NA
Zinc		NA	NA	NA	NA	NA	NA	--	NA	NA	--	NA	NA	NA	NA	NA	NA	NA
Aluminum		NA	NA	NA	NA	NA	NA	--	NA	NA	--	NA	NA	NA	NA	NA	NA	NA
Boron		NA	NA	NA	NA	NA	NA	--	NA	NA	--	NA	NA	NA	NA	NA	NA	NA
Copper		NA	NA	NA	NA	NA	NA	--	NA	NA	--	NA	NA	NA	NA	NA	NA	NA
		NA	NA	NA	NA	NA	NA	--	NA	NA	--	NA	NA	NA	NA	NA	NA	NA

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-- - Indicates compound was not detected.

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BMDL - Below minimum detection limit.

NA - Not analyzed

TABLE 1. W.R. Grace Groundwater Quality Data (ppb)

Sampling Date		11-14-85	10-01-85	10-22-85	11-14-85	10-02-85	10-22-85	11-14-85	10-02-85	11-06-85	12-20-85	10-02-85	11-06-85	12-20-85	04-24-85	05-15-85	11-15-85
Sample Location		GW-265	GW-270	GW-270	GW-270	GW-275	GW-275	GW-275	GW-280	GW-280	GW-280	GW-285	GW-285	GW-285	GB-10	GB-10	GB-10
Lab	Detection	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC
Traffic Report #	Limit	K5739	J2999	K4310	K5742	J2990	J4319	K5741	J3003	J3042	K5970	J3002	J3041	K5969	N1016	N7511	K5747
Chloroethane	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoethane	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	10 J	<10 J	--	--	--	--	--	--	108 J	237	1660 J	222 J	261	1650 J	--	--	--
Methylene Chloride	2.0 J	6.32 J	15.6 J	9.36 J	4.10 J	22.2 J	21.6 J	3.61 J	10.6 J	11.4 J	<20 J	6.4 J	<20 J	3.6 J	--	--	--
1,1-Dichloroethene	2.0	--	--	--	--	--	--	--	--	--	--	<2.0 J	<20	4.25 J	<2.0	7.3	<2.0
1,1-Dichloroethane	4.7	--	--	--	--	--	--	--	--	--	--	--	--	--	<4.7	9	<4.7
trans-1,2-Dichloroethene	1.6 J	22.9 J	--	--	--	--	--	--	1210 J	1520	3440 J	950 J	1440	3200 J	<2	11.9	<1.6
Chloroform	1.6	--	8.56 J	2.65 J	<1.6 J	--	--	--	3.47 J	<16	<16 J	--	--	--	--	--	--
1,2-Dichloroethane	2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	3.0	--	--	--	--	--	--	--	--	--	--	--	--	--	<3.0	113.2	<3.0
Carbon Tetrachloride	2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	2.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	6.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropane	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	1.9 J	11.5 J	<1.9 J	3.50 J	<1.9	--	--	--	470 J	2270	2210 J	517 J	2570	2000 J	3.6	22.9	<1.9
Dibromochloromethane	3.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	4.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloroethylvinylether	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	4.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	4.1	--	--	--	--	--	--	--	24.4 J	57.4	89 J	29.4 J	69.2	80.9 J	119	2616.1	75.9
Toluene	6 J	8.03 J	--	--	--	--	--	--	<6 J	BMDL	<60 J	--	--	--	--	--	--
Chlorobenzene	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	7.2 J	13.5 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Total Xylene	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
para-Chlorobenzene																	
ortho-Chlorobenzene		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--	NA
meta-Chlorobenzene		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--	NA
Barium		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--	NA
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--	NA
Phthalate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	500	NA
Manganese		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	75.6	NA
Zinc		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	40	NA
Aluminum		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	70	NA
Boron		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100	NA
Copper		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	20	NA
		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--	NA

J - Quantitation is approximate due to quality control review.
-- - Indicates compound was not detected.
* - Value is rejected due to blank contamination identified in quality control review (data validation).
** - Value is rejected due to other contractual requirements identified in the quality control review.
BMDL - Below minimum detection limit.
NA - Not analyzed
Samples collected by GeoEnvironmental Consultants, Inc.

TABLE 2. Mean Concentrations for W.R. Grace Groundwater Quality Data (ppb)

Date	11-06-85	11-06-85	12-02-85	12-02-85	11-26-85	11-26-85	4-22-85	04-22-85	4-22-85	11-26-85	4-22-85	04-22-85	04-23-85	04-22-85	04-23-85	04-23-85
Sample Location	GW-1D	GW-1S	GW-2D	GW-2S	GW-5S	GW-5D	GW-6	GW-7D	GW-7D	GW-8	GW-9S	GW-10D	GW-10DD	GW-10S	GW-11D	GW-11S
Lab	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC
Traffic Report #	J3031	J3032	K5949	K5947	K5762	K5763	N1407	N1397	N1396	K5775	N1395	N1405	N1406	N1404	N1401	N1400
Trichloroethene	--	--	--	--	--	--	6.6 J	<1.9 J	391 J	--	3.4 J	<1.9 J	--	--	106.9 J	131 J
Tetrachloroethene	--	--	--	--	--	--	--	--	10 J	--	--	<4.1 J	--	--	--	--
trans-1,2-Dichloroethene	--	--	--	--	--	--	5.1 J	--	306 J	--	--	--	--	--	227 J	76.2 J
1,1,1-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	--	--	--	--	--	--	--	--	14.7 J	--	--	--	--	--	--	--
Styrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Xylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Sampling Date	10-02-85	11-14-85	12-21-85		10-02-85	11-14-85	12-21-85		10-10-85	11-27-85		10-10-85	11-14-85		10-10-85	11-14-85
Sample Location	GW-13D	GW-13D	GW-13D		GW-13S	GW-13S	GW-13S		GW-14D	GW-14D		GW-14S	GW-14S		GW-15D	GW-15D
Lab	ETC	ETC	ETC	GW-13D	ETC	ETC	ETC	GW-13S	ETC	ETC	GW-14D	ETC	ETC	GW-14S	ETC	ETC
Traffic Report #	J3001	K5726	K0913	MEAN	J3000	K5725	K0936	MEAN	J2844	K5932	MEAN	J2845	K5727	MEAN	J2846	K5730
Trichloroethene	--	--	--	--	54.8 J	83.3 J	56	64.7	700 J	16.5 J	402	5.62 J	14.4 J	10	9690	4040 J
Tetrachloroethene	--	--	--	--	5.8 J	<41 J	<41	5.8	--	--	--	--	--	--	**	212 J
trans-1,2-Dichloroethene	--	--	--	--	503 J	838 J	566	636	9320 J	265 J	4793	120 J	419 J	270	16000	12300 J
1,1,1-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<38	<38 J
1,1-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<28	<28 J
Benzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	597 J	329 J
Toluene	--	--	--	--	--	--	--	--	--	--	--	<6 J	11.6 J	6	23400 J	5790 J
Vinyl Chloride	--	--	--	--	439 J	1020 J	574	678	6410 J	211 J	3311	129 J	1850 J	990	2390	<100 J
Styrene	--	--	--	--	--	--	--	--								
Total Xylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

-- - Indicates compound was not detected.
J - Quantitation is approximate due to quality control review (data validation).
* - Value is rejected due to quality control review.
** - Value is rejected due to statistical test for outliers.
NOTE: Less than values (<) were not included in the calculations of the means.
Samples collected by GeoEnvironmental Consultants, Inc.

TABLE 2. Mean Concentrations for W.R. Grace Groundwater Quality Data (ppb)

Sampling Date	11-27-85	12-21-85		10-10-85	11-14-85	11-27-85		11-01-85	11-01-85	11-26-85	12-20-85		11-01-85	11-26-85	
Sample Location	GW-15B	GW-15B		GW-15S	GW-15S	GW-15S		GW-16B	GW-16S	GW-16S	GW-16S		GW-17B	GW-17B	
Lab	ETC	ETC	GW-15B	ETC	ETC	ETC	GW-15S	ETC	ETC	ETC	ETC	GW-16S	ETC	ETC	GW-17B
Traffic Report #	K5934	K8933	MEAN	J2847	K5729	K5933	MEAN	K4155	K4154	K5771	K5967	MEAN	K4152	K5773	MEAN
Trichloroethene	1460 J	702 J	3973 J	460	<19 J	<190 J	460	516 J	<1.9	<1.9 J	5.17 J	5.17	--	--	--
Tetrachloroethene	96.1 J	65.1 J	124	<210	<41 J	<410 J	--	<4.1 J	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	5690 J	*	11330	7090	4510 J	6100 J	5900	70.6 J	--	--	--	--	--	--	--
1,1,1-Trichloroethane	<3.8 J	4.37 J	4.37	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	10 J	14.9 J	12	<140	<28 J	<280 J	--	--	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	206 J	89 J	305	<360	234 J	<720 J	234	--	--	--	--	--	--	--	--
Toluene	2350 J	*	10513	6450	3730 J	4810 J	4997	<6 J	--	--	--	--	--	--	--
Vinyl Chloride	13900 J	*	8145	5930	<100 J	3320 J	4625	<10 J	--	--	--	--	--	--	--
Styrene															
Total Xylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Sampling Date	11-01-85	11-26-85	12-21-85		11-01-85	12-02-85	12-20-85		11-01-85	12-02-85	12-20-85		12-20-85	11-15-85	11-27-85	12-20-85	
Sample Location	GW-17S	GW-17S	GW-17S		GW-18B	GW-18B	GW-18B		GW-18S	GW-18S	GW-18S		GW-19B	GW-19W	GW-19W	GW-19W	
Lab	ETC	ETC	ETC	GW-17S	ETC	ETC	ETC	GW-18B	ETC	ETC	ETC	GW-18S	ETC	ETC	ETC	ETC	GW-19W
Traffic Report #	K4153	K5772	K8928	MEAN	K4163	K5952	K5722	MEAN	K4162	K5951	K5721	MEAN	K5723	K5744	K5931	K5968	MEAN
Trichloroethene	--	--	--	--	--	--	--	--	<1.9 J	<1.9 J	13.5 J	13.5	23.2 J	<1.9 J	9.22 J	11.1 J	14.5
Tetrachloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	<1.6 J	2.33 J	<1.6 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene																	
Total Xylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

-- - Indicates compound was not detected.
J - Quantitation is approximate due to quality control review (data validation).
* - Value is rejected due to quality control review.
** - Value is rejected due to statistical test for outliers.
NOTE: Less than values (<) were not included in the calculations of the means.
Samples collected by GeoEnvironmental Consultants, Inc.

TABLE 2. Mean Concentrations for W.R. Grace Groundwater Quality Data (ppb)

Sampling Date	11-15-85	11-15-85	12-02-85	12-20-85	12-20-85	12-20-85		11-01-85	11-26-85				12-21-85		10-31-85	11-26-85	
Sample Location	GW-19S	GW-19S	GW-19S	GW-19S	GW-19S	GW-19S		GW-20D	GW-20D		GW-20M	GW-20M	GW-20M		GW-20S	GW-20S	
Lab	ETC	ETC	ETC	ETC	ETC	ETC	GW-19S	ETC	ETC	GW-20D	ETC	ETC	ETC	GW-20M	ETC	ETC	GW-20S
Traffic Report #	K5743	K0682	K5945	K5924	K5923	K5724	MEAN	K4859	K5770	MEAN	K4858	K5777	K0925	MEAN	K4861	K5776	MEAN
Trichloroethene	7710 J	5390 J	6020	6000 J	7020 J	8340 J	6760	15.8 J	6.98 J	11.39	28.3 J	41.8 J	313	127.7	133	1010 J	571.5
Tetrachloroethene	58.4 J	84.3 J	78	<210 J	73.9 J	81.8 J	67.3	--	--	--	<4.1	<4.1 J	4.32	4.32	<4.1	14.6 J	7.3
trans-1,2-Dichloroethene	90.9 J	84.4 J	160	169 J	112 J	129 J	124.2	--	--	--	<1.6	3.9 J	31.3	17.6	<1.6	86.3 J	43.15
1,1,1-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene																	
Total Xylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--			

Sample Date	04-23-85	11-15-85		11-06-85	10-23-85	11-06-85		11-15-85	10-02-85	11-06-85	12-21-85		10-02-85	11-06-85		11-01-85	11-06-85	
Sample Location	GW-21	GW-21		GW-21D	GW-21S	GW-21S		GW-22	GW-22D	GW-22D	GW-22D		GW-22S	GW-22S		GW-23D	GW-23D	
Lab	ETC	ETC	GW-21	ETC	ETC	ETC	GW-21	ETC	ETC	ETC	ETC	GW-22D	ETC	ETC	GW-22S	ETC	ETC	GW-23D
Traffic Report #	N1410	K5752	MEAN	J3034	K4158	J3033	MEAN	K5753	J3005	J3036	K0915	MEAN	J3004	J3035	MEAN	K4159	J3050	MEAN
Trichloroethene	246.3 J	204 J	225.2	<1.9	--	--	--	<1.9 J	673 J	1450	1170 J	1097.7	462 J	566 J	514	214 J	110	166
Tetrachloroethene	30.7 J	21.7 J	26.2	--	--	--	--	<4.1 J	50.8 J	<41	45.3 J	48.1	24 J	24.7 J	24	--	--	--
trans-1,2-Dichloroethene	143.6 J	131 J	137.3	--	--	--	--	<1.6 J	1550 J	1200	1020 J	1283.3	603 J	513 J	558	765 J	359	562
1,1,1-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	--	--	<0.4 J	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	<6 J	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	--	--	--	--	--	--	--	--	74.1 J	<100	72.5 J	73.3	17.2 J	15 J	16	--	--	--
Styrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Xylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

-- - Indicates compound was not detected.
J - Quantitation is approximate due to quality control review (data validation).
- Value is rejected due to quality control review.
** - Value is rejected due to statistical test for outliers.
NOTE: Less than values (<) were not included in the calculations of the means.
Samples collected by GeoEnvironmental Consultants, Inc.

TABLE 2. Mean Concentrations for W.R. Grace Groundwater Quality Data (ppb)

Sample Date	11-01-85	11-06-85		10-10-85	11-26-85	12-21-85		10-10-85	11-26-85	12-21-85		10-31-85	11-14-85		10-22-85	11-14-85	12-21-85	
Sample Location	GW-238	GW-238		GW-240	GW-240	GW-240		GW-248	GW-248	GW-248		GW-250	GW-250		GW-256	GW-256	GW-256	
Lab	ETC	ETC	GW-238	ETC	ETC	ETC	GW-240	ETC	ETC	ETC	GW-248	ETC	ETC	GW-250	ETC	ETC	ETC	GW-256
Traffic Report #	K4156	J3029	MEAN	J2049	K5767	K8934	MEAN	J2048	K5766	K8935	MEAN	K4060	K5738	MEAN	J2039	K5737	K8930	MEAN
Trichloroethene	83.8 J	77.3	81	153 J	270 J	201 J	208	190 J	304 J	195	249.5	--	--	--	78.9 J	70.4 J	27.1 J	58.8
Tetrachloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.71 J	<4.1 J	<4.1 J	4.71
trans-1,2-Dichloroethene	313 J	207	260	199 J	331 J	333 J	332	252 J	385 J	513	383	--	--	--	933 J	1010 J	527 J	823
1,1,1-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	<6 J	<6 J	6.9	6.9	--	--	--	36 J	246 J	1110 J	464
Vinyl Chloride	--	--	--	56 J	65.2 J	50.1 J	57.1	90.5 J	102 J	115	102.5	--	--	--	1500 J	2600 J	1140 J	1773
Styrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Xylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Sample Date	10-01-85	10-22-85	11-14-85		10-01-85	10-22-85	11-14-85		10-01-85	10-22-85	11-14-85		10-02-85	10-22-85	11-14-85	
Sample Location	GW-268	GW-268	GW-268		GW-265	GW-265	GW-265		GW-270	GW-270	GW-270		GW-275	GW-275	GW-275	
Lab	ETC	ETC	ETC	GW-268	ETC	ETC	ETC	GW-265	ETC	ETC	ETC	GW-270	ETC	ETC	ETC	GW-275
Traffic Report #	J2997	K4314	K5740	MEAN	J2996	K4315	K5739	MEAN	J2999	K4318	K5742	MEAN	J2998	J4319	K5741	MEAN
Trichloroethene	--	--	--	--	14.7 J	12.1 J	11.5 J	12.8	<1.9 J	3.58 J	<1.9	3.6	--	--	--	--
Tetrachloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	--	--	--	--	64 J	86.3 J	22.9 J	57.7	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	13.3 J	<7.2 J	13.5 J	13.4	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	<6 J	<6 J	0.03 J	0	--	--	--	--	--	--	--	--
Vinyl Chloride	--	--	--	--	21 J	12.1 J	<10 J	16.6	--	--	--	--	--	--	--	--
Styrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Xylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

-- - Indicates compound was not detected.
J - Quantitation is approximate due to quality control review (data validation).
* - Value is rejected due to quality control review.
** - Value is rejected due to statistical test for outliers.
NOTE: Less than values (<) were not included in the calculations of the means.
Samples collected by GeoEnvironmental Consultants, Inc.

TABLE 2. Mean Concentrations for W.R. Grace Groundwater Quality Data (ppb)

Sample Date	10-02-85	11-06-85	12-20-85		10-02-85	11-06-85	12-20-85		04-24-85	05-15-85	11-15-85	
Sample Location	GW-20B	GW-20B	GW-20B		GW-20S	GW-20S	GW-20S		GW-1B	GW-1B	GW-1B	
Lab	ETC	ETC	ETC	GW-20B	ETC	ETC	ETC	GW-20S	ETC	ETC	ETC	GW-1B
Traffic Report #	J3003	J3042	K5970	MEAN	J3002	J3041	K5969	MEAN	H1416	H7511	K5747	MEAN
Trichloroethene	470 **	2270	2210 J	2240	517 J	2570	2000 J	1722	3.6	22.9	<1.9	13.3
Tetrachloroethene	24.4 J	57.4	89 J	57	29.4 J	69.2	80.9 J	60	119	**	75.9	97.5
trans-1,2-Dichloroethene	1210 J	1520	3440 J	2057	950 J	1440	3200 J	1863	<2	11.9	<1.6	11.9
1,1,1-Trichloroethane	--	--	--	--	--	--	--	--	<3.8	113.2	<3.8	113.2
1,1-Dichloroethane	--	--	--	--	--	--	--	--	<4.7	9	<4.7	9
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	<2.8 J	<28	4.25 J	4.3	<2.8	7.3	<2.8	7.3
Benzene	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	<6 J	DNDL	<60 J	--	--	--	--	--	--	--	--	--
Vinyl Chloride	188 J	237	1660 J	212.5	222 J	261	1650 J	242	--	--	--	--
Styrene	--	--	--	--	--	--	--	--	--	--	--	--
Total Xylene	--	--	--	--	--	--	--	--	--	--	--	--

-- - Indicates compound was not detected.
J - Quantitation is approximate due to quality control review (data validation).
* - Value is rejected due to quality control review.
** - Value is rejected due to statistical test for outliers.
NOTE: Less than values (<) were not included in the calculations of the means.
Samples collected by GeoEnvironmental Consultants, Inc.

TABLE 3. Wildwood Conservation Corporation Ground Water Quality Data (ppb)

Sample Locations		DW-1	DSW-1	DW-2	DSW-2	DW-3	DW-4	DW-5	DSSW-6	DSW-6	DSW-7	DW-7	DCW-8	DW-8	DSW-8	DOW-8	DW-9	DSW-9
Date		11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85
Laboratory	Detection	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO
Sample Numbers	Limit	23602	23603	23605	23606	23607	23608	23604	23623	23624	23580	23581	23595	23596	23596	23598	23599	23600
Chloromethane	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	2	--	--	--	360 J	26 J	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8.1 J
1,1-Dichloroethene	1	--	--	--	3 J	--	--	3 J	--	--	--	--	--	--	--	--	1.3 J	6.9 J
1,1-Dichloroethane	1	--	--	--	35 J	36 J	4.6 J	20 J	--	--	--	--	--	1.1 J	--	--	1.9 J	20 J
trans-1,2-Dichloroethene	1	2.3 J	110 J	4.3 J	2500 J	37 J	3.7 J	2.2 J	--	--	2.7 J	9.7 J	1.7 J	1.2 J	37 J	30 J	--	2.8 J
Chloroform	1	--	--	--	--	--	--	240 J	24000 J	--	--	2.7 J	--	11 J	4.4 J	--	160 J	510 J
1,2-Dichloroethane	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	140 J
1,1,1-Trichloroethane	1	34 J	12 J	4.5 J	120 J	15 J	7.3 J	220 J	10000 J	4900	--	--	2 J	3.6 J	1.6 J	--	80 J	270 J
Carbon Tetrachloride	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	1	5.4 J	750 J	14 J	840 J	200 J	7.4 J	6700 J	430000 J	100000	3.7 J	8.4 J	40 J	180 J	55 J	42 J	3600 J	12000 J
Dibromochloromethane	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cis-1,3-Dichloropropylene	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	1	<1 J	22 J	--	34 J	6.6 J	--	4.2 J	--	--	<1 J	2 J	<1 J	--	--	2.4 J	1.6 J	6 J
Chlorobenzene	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloroethyl vinyl ether	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene		**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Toluene		**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Ethylbenzene		**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
para-Xylene		**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Chlorobenzene		**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
meta-Xylene		**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
ortho-Xylene		**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Styrene		**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
N-Propylbenzene		**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
ortho-Chlorotoluene		**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Trimethyl benzene		**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
para-Dichlorobenzene		**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
meta-Dichlorobenzene		**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
ortho-Dichlorobenzene		**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
1,2,4-Trichlorobenzene		**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Dilution Factor		1	1	1	1	1	1	1	500	500	1	1	1	1	1	1	1	1

J - Quantitation is approximate due to quality control review.
-- - Indicates compound was not detected.
* - Value is rejected due to blank contamination identified in quality control review (data validation).
** - Value is rejected due to other contractual requirements identified in the quality control review.
BMDL - Below minimum detection limit.
NOTE: Detection limit should be multiplied by dilution factor to obtain sample detection limit.
Samples collected by Woodward-Clyde Consultants, Inc.

TABLE 3. Wildwood Conservation Corporation Ground Water Quality Data (ppb)

Sample Locations		DBW-9	DBW-10	DCW-10	DSW-10	DW-10	DW-11	DW-12	DW-12	DSW-12	DW-13	DSW-13	DBW-13	DCW-13	DW-14	DCW-14	DSW-14	DBW-14
Date		11-10-85	11-10-85	11-10-85	11-10-85	11-10-85	11-10-85	11-10-85	11-10-85	11-10-85	11-10-85	11-10-85	11-10-85	11-10-85	11-10-85	11-10-85	11-10-85	11-10-85
Laboratory	Detection	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO
Sample Numbers	Limit	23601	23591	23591	23593	23594	23583	23582	23246	23609	23625	23631	23632	23626	23627	23628	23629	23630
Chloromethane	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	1	5.5 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	1	3 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	1	9.4 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	1	<1 J	--	--	--	--	--	--	--	--	--	--	5000 J	1400 J	12 J	--	7.4 J	2100 J
Chloroform	1	240 J	--	--	--	1.3 J	4.8 J	--	--	--	--	--	--	--	--	--	--	1600 J
1,2-Dichloroethane	1	71 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	1	140 J	--	2 J	1.9 J	3.5 J	1.1 J	3.2 J	3.2 J	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	1	5700 J	2.9 J	89 J	--	170 J	1.3 J	1.3 J	--	--	230 J	1500 J	54000 J	1700 J	71 J	24 J	37 J	54000 J
Dibromochloromethane	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cis-1,3-Dichloropropylene	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	1	2.4 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	61 J
Chlorobenzene	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloroethyl vinyl ether	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene		**	**	**	**	**	**	**	--	--	--	--	--	--	--	--	--	--
Toluene		**	**	**	**	**	**	**	--	--	2.3	--	--	<10	--	--	--	--
Ethylbenzene		**	**	**	**	**	**	**	--	--	2.0	--	230	14	--	--	--	170
para-Xylene		**	**	**	**	**	**	**	--	--	2.4	--	180	2.4	--	--	--	120
Chlorobenzene		**	**	**	**	**	**	**	--	--	--	--	--	--	--	--	--	--
meta-Xylene		**	**	**	**	**	**	**	--	--	2.6	--	290	--	--	--	1.1	110
ortho-Xylene		**	**	**	**	**	**	**	--	--	3.0	--	290	21	--	--	1.1	220
Styrene		**	**	**	**	**	**	**	--	--	--	--	--	--	--	--	--	--
N-Propylbenzene		**	**	**	**	**	**	**	--	--	--	--	--	--	--	--	--	--
ortho-Chlorotoluene		**	**	**	**	**	**	**	--	--	--	--	--	--	--	--	--	--
Trimethyl benzene		**	**	**	**	**	**	**	--	--	--	--	--	--	--	--	--	--
para-Dichlorobenzene		**	**	**	**	**	**	**	--	--	--	--	--	--	--	--	--	--
meta-Dichlorobenzene		**	**	**	**	**	**	**	--	--	--	--	--	--	--	--	--	--
ortho-Dichlorobenzene		**	**	**	**	**	**	**	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene		**	**	**	**	**	**	**	--	--	--	--	--	--	--	--	--	--
Dilution Factor		1	1	1	1	1	1	1	1	1	5	25	500	50	5	5	5	10

J - Quantitation is approximate due to quality control review.
-- - Indicates compound was not detected.
* - Value is rejected due to blank contamination identified in quality control review (data validation).
** - Value is rejected due to other contractual requirements identified in the quality control review.
BMDL - Below minimum detection limit.
NOTE: Detection limit should be multiplied by dilution factor to obtain sample detection limit.
Samples collected by Woodward-Clyde Consultants, Inc.

Table 4. Mean Concentrations for Wildwood Conservation Corporation Ground Water Quality Data (ppb)

Sample Locations		DW-1	DSW-1	DW-2	DSW-2	DW-3	DW-4	DW-5	DSSW-6	DSW-6	DSW-7	DW-7	DCW-8	DW-8	DSW-8	DDW-8	DW-9	DSW-9
Sampling Date		11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85
Laboratory	Detection	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO
Sample Numbers	Limit	23602	23603	23605	23606	23607	23608	23604	23623	23624	23580	23581	23595	23596	23596	23590	23599	23600
Trichloroethene	1	5.4 J	750 J	14 J	840 J	200 J	7.4 J	6700 J	430000 J	100000	3.7 J	8.4 J	40 J	180 J	55 J	42 J	3600 J	12000 J
Tetrachloroethene	1	<1 J	22 J	--	34 J	6.6 J	--	4.2 J	--	--	<1 J	2 J	<1 J	--	--	2.4 J	1.6 J	6 J
trans-1,2-Dichloroethene	1	2.3 J	110 J	4.3 J	2500 J	37 J	3.7 J	2.2 J	--	--	2.7 J	9.7 J	1.7 J	1.2 J	37 J	30 J	--	2.0 J
1,1,1-Trichloroethane	1	34 J	12 J	4.5 J	120 J	15 J	7.5 J	220 J	10000 J	4900	--	--	2 J	3.6 J	1.6 J	--	80 J	270 J
1,1-Dichloroethane	1	--	--	--	35 J	36 J	4.6 J	20 J	--	--	--	--	--	1.1 J	--	--	1.9 J	20 J
1,1,2,2-Tetrachloroethane	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	140 J
1,1-Dichloroethene	1	--	--	--	3 J	--	--	3 J	--	--	--	--	--	--	--	--	1.3 J	6.9 J
Benzene		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ethyl Benzene		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Toluene		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Vinyl Chloride	2	--	--	--	360 J	26 J	--	--	--	--	--	--	--	--	--	--	--	--
Styrene		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total Xylenes		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

Sample Locations		DDW-9	DDW-10	DCW-10	DSW-10	DW-10	DW-11	DW-12	DW-12		DSW-12	DW-13	DSW-13	DDW-13	DCW-13	DW-14	DCW-14	DSW-14	DDW-14
Date		11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85		11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85	11-18-85
Laboratory	Detection	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	DW-12	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO	ERCO
Sample Numbers	Limit	23601	23591	23591	23593	23594	23583	23582	23246	MEAN	23609	23625	23631	23632	23626	23627	23628	23629	23630
Trichloroethene	1	5700 J	2.9 J	89 J	--	170 J	1.3 J	1.3 J	--	--	--	230 J	1500 J	54000 J	1700 J	71 J	24 J	37 J	54000
Tetrachloroethene	1	2.4 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	61
trans-1,2-Dichloroethene	1	<1 J	--	--	--	--	--	--	--	--	--	--	--	5000 J	1400 J	12 J	--	7.4 J	2100
1,1,1-Trichloroethane	1	140 J	--	2 J	1.9 J	3.5 J	1.1 J	3.2 J	3.2 J	3.2	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	1	9.4 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	1	71 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	1	3 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene		*	*	*	*	*	*	*	--	--	--	--	--	--	--	--	--	--	--
Ethyl Benzene		*	*	*	*	*	*	*	--	--	--	2.0	--	230 J	14 J	--	--	--	170
Toluene		*	*	*	*	*	*	*	--	--	--	2.3	--	--	<10 J	--	--	--	--
Vinyl Chloride	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene		*	*	*	*	*	*	*	--	--	--	--	--	--	--	--	--	--	--
Total Xylenes		*	*	*	*	*	*	*	--	--	--	8.0	--	760	23.4 J	--	--	2.2	450

J - Quantitation is approximate due to quality control review.
-- - Indicates compound was not detected.
* - Value is rejected due to quality control review (data validation).
** - Value is rejected due to statistical test for outliers
NOTE: Less than values (<) were not included in the calculation of the means.
Samples were collected by Woodward-Clyde Consultants, Inc.

TABLE 5. Additional Study Area Ground Water Quality Data (ppb)

Sampling Date		11-19-85	4-24-85	4-24-85	11-19-85	11-15-85	11-19-85	11-19-85	11-19-85	5-01-85	5-01-85	5-01-85	5-01-85	5-01-85	5-01-85	4-23-85	4-23-85
Sample Location		S63D	S63D	S63S	S64S	S64D	S64D	S64D	S64N	S65D	S65M	S65S	S66D	S67M	S67S	S68D	S68M
Laboratory	Detectio	ERCD	ETC	ETC	ETC	ERCD	CChem	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC
Traffic Report #	Limit	23608	M1441	M1440	M1426	23424	AE299	M1428	M1427	M6096	M6095	M6094	M6093	M6099	M6098	M1439	M1438
Chloromethane	5	--	--	--	--	**	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	5	--	--	--	--	**	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	2	--	--	--	--	**	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	5	--	--	--	--	**	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	1	--	--	--	*	**	1.6 J	*	*	--	--	--	--	--	--	--	--
1,1-Dichloroethene	1	--	BNDL	--	--	**	--	--	--	--	--	--	--	3 J	3 J	--	--
1,1-Dichloroethane	1	--	--	--	--	**	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	1	40 J	--	--	64	**	52	82.6	85.7	28.1 J	18.9 J	2.4 J	7.7	--	--	40.2 J	29.6 J
Chloroform	1	--	--	--	--	**	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	1	--	--	--	--	**	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	1	13 J	9.3 J	BNDL	--	**	2.4 J	--	--	--	--	--	--	14 J	14.2 J	16.8 J	7 J
Carbon Tetrachloride	1	--	--	--	--	**	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	1	--	--	--	--	**	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	2	--	--	--	--	**	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	2	--	--	--	--	**	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	1	120 J	183.9 J	103.9 J	126.6	**	87	216.5	180.6	66.3 J	49.2 J	7 J	20.5 J	62.5 J	24 J	118 J	73.1 J
Dibromochloromethane	1	--	--	--	--	**	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	2	--	--	--	--	**	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	2	--	--	--	--	**	--	--	--	--	--	--	--	--	--	--	--
Bromoform	5	--	--	--	--	**	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	2	--	--	--	--	**	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	1	380 J	238.5 J	97.5 J	38.3	**	18	43.1	61.4	15.3 J	10.8 J	BNDL	5.2 J	--	--	112.4 J	52.1 J
Chlorobenzene	5	--	--	--	--	**	--	253.6	10.7	--	--	--	--	--	--	--	--
2-Chloroethyl vinyl ether	10	--	--	--	--	**	--	--	--	--	--	--	--	--	--	--	--
Benzene		72 +	--	--	--	**	--	--	--	--	--	--	--	--	--	--	--
Toluene		--	--	--	--	**	6.4	--	--	--	--	--	--	--	--	--	--
Ethylbenzene		--	--	--	--	**	--	--	--	--	--	--	--	--	--	--	--
ortho-Xylene		--	NA	NA	NA	**	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
meta-Xylene		--	NA	NA	NA	**	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
para-Xylene		--	NA	NA	NA	**	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene		--	NA	NA	NA	**	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene		--	NA	NA	NA	**	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ortho-Chlorotoluene		--	NA	NA	NA	**	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trimethylbenzene		--	NA	NA	NA	**	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
para-Chlorobenzene		--	NA	NA	NA	**	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ortho-Chlorobenzene		--	NA	NA	NA	**	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
meta-Chlorobenzene		--	NA	NA	NA	**	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene		--	NA	NA	NA	**	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 5. Additional Study Area Ground Water Quality Data (ppb)

Sampling Date		5-01-85	5-02-85	5-02-85	5-02-85	4-23-85	4-23-85	4-23-85	4-23-85	5-02-85	5-02-85	5-02-85	4-26-85	4-26-85	4-29-85	4-26-85
Sample Location		S690	S720	S720	S725	S730	S735	S740	S740	S750	S750	S755	S770	S770	S775	S775S
Laboratory	Detectio	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC
Traffic Report #	Limit	M6097	M6100	M6107	M6106	M1433	M1434	M1436	M1435	M6105	M6104	M6103	M5390	M5389	M5387	M5386
Chloroethane	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	1	--	--	*	*	--	--	--	--	*	--	*	*	--	--	BMDL
1,1-Dichloroethene	1	--	--	--	--	6 J	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	1	--	BMDL	--	0.4	34.2 J	5.4 J	--	--	--	--	--	--	--	BMDL	--
trans-1,2-Dichloroethene	1	--	--	--	--	38.2 J	13.6 J	--	--	--	--	--	13.8	21.7 J	6.1	9.1 J
Chloroform	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	1	--	--	--	--	--	--	--	--	--	--	--	--	11 J	--	--
Carbon Tetrachloride	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	1	BMDL	14.6	20.9 J	7.3	62 J	11.3 J	BMDL	BMDL	--	--	--	349.1	136.5 J	194.2 J	5.8 J
Dibromochloromethane	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	1	--	BMDL	--	4.8	--	--	--	BMDL	--	--	--	10.8	44.7 J	18.9 J	BMDL
Chlorobenzene	5	--	--	--	--	--	--	BMDL	--	--	--	--	--	--	--	--
2-Chloroethyl vinyl ether	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene		--	--	--	--	--	--	--	--	166.8	142.7 J	2773.7 J	--	--	--	--
Toluene		--	--	--	--	--	--	--	--	6.6	--	232.9 J	--	BMDL	BMDL	--
Ethylbenzene		--	--	--	--	--	--	--	--	16.8	--	262.5 J	--	--	--	--
ortho-Xylene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
meta-Xylene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
para-Xylene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ortho-Chlorotoluene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trimethylbenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
para-Chlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ortho-Chlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
meta-Chlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 5. Additional Study Area Ground Water Quality Data (ppb)

Sampling Date		12-25-85	12-25-85	5-01-85	5-01-85	5-01-85	11-18-85	11-19-85	4-23-85	4-23-85	4-23-85	4-23-85	4-23-85	4-25-85	4-25-85	4-25-85
Sample Location		S70S	S70D	S81M	S81S	S81D	S81D	S81D	S82	S83	S84D	S84M	S84S	S85S	S85D	S86S
Laboratory	Detectio	ETC	ETC	ETC	ETC	ETC	ERCO	CChem	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC
Traffic Report #	Limit	H1418	H1419	H6101	H6100	H6102	23470	AE291	H1422	H1437	H1430	H1431	H1432	H1420	H1421	H1424
Chloroethane	5	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
Bromoethane	5	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
Vinyl Chloride	2	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
Chloroethane	5	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
Methylene Chloride	1	--	--	--	*	*	**	2.4 J	--	--	--	--	--	--	*	*
1,1-Dichloroethene	1	34.9 J	--	--	BMDL	--	**	1.8 J	--	--	--	--	--	--	--	--
1,1-Dichloroethane	1	--	--	--	5.5 J	--	**	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	1	62.8 J	--	--	21.5 J	--	**	7.3 J	35.6	137.9	9.7	8.1	10.7	139.2 J	42.5 J	--
Chloroform	1	--	--	--	3.2 J	--	**	--	--	3.1	--	--	--	--	--	--
1,2-Dichloroethane	1	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	1	511.8	--	6 J	156.8 J	--	**	--	--	--	--	--	--	*	*	--
Carbon Tetrachloride	1	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
Bromodichloromethane	1	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	2	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	2	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
Trichloroethene	1	182575 J	26 J	6.8 J	72.7 J	3 J	**	11 J	73.9	665.6	33	24.5	33.2	*	91.3	7
Dibromochloromethane	1	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	2	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	2	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
Bromoform	5	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	2	--	--	--	--	--	**	--	--	--	--	--	--	--	--	--
Tetrachloroethene	1	32218 J	17 J	59.4 J	484.9 J	67.4 J	**	200 J	39.1	24.6	10.1	12.5	24.3	98.2 J	207.9 J	17.5
Chlorobenzene	5	5.1 J	--	--	BMDL	--	--	--	--	--	--	--	--	6.5 J	8.7 J	--
2-Chloroethyl vinyl ether	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene		19.9 J	--	--	--	--	35 J	34 J	--	--	--	--	--	--	--	--
Ethylbenzene		651.5 J	--	--	--	--	<1 J	--	--	--	--	--	--	--	--	--
ortho-Xylene		NA	NA	NA	NA	NA	1.3 J	1.9 J	NA	NA	NA	NA	NA	NA	NA	NA
meta-Xylene		NA	NA	NA	NA	NA	<1 J	--	NA	NA	NA	NA	NA	NA	NA	NA
para-Xylene		NA	NA	NA	NA	NA	1.7 J	--	NA	NA	NA	NA	NA	NA	NA	NA
Styrene		NA	NA	NA	NA	NA	--	--	NA	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene		NA	NA	NA	NA	NA	--	--	NA	NA	NA	NA	NA	NA	NA	NA
ortho-Chlorotoluene		NA	NA	NA	NA	NA	--	--	NA	NA	NA	NA	NA	NA	NA	NA
Trimethylbenzene		NA	NA	NA	NA	NA	--	--	NA	NA	NA	NA	NA	NA	NA	NA
para-Chlorobenzene		NA	NA	NA	NA	NA	--	--	NA	NA	NA	NA	NA	NA	NA	NA
ortho-Chlorobenzene		NA	NA	NA	NA	NA	--	--	NA	NA	NA	NA	NA	NA	NA	NA
meta-Chlorobenzene		NA	NA	NA	NA	NA	--	--	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene		NA	NA	NA	NA	NA	--	--	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 5. Additional Study Area Ground Water Quality Data (ppb)

Sampling Date		4-25-85	12-2-85	12-2-85	12-2-85	11-18-85	11-19-85	11-18-85	11-19-85	11-18-85	11-19-85	11-18-85	11-19-85	11-18-85	11-19-85	11-19-85	12-2-85
Sample Location		S86D	S88D	S88M	S88S	S90D	S90D	S90M	S90M	S90S	S90S	S92D	S92D	S92I	S92I	S92I	S92I
Laboratory	Detectio	ETC	ERCO	ERCO	ERCO	ERCO	CChem	ERCO	CChem	ERCO	CChem	ERCO	CChem	ERCO	CChem	CChem	ERCO
Traffic Report #	Limit	H1425	23964	23963	23962	23469	AE292	23467	AE295	23466	AE296	23584	AE290	23587	AE286	AE287	23968
Chloromethane	5	--	--	--	--	**	--	--	--	**	--	--	--	--	--	--	--
Bromomethane	5	--	--	--	--	**	--	--	--	**	--	--	--	--	--	--	--
Vinyl Chloride	2	--	--	--	--	**	--	--	--	**	--	--	--	--	--	--	--
Chloroethane	5	--	--	--	--	**	--	--	--	**	--	--	--	--	--	--	--
Methylene Chloride	1	*	--	--	--	**	1.5 J	--	1.4 J	**	--	--	*	--	*	*	--
1,1-Dichloroethene	1	--	--	--	--	**	--	--	--	**	--	--	--	--	--	--	--
1,1-Dichloroethane	1	--	1.8 J	5.2 J	3.8 J	**	--	--	--	**	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	1	--	--	2.3 J	5.4 J	**	10 J	28 J	28	**	--	2.6 J	2.6 J	--	1.1 J	1.2 J	--
Chloroform	1	--	--	1.0 +	--	**	5.1 J	--	--	**	--	--	--	--	1.2 J	1.3 J	2.8
1,2-Dichloroethane	1	--	--	--	--	**	--	--	--	**	--	--	--	--	--	--	--
1,1,1-Trichloroethane	1	--	--	--	--	**	2.1 J	17 J	11	**	--	2.8 J	2.0 J	3.1 J	3.2 J	3.3 J	4.5
Carbon Tetrachloride	1	--	--	--	--	**	--	--	--	**	--	--	--	--	--	--	--
Bromodichloromethane	1	--	--	--	--	**	--	--	--	**	--	--	--	--	--	--	--
1,2-Dichloropropane	2	--	--	--	--	**	--	--	--	**	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	2	--	--	--	--	**	--	--	--	**	--	--	--	--	--	--	--
Trichloroethene	1	5.8	50 J	56 J	14 J	**	20 J	180 J	46	**	--	66 J	49	8.8 J	6.2	6.3	7.0
Dibromochloromethane	1	--	--	--	--	**	--	--	--	**	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	2	--	--	--	--	**	--	--	--	**	--	--	--	--	--	--	--
1,1,2-Trichloroethane	2	--	--	--	--	**	--	--	--	**	--	--	--	--	--	--	--
Bromoform	5	--	--	--	--	**	--	--	--	**	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	2	--	--	--	--	**	--	--	--	**	--	--	--	--	--	--	--
Tetrachloroethene	1	15	8.2 J	3 J	--	**	--	72 J	69	**	--	5.1 J	4.3 J	1.3 J	--	1.6 J	1.5
Chlorobenzene	5	--	--	--	--	**	--	--	--	**	--	--	--	--	--	--	--
2-Chloroethyl vinyl ether	10	--	--	--	--	**	--	--	--	**	--	--	--	--	--	--	--
Benzene		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene		3.9 J	3.7 +	5.1 +	--	4.6 J	6.4 J	--	--	--	--	--	--	--	--	--	--
Ethylbenzene		--	--	--	--	<1 J	--	--	--	--	--	--	--	--	--	--	--
ortho-Xylene		NA	--	--	--	<1 J	4.3 J	--	--	--	--	--	--	--	--	--	--
meta-Xylene		NA	--	--	--	<1 J	--	--	--	--	--	--	--	--	--	--	--
para-Xylene		NA	--	--	--	<1 J	--	--	--	--	--	--	--	--	--	--	--
Styrene		NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
n-Propylbenzene		NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ortho-Chlorotoluene		NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trimethylbenzene		NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
para-Chlorobenzene		NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ortho-Chlorobenzene		NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
meta-Chlorobenzene		NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene		NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

J - Quantitation is approximate due to quality control review.
-- - Indicates compound was not detected.
* - Value is rejected due to blank contamination identified in quality control review (data validation).
** - Value is rejected due to other contractual criteria identified in quality control review.
+ - Quantified during EPA validation.
BMDL - Below minimum detection limit.
Samples analyzed by ETC were collected by GeoEnvironmental Consultants;
those analyzed by ERCO were collected by Woodward Clyde Consultants;
while those analyzed by CompuChem were split samples collected by EPA.

TABLE 5. Additional Study Area Ground Water Quality Data (ppb)

Sampling Date		12-19-85	11-18-85	11-19-85	12-2-85	12-19-85	11-18-85	11-19-85	12-19-85	12-19-85	12-19-85	11-18-85	11-19-85	11-18-85	11-19-85	11-19-86	11-18-85
Sample Location		S921	S92N	S92N	S92N	S92N	S92S	S92S	S93D	S93N	S93S	S95D	S95D	S95N	S95N	S95N	S95S
Laboratory	Detectio	ERCD	ERCD	CChem	ERCD	ERCD	ERCD	CChem	ERCD	ERCD	ERCD	ERCD	CChem	ERCD	CChem	CChem	ERCD
Traffic Report #	Limit	24923	23586	AE200	23969	24922	23585	AE209	24918	24919	24920	23588	AE205	23590	AE202	AE203	23589
Chloroethane	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	1	--	--	*	--	--	--	1.8 J	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	1	2.1 J	1.8 J	5.1	3.6 J	--	--	1.3 J	2.1 J	--	--	--	--	--	--	--	--
Chloroform	1	--	--	--	34 J	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	1	4.5 J	--	1.1 J	7.9 J	--	--	--	--	--	--	4.5 J	3.4 J	2 J	3.6	3.5	2.1 J
Carbon Tetrachloride	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	1	8.1 J	220 J	170	190 J	44 J	--	--	25 J	3.3 J	5.6 J	22 J	13	9.6 J	10	10	3.4 J
Dibromochloromethane	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	1	--	14 J	13	11 J	2.4 +	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloroethyl vinyl ether	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene		--	--	--	--	--	--	1.0	--	--	--	1.8 +	--	--	--	--	2.1 +
Toluene		--	--	--	--	--	--	--	--	--	--	3.2 +	--	--	--	--	2.5 +
Ethylbenzene		--	--	--	--	4.9 J	--	--	--	--	--	3.2 +	--	--	--	--	3.5 +
ortho-Xylene		--	--	--	--	--	--	--	--	--	--	3.2 +	--	--	--	--	--
meta-Xylene		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
para-Xylene		--	--	--	--	--	--	--	--	--	--	2.7 +	--	--	--	--	--
Styrene		--	--	--	--	20 J	--	--	--	--	--	--	--	--	--	--	--
n-Propylbenzene		--	--	--	--	--	--	--	--	--	--	2.9 +	--	--	--	--	--
ortho-Chlorotoluene		--	--	--	--	--	--	--	--	--	--	2.0 +	--	--	--	--	--
Trimethylbenzene		NA	--	--	--	NA	--	--	NA	NA	NA	2.4 +	--	--	--	--	2.5 +
para-Chlorobenzene		NA	--	--	--	NA	--	--	NA	NA	NA	--	--	--	--	--	--
ortho-Chlorobenzene		NA	--	--	--	NA	--	--	NA	NA	NA	--	--	--	--	--	--
meta-Chlorobenzene		NA	--	--	--	NA	--	--	NA	NA	NA	--	--	--	--	--	--
1,2,4-Trichlorobenzene		NA	--	--	--	NA	--	--	NA	NA	NA	2.2 +	--	--	--	--	3.7 +

J - Quantitation is approximate due to quality control review.
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** - Value is rejected due to other contractual criteria identified in quality control review.
+ - Quantified during EPA validation.
BMDL - Below minimum detection limit.
Samples analyzed by ETC were collected by GeoEnvironmental Consultants;
those analyzed by ERCD were collected by Woodward Clyde Consultants;
while those analyzed by CompuChem were split samples collected by EPA.

TABLE 5. Additional Study Area Ground Water Quality Data (ppb)

Sampling Date		11-19-85	12-2-85	12-2-85	12-2-85	11-18-85	11-19-85	11-19-85	11-19-85	11-18-85	11-18-85	11-19-85
Sample Location		S95S	S96D	S96M	S96S	S97D	S97D	S97D	S97M	S97SS	S97S	S97S
Laboratory	Detectio	CChem	ERCD	ERCD	ERCD	ERCD	CChem	CChem	CChem	ERCD	ERCD	CChem
Traffic Report #	Limit	AE284	23965	23967	23966	23468	AE293	AE294	AE297	23464	23465	AE298
Chloroethane	5	--	--	--	--	**	--	--	--	**	**	--
Bromoethane	5	--	--	--	--	**	--	--	--	**	**	--
Vinyl Chloride	2	--	--	--	--	**	--	--	--	**	**	--
Chloroethane	5	--	--	--	--	**	--	--	--	**	**	--
Methylene Chloride	1	*	--	--	--	**	1.8 J	1.3 J	1.2 J	**	**	--
1,1-Dichloroethene	1	--	2.2 +	--	--	**	--	--	--	**	**	--
1,1-Dichloroethane	1	--	2.9 J	3.1 J	--	**	--	--	--	**	**	--
trans-1,2-Dichloroethene	1	--	26 J	3.1 J	--	**	20	20	41	**	**	2.2 J
Chloroform	1	1.5 J	6.5 J	2.2 J	--	**	1.3 J	1.3 J	1.5 J	**	**	--
1,2-Dichloroethane	1	--	--	1.1 +	--	**	--	--	--	**	**	--
1,1,1-Trichloroethane	1	2.4 J	2.3 J	--	--	**	1.8 J	1.8 J	2.6 J	**	**	--
Carbon Tetrachloride	1	--	--	--	--	**	--	--	--	**	**	--
Bromodichloromethane	1	--	--	--	--	**	--	--	--	**	**	--
1,2-Dichloropropane	2	--	--	--	--	**	--	--	--	**	**	--
trans-1,3-Dichloropropene	2	--	--	--	--	**	--	--	--	**	**	--
Trichloroethene	1	2.8 J	170 J	5.2 J	4.5 J	**	60	60	72	**	**	5.3
Dibromochloromethane	1	--	--	--	--	**	--	--	--	**	**	--
cis-1,3-Dichloropropene	2	--	--	--	--	**	--	--	--	**	**	--
1,1,2-Trichloroethane	2	--	--	--	--	**	--	--	--	**	**	--
Bromoform	5	--	--	--	--	**	--	--	--	**	**	--
1,1,2,2-Tetrachloroethane	2	--	--	--	--	**	--	--	--	**	**	--
Tetrachloroethene	1	--	32 J	--	--	**	16	15	30	**	**	3.1
Chlorobenzene	5	--	--	--	--	--	--	--	--	--	--	--
2-Chloroethyl vinyl ether	10	--	--	--	--	--	--	--	--	--	--	--
Benzene		--	--	--	--	--	--	--	--	1.6 J	--	--
Toluene		1.3 J	16 +	--	--	2 J	1.4 J	1.4 J	--	2.2 J	--	--
Ethylbenzene		--	--	--	--	<1 J	--	--	--	<1 J	--	--
ortho-Xylene		--	--	--	--	<1 J	1.3 J	2.6 J	--	<1 J	--	--
meta-Xylene		--	--	--	--	<1 J	--	--	--	1 J	--	--
para-Xylene		--	--	--	--	<1 J	--	--	--	1.7 J	--	--
Styrene		--	--	--	--	--	--	--	--	--	--	--
n-Propylbenzene		--	--	--	--	--	--	--	--	--	--	--
ortho-Chlorotoluene		--	--	--	--	--	--	--	--	--	--	--
Trimethylbenzene		--	--	--	--	--	--	--	--	--	--	--
para-Chlorobenzene		--	--	--	--	--	--	--	--	1.5 J	--	--
ortho-Chlorobenzene		--	--	--	--	--	--	--	--	--	--	--
meta-Chlorobenzene		--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene		--	--	--	--	--	--	--	--	--	--	--

J - Quantitation is approximate due to quality control review.
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TABLE 6. Mean Concentrations for Additional Study Area Groundwater Quality Data (ppb)

Sampling Date	11-19-85	4-24-85		4-24-85	11-19-85	11-19-85		11-19-85	11-19-85	5-1-85	5-1-85	5-1-85	5-1-85	5-1-85	5-1-85	4-23-85
Sample Location	S63B	S63D		S63S	S64D	S64D		S64S	S64M	S65D	S65M	S65S	S66D	S67M	S67S	S68D
Laboratory	ERCB	ETC		ETC	CChem	ETC		ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC
Traffic Report #	23640	M1441	S63D MEAN	M1440	AE299	M1428	S64D MEAN	M1426	M1427	M6096	M6095	M6094	M6093	M6099	M6098	M1439
Trichloroethene	120 J	183.9 J	152.0	103.5 J	87	216.5	151.8	126.6	180.6	66.3 J	49.2 J	7 J	20.5 J	62.5 J	24 J	118 J
Tetrachloroethene	380 J	238.5 J	309.3	97.5 J	18	43.1 J	30.6	38.3	61.4	15.3 J	10.8 J	BMDL	5.2 J	--	--	112.4 J
trans-1,2-Dichloroethene	40 J	--	40.0	--	52	82.6 J	67.3	64	85.7	28.1 J	18.9 J	2.4 J	7.7	--	--	40.2 J
1,1,1-Trichloroethane	13 J	9.3 J	11.2	BMDL	2.4 J	--	1.2	--	--	--	--	--	--	14 J	14.2 J	16.8 J
1,1-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	3.1 +	--	1.6	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	BMDL	--	--	--	--	--	--	--	--	--	--	--	3 J	3 J	--
Benzene	72 +	--	36.0	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	6.4	--	3.2	--	--	--	--	--	--	--	--	--
Vinyl Chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	--	NA	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Xylene	--	NA	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Sampling Date	4-23-85	5-1-85	5-2-85	5-2-85	5-2-85	4-23-85	4-23-85	4-23-85	4-23-85	5-2-85	5-2-85	5-2-85	4-26-85	4-26-85	4-29-85	4-26-85	
Sample Location	S68M	S69D	S72D	S72M	S72S	S73D	S73S	S74D	S74M	S75D	S75M	S75S	S77D	S77M	S77S	S77SS	S78S
Laboratory	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC
Traffic Report #	M1438	M6097	M6108	M6107	M6106	M1433	M1434	M1436	M1435	M6105	M6104	M6103	M5390	M5389	M5387	M5386	M1418
Trichloroethene	73.1 J	BMDL	14.6	20.9 J	7.3	62 J	11.3 J	BMDL	BMDL	--	--	--	349.1	136.5 J	194.2 J	5.8 J	182575 J
Tetrachloroethene	52.1 J	--	BMDL	--	4.8	--	--	--	BMDL	--	--	--	10.8	44.7 J	18.9 J	BMDL	32218 J
trans-1,2-Dichloroethene	26.9 J	--	--	--	--	38.2 J	13.6 J	--	--	--	--	--	13.8	21.7 J	6.1	9.1 J	62.8 J
1,1,1-Trichloroethane	7 J	--	--	--	--	--	--	--	--	--	--	--	--	11 J	--	--	511.8 J
1,1-Dichloroethane	--	--	BMDL	--	8.4	34.2 J	5.4 J	--	--	--	--	--	--	--	BMDL	--	--
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	--	6 J	--	--	--	--	--	--	--	--	--	--	34.9 J
Benzene	--	--	--	--	--	--	--	--	--	166.8	142.7 J	2773.7 J	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--	16.8	--	262.5 J	--	--	--	--	651.5 J
Toluene	--	--	--	--	--	--	--	--	--	6.6	--	232.9 J	--	BMDL	BMDL	--	19.9 J
Vinyl Chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Xylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

J - Quantitation is approximate due to quality control review (data validation).
-- - Indicates compound was not detected.
+ - Value is rejected due to quality control review (data validation).
++ - Value is rejected due to statistical test for outliers.
+ - Quantified during EPA validation.
NA - Not Analyzed
NOTE: Less than values (<) not included in calculation of the means.

TABLE 6. Mean Concentrations for Additional Study Area Groundwater Quality Data (ppb)

Sampling Date		5-01-85	5-01-85	5-01-85	11-18-85	11-19-85		4-25-85	4-23-85	4-23-85	4-23-85	4-23-85	12-25-85	12-25-85	12-25-85	12-25-85	12-2-85	12-2-85
Sample Location	S700	S01D	S01R	S01S	S01D	S01D		S02	S03	S04D	S04M	S04S	S05S	S05M	S06D	S06S	S08D	S08M
Laboratory	ETC	ETC	ETC	ETC	ERCO	CChem		ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ERCO	ERCO
Traffic Report #	M1419	M6102	M6101	M6100	23470	AE291	S01D MEAN	M1422	M1437	M1430	M1431	M1432	M1420	M1421	M1425	M1424	23964	23963
Trichloroethene	26 J	--	6.8 J	72.7 J	*	11	11	73.9	665.6 J	33 J	24.5 J	33.2 J	231	91.3	5.8	--	50 J	56 J
Tetrachloroethene	17 J	67.4 J	59.4 J	404.9 J	*	200	200	39.1	24.6 J	10.1	12.5 J	24.3 J	98.2	207.9	15	17.5	8.2 J	3 J
trans-1,2-Dichloroethene	--	--	--	21.5 J	*	7.3	7.3	35.6	137.9 J	9.7 J	8.1 J	10.7 J	139.2 J	42.5	--	--	--	2.3 J
1,1,1-Trichloroethane	--	--	6 J	156.8 J	*	--	--	3.8	--	--	--	--	*	35.2	--	--	--	--
1,1-Dichloroethane	--	--	--	5.5 J	*	--	--	--	--	--	--	--	--	--	--	--	1.8 J	5.2 J
1,1,2,2-Tetrachloroethane	--	--	--	--	*	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	--	--	--	--	*	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	DNRL	*	1.8 J	1.8	--	--	--	--	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	<1	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	35	34	34	--	--	--	--	--	--	--	3.9 J	--	3.7 +	5.1 +
Vinyl Chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	NA	NA	NA	NA	--	--	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	--	--
Total Xylene	NA	NA	NA	NA	--	--	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	--	--

Sampling Date	12-2-85	11-18-85	11-19-85		11-18-85	11-19-85		11-18-85	11-19-85		11-18-85	11-19-85		11-18-85	11-19-85	11-19-85	12-2-85	12-19-85
Sample Location	S08S	S90D	S90D		S90M	S90M		S90S	S90S		S92D	S92D		S92I	S92I	S92I	S92I	S92I
Laboratory	ERCO	ERCO	CChem		ERCO	CChem		ERCO	CChem		ERCO	CChem		ERCO	CChem	CChem	ERCO	ERCO
Traffic Report #	23962	23469	AE292	S90D MEAN	23467	AE295	S90M MEAN	23466	AE296	S90S MEAN	23584	AE290	S92D MEAN	23587	AE286	AE287	23968	24923
Trichloroethene	14 J	*	20	20	*	46	46	*	--	--	66	49	57.5	8.8	6.2	6.3	7 J	8.1 J
Tetrachloroethene	--	*	--	--	*	69	69	*	--	--	5.1	4.3 J	4.7	1.3	--	1.6 J	1.5 J	--
trans-1,2-Dichloroethene	5.4 J	*	10	10	*	28	28	*	--	--	2.6	2.6 J	2.6	--	1.1 J	1.2 J	--	2.1 J
1,1,1-Trichloroethane	--	*	2.1 J	2.1	*	11	11	*	--	--	2.8	2.0 J	1.4	3.1	3.2 J	3.3 J	4.5 J	4.5 J
1,1-Dichloroethane	3.8 J	*	--	--	*	--	--	*	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	--	*	--	--	*	--	--	*	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	--	*	--	--	*	--	--	*	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	*	--	--	*	--	--	*	--	--	--	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	<1 J	--	--	--	--	--	--	--	--	--	--	--	1.8 +	--	--	--	--
Toluene	--	4.6 J	6.4	5.5	--	--	--	--	--	--	3.9 +	--	--	3.2 +	--	--	--	--
Vinyl Chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Xylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

J - Quantitation is approximate due to quality control review (data validation).
-- - Indicates compound was not detected.
* - Value is rejected due to quality control review (data validation).
** - Value is rejected due to statistical test for outliers.
+ - Quantified during EPA validation.
NA - Not Analyzed
NOTE: Less than values (<) not included in calculation of the means.

TABLE 6. Mean Concentrations for Additional Study Area Groundwater Quality Data (ppb)

Sampling Date		11-18-85	11-19-85	12-2-85	12-19-85		11-18-85	11-19-85		12-19-85	12-19-85	12-19-85	11-18-85	11-19-85		11-18-85
Sample Location		S92N	S92N	S92N	S92N		S92S	S92S		S93D	S93N	S93S	S95D	S95D		S95N
Laboratory		ERCD	CChem	ERCD	ERCD		ERCD	CChem		ERCD	ERCD	ERCD	ERCD	CChem		ERCD
Traffic Report #	S92I	23586	AE280	23969	24922	S92N	23585	AE289	S92S	24918	24919	24920	23588	AE285	S95D	23590
	MEAN					MEAN			MEAN						MEAN	
Trichloroethene	7.3	220 J	170	190 J	**	145.0	--	--	--	25 J	3.3 J	5.6 J	22 J	13	17.5	9.6
Tetrachloroethene	0.9	14 J	13	11 J	2.4 +	10.1	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	0.9	1.8 J	5.1	3.6 J	--	2.6	--	1.3 J	0.7	2.1 J	--	--	--	--	--	--
1,1,1-Trichloroethane	3.7	--	1.1 J	7.9 +	--	8.4	--	--	--	--	--	--	4.5 J	3.4	4.0	2
1,1-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	--	--	1.0	0.5	--	--	--	1.8 +	--	--	--
Ethylbenzene	--	--	--	--	4.9 J	--	--	--	--	--	--	--	3.2 +	--	--	--
Toluene	--	--	--	--	--	--	--	--	--	--	--	--	3.2 +	--	--	--
Vinyl Chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	--	--	--	--	28 J	--	--	--	--	--	--	--	--	--	--	--
Total Xylene	--	--	--	--	--	--	--	--	--	--	--	--	5.9 +	--	--	--

Sampling Date	11-19-85	11-19-86		11-18-85	11-19-85 A		12-2-85	12-2-85	12-2-85	11-18-85	11-19-85	11-19-85		11-19-85	11-18-85	11-18-85	11-19-85	
Sample Location	S95N	S95N		S95S	S95S		S96D	S96N	S96S	S97D	S97D	S97D		S97N	S97SS	S97S	S97S	
Laboratory	CChem	CChem		ERCD	CChem		ERCD	ERCD	ERCD	ERCD	CChem	CChem		CChem	ERCD	ERCD	CChem	
Traffic Report #	AE282	AE283	S95N	23589	AE284	S95S	23965	23967	23966	23468	AE293	AE294	S97D	AE297	23464	23465	AE298	S97S
			MEAN			MEAN							MEAN					MEAN
Trichloroethene	10	10	9.9	3.4 J	2.8 J	3.1	170 J	5.2 J	4.5 J	*	60	60	60.0	72	*	*	5.3	5.3
Tetrachloroethene	--	--	--	--	--	--	32 J	--	--	*	16	15	15.5	30	*	*	3.1	3.1
trans-1,2-Dichloroethene	--	--	--	--	--	--	26 J	3.1 J	--	*	28	28	28.0	41	*	*	2.2 J	2.2
1,1,1-Trichloroethane	3.6 J	3.5	3.0	2.1 J	2.4 J	2.3	2.3 J	--	--	*	1.8 J	1.8 J	1.8	2.6 J	*	*	--	--
1,1-Dichloroethane	--	--	--	--	--	--	2.9 J	3.1 J	--	*	--	--	--	--	*	*	--	--
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	*	--	--	--	--	*	*	--	--
1,2-Dichloroethane	--	--	--	--	--	--	2.2 +	1.1 +	--	*	--	--	--	--	*	*	--	--
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	*	--	--	--	--	*	*	--	--
Benzene	--	--	--	2.1 +	--	1.1 J	--	--	--	--	--	--	--	--	1.6 J	--	--	--
Ethylbenzene	--	--	--	2.5 +	--	2.2 J	--	--	--	<1 J	--	--	--	--	<1 J	--	--	--
Toluene	--	--	--	3.5 +	1.3 J	2.4 J	16 +	--	--	2 J	1.4 J	1.4 J	1.6	--	2.2 J	--	--	--
Vinyl Chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Xylene	--	--	--	--	--	--	--	--	--	--	1.3	2.6 +	1.9	--	--	--	--	--

J - Quantitation is approximate due to quality control review (data validation).
-- - Indicates compound was not detected.
* - Value is rejected due to quality control review (data validation).
** - Value is rejected due to statistical test for outliers.
\+ - Quantified during EPA validation.
NA - Not Analyzed

APPENDIX D

METHOD PROTOCOLS

Appendix D presents protocols followed in the collection and analysis of all samples collected by NUS/FIT during the Remedial Investigation. Information is included as follows:

- Volatile organic analysis using the Foxboro Century Systems Organic Vapor Analyzer (OVA Model 128).
- Volatile organic analysis using the Photovac 10A10 Gas Chromatograph.
- Contract Laboratory analysis for organic Hazardous Substance List compounds.
- Contract Laboratory analysis for inorganic Hazardous Substance List compounds.
- Validation procedures for Contract Laboratory data.
- Groundwater sampling protocols.
- Installation of groundwater monitoring well protocols.

VOLATILE ORGANIC ANALYSIS USING THE FOXBORO ORGANIC VAPOR ANALYZER (OVA-128)

The Foxboro Century Systems Organic Vapor Analyzer (OVA) is a portable unit equipped to detect organic vapors in air. It is fitted with a chromatographic column packed with a material which physically interacts with organic compounds. Since the packing material has a different affinity for each individual compound, the time it takes for each compound to pass through the column (retention time) will be different. The retention time is dependent on several parameters of the column: temperatures, length of column, type of packing, and flow rate or carrier gas (hydrogen). The OVA can be used in the field or laboratory to separate and identify volatile organic compounds. Water and soil samples for analysis on the OVA are collected in 40 to 44 milliliter (ml) septum-fitted vials. Vials are filled to 75% capacity, leaving a "headspace" of air, if analysis is to be conducted at the sampling location. Aqueous samples collected for analysis in the lab are completely filled and kept on ice during transport to preserve sample integrity. A headspace is created in lab by withdrawing 10 ml of liquid with a syringe. Soil samples are always collected with headspace to avoid reopening of the vial.

The OVA runs at ambient temperature, and must therefore be allowed to equilibrate to surrounding conditions. Samples are also Equilibrated to ambient temperature for analysis. The instrument is put in the chromatography mode by depressing the inject valve, which diverts ambient air through an activated charcoal filter to remove interfering volatiles. The backflush valve is left in the up position. A strip chart recorder is plugged into the OVA to receive output from the detector.

A 500 microliter (ul) gas-tight syringe is used to inject sample vapors onto the column. The syringe is initially flushed several times and 500 ul of "clean" ambient air is injected to verify syringe cleanliness. The time of injection is noted on the strip chart and the chromatograph is allowed to run for several minutes. The backflush valve is then depressed, reversing the flow through the column, while the chart is left running to record peaks occurring from heavier compounds that were

still on the column. When this run is through, the backflush valve is returned to the up position. Air may then be withdrawn from the headspace above a soil or water sample and analyzed in the same fashion.

Analysis can be qualitative or quantitative. Standards containing individual volatile organic compounds or mixtures can be prepared. These standards can be at specific concentrations if quantitative analysis is desired. Compound identification is made by comparison of sample and standard peak retention times. Quantitation is accomplished by comparing peak height to a standard peak of that compound at known concentration. Identifications are tentative unless peak retention times match those of the standard on three columns of dissimilar polarity, in which case identification is considered positive. Detection limits for most common volatile organic compounds are in the 0.5-1 part per million range using this method.

VOLATILE ORGANIC ANALYSIS USING THE PHOTOVAC 10A10 CHROMATOGRAPH

The Photovac 10A10 is a portable gas chromatograph used to screen soil and water samples for volatile organic compounds. A 4' by 1/8" SE-30 column is typically used for NUS/FIT screening. This instrument is generally used in the laboratory to allow greater analytical control. Samples are collected in 40 to 44 milliliter (ml) septum-fitted vials and are kept on ice during transporation. Soil samples are collected leaving 25% of the vial empty; this headspace will be sampled for volatile organic vapors. Aqueous sample vials are completely filled to better preserve the sample; a headspace is then created in lab by withdrawing 10 ml of liquid with a syringe.

Samples are allowed to equilibrate to room temperature before analysis. The instrument is also allowed to warm up for several minutes to stabilize analytical conditions. A multi-compound standard of known concentration is prepared daily by dilution of stock solution. Instrument response and technical reproducibility are verified by running the standard two times prior to sample analysis. The standard run takes approximately 12 minutes to complete. A gas-tight 200 microliter (ul) syringe is used to make injections, unless high concentrations require the use of a smaller volume. The syringe is flushed with ambient air between samples, and an injection of "clean" ambient air is run to verify syringe cleanliness. The standard run is repeated every eight samples to confirm ongoing instrument stability.

Compound identification is by comparison of peak retention time to standards. Comparison of peak height to a standard peak of that compound at a known concentration yields quantitative results for aqueous samples. Soil samples are reported with qualitative results only, as no standard with a soil matrix is run. Compound identification is tentative unless peak retention times match standard peaks on three dissimilar columns, in which case identification is considered positive. A list of compounds analyzed for and typical detection limits are given below.

TABLE 1

COMPOUNDS ANALYZED FOR AND TYPICAL DETECTION LIMITS FOR THE PHOTOVAC 10A10 GC

Compound	detection limit (ppb)
benzene	1
trichloroethylene	1
toluene	3
tetrachloroethylene	3
chlorobenzene	5
ethylbenzene	5
m-xylene	5
o-xylene	10

CONTRACT LABORATORY ANALYSIS
FOR ORGANIC HAZARDOUS SUBSTANCE LIST COMPOUNDS

Full Hazardous Substance List (HSL) analysis by a contract lab includes volatile organic analysis (VOA), semivolatile (base/neutral/acid), pesticide and PCB analysis. A complete list of these compounds and their contract required detection limits is presented in Table 2. Samples are run according to procedures specified in the Contract Lab Program Organics Analysis Statement of Work. This document details analytical and contractual requirements and is based on EPA Methods 624 (purgeables), 625 (base/neutral/acids) and 608 (pesticides and PCBs).

Volatiles (or "purgeables") are analyzed utilizing a purge and trap method. In this method, 5 to 25 ml. of aqueous sample or soil extract is placed in a special enclosed chamber. Finely divided inert gas bubbles are blown through the sample to release volatile compounds into the vapor phase. A sorbent trap collects these vapors for analysis. When purging is completed, the trap is heated and backflushed onto a gas chromatograpic (GC) column. The various chemicals present will interact differently with the column and pass through it with varying retention times. The GC is interfaced with a mass spectroscopy (MS) system which is then used to identify the separated components.

Base/neutral and acid compounds are extracted into methylene chloride and analyzed using fused silica capillary column GC/MS. Base/neutral compounds are extracted at pH 11, acids at pH 2. As with volatiles, compound separation occurs in the column. Qualitative identification is made via GC retention time and relative abundance of three or more characteristics MS ions. Quantitative analysis is accomplished using an internal standard and one characteristic ion.

Screening for pesticides is done using GC equipped with an electron capture detector (ECD) which is particularly sensitive to chlorinated compounds. The sample is extracted with methylene chloride, then the methylene chloride is exchanged for hexane, a GC/ECD compatible solvent. Compounds detected at high enough levels using GC/ECD are confirmed using GC/MS.

Each of the above fractions is subject to contract-required quality control measures. This involves the analysis of method blanks, duplicates, and spiked samples which are used to assess data quality. Data validation is discussed further in a following section.

CONTRACT LABORATORY ANALYSIS
FOR INORGANIC HAZRADOUS SUBSTANCE LIST COMPOUNDS

Inorganics analysis by a contract lab includes screening for the 24 metals listed in Table 3. Analysis is conducted according to the Contract Laboratory Program Inorganics Analysis Statement of Work.

Sample preparation involves digestion by nitric acid and hydrogen peroxide. Analysis is conducted using standard atomic absorption (AA) methods. Flame, furnace, or the inductive coupled plasma (ICP) method may be used for each metal, as long as the contract required detection limit for that element is met. These limits are listed in Table 3. Mercury analysis is an exception; it is done by the cold vapor method and requires a persulfate digestion.

All analysis is subject to contract-required quality control measures. This involves analysis of blanks, duplicates and spiked samples to insure valid results. Data quality review is discussed further in the following section.

TABLE 2
COMPOUNDS INCLUDED IN CLP ORGANICS ANALYSIS AND CONTRACT REQUIRED DETECTION LIMITS (CRDL)

Volatile Organics		Pesticides/PCBs	
Compound	CRDL (ug/l)	Compound	CRDL (ug/l)
Chloromethane	10	Alpha-BHC	0.05
Bromomethane	10	Beta-BHC	0.05
Vinyl Chloride	10	Delta-BHC	0.05
Chloroethane	10	Gamma-BHC (Lindane)	0.05
Methylene Chloride	5	Heptachlor	0.05
Acetone	10	Aldrin	0.05
Carbon Disulfide	5	Heptachlor epoxide	0.05
1,1-Dichloroethene	5	Endosulfan I	0.05
1,1-Dichloroethane	5	Dieldrin	0.10
Trans-1,2-Dichloroethene	5	4,4'-DDE	0.10
Chloroform	5	Endrin	0.10
1,2-Dichloroethane	5	Endosulfan II	0.10
2-Butanone	10	4,4'-DDD	0.10
1,1,1-Tetrachloroethene	5	Endrin Aldehyde	0.10
Carbon Tetrachloride	5	Endosulfan Sulfate	0.10
Vinyl Acetate	10	4,4'-DDT	0.10
Bromodichloromethane	5	Methoxychlor	0.50
1,2-Dichloropropane	5	Endrin ketone	0.10
Trans-1,3-Dichloropropene	5	Chlordane	0.50
Trichloroethene	5	Toxaphene	1
Dibromochloromethane	5	Aroclor-1016	0.50
1,1,2-Trichloroethane	5	Aroclor-1221	0.50
Benzene	5	Aroclor-1242	0.50
cis-1,3-Dichloropropene	5	Aroclor-1248	0.50
2-Chloroethylvinylether	10	Aroclor-1254	1
Bromoform	5	Aroclor-1260	1
4-Methyl-2-Pentanone	10		
2-Hexanone	10		
Tetrachloroethene	5		
1,1,2,2-Tetrachloroethane	5		
Toluene	5		
Chlorobenzene	5		
Ethylbenzene	5		
Styrene	5		
Total Xylenes	5		

TABLE 2
COMPOUNDS INCLUDED IN CLP ORGANICS ANALYSIS AND CONTRACT REQUIRED DETECTION LIMITS (CRDL)

Semivolatile (Base/Neutral/Acid) Organics

Compound	CRDL (ug/l)	Compound	CRDL (ug/l)
Phenol	20	Acenaphthene	20
bis(2-Chloroethyl)Ether	20	2,4-Dinitrophenol	100
2-Chlorophenol	20	4-Nitrophenol	100
1,3-Dichlorobenzene	20	Dibenzofuron	20
1,4-Dichlorobenzene	20	2,4-Dinitrotoluene	20
Benyl Alchohol	20	2,6-Dinitrotoluene	20
1,2-Dichlorobenzene	20	Diethylphthalate	20
2-Methylphenol	20	4-Chlorophenyl-phenylether	20
bis(2-chloroisopropyl)Ether	20	Fluorene	20
4-Methylphenol	20	4-Nitroaniline	100
N-Nitroso-Di-n-Propylamine	20	4,6-Dinitro-2-Methylphenol	100
Hexachloroethane	20	N-Nitrosodiphenylamine (1)	20
Nitrobenzene	20	4-Bromophenyl-phenylether	20
Isophorone	20	Hexachlorobenzene	20
2-Nitrophenol	20	Pentachlorophenol	100
2,4-Dimethylphenol	20	Phenanthrene	20
Benzoic Acid	20	Anthracene	20
bis(2-Chloroethnoxy)Methane	20	Di-n-Butylphthalate	20
2,4-Dichlorophenol	20	Fluoranthene	20
1,2,4-Trichlorobenzene	20	Pyrene	20
Naphthalene	20	Butylbenzylphthalate	20
4-Chloroaniline	20	3,3-Dichlorobenzidine	40
Hexachlorobutadiene	20	Benzo (a) Anthracene	20
4-Chloro-3-Methylphenol	20	bis(2-Ethylhexyl)Phthalate	20
2-Methylnaphthalene	20	Chrysene	20
Hexachlorocyclopentadiene	20	Di-n-Octyl Phthalate	20
2,4,6-Trichlorophenol	20	Benzo (b) Fluoranthene	20
2,4,5-Trichlorophenol	100	Benzo (k) Fluoranthene	20
2-Chloronaphthalene	20	Benzo (a) Pyrene	20
2-Nitroaniline	100	Indeno(1,2,3-cd)Pyrene	20
Dimethyl Phthalate	20	Dibenzo(a,h)Anthracene	20
Acenaphthylene	20	Benzo(g,h,i)Perylene	20
		3-Nitroaniline	100

TABLE 3

ELEMENTS INCLUDED IN CLP INORGANICS ANALYSIS AND CONTRACT REQUIRED DETECTION LIMITS (CRDL)

Element	CRDL	Element	CRDL
1. Aluminum	200	13. Magnesium	5000
2. Antimony	60	14. Manganese	15
3. Arsenic	10	15. Mercury	0.2
4. Barium	200	16. Nickel	40
5. Beryllium	5	17. Potassium	5000
6. Cadmium	5	18. Selenium	5
7. Calcium	5000	19. Silver	10
8. Chromium	10	20. Sodium	5000
9. Cobalt	50	21. Thallium	10
10. Copper	25	22. Tin	40
11. Iron	100	23. Vanadium	50
12. Lead	5	24. Zinc	20

VALIDATION OF
CONTRACT LABORATORY DATA

Contract Laboratory analysis is conducted according to EPA Methods 624 (Purgeables) and 625 (Base/Neutrals and Acids). Results are released to the public only after data validation has been completed by NUS/FIT and approved by EPA. This data review insures that the laboratory followed appropriate quality control procedures and met all contractual requirements. Data may be considered unuseable (rejected) or approximate as a result of the review. Parameters assessed in the NUS/FIT Level I data validation are as follows:

- Instrument tuning and calibration. The laboratory is required to verify proper and stable instrument response prior to sample analysis. Poor or fluctuating response may result in misidentification or invalid quantitation.

- Sample holding times. Samples must be analyzed within contract specified holding times to minimize sample degradation and contamination. Data will frequently be approximated for samples held beyond the specified limits.

- Surrogate spike recoveries. All samples are spiked with a known quantity of solution containing compounds not likely to occur in the samples. The laboratory determines their percent recoveries from analysis results. Poor recoveries, either high or low, result in entire fractions of data being approximated. Results may be rejected entirely if recoveries are so low that analysis is considered unuseable.

- Matrix spike recoveries. The laboratory spikes one in ten samples with a known concentration of several of the compounds that are being analyzed for. Percent recoveries of these compounds may be low if laboratory technique is poor or if the sample matrix prevents successful analysis. Recoveries outside of contract-required limits may result in approximating or rejecting data.

- Laboratory duplicate. The laboratory divides each matrix-spiked sample into two portions for the purpose of duplicate analysis. Comparison of the two sets of data gives an indication of the reliability of results. Values that vary greatly generally result in the approximation of data for certain compounds.

- Field ("blind") duplicates. The sample collection team collects duplicate samples that are submitted to the laboratory unidentified in order to get an unbiased duplicate comparison. Data qualifiers due to poor agreement are the same as for laboratory duplicates.

- Laboratory blanks. The laboratory is required to store, prepare, and analyze "blank" water samples with each group of samples submitted. These blanks frequently contain common laboratory solvents that have contaminated samples as well. Data for compounds present in blanks is generally rejected.

- Field ("blind") blanks. Blank water is carried to the sampling location, stored with other samples and shipped to the laboratory unidentified. This gives unbiased blank data as well as indications of cross-contamination that may have occurred in the field. Data for compounds found in these blanks is generally rejected.

Inorganics data validation also includes assessment of the following:

- Interference Check. The laboratory is required to run a sample that has been spiked with high levels of certain elements to determine if inter-element interferences exist. Poor recoveries of elements present at known, lower concentrations may result in approximation of data for these elements in certain samples.

- Standard additions. Certain sample matrices may interfere with the analysis of inorganic constituents. A poor matrix spike recovery indicates such an interference, and requires the laboratory to quantitate that element using the method of standard additions. This method sets a new standard curve using the sample matrix in question. Data for a given element may be approximated or rejected if the spike recovery was poor and standard additions were not used.

Groundwater Sampling

The method NUS/FIT utilized for groundwater sample collection followed a measure, purge, and sample sequence. Initially, static water levels and total depth measurements were collected. From these data, the volume of standing water in the column was calculated according to the following formula:

$$r^2h$$

r = radius of the well

h = height of water column

Purging of the wells was accomplished by mecahnical pumps or by hand bailing. For those wells having a fairly rapid recharge, NUS/FIT was able to use a gasoline powered pump. In order to ensure proper evacuation of the standing water, the pump was started with the intake hose at the bottom of the well, after which the hose was drawn upwards. The purged water was measured by filling and emptying a calibrated ten gallon wash tub.

Following the removal of each well volume, measurements of pH, conductivity and temperature were taken in order to ensure collection of samples representative of the aquifer. Two consecutive measurements within + 0.03 pH units +10% relative conductance represented stabilization of the groundwater conditions. A maximum of five well volumes were purged from any one well.

Collection occurred after allowing the wells to recharge to a minimum of 75% of their initial static water levels. The samples were obtained from each well utilizing a stainless steel bailer with a teflon check valve which was lowered to the middle of known well screens and allowed to fill. The retrieved groundwater was then poured into two 44 ml septum sealed vials to which a 7,000 part per million (ppm) mecuric chloride ($HgCl_2$) solution had been added as a preservative to a final concentration in the sample of 16 ppm $HgCl_2$. Replicate samples were obtained by

filling two additional vials from the same bailer volume. Field blanks consisted of deionized water obtained from the EPA's New England Regional Laboratory in Lexington, Massachusetts. All samples were labelled in the field and placed on ice. Custody of the samples was then relinguished by the field personnel to an NUS chemist for analysis at EPA's New England Regional Laboratory in Lexington, Massachusetts or for shipment to a CLP laboratory.

All sampling equpiment was decontaminted bewteen wells utilizing a deionized water, methanol, deionized water final rinse sequence.

Installation of Groundwater Monitoring Wells Protocols

Installation of groundwater monitoring wells was subcontracted by NUS to M & M Enterprises, Inc., of Arlington, Virginia. M & M Enterprises subcontracted the actual field work to Buffalo Drilling Co., Inc. (BDC) of Buffalo, New York and New England Boring Contractors, Inc. (NEBC) of Glastonbury, Connecticut.

There were two primary overburden drilling methods employed during the investigation; hollow stem auger (BDC), and drive and wash (NEBC). The five foot auger flights used by BDC had an eight inch outside diameter with a nominal 3 and 3/8 inch inside diameter. Initially, the augers were plugged with a removable plug that was retracted for soil sampling. The plugged auger method was eventually abandoned in favor of open ended augering which requires the removal of soils that enter the augers by the pumping of clean water into the flights. The washing action forces soil particles into suspension. The wash flows up and out the top of the flights, carrying with it the suspended particles. In locations where the augers could not penetrate, BDC would advance the borehole by roller bitting and subsequent introduction of a smaller diameter casing through the auger flights, a method referred to as telescoping. The flights were then retracted and the method became essentially drive and wash.

The drive and wash method (NEBC) utilized five or ten foot lengths of steel casing that are driven into the overburden by a 300 pound hammer. The hammer is winch raised then allowed to free fall the length of the drive stem (approximately 3 ft) which is threaded into the steel casing. The casing was then cleansed of soil with clean water as described previously. In several well locations, very difficult

drilling was encountered. When confronted with refusal using the drive and wash method, NEBC utilizing telescoping, as did BDC. The spin method was used in nested boulder and cobble zones and utilized a diamond-impregnated shoe. The shoe is placed at the bottom of the casing and the entire assembly is spun, allowing the casing to be advanced by cutting its way through blockages.

All water used during the drilling procedures came from the current Woburn water supply as accessed through a variety of hydrants throughout the study area. Samples were drawn from the water supply and screened on the Foxboro Century Systems Organic Analyzer (OVA) Model 128 for volatile organics before use. Samples were also collected periodically from the drillers' storage tanks and analyzed to ensure absence of volatile organics prior to their use in the drilling procedures.

All drilling tools used down the borehole (i.e., casing, chuch rods, auger flights) were decontaminated by a steam cleaning, methanol rinse, and a final steaming before use and between boreholes. Any part of the drilling rigs that extended over the borehole was also steam cleaned prior to its use and between locations. Hydraulic equipment (i.e., hoses, valve banks, etc.) was inspected for leaskage by NUS/FIT to confirm that no fluids were leaking before allowing the drill rig to be on-site. Lengths of PVC riser and screen were steam cleaned and cold water rinsed before being introduced to the subsurface. There were no petroleum based lubricants used during the study. In most situations, the drillers used no lubricants at all. Occasionally, however, a vegetable based lubricant (ie., Crisco) was used on casing and rod joints. Soil samples were collected with a 24 inch, 2 inch outside diameter split spoon sampler at 5 foot intervals. The split spoon sampler was driven by a 140 pound hammer with a 30 foot freefall (standard penetration test). The driving resistance was gauged by blow counts (the number of hammer falls needed) for each six inch interval of the total penetration of 24 inches. Retrieved soil samples were placed into at least one eight ounce jar for geologic characterization. These jars were labelled and retained by NUS/FIT for future reference. In addition, one septum sealed 44 ml VOA (volatile organic analysis) vial wsa partially filled with soil for OVA headspace analysis which was performed by the NUS/FIT on-site chemist.

The split spoons were decontaminated prior to use and between uses by the NUS on-site geologist utilizing a water bath with brushing to remove residual soils, followed by an Alconox and water scrub to ensure removal of contaminants, and finally a clean water rinse.

Whenever possible, the deepest well in a nested set was drilled first. During the drilling, data was compiled throughout the volatile organic screening and through visual examination of the split spoon samples. The collected data formed the basis for screen placement decisions according to the following criteria. In boreholes where OVA analysis of the soil samples indicated the presence of volatile organics, the screened interval was placed to intercept the zone of contamination. Where contamination was not clearly indicated, the screened interval was placed in the most permeable stratum, as directed by the NUS on-site geologist, based on visual inspection of the soil samples. Upon reaching the desired depth, well installation was conducted. The wells were constructed using shedule 80 1.5 inch inside diameter threaded flush jointed polyvinyl chloride (PVC). The screen slot size for all wells installed was 0.010 inch. The overburden wells are screened entirely in the overburden. The screen length varied (5-50 feet) according to the intended purpose of the well. Longer screen lengths were used where past groundwater quality has not been documented and current contamination was not indicated by field chemical screening. The shorter lengths were used where groundwater gradient information was important and/or information on vertical distribution of contaminants was known or desired. After establishing the most advantageous screen length, the five foot sections of screen were threaded together and the bottom was capped. No solvents or glues were used for jointing. A small amount of Ottawa sand (4") was poured into the cased borehole and the bottom was sounded. This small amount of sand acted to seat the bottom of the PVC riser. Next, the screen and riser were lowered into the borehole and seated. Filter sands were then placed around the screen. A 60/40 grade Ottawa sand was used as filter sand. The sand level was periodically measured until enough had been added to reach a level two feet above the top of the screened interval. Clean water was used to wash the filter sand off the steel casing and PVC riser and down to the screened interval. Time was allowed for the sands to settle before measuring took

place. The two feet of sand above the top of the screen was placed to act as a separation between the slurry grout and the screened interval.

In order to seal the screen in the interval of choice, a cement/bentonite slurry grout was injected into the borehole above the filter sand. A tremie pipe was lowered to a level approximately one foot from the top of sand, and grout (10:1 ratio by weight cement to bentonite) was slowly pumped into the borehole. This technique minimized disturbance of the filter sand. The casing still remaining in the borehole was then pumped full of grout. The standing water was displaced out the top of casing. This process was continued until the grout was observed to be flowing out of the top of the casing. The remaining casing was then retracted. If the grout level dropped substantially during the casing retraction, more grout was pumped into the borehole. In cases where the top of the screen was less than 15 feet from ground surface, bentonite pellets were used to seal the well instead of the slurry grout.

One well from each nested location penetrated 20 feet into the bedrock. The bedrock was cored using a NWX size diamond core bit according to standard ASTM method for diamond core drilling. All rock cores were boxed, labelled and retained by NUS/FIT for future reference. Rock quality designations (RQDs) were calculated for each five foot run. The NWX bit cuts a 2.155 inch diameter core and leaves a 2.930 inch diameter borehole. This diameter afforded a 2.93 inch annulus around the screen for the placement of filter sand. Fifteen feet of 0.010 slotted PVC screen was then lowered into the rock borehole with PVC riser to a point above ground surface. Filter sand was added to a level one foot above the top of screen. Cement/bentonite slurry was then emplaced via a tremie pipe with the grout being brought to ground surface. In this manner, a four foot grout plug was emplaced into the bedrock limiting or precluding communication between the bedrock well and the overburden aquifer.

The PVC risers were brought to a level approximately 2 1/2 feet above ground surface (except on Unifirst, Corp. property where limited space demanded subsurface installation). A five foot steel security casing was placed around the

riser. The security casing was grouted into the ground to a depth of 2 1/2 feet leaving 2 1/2 above the ground surface. Each casing has a lockable lid. Padlocks were used to secure each lid. Serial numbers located on each lock were removed by filing.

APPENDIX E
NUS/FIT WELL LOGS

This appendix contains the logs of monitoring wells installed by NUS/FIT as a part of this Remedial Investigation. In most locations, more than one well was completed. Each location is represented by a boring log. Each log contains the construction details of all wells installed at that location.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	FI-8409-01	1 of 1	S63

Location	Angle from Horiz.
NW Corner of Parking Lot 200 W-Cummings	Vertical

Begun	Completed	Driller	Drill Make & Model	Hole Dia.	Overburden (ft)	Rock (ft)	Total Depth
1 Nov 85	3 Nov 85	Buffalo Drilling Co.	CME 55	3.5 ID	22'	14'	36

Core Recovery (ft)	Core Box	Samples	El. Top of Casing	Ground El.	Depth to Top of Rock
10	1	5		S63S 70.04, S63D 69.52	22'

Sample Hammer Weight/Fall	Casing	NUS Inspector
140 lbs/30"	Solid Sch 80 PVC 1.5" I.D. Screen 0.010 slot	Angers

Depth	Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
	01			24/12	0-2	10/7/7/7		Fill: Dark BN to BN sandy loam and GRAVEL, some PEBBLES	
	02			24/8	3-5	6/8/11/11		Fill: Same as above	
5									
	03			24/24	8-10	15/20/31/52		lt BN to BN SAND, fining w/ depth, C to F S63S top of Ottawa Sand 9'	1
10									
	04			13 1/2/8	13-14.2	15/120-4"		S63S top of screen 12' M/C SAND Refusal at 14.2', COBBLES	
15									
	05			24/4	18-20	6/26/25/32		F to C SAND, TR Pebbles, TR Silt	
20									
								S63S Bottom of Screen 22' BEDROCK: Roller bitted from 22' to 26'. Wash contained highly angular to subangular particles some w/weathered faces. Bedrock is intensely fractured.	
25								S63D top of Ottawa Sand 24' S63D top of screen 26'	2
30									
								S63D Bottom of screen 36'	

GRANULAR SOILS Blows/Ft	Density	PROPORTIONS USED		ABBREVIATIONS
0-4	V. Loose	Trace (TR)	0-10%	F-Fine
4-10	Loose	Little (LI)	10-20%	M-Medium
10-30	M. Dense	Some (SO)	20-35%	C-Coarse
30-50	Dense	And	35-50%	F/M-Fine to Medium
>50	V. Dense			F/C-Fine to Coarse
				V-Very
				GR-Gray
				BN-Brown
				YEL-Yellow

1. Well S63S sealed w/2 foot layer of bentonite pellets from 8' to 10'. Natural backfill to ground surface.
2. Well sealed in bedrock with 3 to 1 (by weight) cement to bentonite slurry. Slurry brought to ground surface.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	1 of 2	S64

Location	Angle from Horiz.
Mass Rifle Assn	Vertical

Begun	Completed	Driller	Drill Make & Model	Hole Dia.	Overburden (ft)	Rock (ft)	Total Depth
		NEBC	Mobile B-47	3.5	35'	20'	55'

Core Recovery (ft)	Core Box	Samples	El. Top of Casing	Ground El.	Depth to Top of Rock
20'	2	8		S64S 57.58, S64M 57.74, S64D 57.83	35'

Sample Hammer Weight/Fall	Casing	NUS Inspector
140 lbs/30"	Solid Sch 80 PVC 1.5" I.D. Screen 0.010 slot	Baldyga

Depth	Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
	01			24/14	0-2	1/1/2/3		F/M BR SAND	
5	02			24/16	5-7	6/11/8/5		F/M BR SAND	
10	03			24/10	9-11	11/9/8/12		S64S Top of Ottawa sand 9' S64S Top of Screen 10' F/C BR SAND, TR F/C GRAVEL	1
15	04			24/10	14-16	21/17/18/14		S64S Bottom of Screen 15' M/C Dark BN SAND, some highly angular C Gravel	
20	05			24/6	19-21	17/15/21/18		M/C Dark BN SAND, some F Gravel	
25	06			24/9	24-26	31/21/17/18		lt BN to tan F SAND, LI Gravel, layered Gravel-Sand-Gravel S64M Top of Ottawa Sand 25' S64M Top of Screen 27'	2
30	07			17/14	29-31	51/57/100-5		lt BN F SAND and SILT, LI Gravel S64M Bottom of Screen 32'	

GRANULAR SOILS Blows/Ft	Density	PROPORTIONS USED		ABBREVIATIONS
0-4	V. Loose	Trace (TR)	0-10%	F-Fine
4-10	Loose	Little (LI)	10-20%	M-Medium
10-30	M. Dense	Some (SO)	20-35%	C-Coarse
30-50	Dense	And	35-50%	F/M-Fine to Medium
>50	V. Dense			F/C-Fine to Coarse
				V-Very
				GR-Gray
				BN-Brown
				YEL-Yellow

1. Well S64S sealed w/2' bentonite pellet layer from 7' to 9'. Natural backfill from GS to 7'.
2. Well S64M sealed from GS to 25' with 10 to 1 (by weight, estimated) cement to bentonite slurry.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	2 of 2	S64

Location: Mass Rifle Assn

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
35		60/60						Highly fractured Salem Gabbrodiorite - very angular - brecciated some gouge observable.	
40								S64D Top of Ottawa sand 38'	3
		60/60						S64D Top of Screen 40' Highly fractured Salem Gabbrodiorite	
								S64D Top of screen 40'	
45		60/60						less fractured Salem Gabbrodiorite	
50		60/60						More competent Salem Gabbrodiorite	
55								S64D Bottom of Screen 55' EOB - 56'	

REMARKS:

3. Well S64D sealed from GS to 38' with 10 to 1 (by weight, estimated) cement to bentonite slurry.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	1 of 2	S65

Location	Angle from Horiz.
Behind 300 W. Cummings Bldg	Vertical

Begin	Completed	Driller	Drill Make & Model	Hole Dia.	Overburden (ft)	Rock (ft)	Total Depth
10 Nov 84	18 Nov 85	Buffalo	CME55	3.5	36.4	20	56.4

Core Recovery (ft)	Core Bxs	Samples	El. Top of Casing	Ground El.	Depth to Top of Rock
20	2	7		S65S 76.78, S65M 76.98, S65D 76.89	36.4

Sample Hammer Weight/Fall	Casing	NUS Inspector
140 lbs/30"	Solid / Screen: Sch 80 PVC 1.5" I.D. 0.010 slot	Angers/Baldyga

Depth	Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
	01			24/8	0-2	12/10/10/7		Fill: Sandy loam, some C Gravel	
								S65S Top of Ottawa Sand 3'	
	02			24/12	3-5	6/8/8/9		BR M SAND and Gravel	
5									
	03			24/10	8-10	8/10/12/20		F/M SAND, SO Silt, TR Clay, TR Gravel	
10								COBBLES	
	04			24/6	13-15	9/11/10/19		F/M SAND, SO Silt, TR Clay, TR Gravel	
15								COBBLES	
								F/M SAND, SO Silt, TR	
20	05			24/14	18-20	12/23/40/45		Clay, TR Gravel	
								F/M SAND, SO SILT, TR	
25	06			24/10	23-25	17/19/26/35		Clay, TR Gravel	
								S65M Top of Ottawa Sand 25'	
	07			24/11	26-28	23/15/12/10		S65M Top of screen 27'	
30								Boulders and Cobbles to 37.4'	

GRANULAR SOILS

Blows/Ft	Density
0-4	V. Loose
4-10	Loose
10-30	M. Dense
30-50	Dense
>50	V. Dense

PROPORTIONS USED

Trace (TR)	0-10%
Little (LI)	10-20%
Some (SO)	20-35%
And	35-50%

ABBREVIATIONS

F-Fine
M-Medium
C-Coarse
F/M-Fine to Medium
F/C-Fine to Coarse
V-Very
GR-Gray
BN-Brown
YEL-Yellow

1. Well S65S sealed with a 2 foot layer of bentonite pellets from 2' to 4'.
2. Well S65M sealed with 10 to 1 (by weight estimated) cement to bentonite slurry from GS to 25'.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	2 of 2	S65

Location: Behind 300 W. Cummings Bldg

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
35		60/60						S65M Bottom of screen 37'	
								S65D Top of Ottawa Sand 39.2'	
40								S65D Top of screen 41.4'	
		60/60						Highly competent Salem Gabbrodiorite	3
45		60/60							
50		60/60							
55									
56.4								S65D Bottom of screen 56.4 EOB - 59.2'	

REMARKS:

3. Well S65D sealed with a 10 to 1 (by weight estimated) cement to bentonite slurry from GS to 39.2'.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	1 of 1	S66

Location	Angle from Horiz.
At end of 600 W. Cummings Park traffic island	Vertical

Begun	Completed	Driller	Drill Make & Model	Hole Dia.	Overburden (ft)	Rock (ft)	Total Depth
		BDC	CME55	3.5"	11.5	23.2	34.7

Core Recovery (ft)	Core Bxs	Samples	El. Top of Casing	Ground El.	Depth to Top of Rock
20	2	2		69.64	11.5

Sample Hammer Weight/Fall	Casing	NUS Inspector
140 lbs/30"	Solid Sch 80 PVC 1.5" I.D. Screen 0.010 slot	Sandhaus

Depth	Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
								Bark mulch - no sample collected	
5	01			24/24	5-7	13/24/36/40		BR F/C SAND, LI F Gravel	
10	02			24/24	10-12	35/40/38/35		BR F SAND, TR M/C Sand, TR F Gravel	
								Highly fractured Salem Gabbrodiorite begins 11.5	
15		60/60						Wash sample highly angular GR to black some particles exhibit weathered faces.	
								Roller bitted and augered to 14.7 - Coring Begins	
20		60/60						Salem Gabbrodiorite fairly competent	
								S66D Top of Ottawa Sand 17.7'	1
								S66D Top of screen 19.7'	
25		60/60						Salem Gabbrodiorite increasing competence with depth	
30		60/60						Salem Gabbrodiorite very competent	
								S66D Bottom of screen 34.7'	

GRANULAR SOILS Blows/Ft	Density	PROPORTIONS USED		ABBREVIATIONS
0-4	V. Loose	Trace (TR)	0-10%	F-Fine
4-10	Loose	Little (LI)	10-20%	M-Medium
10-30	M. Dense	Some (SO)	20-35%	C-Coarse
30-50	Dense	And	35-50%	F/M-Fine to Medium
>50	V. Dense			F/C-Fine to Coarse
				V-Very
				GR-Gray
				BN-Brown
				YEL-Yellow

1. Well S66D sealed in bedrock from 17.7' to GS with cement bentonite slurry.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	1 of 2	S67

Location	Angle from Horiz.
Directly across Washington St. East Cummings/From 200 W. Cummings Park	Vertical

Begun	Completed	Driller	Drill Make & Model	Hole Dia.	Overburden (ft)	Rock (ft)	Total Depth
5 Dec 84	10 DEC 85	NEBC	Mobile B-47	3.5"	54	21	75'

Core Recovery (ft)	Core Box	Samples	El. Top of Casing	Ground El.	Depth to Top of Rock
20	2	7		S67S 83.23, S67M 83.28, S67D 83.35	54'

Sample Hammer Weight/Fall	Casing	NUS Inspector
140 lbs/30"	Solid: Sch 80 PVC 1.5" I.D. Screen: 0.010 slot	Baldyga

Depth	Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
	01			18/18	0-1.5	12/11/12/15		Cover Fill-Sandy loam underlain by coarse Gravel	
5	02			15/11	5-6.25	100/110.5		BR F/M SAND, LI M Gravel, LI Silt	
10	03			18/18	10-11.5	43/69/92		BR M/C SAND, LI M/C Gravel, TR Silt, very compact, Cobbles at 12.7'	
15	04			24/12	15-17	47/52/30/21		Differentiated spoon sample. 3" GR-BN C SAND, LI M Gravel, TR Clay 2" clayey SILT 1" C GRAVEL very angular 6" GREEN BN C SAND	
20	05			12/12	20-21	106/100/R		C SAND, SO SILT and F Gravel 2" layer highly angular GRAVEL S67S Top of Ottawa SAND 22' S67S Top of screen 24'	1
25	06			14/14	25-26.2	41/52/120.3		Green-GR SILT and F SAND, SO C Gravel	
30	07			14/0	30-31.2	120/100/100.5		No recovery S67M Top of Ottawa Sand 31' S67M Top of screen 33' S67S Bottom of screen 34'	

GRANULAR SOILS

Blows/Ft	Density
0-4	V. Loose
4-10	Loose
10-30	M. Dense
30-50	Dense
>50	V. Dense

PROPORTIONS USED

Trace (TR)	0-10%
Little (LI)	10-20%
Some (SO)	20-35%
And	35-50%

ABBREVIATIONS

F-Fine
M-Medium
C-Coarse
F/M-Fine to Medium
F/C-Fine to Coarse
V-Very
GR-Gray
BN-Brown
YEL-Yellow

1. S67S sealed with 2 foot thick layer of bentonite pellets from 18' to 22', Natural backfill to GS.
2. S67M sealed with cement/bentonite slurry from 31' to GS.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	2 of 2	S67

Location: East Cummings/from 200 W. Cummings Park

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
				0/0	35	100.R		No recovery. Refusal at 35'- boulder	
40								Roller bitted to 45'	
								S67M Bottom of Screen 43'	
45				1/0	45	130.1		No recovery	
50				4/0	50	140.4		Basal Till Green-GR CLAY and Silt; SO C angular Gravel	
						R		Roller bitted 1' into bedrock 54'- 55' coring begins at 55'	
55		60/60						Highly fractured Salem Gabbrodiorite w/inclusions of Granodiorite	
60		60/60						Becoming more ganitic and and competent w/depth	
								S67D Top of Ottawa Sand 58'	
								S67D Top of screen 60'	
65		60/60							
70								S67D Bottom of screen 75'	

REMARKS: 60/60

EOB - 75'

S67D sealed with cement/bentonite slurry from 58' to GS

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	1 of 3	S68

Location	Angle from Horiz.
Along road between G & H	Vertical

Begun	Completed	Driller	Drill Make & Model	Hole Dia.	Overburden (ft)	Rock (ft)	Total Depth
20 NOV 85		BDC	CME-55	3.5"	105	12	117'

Core Recovery (ft)	Core Box	Samples	El. Top of Casing	Ground El.	Depth to Top of Rock
5	1	10		S68S 45.18, S68D 45.52	105'

Sample Hammer Weight/Fall	Casing Solid Screen	NUS Inspector
140 lbs/30"	Sch 80 PVC 1.5" I.D. 0.010 slot	Angers

Depth	Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
	01			24/14	0-2	1/1/2/5		Two very distinct strata divisible at 3" BN F/M SAND, TR Peat,	
	02			24/15	3-5	10/11/10/5		sandy PEAT	
5								lt BN F/M SAND	
10	03			24/15	8-10	8/10/10/9		lt BN M SAND	
								S68S Top of Ottawa Sand 12.9'	
								S68S Top of screen 14.5'	1
15	04			24/12	13-15	6/7/7/6		lt BN F SAND, SO Gravel	
20	05			24/15	18-20	9/17/17/22		No recovery	
25	06			24/0	23-25	7/8/8/7		No recovery	
30	07			24/0	28-30	16/18/17/20		No recovery	

GRANULAR SOILS Blows/Ft	Density	PROPORTIONS USED		ABBREVIATIONS
0-4	V. Loose	Trace (TR)	0-1 %	F-Fine
4-10	Loose	Little (LI)	10-20 %	M-Medium
10-30	M. Dense	Some (SO)	20-35 %	C-Coarse
30-50	Dense	And	35-50 %	F/M-Fine to Medium
>50	V. Dense			F/C-Fine to Coarse
				V-Very
				GR-Gray
				BN-Brown
				YEL-Yellow

1.) S68S sealed w/bentonite pellets from 12.9' to GS

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	2 of 3	S68

Location: between G & H

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
40				24/0	38-40	13/13/17/20		No recovery	
								No recovery	
45				24/0	43-45	13/13/16/14		S68S Bottom of screen 45'	
50				24/4	50-52	68/27/21/28		GR to Black C GRAVEL SO BN C Sand S68M Top of Ottawa Sand 52' S68M Top of screen 55'	
55					55-57			NO SAMPLE ATTEMPTED DUE TO RUNNING SAND	2
60				24/0	60-62	39/20/20/16		No Recovery	
65				24/0	65-67	200-3		No Recovery	
70				24/14	69-71	17/59/73/150		GR to Black dense silty GRAVEL	

REMARKS:

2.) S68D sealed with cement bentonite slurry from 52' to GS

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	3 of 3	S68

Location: between G & H

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
								No SAMPLE	
80									
								No SAMPLE	
85				24/11	85-87	42/48/49/50		M SAND and M GRAVEL SO C SAND AND C GRAVEL highly angular, dull BN, many Rx types	
90				1/0	90	100.1 R		No RECOVERY - boulder	
95				24/10	95-97	76/112/ 104/92		Sandy Till, dense GR angular Rx fragments TR C SAND, SO Silt and clay	
100				22/22	100-102	14/18/ 48/135/4		two distinct strata 1.5' F SAND, .33' Till	
105		60/60						S68D Bottom of screen 105' Bedrock at 105' 4" Ottawa Sand cushion Began coring 107' Dedham Granodiorite	
110								highly competent	

REMARKS:

Borehole backfilled to 105' w/cement/bentonite grout
EOB 112'

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	1 of 2	S69

Location	Angle from Horiz.
200 W. Cummings Park	Vertical

Begun	Completed	Driller	Drill Make & Model	Hole Dia.	Overburden (ft)	Rock (ft)	Total Depth
3 MAR 85	18 MAR 85	NEBC	Mobile B-53	3.5"	35	20	55'

Core Recovery (ft)	Core Box	Samples	El. Top of Casing	Ground El.	Depth to Top of Rock
20	2	7		75.43	35'

Sample Hammer Weight/Fall	Casing	NUS Inspector
140 lbs/30"	Solid: Sch 80 PVC 1.5" I.D. Screen: 0.010 slot	Golden

Depth	Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
	01			24/19	0-2	5/18/11/12		F/M SAND, SO Gravel	
5	02			24/21	5-7	40/21/30/41		M/C SAND, SO Gravel, TR F SAND	
10	03			12/6	10-11	100.6		GR SILT, SO F Sand (micaceous)	
15	04			13/13	15-16	60/60.1		GR SILT, SO F Sand	
20	05			24/12	20-22	37/67/63/60		GR F SAND, TR Silt TR clay, TILL	
25	06			24/13	25-27	25/14/26/32		GR F SANDY TILL, SO SO Gravel	
30				12/6	30-31	83/120-R		GR M SANDY TILL, TR F Sand, TR Silt, TR Gravel	

GRANULAR SOILS

Blows/Ft	Density
0-4	V. Loose
4-10	Loose
10-30	M. Dense
30-50	Dense
>50	V. Dense

PROPORTIONS USED

Trace (TR)	0-15%
Little (LI)	16-20%
Some (SO)	25-35%
And	35-50%

ABBREVIATIONS

F-Fine
M-Medium
C-Coarse
F/M-Fine to Medium
F/C-Fine to Coarse
V-Very
GR-Gray
BN-Brown
YEL-Yellow

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	2 of 2	S69

Location
Parking lot south of 200 W. Cummings Park

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
		60/60						Feldspathic granite highly fractured, Some mineralization along fracture planes	
40		60/60						Brecciated, meta grano-diorite	
								S69D Top of Ottawa Sand 39'	1
								S69D Top of screen 40'	
45		60/60						Increasing competence with depth	
50		60/60							
55								S69D Bottom of screen 55' EOB	

REMARKS:

1.) S69D sealed with cement/bentonite slurry from 39' to GS

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	1 of 3	S70

Location	Angle from Horiz.
25' West of Unifirst BLDG	Vertical

Begun	Completed	Driller	Drill Make & Model	Hole Dia.	Overburden (ft)	Rock (ft)	Total Depth
17 DEC 85		NEBC	Mobile B-53	3.5"	62'	20'	82'

Core Recovery (ft)	Core Bxs	Samples	El. Top of Casing	Ground El.	Depth to Top of Rock
20'	2	12		S70S-69.95 S70M-69.96 S70D-69.96	62'

Sample Hammer Weight/Fall	Casing	NUS Inspector
140 lbs/30"	Solid: Sch 80 PVC 1.5" I.D. Screen: 0.010 slot	Golden

Depth	Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
	01			24/4	0-2	4/5/6/7		Fill: F SAND, SO C Sand, SO F/M Gravel	
5	02			24/15	5-7	0/24/42/80		Fill: F SAND, SO C Sand, SO F/M Gravel	
10	03			10/9	10-12	28/100.4 R		GR-Green F SAND, SO F Sand and Silt, TR TR Clay, TR F Gravel	
15	04			24/17	15-17	28/29/42/51		GR-Green M SAND, SO F Sand and Silt, TR Gravel, TR Clay	
20	05			12/8	20	33/133/R		Sandy Till highly compact F SAND, Silt and Clay	
25	06			8/8	25	33/100.2 R		GR-Green Sandy Till - sand percentage decreasing with depth	
30									

GRANULAR SOILS

Blows/Ft	Density
0-4	V. Loose
4-10	Loose
10-30	M. Dense
30-50	Dense
>50	V. Dense

PROPORTIONS (SEI)

Trace (TR)	0-10%
Little (LI)	10-20%
Some (SO)	20-35%
And	35-50%

ABBREVIATIONS

F-Fine
M-Medium
C-Coarse
F/M-Fine to Medium
F/C-Fine to Coarse
V-Very
GR-Gray
BN-Brown
YEL-Yellow

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	2 of 3	S70

Location: Unifirst Parking Lot

Depth	ROCK Sample No.	ROCK Core/Rec. (in)	ROCK RQD	SOIL Pen/Rec. (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
	07			5/3	35	120.5		Sandy Till	
40	08			6/6	40	120		S70M Top of Ottawa 40' Sandy Till S70M Top of screen 42'	
45	09			3/3	45	120		Sandy Till	
50	10			4/2	50	120		Sandy Till	
55	12			6/2	55	120		Sandy Till	
60	13			3/3	60	120		Sandy Till Bedrock at 62' S70M Bottom of screen 62'	
		60/60						Highly fractured felds-pathic granite	
65		60/60						S70D Top of Ottawa SAND 65' S70D Top of screen 67'	

REMARKS:

NUS CORPORATION
A Halliburton Company

Project	FDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	3 of 3	S70

Location: Unifirst Parking Lot

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
70								Less fractured Dedham (Granodiorite)	
		60/60						highly fractured granite	
75								highly fractured granite	
		60/60							
80								S70D Bottom of screen 82' EOB - 83'	
85									

REMARKS:

All wells sealed with cement/bentonite slurry from top of sand to GS.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	1 of 2	S71

Location	Angle from Horiz.
Unifirst (front gate) Parking Lot	Vertical

Begun	Completed	Driller	Drill Make & Model	Hole Dia.	Overburden (ft)	Rock (ft)	Total Depth
1 Feb 83		NEBC	Mobile B-53	3.5"	16.5	26.2	42.7

Core Recovery (ft)	Core Bxs	Samples	El. Top of Casing	Ground El.	Depth to Top of Rock
25	2	2		S71S-71.31 S71D-71.39	16.5

Sample Hammer Weight/Fall	Casing	NUS Inspector
140 lbs/30"	Solid Sch 80 PVC 1.5" I.D. Screen 0.010 slot	Radville

Depth	Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
5	01			24/24	5-7	37/67/77/87		BN F/C GRAVEL, SO F/M Sand, TR Silt	
10	02			13/11	10-12	19/19/17/25		S71S Top of Ottawa Sand 9' S71S Top of screen 11' C SAND, SO F/C Gravel, TR Silt	1
15		60/60						S71S Bottom of screen 16' Roller bitted from 16 1/2' to 20' expecting Boulders Bedrock at 16.5'	2
20		60/60						S71D Top of Ottawa Sand 20' S71D Top of screen 22.7' Dedham Granodiorite moderately fractured, some fractures are mineralized	
25		60/60							
30		60/60							

GRANULAR SOILS Blows/Ft	Density	PROPORTIONS USED		ABBREVIATIONS
0-4	V. Loose	Trace (TR)	0-10%	F-Fine
4-10	Loose	Little (LI)	10-20%	M-Medium
10-30	M. Dense	Some (SO)	20-35%	C-Coarse
30-50	Dense	And	35-50%	F/M-Fine to Medium
>50	V. Dense			F/C-Fine to Coarse
				V-Very
				GR-Gray
				BN-Brown
				YEL-Yellow

1.) S71S sealed in overburden with cement/bentonite slurry from 9' to GS
2.) S71D sealed in bedrock with cement/bentonite slurry from 22.7 to GS

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	2 of 2	S71

Location: Unifirst (front gate) Parking Lot

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
		60/60						Dedham Granodiorite	
40								EOB 42.7'	

REMARKS:

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	1 of 4	S72

Location	Angle from Horiz.
Behind United Truck Leasing Bldg	Vertical

Begun	Completed	Driller	Drill Make & Model	Hole Dia.	Overburden (ft)	Rock (ft)	Total Depth
14 DEC 85		NEBC	Mobile B47	3.5"	116	21	137

Core Recovery (ft)	Core Box	Samples	El. Top of Casing	Ground El.	Depth to Top of Rock
20	2	18		S72S 51.22, S72M 50.00, S72D 50.16	116'

Sample Hammer Weight/Fall	Casing	NUS Inspector
140 lbs/30"	Solid: Sch 80 PVC 1.5" I.D. Screen: 0.010 slot	Baldyga/Sandhaus

Depth	Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
	01			24/0	0-2	1/1/1/1		Topsoil	
5	02			24/16	5-7	1/1/1/2		Interlayered F SAND and Sandy PEAT	
10	03			25/15	10-12	32/31/28/29		2" layer M/C GRAVEL 13" layer F to C silty SAND, some GRAVEL	
15	04			24/8	15-17	10/10/9/10		GR F SAND AND SILT SO VF Sand	
20	05			24/12	20-22	9/9/10/10		GR F SAND AND SILT	
25	06			24/20	25-27	8/9/9/9		GR F Silty SAND	
30	07			24/19	30-32	7/9/8/8		GR F Silty SAND	

GRANULAR SOILS Blows/Ft	Density	PROPORTIONS USED		ABBREVIATIONS
0-4	V. Loose	Trace (TR)	0-10%	F-Fine
4-10	Loose	Little (LI)	10-20%	M-Medium
10-30	M. Dense	Some (SO)	20-35%	C-Coarse
30-50	Dense	And	35-50%	F/M-Fine to Medium
>50	V. Dense			F/C-Fine to Coarse
				V-Very
				GR-Gray
				BN-Brown
				YEL-Yellow

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	2 of 4	S72

Location: Behind United Truck Leasing Bldg

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
35	08			24/18	35-37	6/8/8/9		GR F SAND AND SILT	
40	09			24/21	40-42	7/9/9/10		GR F SAND AND SILT	
45	10			24/24	45-47	6/8/10/10		GR F SAND AND SILT	
50	11			24/15	50-52	3/4/13/10		GR F SAND AND SILT S72M Top of Ottawa Sand S72S Bottom of screen 54' S72M Top of screen 54.5'	
55	12			24/10	55-57	3/4/5/8		GR F SAND AND SILT	
60	13			24/8	60-62	1/5/4/6		GR F SAND AND SILT	
65	14			24/4	65-67	1/1/4/5		GR F SAND AND SILT	

REMARKS:

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	3 of 4	S72

Location: Behind United Truck Leasing Bldg.

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
70									
	15			24/12	70-72	7/7/8/9		GR F SAND AND SILT	
75	16			24/10	75-77	1/4/5/7		two distinct layers: 4" GR F SAND, TR SILT 6" Angular F/M GRAVEL	
80	17			11/11	80-81	35/125/5		GR F to C SAND, LI SILT NESTED BOULDERS CORED THROUGH BOULDERS- RETRIEVED Boulder cores and V C SANDS AND GRAVEL	
85									
90								S76M Bottom of screen 92.5'	1
95									
100									

REMARKS:

1. No samples attempted due to running sands from 80 to 105 feet.

NUS CORPORATION
A Halliburton Company

Project	EDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	FI-8409-01	4 of 4	S72

Location: Behind United Truck Leasing Bldg.

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
105	18			10/10	104-105	35-50/5		GR-GN SANDY TILL	
110								NO SAMPLE	
115								Bedrock: Roller bitted 1 ft from 116 to 117	
117								CORE 117 to 120 Green Chlorite Schist, purple stains from fe and Mg oxides, very weathered, highly fractured	
120		36/36	5					S72 Top of screen 122' Highly fractured, brecciated green schist	
125		60/60	0					Green schist, much less fractured. Quartz veins filling fractures.	
130		60/60	55					Very highly fractured green schist. Both horizontal and vertical fractures.	
132		24/22	0					Green schist, less fractured than above.	
137								S72D Bottom of screen 137' EOB - 137'	

REMARKS:

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	1 of 2	S73

Location	Angle from Horiz.
South of Charrette Bldg.	Vertical

Begun	Completed	Driller	Drill Make & Model	Hole Dia.	Overburden (ft)	Rock (ft)	Total Depth
4 JAN 85		NEBC	Mobile B-53	3.5"	36	20.5	56.5

Core Recovery (ft)	Core Bxs	Samples	El. Top of Casing	Ground El.	Depth to Top of Rock
20	2	7		S73S-52.50 S73D-52.56	36

Sample Hammer Weight/Fall	Casing	NUS Inspector
140 lbs/30"	Solid Sch 80 PVC 1.5" I.D. Screen 0.010 slot	Ross

Depth	Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
	01			24/8	0-2	2/2/6/9		LOAM	
5	02			12/10	5-6	33/120 R		lt BN C SAND and Gravel, SO M Sand, TR F Sand S73S Top of Ottawa Sand 9'	1
10	03			18/6	10-11.5	8/8/7		lt BN C SAND and Gravel, SO F/M Sand S73S Top of screen 10'	
15	04			13/16	15-16.5	10/7/6		lt BN F SAND, SO M Sand, TR Gravel	
20	05			24/23	20-22	1/3/4/6		lt BN GR F SAND	
25	06			24/19	25-27	2/3/4/4		lt GR F SAND, SO M Sand, TR C Sand	
30	07			24/5	30-32	10/8/7/6		black green F/M GRAVEL, SO F/M Sand S73S Bottom of screen 35'	

GRANULAR SOILS Blows/Ft	Density	PROPORTIONS USED		ABBREVIATIONS
0-4	V. Loose	Trace (TR)	0-10%	F-Fine
4-10	Loose	Little (LI)	10-20%	M-Medium
10-30	M. Dense	Some (SO)	20-35%	C-Coarse
30-50	Dense	And	35-50%	F/M-Fine to Medium
>50	V. Dense			F/C-Fine to Coarse
				V-Very
				GR-Gray
				BN-Brown
				YEL-Yellow

1.) S73S sealed with cement bentonite slurry from 9' to GS

NUS CORPORATION
A Halliburton Company

Project	DDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	2 of 2	S73

Location
South of Charrette Bldg.

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
		60/60						Roller Bitted from 35 to 36'	
								Began Coring at 36'	
								green Schist, highly	
40								fractured and veined	
								S73D Top of Ottawa sand 39'	2
		60/60						S73D Top of screen 41'	
45									
		60/60							
50									
		60/60						Green schist w/interfingered	
								granodioritic material	
								Possibly Dedham Granodiorite	
55									
								S73D Bottom of screen 56.5'	
								EOB - 56.5'	
60									

REMARKS:

2. S73D sealed w/cement bentonite slurry from 39' to GS

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	1 of 3	S74

Location	Angle from Horiz.
Behind NREC - River side of RR tracks	Vertical

Begun	Completed	Driller	Drill Make & Model	Hole Dia.	Overburden (ft)	Rock (ft)	Total Depth
15 JAN 85		NEBC	Mobile B-47	3.5"	67.5	21	88.5

Core Recovery (ft)	Core Bxs	Samples	El. Top of Casing	Ground El.	Depth to Top of Rock
20'	2	13		S74M-47.96 S74D-48.21	67.5

Sample Hammer Weight/Fall	Casing	NUS Inspector
140 lbs/30"	Solid Sch 80 PVC 1.5" I.D. Screen 0.010 slot	Demorest

Depth	Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
	01			24/6	0-2	1/0/2/4		DK BN organic rich soil	
5	02			24/18	5-7	31/40/42/41		BN C SAND, SO C Gravel, angular fragments S74S Top of screen 8.0'	
10	03			24/10	10-12	19/20/21/24		GR C SAND and C angular gravel	
15	04			24/8	14-16	1/5/9/7		GR C SAND, LT GR Clay, TR M SAND and M Gravel	
20	05			24/12	19-21	5/6/5/5		GR-Green SILT and Clay LT F Sand	
25	06			24/18	24-26	6/4/4/6		GR-Green F SAND, highly micaceous	
30	07			24/24	29-31	1/2/4/4		GR-Green F SAND, SO Clay and Silt, TR M Gravel	

GRANULAR SOILS

Blows/Ft	Density
0-4	V. Loose
4-10	Loose
10-30	M. Dense
30-50	Dense
>50	V. Dense

PROPORTIONS USED

Trace (TR)	0-10%
Little (LI)	10-20%
Some (SO)	20-35%
And	35-50%

ABBREVIATIONS

F-Fine
M-Medium
C-Coarse
F/M-Fine to Medium
F/C-Fine to Coarse
V-Very
GR-Gray
BN-Brown
YEL-Yellow

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	2 of 3	S74

Location

Behind NREC River side of RR tracks - in the woods

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
	08			24/12	34-36	1/0/1/1		GR-Green F SAND, and YEL-BN F Sand, highly micaceous	
40	09			24/18	39-41	8/5/7/12		GR-Green F SAND, and YEL F Sand w/iron staining - micaceous	
45	10			24/24	44-46	9/12/18/22		GR-Green F SAND, SO YEL BN F Sand	
50	11			24/14	49-51	9/16/26/41		BN F/M SAND, micaceous	
55	12			24/24	54-56	3/8/11/15		GR Gray F SAND, 1" orange BN band at 55', lt BN F micaceous Sand	
60	13			24/7	59-61	0/14/52/24		Green clayey SILT, LT F Sand, TR M Gravel	
65								No split spoon due to running sands	
								Wash: GR C SAND, angular	
								Bedrock at 67.5	
		36/36						Coring begins at 68.5	

REMARKS:

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	3 of 3	S74

Location: Behind NREC building

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
70								S74D Top of Ottawa Sand 70'	
		60/60						S74D Top of screen 73'	2
75									
		60/60						highly fractured schist	
80									
		60/60							
85									
		24/24							
								S74D Bottom of screen 88.0'	
88.5								EOB 88.5	

REMARKS:

2. S74D sealed in bedrock with cement bentonite slurry from 70' to GS.
All wells sealed with cement/bentonite slurry from top of sand to GS.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	1 of 3	S75

Location	Angle from Horiz. Vertical
Weyerhaueser Lumberyard	

Beg.	Completed	Driller	Drill Make & Model	Hole Dia.	Overburden	Rock (ft)	Total Depth
9JAN 85		NEBC	Mobile B-53	3.5"	75 (ft)	20	95

Core Recovery (ft)	Core Bxs	Samples	El. Top of Casing	Grounds	Depth to Top of Rock
20'	2	14		S75S-57.00 S75D-56.89	75'

Sample Hammer Weight/Fall	Casing / Solid / Screen	NUS Inspector
140 lbs/30"	Sch 80 PVC 1.5" I.D. / 0.010 slot	Golden

Depth	Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
								Fill - No sample collected from 0-2	
5	01			24/20	5-7	10/9/9/9		M/C SAND, TR Gravel and pebbles	
10	02			24/18	10-12	14/14/17/17		C SAND, TR Gravel, TR Pebbles, Iron staining	
15	03			24/8	15-17	8/8/10/10		C SAND, SO GRAVEL	
20	04			24/20	20-22	4/4/5/7		C SAND, SO Pebbles LI Silt	
25	05			24/15	25-27	7/11/13/14		GR M/C SAND, TR Gravel, TR Silt S75S Top of Ottawa Sand 28.5 S76S Top of Screen 29'	
30	06			24/24	30-32	5/5/7/10		M SAND, TR F SAND TR SILT	

GRANULAR SOILS Blows/Ft	Density	PROPORTIONS USED		ABBREVIATIONS
0-4	V. Loose	Trace (TR)	0-10%	F-Fine
4-10	Loose	Little (LI)	10-20%	M-Medium
10-30	M. Dense	Some (SO)	20-35%	C-Coarse
30-50	Dense	And	35-50%	F/M-Fine to Medium
>50	V. Dense			F/C-Fine to Coarse
				V-Very
				GR-Gray
				BN-Brown
				YEL-Yellow

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	2 of 3	S75

Location: Weyerhaueser Lumberyard

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
	07			24/21	35-37	7/6/7/11		M SAND grading to F SAND, TR Silt	
								S75S Bottom of screen 44'	
40								F/M SAND, TR Silt	
	08			24/20	40-42	7/12/12/13			
45								M SAND, LI F Sand, TR Silt	
	09			24/24	45-47	10/13/13/15			
								S75M Top of Ottawa Sand 48'	
								S75M Top of screen 50'	
50								M SAND, TR F Sand	
	10			24/24	50-52	5/7/9/8			
55								M SAND, LI F Sand, TR Silt	
	11			24/21	55-57	9/9/10/13			
60								F SAND, TR Silt	
	12			24/24	60-62	4/4/6/7			
65								CLAY, SO Silt	
	13			24/24	65-67	13/13/14/15			

REMARKS:

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	3 of 3	S75

Location: Weyerhaueser Lumberyard

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
70									
	~~14~~			~~24/18~~	~~70-72~~	~~18/17/14/16~~		M/C SAND, SO Silt	
75								S75M Bottom of screen 75'	
		60/60						Highly metamorphosed quartzite and schists. Moderately fractured secondary quartz veins present.	
80								S75D Top of Ottawa Sand 79'	
		60/60						S75D Top of screen 80'	
								Highly metamorphosed sedimentary rock	
85								Highly fractured w/no quartz filling. Some fractures are very weathered	
		60/60						Moderately fractured meta-sedimentary rock	
								Green white to purple	
90									
		60/60							
95								S75D Bottom of screen 95'	
								EOB 95'	

REMARKS:

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	1 of 5	S76

Location	Angle from Horiz.
Behind FJL Distributor Bldg.	Vertical

Begun	Completed	Driller	Drill Make & Model	Hole Dia.	Overburden (ft)	Rock (ft)	Total Depth
16 JAN 85	23 JAN 85	NEBC	Mobile B53	3.5"	130	20	150

Core Recovery (ft)	Core Bxs	Samples	El. Top of Casing	Ground El.	Depth to Top of Rock
	2	21		S76S-53.45 S76D-52.98 S76M-52.39	130'

Sample Hammer Weight/Fall	Casing	NUS Inspector
140 lbs/30"	Solid: Sch 80 PVC 1.5" I.D. Screen: 0.010 slot	Sandhaus/Golden

Depth	Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
	01			24/7	0-2	13/27/20/34		lt BN F/M SAND	
5	02			24/24	5-7	13/14/16/21		lt BN F SAND and SILT Below water table	
10	03			24/24	10-12	11/6/8/13		lt BN F SAND and SILT S-76S Top of Ottawa Sand 13'	
15	04			24/22	15-17	9/10/16/17		lt BN SILT S-76S Top of screen at 15'	
20	05			24/17	20-22	8/8/11/14		lt BN F/M SAND, Prominent Iron staining 20-20.5'	
25	06			24/24	25-27	9/12/14/19		Three discernable strata Top 8" - F/M lt BN SAND and SILT Middle 8" - lt BN F SAND Bottom 8" - lt BN SILT and F SAND	
30	07			24/21	30-32	10/8/5/6		lt BN F SAND some SILT	

GRANULAR SOILS

Blows/Ft	Density
0-4	V. Loose
4-10	Loose
10-30	M. Dense
30-50	Dense
>50	V. Dense

PROPORTIONS USED

Trace (TR)	0-10%
Little (LI)	10-20%
Some (SO)	20-35%
And	35-50%

ABBREVIATIONS

F-Fine
M-Medium
C-Coarse
F/M-Fine to Medium
F/C-Fine to Coarse
V-Very
GR-Gray
BN-Brown
YEL-Yellow

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	2 of 5	S76

Location: Behind FJL Distributors Bldg

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
35	08			24/24	35-37	8/8/7/10		lt BN F/M SAND, TR Silt biotite and muscovite plates visible	
40	09			24/24	40-42	4/3/5/6		lt BN F/M sand, TR Silt	
45	10			24/24	45-47	5/4/6/6		lt BN F SAND and SILT	
50	11			24/24	50-52	8/7/8/9		lt BN F SAND and SILT	
55	12			24/24	55-57	9/9/10/15		lt BN F SAND and SILT	
60	13			24/23	60-62	8/13/13/17		BN M SAND, some F SAND, little SILT	
65	14			24/20	65-67	5/5/8/9		S76S - Bottom of scren 65' lt BN F SAND and SILT	

REMARKS:

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	3 of 5	S76

Location
Behind FJL Distributors Bldg.

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
70									
	15			24/17	70-72	6/6/8/12		lt BN F SAND and SILT	
75	16			24/20	75-77	7/7/6/10		lt BN F SAND and SILT S76M Top of Ottawa Sand 75' S76M Top of screen at 78'	
80	17			24/23	80-82	7/10/14/18		BN F SAND and SILT	
85	18			24/22	85-87	5/9/15/12		BN F SAND, TR SILT	
90	19			24/15	90-92	4/6/8/11		BN M SAND, TR F SAND, TR SILT	
95	20			2/2	95-95	100		BN M SAND, TR F SAND, TR SILT NESTED BOULDERS	
100								NO SAMPLE NESTED BOULDERS	

REMARKS:

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	4 of 5	S76

Location: Behind FJL Distributors Bldg.

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
105									
	21			24/3	105-107	18/29/12/21		BN M SAND, TR Gravel TR Silt	
110									
				24/0	110	100		NO SAMPLE	1
115								NO SAMPLED ATTEMPTED	2
120								NO SAMPLE ATTEMPTED	3
125								NO SAMPLE ATTEMPTED	4
130		60/60						Bedrock: META GABBRO-DIORITE MODERATELY FRACTURED SOME FRACTURES QUARTZ FILLED	
135		60/60						S76D Top of Ottawa Sand 133' S76D Top of screen 135' META GABBRODIORITE HIGHLY FRACTURED W/SOME FRACTURES QUARTZ AND CALCITE FILLED	

REMARKS:

1. No sample due to running sands. Sands filled casing as much as 40' when tool string was retracted.
2. No sample attempted due to running sands (see note 1).
3. Same as note 2.
4. Same as note 3.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	5 of 5	S76

Location: Behind FJL Distributors Bldg.

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
140		60/60						META GABBRODIORITE HIGHLY FRACTURED	
145		60/60						META GABBRODIORITE MODERATELY FRACTURED	
150								Bottom of S76D - 150' EOB	*

REMARKS:

*General Note: All wells backfilled with 10 to 1 (by weight) cement/bentonite slurry to ground surface.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	1 of 5	S77

Location	Angle from Horiz.
Aberjona Auto Parts (NE Corner)	Vertical

Begun	Completed	Driller	Drill Make & Model	Hole Dia.	Overburden (ft)	Rock (ft)	Total Depth
18 FEB 85		NEBC	Mobile B53	3.5"	138.5	NA	138.5

Core Recovery (ft)	Core Bxs	Samples	El. Top of Casing	Ground El.	Depth to Top of Rock
	2	21		S77SS-44.56 S77S-44.73 S77D-44.89 S77M-44.69	130'

Sample Hammer Weight/Fall	Casing	NUS Inspector
140 lbs/30"	Solid Sch 80 PVC 1.5" I.D. Screen 0.010 slot	Baldyga

Depth	Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
	01			24/9	0-2	9/6/10/8			
5	02			24/10	5-7	2/2/2/2		dk GR F/M SAND S77SS Top of Ottawa Sand 7' S77SS Top of screen 8'	
10	03			24/18	10-12	4/4/5/6		lt GR F SAND, TR Silt S77SS Bottom of screen 13'	
15	04			24/24	15-17	2/2/7/8		lt GR F SAND, TR Silt	
20	05			24/18	20-22	1/4/5/7		lt BN F SAND, TR Silt S77S Top of Ottawa Sand 23.5	
25	06			24/18	25-27	6/2/2/13		Dk BN F/M SAND, TR Silt S77S Top of screen 25'	
30	07			24/12	30-32	51/45/28/21		S77S Bottom of screen 30' Red - BN M/C SAND, SO F SO F Sand, TR Silt	

GRANULAR SOILS

Blows/Ft	Density
0-4	V. Loose
4-10	Loose
10-30	M. Dense
30-50	Dense
>50	V. Dense

PROPORTIONS USED

Trace (TR)	0-10%
Little (LI)	10-20%
Some (SO)	20-35%
And	35-50%

ABBREVIATIONS

F-Fine
M-Medium
C-Coarse
F/M-Fine to Medium
F/C-Fine to Coarse
V-Very
GR-Gray
BN-Brown
YEL-Yellow

1. S77SS sealed in overburden with cement/bentonite slurry from 7' to GS.
2. S77S sealed in overburden with cement/bentonite slurry from 23.5' to GS.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	2 of 5	S77

Location: Aberjona Auto Parts

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
	08			24/24	35-37	7/10/12/10		tan SILT	
40	09			24/24	40-42	8/11/10/12		tan SILT	
45	10			24/24	45-47	15/13/15/17		tan SILT, more compact than above	
50	11			24/16	50-52	15/21/27/34		BN F SAND and SILT	
55	12			24/24	55-57	13/15/14/18		M/C BN SAND	
60	13			24/24	60-62	12/13/19/19		F/C C GRAVEL, SO C BN SAND, grading with depth	
65	14			24/24	65-67	25/15/16/24		M/C BN SAND	
								S77M Top of Ottawa Sand 68'	3

REMARKS:

3. S77M sealed in overburden with cement/bentonite slurry from 68' to GS.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	3 of 5	S77

Location: Aberjona Auto Parts

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
70									
	15			24/24	70-72	35/30/22/27		M/C BN SAND	
								S77M Top of screen 70'	
75								S77M Bottom of screen 75'	
80								10" F/C SAND, 14" M/C	
	16			24/24	80-82	33/38/30/21		GRAVEL, TR M Sand	
85									
	17			8/6	85-87	147.8		F/M GRAVEL, SO C Sand	
90									
	18			24/20	90-92	22/22/23/27		F/C SAND, TR Silt	
95									
100									
	19			24/24	100-102	12/34/31/60		tan F silty SAND, very compact	

REMARKS:

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	4 of 5	S77

Location: Aberjona Auto Parts

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
105									
110	20			24/15	110-112	30/35/36/60		GR SILT, compact	
115	21			24/24	115-117	14/22/31/46		GR SILT, compact	
120	22			24/22	120-122	32/39/48/52		GR SILT, compact	
125									
130	23			24/0	130-132	4/6/38/27		No Recovery S77D Top of Ottawa Sand 130' S77D Top of screen 133.5' NESTED BOULDERS from 130'	4
135									

REMARKS:

4. S77D sealed in overburden with cement/bentonite slurry from 130' to GS.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	5 of 5	S77

Location: Aberjona Auto Parts

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
140								S77D Bottom of screen 138.5' EOB 138.5'	

REMARKS:

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	1 of 4	S78

Location	Angle from Horiz.
Beatrice Property	Vertical

Begun	Completed	Driller	Drill Make & Model	Hole Dia.	Overburden (ft)	Rock (ft)	Total Depth
16 JAN 85	02 FEB 95	BDC/NEBC	CME55/Mobile B53	3.5"	90.5	20	110.5

Core Recovery (ft)	Core Bxs	Samples	El. Top of Casing	Ground El.	Depth to Top of Rock
20	2			S78D-45.41 S78D-45.77	90.5

Sample Hammer Weight/Fall	Casing	NUS Inspector
140 lbs/30"	Solid Sch 80 PVC 1.5" I.D. Screen 0.010 slot	Ross

Depth	Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
	01			24/14	0-2	4/5/2/2		BN F/M SAND, TR Silt	
								S78S Top of Ottawa Sand 4'	1
5								S78S Top of screen 5'	
	02			21/21	7-9	7/11/68/100.3		BN F SAND, LI Silt	
10									
	03			24/24	12-14	5/4/5/5		GR F SAND, LI Silt	
15									
	04			24/20	17-19	10/12/13/15		GR and BN F/M SAND, TR Silt - interbedded	
20									
	05			24/24	22-24	8/10/11/16		GR and BN F SAND, LI Silt	
25								S78S Bottom of screen 25'	
	06			24/24	27-29	12/23/27/40		BN VF SAND, LI Silt	
30									
	07			24/12	32-34	42/50/52/50		BN F/C SAND, LI F/C Gravel	

GRANULAR SOILS Blows/Ft	Density	PROPORTIONS USED		ABBREVIATIONS
0-4	V. Loose	Trace (TR)	0-10%	F-Fine
4-10	Loose	Little (LI)	10-20%	M-Medium
10-30	M. Dense	Some (SO)	20-35%	C-Coarse
30-50	Dense	And	35-50%	F/M-Fine to Medium
>50	V. Dense			F/C-Fine to Coarse
				V-Very
				GR-Gray
				BN-Brown
				YEL-Yellow

1. S78S sealed in overburden with bentonite pellets from 4' to GS.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	2 of 4	S78

Location: Beatrice Property

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
35									
	08			27/7	38-40	22/13/11/16		BN C SAND, LI F/M Gravel	
40									
	09			24/24	43-45	16/28/20/20		BN C SAND, TR F Gravel	
45									
	10			24/22	48-50	7/27/60/77		C SAND, TR F Gravel	
50									
	11			24/14	53-55	8/24/34/34		C SAND, TR F Gravel	
55									
				24/0	58-60	58/26/18/16			
60									
	12			24/15	63-65	45/45/60/75		Silty CLAY, color change from BN to GR with depth	
65									
	13			24/22	68-70	12/12/25/40		GR F SAND, and Silt	

REMARKS:

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	3 of 4	S78

Location: Beatrice Property

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
70									
	14			16/12	73-75	40/65/100		8" F GR SAND and Silt	
								4" VC Rx fragments, highly angular, w/sharp faces	
75	14				75.5-76.7				
	16				77-78.3			Boulders nested in very coarse sand and gravels - large volume of water lost to aquifer	
	15				78.5-79.8				
80								No Sample attempted 75-90'	
85									
90								NO RECOVERY -	
				3/0	90	100 R		Bedrock - 90.5'	
		60/60						Schist increasing competence with depth	
								S78D Top of Ottawa Sand 93'	
95								S78D Top of screen 95.5'	2
		60/60							
100									
		60/60							

REMARKS:

2. S78D well sealed with cement/bentonite slurry from 90.5' to GS.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	4 of 4	S78

Location: Beatrice Property

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
105									
		60/60							
110								S78D Bottom of screen 110.5 EOB	

REMARKS:

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	1 of 4	S79

Location	Angle from Horiz.
Along B & M RR Tracks 150 yds north of Lechmere	Vertical

Begun	Completed	Driller	Drill Make & Model	Hole Dia.	Overburden (ft)	Rock (ft)	Total Depth
12 DEC 85		BDC	CME55	3.5"	107.5	20.5	128

Core Recovery (ft)	Core Bxs	Samples	El. Top of Casing	Ground El.	Depth to Top of Rock
20	2			S79D-47.41 S79M-47.95	107.5

Sample Hammer Weight/Fall	Casing	NUS Inspector
140 lbs/30"	Solid: Sch 80 PVC 1.5" I.D. Screen: 0.010 slot	Angers

Depth	Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
								Fill: very dense gravel with high percentage of "blast rock" Highly angular very sharp edged boulders and cobbles	1
5								S79S Top of Ottawa Sand 4' S79S Top of screen 5'	2
10	01			24/16	9-11	5/5/8/9		BN to dark BN and GR F SAND, and Silt, TR Peat	
15	02			24/18	14-16	2/2/5/45		lt GR F SAND, micaceous, TR C SAND sized biotite and muscovite flakes	
20				24/0	19-21	1/1/2/3		No Recovery	
25				24/0	23-25	5/5/11/10		Augers continue to bring up soils fitting above description S79S Botton of screen 25'	
30				24/0	29-31	4/4/7/8			
				24/0	34-36	5/10/13/15			

GRANULAR SOILS Blows/Ft	Density	PROPORTIONS USED		ABBREVIATIONS
0-4	V. Loose	Trace (TR)	0-10%	F-Fine
4-10	Loose	Little (LI)	10-20%	M-Medium
10-30	M. Dense	Some (SO)	20-35%	C-Coarse
30-50	Dense	And	35-50%	F/M-Fine to Medium
>50	V. Dense			F/C-Fine to Coarse
				V-Very
				GR-Gray
				BN-Brown
				YEL-Yellow

1. Blast rock: a generic term for bedrock that has been excavated for road cuts or foundation construction through the use of explosives.
2. S79S sealed in overburden with bentonite pellets from 4' to GS.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	2 of 4	S79

Location: Along B & M RR Tracks 150 yds north of Lechmere

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
35									
40				24/2	39-41	5/8/13/30		Recovery not consistant with blow counts - WASH	
45				24/0	44-46	7/7/8/5		No Recovery Wash and blow counts indicate fine sand strata continues	
50				24/0	49-51	8/11/11/15			
55				24/0	54-56	8/11/10/15			
60	03			24/3	59-61	10/11/13/14		Grayish BN, VF SAND SO Silt, TR C Sand, micaceous	
65	04			24/0	64-66	10/11/13/14		Grayish BN, VF SAND, SO Silt, TR C Sand	

REMARKS:

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	3 of 4	S79

Location: Along B & M RR tracks 150 yds north of Lechmere

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
70	05			24/14	69-71	30/25/15/10		lt BN F/M Gravel, SO Silt, SO M/C Sand, TR C Sand	
75	06			24/12	74-76	30/25/38/55		lt BN GRAVEL, SO Silt SO M/C SAND, TR Pebbles	
80				24/7	80-82	42/16/10/12		M/C GRAVEL and C Sand TR F/M Sand	
85				24/12	84-86	21/15/15/21		lt BN M SAND, TR F SAND, TR Silt subangular grains well sorted and stratified	
90					89-91			No Sample - running sands filled casing to 80'	
95				24/12	93-95	22/22/25/25		lt BN M SAND and F/C Gravel, TR F/C Sand subangular rx fragments poorly sorted	
100				24/3	98-100	64/58/60/64			

REMARKS:

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	4 of 4	S79

Location
Along B & M RR tracks 150 yds North of Lechmere

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
105				5/0	103	100 R			
		60/60						Bedrock at 107.5 Highly competent META GABBRODIORITE	
110								S79D Top of Sand 111'	3
		60/60						S79D Top of Screen 112.5'	
115									
		60/60							
120									
		60/60							
125									
								S79D Bottom of screen 127.5 EOB - 128'	
130									

REMARKS:

3 S79D sealed in bedrock with cement/bentonite slurry from 111' to GS.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	1 of 3	S80

Location	Angle from Horiz.
Behind Lechmere Warehouse	Vertical

Begun	Completed	Driller	Drill Make & Model	Hole Dia.	Overburden (ft)	Rock (ft)	Total Depth
20 NOV 84		BDC	CME 55	3.5"	65	NA	65

Core Recovery (ft)	Core Bxs	Samples	El. Top of Casing	Ground El.	Depth to Top of Rock
NA	0			S80M-48.68 S80S-48.66	unknown

Sample Hammer Weight/Fall	Casing / Solid / Screen	NUS Inspector
140 lbs/30"	Sch 80 PVC 1.5" I.D. / 0.010 slot	Angers

Depth	Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
	01			24/18	0-2	9/18/18/33		F/C SAND and Gravel	
5	02			24/12	3-5	18/49/73/29		F/C SAND and Gravel, SO Pebbles very angular	
10	03			24/20	8-10	5/5/6/4		GR-BN F SAND and Silt, micaceous	
15	04			24/24	13-15	4/3/4/6		GR-BN F SAND and Silt, micaceous	
20	05			24/24	18-20	3/8/8/10		F SAND and Silt, micaceous, iron stained	
25	06			24/22	23-25	5/9/13/13		F SAND, LI Silt	
30	07			24/16	28-30	29/26/26/38		M/C GRAVEL and SAND, SO Silt	

GRANULAR SOILS Blows/Ft	Density	PROPORTIONS USED		ABBREVIATIONS
0-4	V. Loose	Trace (TR)	0-10%	F-Fine
4-10	Loose	Little (LI)	10-20%	M-Medium
10-30	M. Dense	Some (SO)	20-35%	C-Coarse
30-50	Dense	And	35-50%	F/M-Fine to Medium
>50	V. Dense			F/C-Fine to Coarse
				V-Very
				GR-Gray
				BN-Brown
				YEL-Yellow

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	2 of 3	S80

Location: Behind Lechmere Warehouse

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
	08			24/3	35-37	27/22/22/23		C GRAVEL, SO Silt, TR Clay	
40	09			24/4	40-42	9/20/22/21		C GRAVEL, SO C SAND, LT Silt, TR, Clay S80S Top of Ottawa Sand 42' S80S Top of Screen 45'	1
45	10			24/16	45-47	9/19/22/27		M/C SAND, TR F GRAVEL	
50	10							Nested boulders S80M Top of Ottawa Sand 53' S80M Top of screen 55' S80S Bottom of screen 55'	2
55	11			7/3	55	40/140 R		F/C GRAVEL, TR Silt, TR Clay	
60									
								S80M Bottom of screen 65'	
65				14/8	67-69	40/60/100R		F/C GRAVEL, M/C SAND LT Silt, TR Clay, TR F SAND	
								EOB - 70'	

REMARKS:

1. S80S sealed in overburden with cement/bentonite slurry from 42' to GS.
2. S80M sealed in overburden with cement/bentonite slurry from 53' to GS.
3. Borehole backfilled to 65' due to the shearing off of drilling tool at 72'. Hole backfilled with bentonite to 65.5 a half foot of Ottawa sand emplaced above that to 65'.

NUS CORPORATION
A Halliburton Company

Project: Wells G & H Remedial Investigation

TDD No.: F1-8409-01

Sheet: 3 of 3

Hole No.: S80

Location: Behind Lechmere Warehouse

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
70								EOB Borehole backfilled to 65'	3

REMARKS:

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	1 of 3	S81

Location	Angle from Horiz.
Across Olympia Ave from Unifirst (in the wood near swamp)	Vertical

Begun	Completed	Driller	Drill Make & Model	Hole Dia.	Overburden (ft)	Rock (ft)	Total Depth
8 FEB 85		NEBC	Mobile B-47	3.5"	62	20	82

Core Recovery (ft)	Core Bxs	Samples	El. Top of Casing	Ground El.	Depth to Top of Rock
20'	2			S81D-54.10 S81S-54.68 S81M-55.43	62

Sample Hammer Weight/Fall	Casing	NUS Inspector
140 lbs/30"	Solid Sch 80 PVC 1.5" I.D. Screen 0.010 slot	Ross

Depth	Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
	01			24/19	0-2	1/2/3/2		Interbedded F/M SAND and Sandy Peat	
5	02			24/16	5-7	4/4/3/3		F/M SAND, SO PEAT	
								S81S Top of Ottawa sand 8'	1
								S81S Top of screen 10'	
10	03			24/20	10-12	7/10/12/13		lt BN C SAND and F/M Gravel, SO M SAND	
15	04			24/12	15-17	14/11/14/13		lt BN F M SAND, SO C Sand TR Gravel	
								S81S Bottom of screen 20'	
20	05			6/6	20	120 R		BN-GR F/C SAND and F/M Gravel, TR silt, TR Clay Nested boulders and cobbles	
25	06			6/6	25	142 R		lt BN M SAND, SO Gravel, TR C Sand	
30	07			7/7	30	150 R		lt BN F/M SAND, SO Gravel	
								S81M Top of Ottawa Sand 34'	

GRANULAR SOILS

Blows/Ft	Density
0-4	V. Loose
4-10	Loose
10-30	M. Dense
30-50	Dense
>50	V. Dense

PROPORTIONS USED

Trace (TR)	0-10%
Little (LI)	10-20%
Some (SO)	20-35%
And	35-50%

ABBREVIATIONS

F-Fine
M-Medium
C-Coarse
F/M-Fine to Medium
F/C-Fine to Coarse
V-Very
GR-Gray
BN-Brown
YEL-Yellow

1. S81S sealed in overburden with bentonite pellets from 8' to GS.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	2 of 3	S81

Location: Across Olympia Ave from Unifirst

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
								Roller bitted through boulders and cobbles 30-40'	2
								S81M Top of screen 35'	
40									
45									
50								S81M Bottom of screen 50'	
	08			11/10	50-52	45/130 R		GR-Green clayey SILT, LT F/C SAND, TR M Gravel - TILL	
55									
	09			6/6	55-57	110			
60									
	10			5/5	60-62	120		Highly fractured Dedham granodiorite - 62'	
		60/60							
65								S81D Top of Ottawa sand 65'	3
								S81D Top of screen 67'	

REMARKS:

2. S81M sealed in overburden with cement/bentonite slurry from 34' to GS.
3. S81D sealed in overburden with cement/bentonite slurry from 65' to GS.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	FL-8409-01	3 of 3	S81

Location
Across Olympia Ave from Unifirst

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
70								Salem Gabbrodiorite w/granodioritic inclusions throughout	
		60/60						Salem Gabbrodiorite lessening in granitic content w/depth	
75									
		60/60							
80								S81D Bottom of screen 82' EOB - 82.5'	
85									

REMARKS:

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	1 of 2	S82

Location	Angle from Horiz.
MASS Rifle Assn	Vertical

Begun	Completed	Driller	Drill Make & Model	Hole Dia.	Overburden (ft)	Rock (ft)	Total Depth
18 MAR 85	18 MAR 85	NEBC	Mobile B-53	3.5"	45	-	45

Core Recovery (ft)	Core Bxs	Samples	El. Top of Casing	Ground El.	Depth to Top of Rock
NA	NA	8		582-57.00	45

Sample Hammer Weight/Fall	Casing	NUS Inspector
140 lbs/30"	Solid: Sch 80 PVC 1.5" I.D. Screen: 0.010 slot	Golden

Depth	Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
								TOPSOIL, NO SAMPLE COLLECTED	
5	01			24/24	5-7	12/13/13/16		F SAND, TR M Sand	
10	02			24/18	10-12	12/14/14/16		M SAND, TR Gravel	
15	03			24/13	15-17	12/19/20/25		F SAND, TR M Sand trace(-) Clay	
20	04			24/15	20-22	9/11/15/52		GR and BN F SAND, some M Sand	
25	05			24/16	25-27	13/14/10/26		S82 Top of Ottawa Sand 24' BN F SAND, Some Silt, TR Clay S82 Top of screen 25'	1
30	06			24/12	30-32	43/46/120.5		BN F SAND, some M Sand, TR Silt, TR Clay	

GRANULAR SOILS Blows/Ft	Density	PROPORTIONS USED		ABBREVIATIONS
0-4	V. Loose	Trace (TR)	0-10%	F-Fine
4-10	Loose	Little (LI)	10-20%	M-Medium
10-30	M. Dense	Some (SO)	20-35%	C-Coarse
30-50	Dense	And	35-50%	F/M-Fine to Medium
>50	V. Dense			F/C-Fine to Coarse
				V-Very
				GR-Gray
				BN-Brown
				YEL-Yellow

1. Sealed in overburden with cement/bentonite slurry from 24' to GS.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	2 of 2	S82

Location: Mass Rifle Assn

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
35	07			9/9	35-36	82/100.3		F sandy TILL, trace Silt, TR Clay, GR-GN compact	
								S82 Bottom of screen 35'	
40	08			6/6		100/6		F sandy TILL, TR Silt, TR Clay, GR-GN, compact	
45								EOB 45' Backfilled to 35'	

REMARKS:

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	1 of 3	S83

Location	Angle from Horiz.
Aberjona Auto Parts	Vertical

Begun	Completed	Driller	Drill Make & Model	Hole Dia.	Overburden (ft)	Rock (ft)	Total Depth
28 FEB 85		NEBC	Mobile B-53	3.5"	80	NA	80

Core Recovery (ft)	Core Bxs	Samples	El. Top of Casing	Ground El.	Depth to Top of Rock
NA	NA	17		S83D-48.09	unknown

Sample Hammer Weight/Fall	Casing	NUS Inspector
140 lbs/30"	Solid Sch 80 PVC 1.5" I.D. Screen 0.010 slot	Markt

Depth	Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
				24/0	0-2	13/7/5/6			
5	01			24/14	5-7	8/8/10/13		BN F SAND	
10	02			24/24	10-12	14/16/17/21		GR-Green F SAND and Silt	
15	03			24/24	15-17	2/3/5/7		GR-Green F SAND and Silt	
20	05			24/24	20-22	1/2/2/3		GR-Green F SAND and Silt	
25	06			24/23	25-27	2/3/4/6		GR-Green F SAND and Silt	
30	07			24/24	30-32	3/4/6/8		GR-Green F SAND and Silt	

GRANULAR SOILS Blows/Ft	Density	PROPORTIONS USED		ABBREVIATIONS
0-4	V. Loose	Trace (TR)	0-10%	F-Fine
4-10	Loose	Little (LI)	10-20%	M-Medium
10-30	M. Dense	Some (SO)	20-35%	C-Coarse
30-50	Dense	And	35-50%	F/M-Fine to Medium
>50	V. Dense			F/C-Fine to Coarse
				V-Very
				GR-Gray
				BN-Brown
				YEL-Yellow

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	2 of 3	S83

Location: Aberjona Auto Parts

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
	07			24/24	35-37	6/5/11/10		DK GR SILT and Clay SO red-BN F SAND	
40	08			24/24	40-42	5/9/9/20		GR F/C Sand, TR C Gravel	
45	09			24/4	45-47	120.4		F/C GRAVEL, SO C Sand Boulders	
50	10			24/24	50-52	9/13/15/38		M/C BN SAND	
55	11			24/2	55-57	24/13/8/8		BN C SAND	
60	12			24/24	60-62	5/11/20/28		BN C SAND	
65	13			24/18	65-67	30/29/100 R		BN C SAND and F/M Gravel S83M Top of Ottawa Sand 66'	1

REMARKS:

1. S83M sealed in overburden with cement/bentonite slurry from 66' to GS.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	3 of 3	S83

Location: Aberjona Auto Parts

Depth	ROCK Sample No.	ROCK Core/Rec. (in)	ROCK RQD	SOIL Pen/Rec. (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
70								S83M Top of screen 70'	
	14			24/8	70-72	17/21/22/26		M/C BN SAND, SO F Gravel	
								TR F Sand	
75	15			24/24	75-77	22/23/38/41		BN M SAND, SO C Gravel,	
								TR F Sand	
80								S83M Botton of screen 80'	
	16			24/6	80-82	14/17/21/33		BN Silt, TR F SAND	
85									
	17			24/24	85-87	48/58/46/90		B C SAND	
								EOB 87'	2

REMARKS:

2. S83M borehole backfilled with cement/bentonite slurry to 80.33'. Four inches of Ottawa Sand added to bring the bottom of the well to 80.0'.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	1 of 3	S84

Location	Angle from Horiz.
Rifle Range Road 300 fet from Well G	Vertical

Begun	Completed	Driller	Drill Make & Model	Hole Dia.	Overburden (ft)	Rock (ft)	Total Depth
5 MAR 85		NEBC	Mobile B-53	3.5"	81.5	10	91.5

Core Recovery (ft)	Core Bxs	Samples	El. Top of Casing	Ground El.	Depth to Top of Rock
10	1	15		S84S-45.90 S84M-45.99 S84D-46.13	81.5

Sample Hammer Weight/Fall	Casing	NUS Inspector
140 lbs/30"	Solid: Sch 80 PVC 1.5" I.D. Screen: 0.010 slot	Ross

Depth	Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
	01			24/14	0-2	4/4/5/6		lt BN F/M SAND	
5	02			24/12	5-7	22/23/23/2[illegible]		lt BN F/M SAND, SO C SAND, TR F/C Gravel	1
10	03			24/22	10-12	13/17/21/2[illegible]		lt BN C SAND and F/C Gravel, TR M Sand S84S Top of Ottawa Sand 11' S84S Top of screen 13'	
15	04			24/6	15-17	10/8/36/9[illegible]		lt BN F/C GRAVEL, SO M Sand S84S Bottom of screen 18'	
20								No sample boulders at 20'	
25	05			24/10	25-27	13/12/14/2[illegible]		lt BN F/M SAND, TR F Gravel	
30	06			24/22	30-32	5/7/14/28		Green-BN M/C SAND, TR Gravel, TR F Sand	

GRANULAR SOILS

Blows/Ft	Density
0-4	V. Loose
4-10	Loose
10-30	M. Dense
30-50	Dense
>50	V. Dense

PROPORTIONS USED

Trace (TR)	0-10%
Little (LI)	10-20%
Some (SO)	20-35%
And	35-50%

ABBREVIATIONS

F-Fine
M-Medium
C-Coarse
F/M-Fine to Medium
F/C-Fine to Coarse
V-Very
GR-Gray
BN-Brown
YEL-Yellow

1. S84S sealed in overburden with cement/bentonite slurry from 11' to GS.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	2 of 3	S84

Location: Rifle Range Road 300 ft from Well G

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
				24/6	35-37	39/26/14/13		GR-BN F/C GRAVEL, SO lt BN F Sand, TR Silt	
								S84M Top of Ottawa Sand 39'	2
40								S84M Top of screen 40'	
				24/22	40-42	10/17/25/21		lt BN M/C SAND, SO F Sand TR Gravel	
45								S84M Bottom of screen 45'	
				24/24	45-47	11/8/13/14		lt BN-Green M SAND SO F Sand, TR C Sand, TR F/M Gravel	
50									
				11/6	50-52	32/52.5		lt BN M/C SAND, TR F Sand	
55									
				24/18	55-57	22/30/35/34		lt BN-Green C SAND, SO M Sand, TR F SAND, TR C Gravel	
60									
				12/12	60-62	44/110 R		lt BN-Green F/M SAND, SO C Sand, SO F/M Gravel, TR Silt, TR Clay	
65									
				18/18	65-67	49/78/74		lt BN-Green C SAND and F Gravel, SO F/M Sand, TR Silt, TR Clay	

REMARKS:

2. S84M sealed in overburden with cement/bentonite slurry from 39' to GS.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	3 of 3	S84

Location: Rifle Range Road 300 ft from Well G

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
70								C SAND and F/M Gravel	
				24/.5	70-72	50/47/88/72			
								S84D Top of screen 73'	
75				12/8	75-76	62/100.6		C SAND and F/M Gravel, Tr Silt, TR Clay	
								S84D Bottom of screen 78'	
80								Bedrock 81.5' Dedham Granodiorite for 1' with 4' of Salem Gabbrodiorite cored to ensure bedrock	4
85									
90								EOB - 91.5'	

REMARKS:

3. S84D sealed in overburden with cement/bentonite slurry from 68' to GS.
4. S84D was cored to ensure bedrock. Coring was backfilled with cement/bentonite slurry to 78.5'. Six inches of Ottawa sand was added to bring total well depth to 78'.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	of 3	S85

Location	Angle from Horiz.
500 ft North of Well H	Vertical

Begun	Completed	Driller	Drill Make & Model	Hole Dia.	Overburden (ft)	Rock (ft)	Total Depth
20 FEB 85	26 FEB 85	NEBC	Mobile B-47	3.5"		NA	

Core Recovery (ft)	Core Bxs	Samples	El. Top of Casing	Ground El.	Depth to Top of Rock
NA	0	11		S85M-46.09 S85S-46.08	unknown

Sample Hammer Weight/Fall	Casing / Solid / Screen	NUS Inspector
140 lbs/30"	Sch 80 PVC 1.5" I.D. / 0.010 slot	Ross

Depth	Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
	01			24/14	0-2	1/1/3/2		BN F SAND, SO M Sand	
5	02			24/24	5-7	7/11/12/14		lt BN F/M SAND	
10	03			24/14	10-12	3/5/5/5		GR-BN F SAND, TR C Gravel	
15	04			24/18	15-17	3/3/3/5		lt GR F Sand	
								S85S Top of Ottawa sand 18'	1
20	05			24/18	20-22	1/1/3/5		S85S Top of screen 20' lt GR-BN F SAND	
25	06			24/18	25-27	30/36/24/26		C SAND and Gravel, SO lt BN F Sand	
30	07			24/10	30-32	11/17/21/26		S85S Bottom of screen 30' BN M SAND, SO F Sand	

GRANULAR SOILS Blows/Ft	Density	PROPORTIONS USED		ABBREVIATIONS
0-4	V. Loose	Trace (TR)	0-10%	F-Fine
4-10	Loose	Little (LI)	10-20%	M-Medium
10-30	M. Dense	Some (SO)	20-35%	C-Coarse
30-50	Dense	And	35-50%	F/M-Fine to Medium
>50	V. Dense			F/C-Fine to Coarse
				V-Very
				GR-Gray
				BN-Brown
				YEL-Yellow

1. S85S sealed in overburden with cement/bentonite slurry from 18' to GS. Borehole backfilled from 62' to 30'.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	2 of 3	S85

Location: 500 feet North of Well H

Depth	ROCK Sample No.	ROCK Core/Rec. (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
	08			24/22	35-37	7/15/12/14		BN C SAND, SO C Gravel, TR F Sand, TR Silt	
40	09			24/14	40-42	6/31/50/83		C SAND, SO F/M Gravel, TR C Gravel	
45								No samples collected due to running sands 45-65'	
50									
55									
60									
65								S85M Top of sand 64'	2
				9/3	65	120/30.3		S85M Top of screen 65' C SAND with schistose rock fragments	

REMARKS:

2. S85M sealed in overburden with cement/bentonite slurry from 64' to GS.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Boring No.
Wells G & H Remedial Investigation	F1-8409-01	3 of 3	585

Location: 500 feet North of Well H

Depth	ROCK Sample No.	ROCK Core Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
70				4/2	70	120.4		Subangular schistotic rock fragments	
		36/36						585M Bottom of screen 71'	
								Gabbrodiorite boulder	
								casing will not advance	

REMARKS:

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	1 of 2	S86

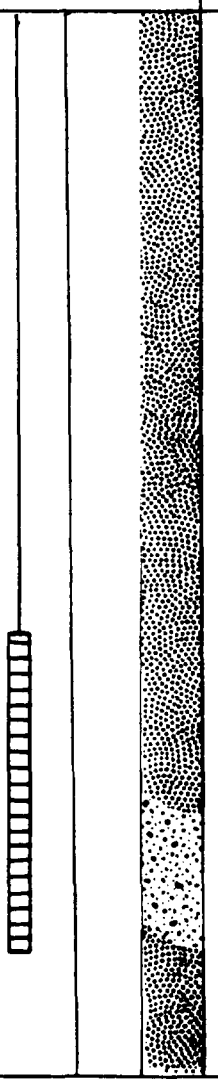
Location	Angle from Horiz.
300 ft South of Well G	Vertical

Begun	Completed	Driller	Drill Make & Model	Hole Dia.	Overburden (ft)	Rock (ft)	Total Depth
4 MAR 85	6 MAR 85	NEBC	Mobile B-47	3.5"	62	NA	45

Core Recovery (ft)	Core Bxs	Samples	El. Top of Casing	Ground El.	Depth to Top of Rock
NA	NA	11		S86S-44.66 S86D-44.33	unknown

Sample Hammer Weight/Fall	Casing	NUS Inspector
140 lbs/30"	Solid: Sch 80 PVC 1.5" I.D. Screen: 0.010 slot	Baldyga

Depth	Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
	01			24/10	0-2	1/1/1/2		BN F/M SAND	
5	02			24/24	5-7	13/19/19/19		BN F/C SAND, SO C Gravel, highly angular	
10	03			24/24	10-12	9/8/9/11		lt GR to BN M/C SAND, TR F Gravel	
15	04			24/8	15-17	8/11/10/11		C SAND and M/C Gravel, SO F Gravel S86S Top of Ottawa Sand 18' S86S Top of screen 20'	1
20	05			24/6	20-22	18/24/21/18		C SAND and M/C Gravel, SO F Gravel, TR F/M Sand	
25	06			24/8	25-27	26/26/18/23		F/C GRAVEL, SO BN F/C Sand	
30								S86S Bottom of screen 30'	2
	07			24/9	30-32	20/8/11/13		BN M/C SAND, TR F Gravel	



GRANULAR SOILS

Blows/Ft	Density
0-4	V. Loose
4-10	Loose
10-30	M. Dense
30-50	Dense
>50	V. Dense

PROPORTIONS USED

Trace (TR)	0-10%
Little (LI)	10-20%
Some (SO)	20-35%
And	35-50%

ABBREVIATIONS

F-Fine
M-Medium
C-Coarse
F/M-Fine to Medium
F/C-Fine to Coarse
V-Very
GR-Gray
BN-Brown
YEL-Yellow

1. S86S sealed in overburden with cement/bentonite slurry from 18' to GS.
2. S86S borehole backfilled with cement/bentonite slurry from 62' to 30.5'. .5 ft of Ottawa added at top of slurry for a total depth of 30 ft.

NUS CORPORATION
A Halliburton Company

Project	TDD No.	Sheet	Hole No.
Wells G & H Remedial Investigation	F1-8409-01	2 of 2	S86

Location: 300 ft South of Well G

Depth	ROCK Sample No.	ROCK Core/Rec (in)	ROCK RQD	SOIL Pen/Rec (in)	SOIL Depth Interval (ft)	SOIL Blows/6"	Well Construction	Stratum Description	Notes
35								No Sample due to running sands	
40	08			24/4	40-42	16/9/8/9		BN F/C SAND and F/C Gravel	
45	09			24/9	45-47	8/1/3/8		BN F/C SAND, TR F Gravel	
								S86M Top of Ottawa sand 45'	3
								S86M Top of screen 47'	
50	10			24/12	50-52	2/2/5/8		dk BN F SAND	
								S86M Bottom of screen 52'	4
55				1/0	55	120		dk GR - TILL	
60	11			6/6	60	185		EOB 62'	
65									

REMARKS:

3. S86M sealed in overburden with cement/bentonite slurry from 45' to GS.
4. Borehole backfilled from 62' to 52.5'. .5' of Ottawa sand added at top of slurry to a total depth of 52'.

APPENDIX F

GRAIN SIZE ANALYSIS AND IN-SITU PERMEABILITY TESTING DATA

This appendix contains the results of grain size analysis performed on selected samples obtained from NUS/FIT borings at the Wells G & H Site. Data from grain size analysis is used to calculate permeabilities of overburden materials in the study area. Also included in this appendix are data from in-situ permeability testing conducted during the drilling of selected NUS/FIT monitoring wells. This type of testing allows a direct measurement of permeability of a selected interval in the borehole. Permeability testing was conducted by utilizing falling-head and using-head methodologies.

Sixteen in-situ permeability tests were conducted in seven boreholes during the installation of monitoring wells on site. Two methods were used (for comparison) to determine values for permeability: the Basic Time Lag method and the Falling Head method. Review of the results from both methods indicated a very good correlation.

The Basic Time Lag method involves a semi-logarithmic plot of the field data. The logarithm of the Head Ratio (H/H_o) is plotted against the corresponding values of time (t), where H is the water level at t and H_o is the initial water level at the start of the test (t = 0). A best fitting straight line is drawn through the experimental points. The value of t on this straight line corresponding to H/H_o = 0.37 is the required value of he Basic Time Lag (T) (U.S. Bureau of Reclamation, 1975). The calculated value for the Basic Time Lag is used in the following formula to calculate the permeability.

$$K = \frac{\pi \ d}{11T}$$

Where:

K = permeability (cm/sec)
d = diameter of the standpipe (cm)
T = Basic Time Lag (sec)

Determining permeability using the Falling Head method involves the following formula (Lambe and Whitman, 1969):

$$K = \frac{\pi \ d}{11 \ (t_2 - t_1)} \qquad \text{Ln } H_1/H_2$$

Where:

K = permeability (cm/sec)
d = diameter of the standpipe (cm)
t_1 = time at beginning of test (sec)
t_2 = time at end of test (sec)
H_1 = Water level at $t = t_1$
H_2 = water level at $t = t_2$

The range of permeabilities coincide with those permeabilities determined for similar unconsolidated deposits as outlined by Freeze and Cherry, 1979 (page 29). The permeabilities calculated from grain size data correlates fairly well to each geologic unit tested, although the permeability estimates based on grain size analysis were typically lower than the corresponding in-situ test results.

Permeability Calculations

Basic Time Lag Method

$$K = \frac{\pi D}{11 T}$$

K = mean coeff. perm. (cm/s)

D = diameter, intake sample (cm)

T = Basic Time Lag (sec.)

Falling Head Method

$$K = \frac{\pi D}{11(t_2 - t_1)} \ln \frac{H_1}{H_2}$$

K = mean coeff. perm. (cm/s)

D = diameter, intake sample (cm)

t = time (sec)

H_1 = head for $t = t_1$

H_2 = head for $t = t_2$

Well No. S-64 (9-11') Brown silty sand, little clay.

Basic Time Lag

$$K = \frac{\pi D}{11 T} \qquad D = 7.62 \text{ cm} \quad T = 1530 \text{ sec}$$

$$K = \frac{\pi\ 7.62}{11\ (1530)}$$

$$K = 1.42 \times 10^{-3} \text{ cm/sec}$$

Falling Head

$$K = \frac{\pi D}{11(t_2 - t_1)} \ln \frac{H_1}{H_2}$$

$$K = \frac{\pi (7.62)}{11\ (2700)} \ln \frac{243.8}{45.7}$$

$$K = 1.35 \times 10^{-3} \text{ cm/sec}$$

D = 7.62 cm
t_2 = 2700 sec
t_1 = 0
H_1 = 243.8 cm
H_2 = 45.7 cm

Well No. S-64 (19-21') Dark brown medium-coarse sand, some fine gravel.

Basic Time Lag

$$K = \frac{\pi D}{11 T} \qquad D = 7.62 \text{ cm} \quad T = 22320 \text{ sec}$$

$$K = \frac{\pi\ (7.62)}{11\ (22320)}$$

$$K = 9.75 \times 10^{-4} \text{ cm/sec}$$

Falling Head

$$K = \frac{\pi D}{11\ (t_2 - t_1)} \ln \frac{H_1}{H_2}$$

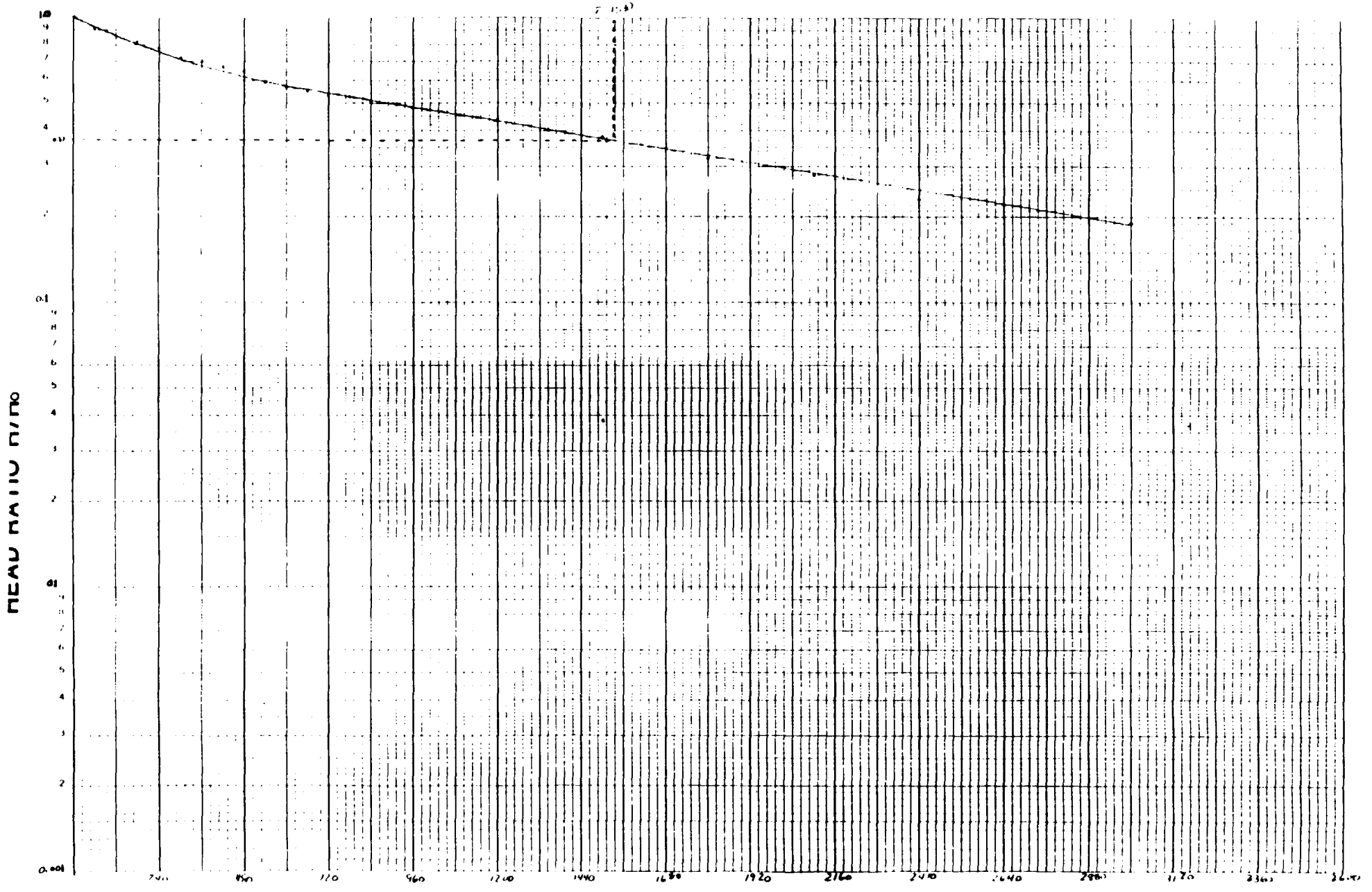
$$K = \frac{\pi\ (7.62)}{11\ (2400)} \ln \frac{228.6}{207.0}$$

$$K = 8.9 \times 10^{-5} \text{ cm/sec}$$

D = 7.62 cm
t_2 = 2400 sec
t_1 = 0
H_1 = 228.6 cm
H_2 = 207.0 cm

Well S-64 (9-11')
GW level from ground surface = 4.0'
Casing stick up from ground level = 4.0'
Depth of borehole below ground level = 11.0'
Casing diameter = 3.0"
H_o = 96.0"

Time (t) (seconds)	H (inches)	H/H_o	Time (t) (seconds)	H (inches)	H/H_o
0	96.0	1.00	720	50.55	0.53
30	91.0	0.95	780	50.50	0.53
60	87.45	0.91	840	49.00	0.51
90	85.12	0.89	900	48.00	0.50
120	82.20	0.86	1200	42.30	0.44
150	80.75	0.84	1500	36.30	0.38
180	78.40	0.82	1800	30.50	0.32
210	75.80	0.80	2100	26.25	0.27
240	74.50	0.78	2400	22.00	0.23
270	72.88	0.76	2700	18.00	0.19
300	69.50	0.72			
360	67.40	0.70			
420	64.00	0.67			
480	62.75	0.65			
540	56.88	0.59			
600	54.50	0.57			
660	53.00	0.55			



DRAWDOWN CURVE

H/H₀ vs TIME

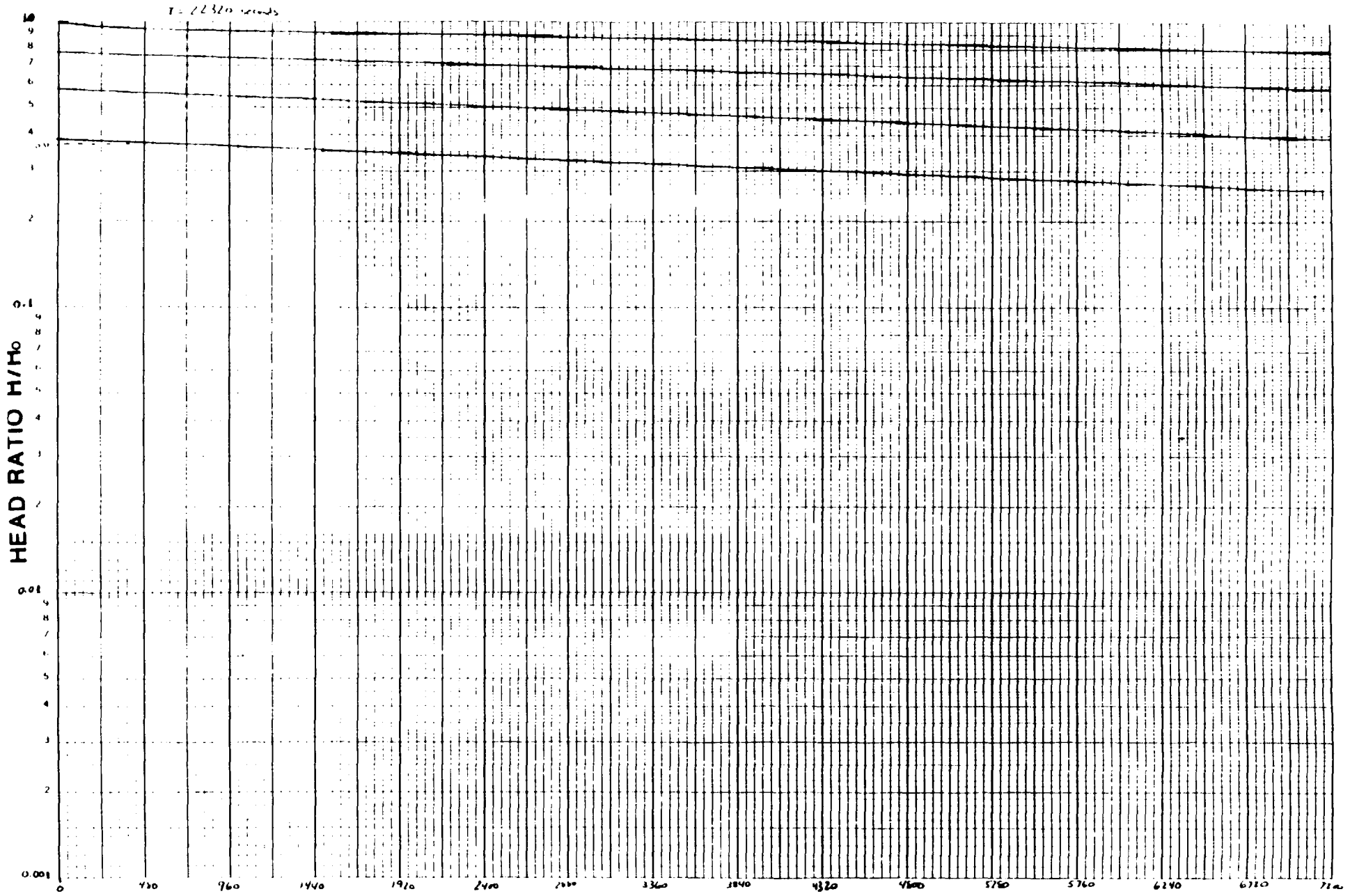
WELL S 64 (9-11')

NUS CORPORATION

A Halliburton Company

Well S-64 (19-21')
GW level from ground surface = 4.0'
Casing stick up from ground level = 3.5'
Depth of borehole below ground level = 21.0'
Casing diameter = 3.0"
H_o = 90.0"

Time (t) (seconds)	H (inches)	H/H_o	Time (t) (seconds)	H (inches)	H/H_o
0	90.00	1.00	720	84.25	0.94
30	89.00	0.99	780	84.13	0.93
60	88.25	0.98	840	84.00	0.93
90	87.85	0.98	900	83.88	0.93
120	87.38	0.97	1200	83.25	0.93
150	87.25	0.97	1500	83.00	0.92
180	87.00	0.97	1800	82.63	0.92
210	86.75	0.96	2100	82.00	0.91
240	86.63	0.96	2400	81.50	0.91
270	86.25	0.96			
300	86.00	0.96			
360	85.87	0.95			
420	85.38	0.95			
480	85.13	0.95			
540	84.88	0.94			
600	84.75	0.94			
660	84.38	0.94			



TIME (T) SECONDS

DRAWDOWN CURVE

H/Ho vs TIME

WELL S 64 (19-21')

NUS CORPORATION

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Well No. S-64 (31.5-33.5') Brown silty sand, little clay and gravel.

Basic Time Lag

$$K = \frac{\pi D}{11 T} \qquad D = 7.62 \text{ cm} \quad T = 1590 \text{ sec}$$

$$K = \frac{\pi (7.62)}{11 (1590)}$$

$$K = 1.37 \times 10^{-3} \text{ cm/sec}$$

Falling Head

$$K = \frac{\pi D}{11 (t_2 - t_1)} \ln \frac{H_1}{H_2}$$

$$K = \frac{\pi (7.62)}{11 (2700)} \ln \frac{163.0}{32.3}$$

$$K = 1.30 \times 10^{-3} \text{ cm/sec}$$

$D = 7.62$ cm
$t_2 = 2700$ sec
$t_1 = 0$
$H_1 = 163.0$ cm
$H_2 = 32.3$ cm

Well No. S-74 (39-41') Brown sand, little silt.

Basic Time Lag

$$K = \frac{\pi D}{11 T} \qquad D = 7.62 \text{ cm} \quad T = 48 \text{ sec}$$

$$K = \frac{\pi (7.62)}{11 (48)}$$

$$K = 4.5 \times 10^{-2} \text{ cm/sec}$$

Falling Head

$$K = \frac{\pi D}{11 (t_2 - t_1)} \ln \frac{H_1}{H_2}$$

$$K = \frac{\pi (7.62)}{11 (660)} \ln \frac{150.3}{0.30}$$

$$K = 2.0 \times 10^{-2} \text{ cm/sec}$$

$D = 7.62$ cm
$t_2 = 660$ sec.
$t_1 = 0$
$H_1 = 150.3$ cm
$H_2 = 0.30$ cm

Well No. S-74 (54-56') Brown silty sand, trace clay.

Basic Time Lag

$$K = \frac{\pi D}{11 T} \qquad D = 7.62 \text{ cm} \quad T = 36 \text{ sec}$$

$$K = \frac{\pi (7.62)}{11 (36)}$$

$$K = 6.0 \times 10^{-2} \text{ cm/sec}$$

Falling Head

$$K = \frac{\pi D}{11 (t_2 - t_1)} \ln \frac{H_1}{H_2}$$

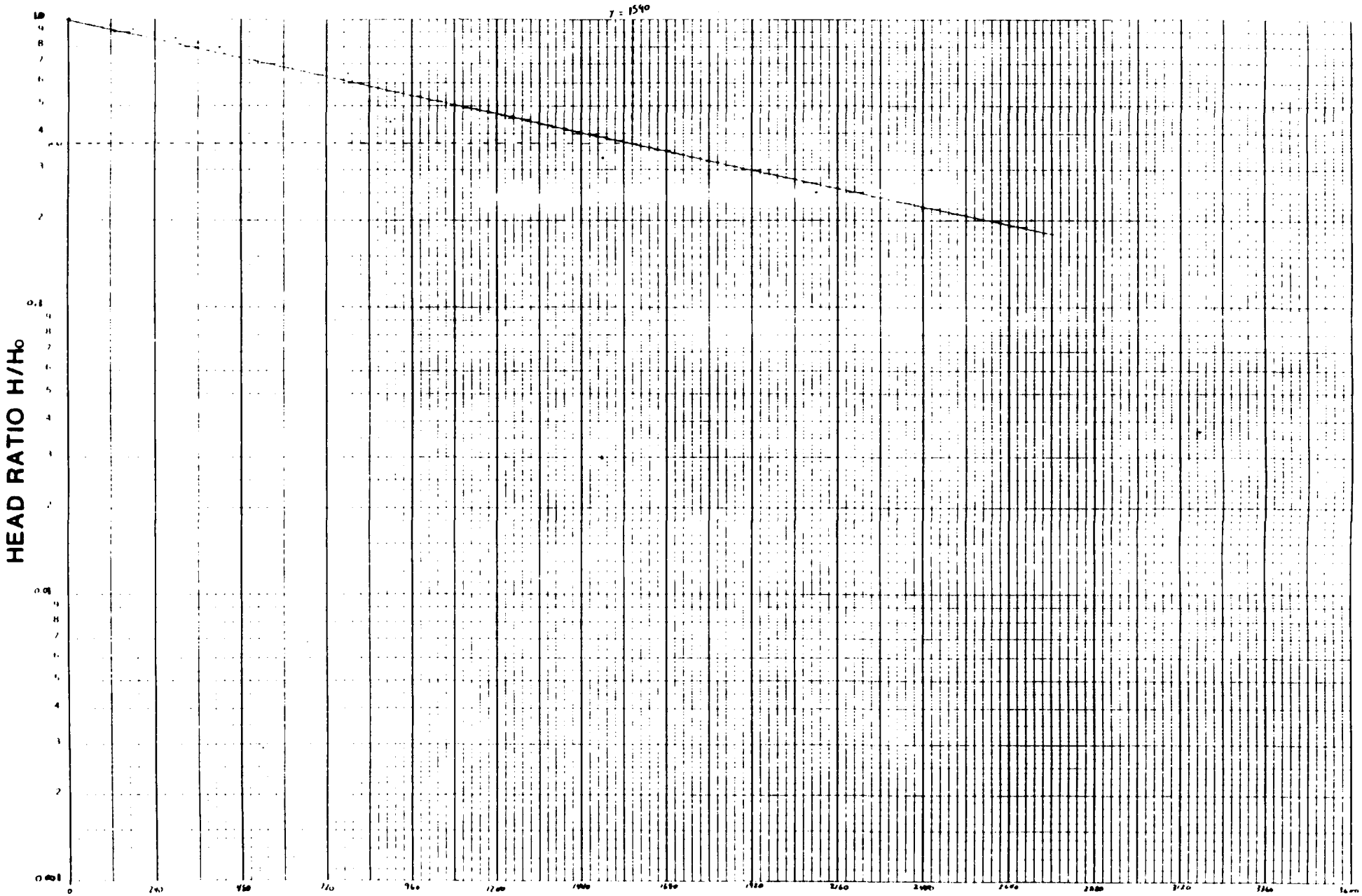
$$K = \frac{\pi (7.62)}{11 (150)} \ln \frac{150.8}{0.10}$$

$$K = 1.0 \times 10^{-1} \text{ cm/sec}$$

$D = 7.62$ cm
$t_2 = 150$ sec.
$t_1 = 0$
$H_1 = 150.8$ cm
$H_2 = 0.10$ cm

Well S-64 (31.5-33.5')
GW level from ground surface = 4.0'
Casing stick up from ground level = 1.35'
Depth of borehole below ground level = 33.5'
Casing diameter = 3.0"
H_o = 64.2"

Time (t) (seconds)	H (inches)	H/H_o	Time (t) (seconds)	H (inches)	H/H_o
0	64.20	1.00	720	43.08	0.67
30	63.12	0.98	780	41.64	0.65
60	-	-	840	33.24	0.52
90	62.04	0.97	900	28.44	0.44
120	61.20	0.95	1200	24.12	0.38
150	60.00	0.93	1500	21.24	0.33
180	58.80	0.92	1800	18.60	0.29
210	57.72	0.90	2100	16.32	0.25
240	56.76	0.88	2400	14.40	0.22
270	55.80	0.87	2700	12.72	0.20
300	54.96	0.86	3000	-	-
360	53.04	0.83			
420	51.24	0.80			
480	-	-			
540	47.40	0.74			
600	45.50	0.71			
660	44.52	0.69			



DRAWDOWN CURVE

H/Ho vs TIME

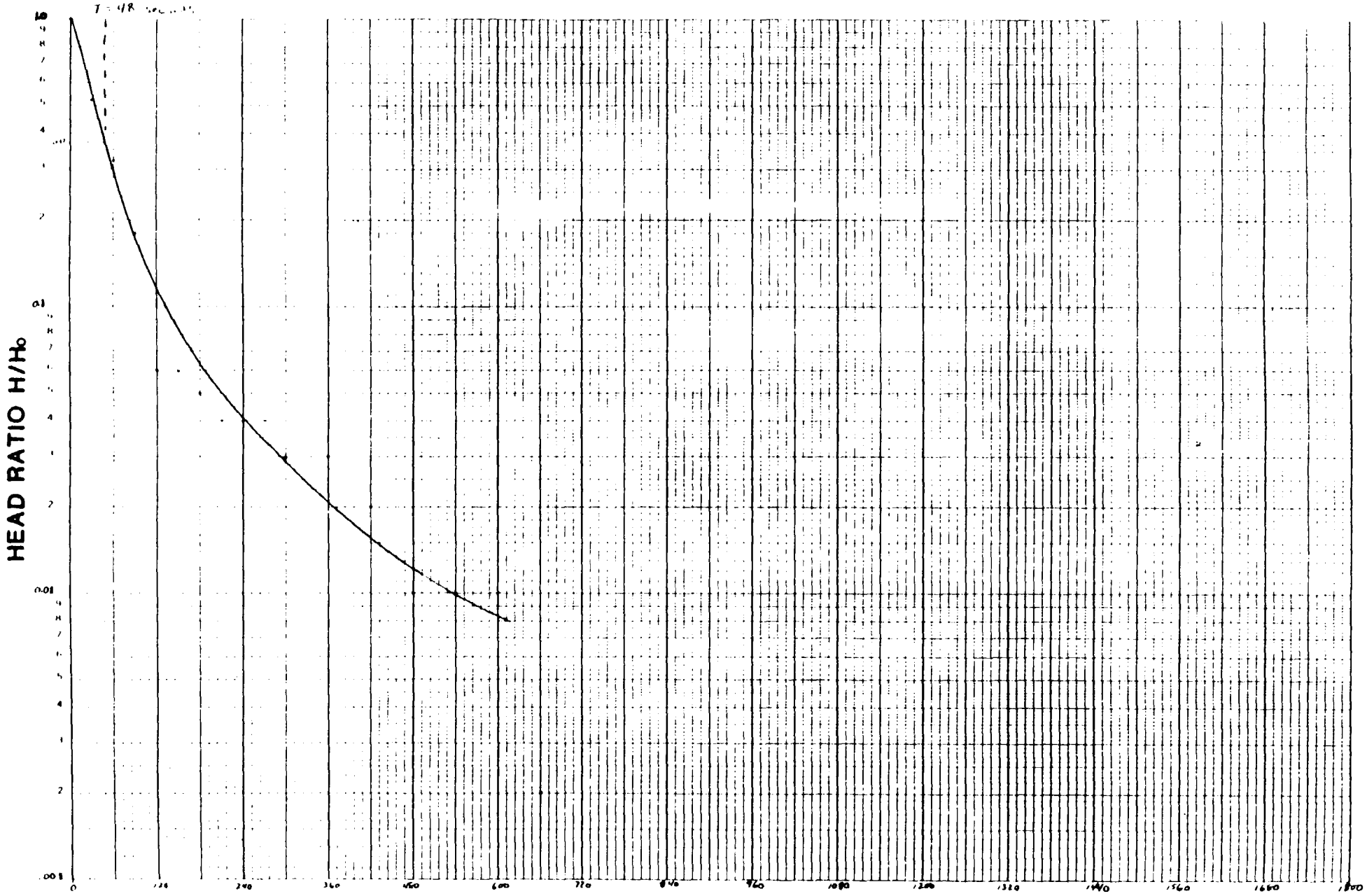
WELL S 64 (31.5-33.5)

NUS CORPORATION

A Halliburton Company

Wells S-74 (39-41')
GW level from ground surface = 1.5'
Casing stick up from ground level = 3.43'
Depth of borehole below ground level = 41.0'
Casing diameter = 3.0"
H_o = 59.16"

Time (t) (seconds)	H (inches)	H/H_o	Time (t) (seconds)	H (inches)	H/H_o
0	-	1.00			
30	30.96	0.52			
60	19.08	0.32			
90	11.16	0.18			
120	3.36	0.06			
150	3.36	0.06			
180	2.76	0.05			
210	2.64	0.04			
240	2.28	0.04			
270	2.16	0.04			
300	1.80	0.03			
360	1.56	0.03			
420	0.96	0.02			
480	0.36	0.01			
540	0.36	0.01			
600	0.36	0.01			
660	0.12	0.002			



DRAWDOWN CURVE

H/Ho vs TIME

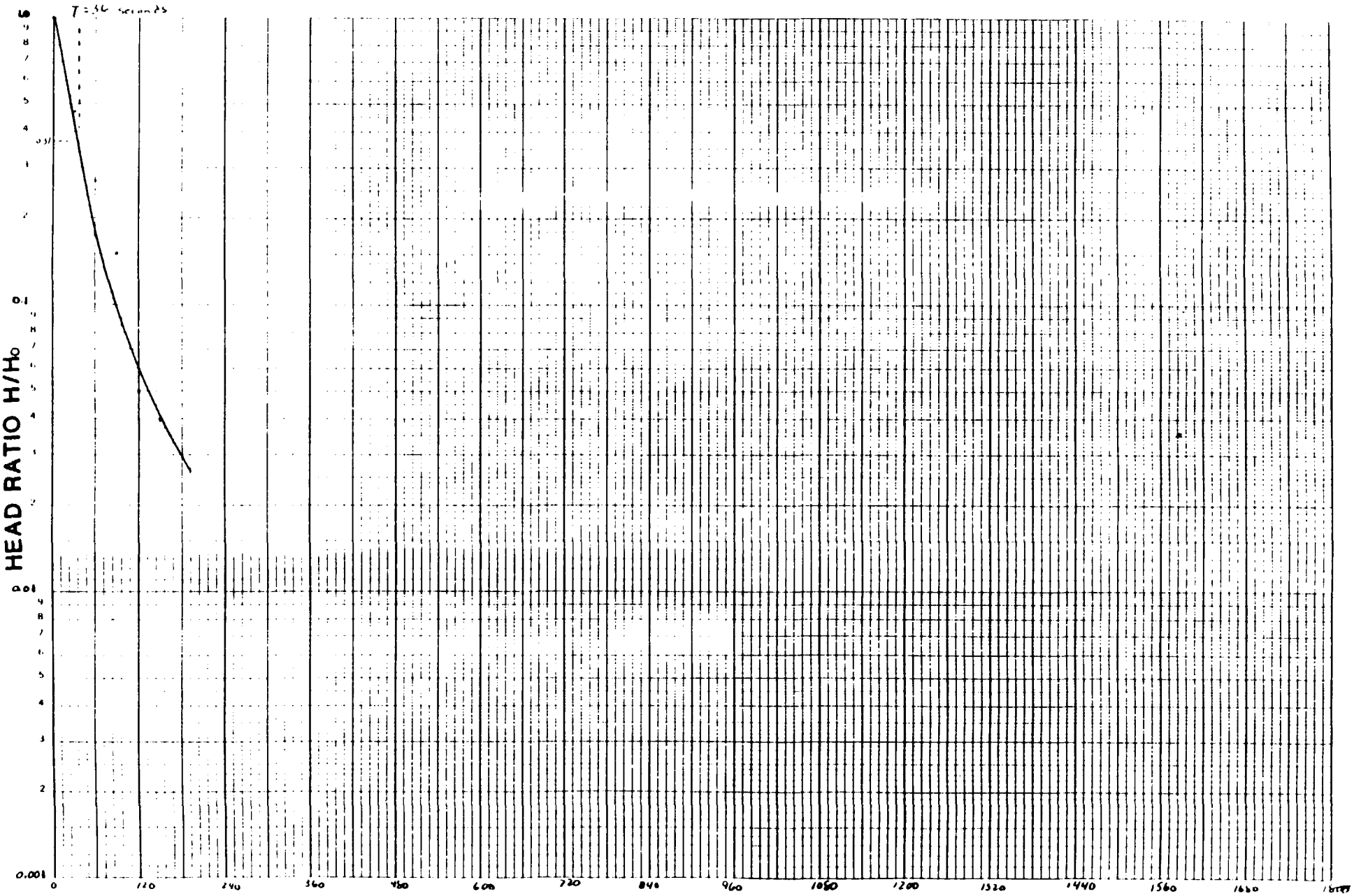
WELL S 74 (39-41')

NUS CORPORATION

A Halliburton Company

WELL S-74 (54-56')
GW level from ground surface = 1.5'
Casing stick up from ground level = 3.45'
Depth of borehole below ground level = 56.0'
Casing diameter = 3.0"
H_o = 59.40"

Time (t) (seconds)	H (inches)	H/H_o	Time (t) (seconds)	H (inches)	H/H_o
0	59.40	1.00			
30	27.96	0.47			
60	16.20	0.27			
90	8.76	0.15			
120	3.24	0.0			
150	2.40	0.04			
180	0.00	0			



TIME (T) SECONDS DRAWDOWN CURVE

H/H₀ vs TIME

WELL S 74 (54-56')

NUS CORPORATION

A Halliburton Company

Well No. S-74 (66-68') Running sands, no sample collected.

Basic Time Lag

$$K = \frac{\pi D}{11 T} \qquad D = 7.62 \text{ cm} \quad T = 11220 \text{ sec}$$

$$K = \frac{\pi (7.62)}{11 (11220)}$$

$$K = 1.94 \times 10^{-4} \text{ cm/sec}$$

Falling Head

$$K = \frac{\pi D}{11 (t_2 - t_1)} \ln \frac{H_1}{H_2}$$

$$K = \frac{\pi (7.62)}{11 (3900)} \ln \frac{150.8}{114.6}$$

$$K = 1.53 \times 10^{-4} \text{ cm/sec}$$

$D = 7.62$ cm
$t_2 = 3900$ sec
$t_1 = 0$
$H_1 = 150.8$ cm
$H_2 = 114.6$ cm

Well No. S-76 (20-22') Brown silty sand, trace clay.

Basic Time Lag

$$K = \frac{\pi D}{11 T} \qquad D = 7.62 \text{ cm} \quad T = 74400 \text{ sec}$$

$$K = \frac{\pi (7.62)}{11 (74400)}$$

$$K = 2.93 \times 10^{-5} \text{ cm/sec}$$

Falling Head

$$K = \frac{\pi D}{11 (t_2 - t_1)} \ln \frac{H_1}{H_2}$$

$$K = \frac{\pi (7.62)}{11 (5400)} \ln \frac{365.7}{342.6}$$

$$K = 2.63 \times 10^{-5} \text{ cm/sec}$$

$D = 7.62$ cm
$t_2 = 5400$ sec
$t_1 = 0$
$H_1 = 365.7$ cm
$H_2 = 342.6$ cm

Well No. S-76 (60-62') Brown silty sand, trace clay.

Basic Time Lag

$$K = \frac{\pi D}{11 T} \qquad D = 7.62 \text{ cm} \quad T = 57360 \text{ sec}$$

$$K = \frac{\pi (7.62)}{11 (57360)}$$

$$K = 3.8 \times 10^{-5} \text{ cm/sec}$$

Falling Head

$$K = \frac{\pi D}{11 (t_2 - t_1)} \ln \frac{H_1}{H_2}$$

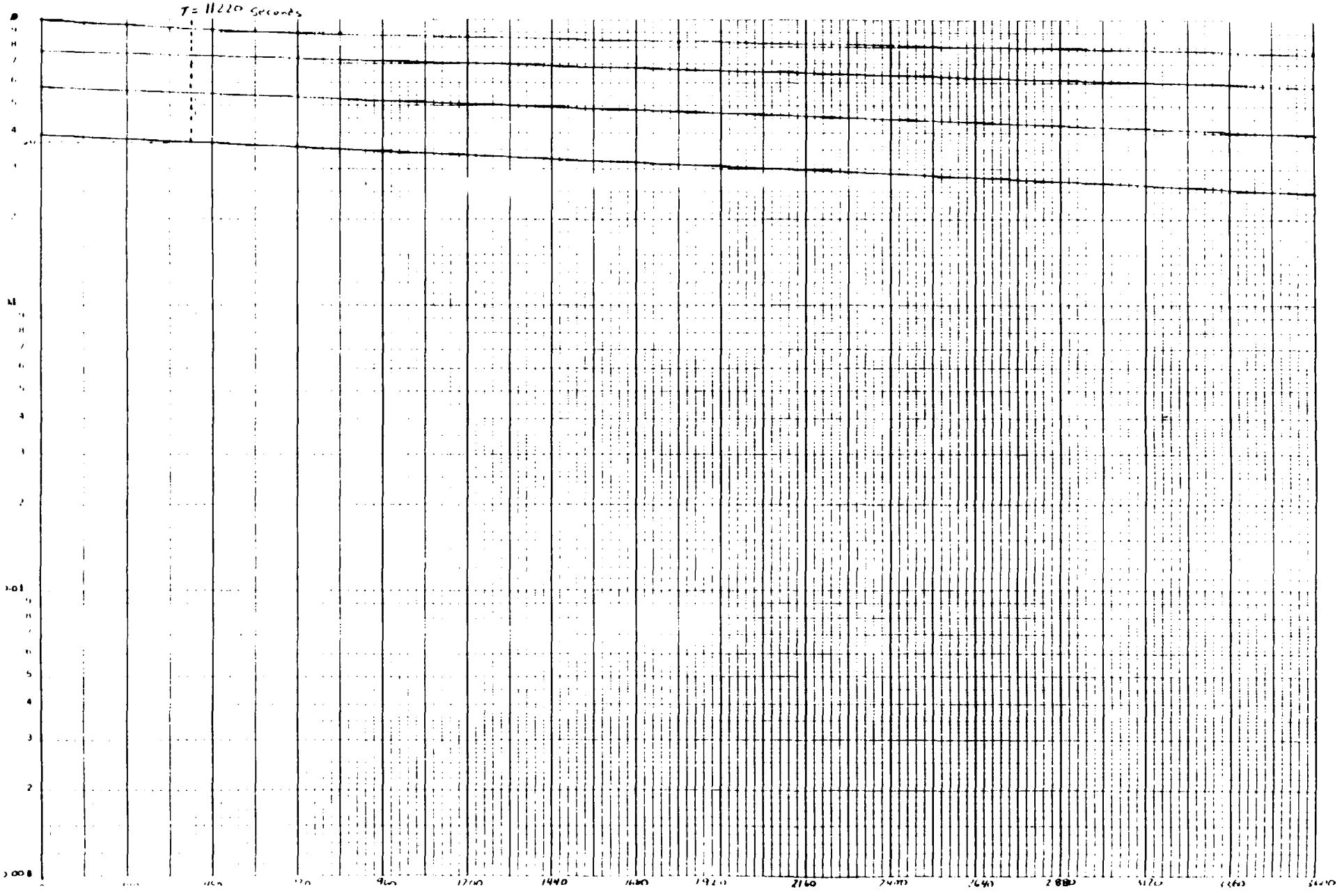
$$K = \frac{\pi (7.62)}{11 (8400)} \ln \frac{365.7}{302.4}$$

$$K = 4.93 \times 10^{-5} \text{ cm/sec}$$

$D = 7.62$ cm
$t_2 = 8400$ sec
$t_1 = 0$
$H_1 = 365.7$ cm
$H_2 = 302.4$ cm

Well S-74 (66-68')
GW level from ground surface = 1.5'
Casing stick up from ground level = 3.45'
Depth of borehole below ground level = 68.0'
Casing diameter = 3.0"
H_o = 59.4"

Time (t) (seconds)	H (inches)	H/H_o	Time (t) (seconds)	H (inches)	H/H_o
0	59.40	1.00	720	53.52	0.90
30	58.80	0.99	780	53.28	0.90
60	58.20	0.98	840	52.80	0.89
90	57.60	0.97	900	52.56	0.88
120	57.48	0.97	1200	51.60	0.87
150	57.48	0.97	1500	50.4	0.85
180	57.24	0.96	1800	49.56	0.83
210	57.12	0.96	2100	48.84	0.82
240	56.88	0.96	2400	48.12	0.81
270	56.40	0.95	2700	47.40	0.80
300	55.80	0.94	3000	46.80	0.79
360	55.44	0.93	3300	46.44	0.78
420	55.32	0.93	3600	45.72	0.77
480	54.84	0.92	3900	45.12	0.76
540	54.48	0.92			
600	54.12	0.91			
660	53.68	0.91			



TIME (T) SECONDS

DRAWDOWN CURVE

H/H_0 vs TIME

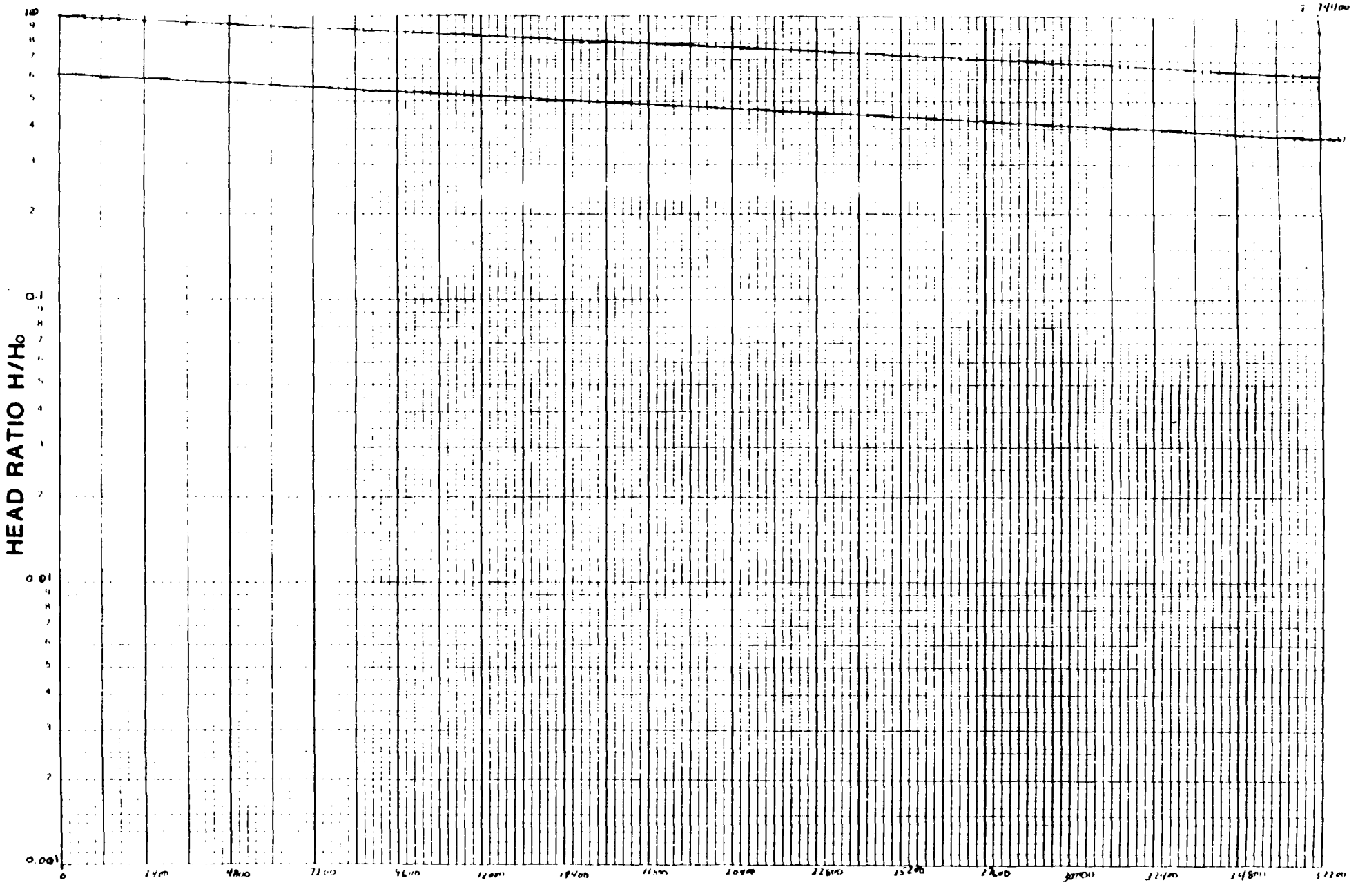
WELL S 74 (66-68')

NUS CORPORATION

A Halliburton Company

Well S-76 (20-22')
GW level from ground surface = 11.0'
Casing stick up from ground level = 1.0'
Depth of borehole below ground level = 22.0'
Casing diameter = 3.0"
H_o = 144.0"

Time (t) (seconds)	H (inches)	H/H_o	Time (t) (seconds)	H (inches)	H/H_o
0	144.00	1.00	600	141.60	0.98
30	143.75	0.99	660	141.50	0.98
60	143.75	0.99	720	141.40	0.98
90	143.00	0.99	780	141.25	0.98
120	143.00	0.99	840	141.10	0.98
150	142.90	0.99	900	141.00	0.98
180	142.90	0.99	960	140.16	0.97
210	142.70	0.99	1020	139.92	0.97
240	142.60	0.99	1080	139.80	0.97
270	142.50	0.99	1140	139.68	0.97
300	142.40	0.99	1200	139.56	0.97
330	142.30	0.99	1260	139.32	0.97
360	142.25	0.99	1320	139.20	0.97
390	142.20	0.99	1380	139.08	0.97
420	142.10	0.99	1440	138.96	0.97
480	141.9	0.99	1500	138.84	0.96
540	141.6	0.98	1560	138.72	0.96



TIME (T) SECONDS

DRAWDOWN CURVE

H/Ho vs TIME

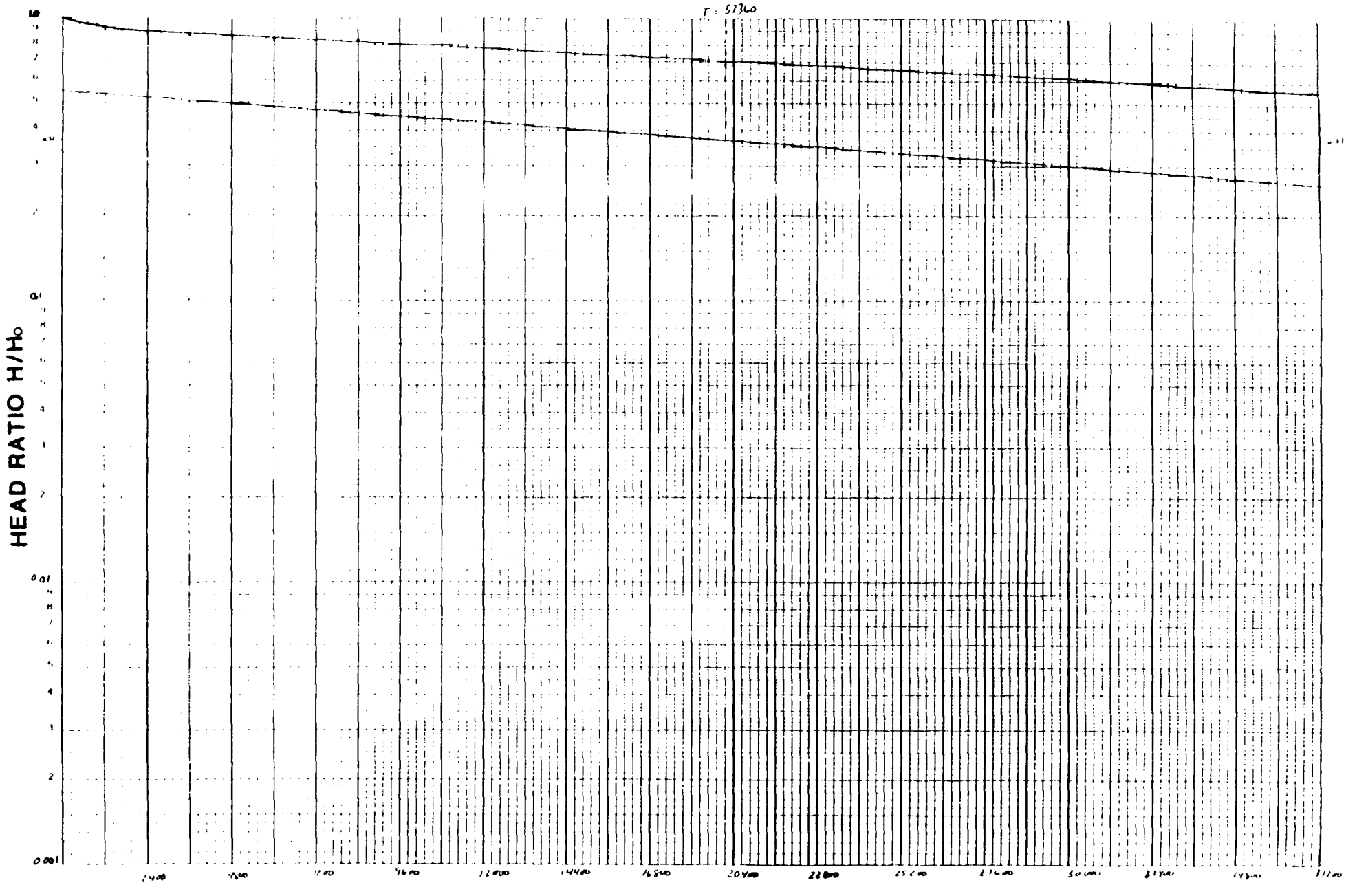
WELL S 76 (20-22')

NUS CORPORATION

A Halliburton Company

Well S-76 (60-62')
GW level from ground surface = 11.0'
Casing stick up from ground level = 1.0'
Depth of borehole below ground level = 62.0
Casing diameter = 3.0"
H_o = 144.0"

Time (t) (seconds)	H (inches)	H/H_o	Time (t) (seconds)	H (inches)	H/H_o
0	144	1.00	720	136.80	0.95
30	143.40	1.00	780	136.32	0.95
60	142.92	0.99	840	135.72	0.94
90	142.56	0.99	900	135.24	0.94
120	142.32	0.99	960	135.00	0.94
150	141.96	0.96	1020	134.64	0.94
180	141.60	0.98	1080	134.28	0.93
210	141.24	0.91	1140	133.92	0.93
240	141.12	0.98	1200	132.84	0.92
270	140.88	0.98	1260	132.24	0.92
300	140.40	0.98	1320	131.88	0.92
360	139.80	0.97	1380	131.82	0.92
420	139.20	0.97	1440	131.76	0.92
480	138.72	0.96	1500	131.64	0.91
540	138.36	0.96	1560	131.40	0.91
600	137.88	0.96	1620	131.04	0.91
660	137.40	0.95	1680	130.92	0.91



DRAWDOWN CURVE

H/Ho vs TIME

WELL S 76 (60-62')

NUS CORPORATION

Well No. S-76 (126-128') No soil sample collected.

Basic Time Lag

$$K = \frac{\pi D}{11 T} \qquad D = 7.62 \text{ cm} \quad T = 77760 \text{ sec}$$

$$K = \frac{\pi (7.62)}{11 (77760)}$$

$$K = 2.8 \times 10^{-6} \text{ cm/sec}$$

Falling Head

$$K = \frac{\pi D}{11 (t_2 - t_1)} \ln \frac{H_1}{H_2}$$

$$K = \frac{\pi (7.62)}{11 (7200)} \ln \frac{365.7}{323.4}$$

$$K = 3.72 \times 10^{-5} \text{ cm/sec}$$

$D = 7.62$ cm
$t_2 = 7200$ sec
$t_1 = 0$
$H_1 = 365.7$ cm
$H_2 = 323.4$ cm

Well No. S-77 (30-32') Red-brown medium-coarse sand, some fine sand, trace silt.

Basic Time Lag

$$K = \frac{\pi D}{11 T} \qquad D = 7.62 \text{ cm} \quad T = 60000 \text{ sec}$$

$$K = \frac{\pi (7.62)}{11 (60000)}$$

$$K = 3.6 \times 10^{-5} \text{ cm/sec}$$

Falling Head

$$K = \frac{\pi D}{11 (t_2 - t_1)} \ln \frac{H_1}{H_2}$$

$$K = \frac{\pi (7.62)}{11 (3600)} \ln \frac{213.4}{200.0}$$

$$K = 3.9 \times 10^{-5} \text{ cm/sec}$$

$D = 7.62$ cm
$t_2 = 3600$ sec
$t_1 = 0$
$H_1 = 213.4$ cm
$H_2 = 200.0$ cm

Well No. S-77 (73-75') Brown sand, trace gravel.

Basic Time Lag

$$K = \frac{\pi D}{11 T} \qquad D = 7.62 \text{ cm} \quad T = 24960 \text{ sec}$$

$$K = \frac{\pi (7.62)}{11 (24960)}$$

$$K = 8.7 \times 10^{-5} \text{ cm/sec}$$

Falling Head

$$K = \frac{\pi D}{11 (t_2 - t_1)} \ln \frac{H_1}{H_2}$$

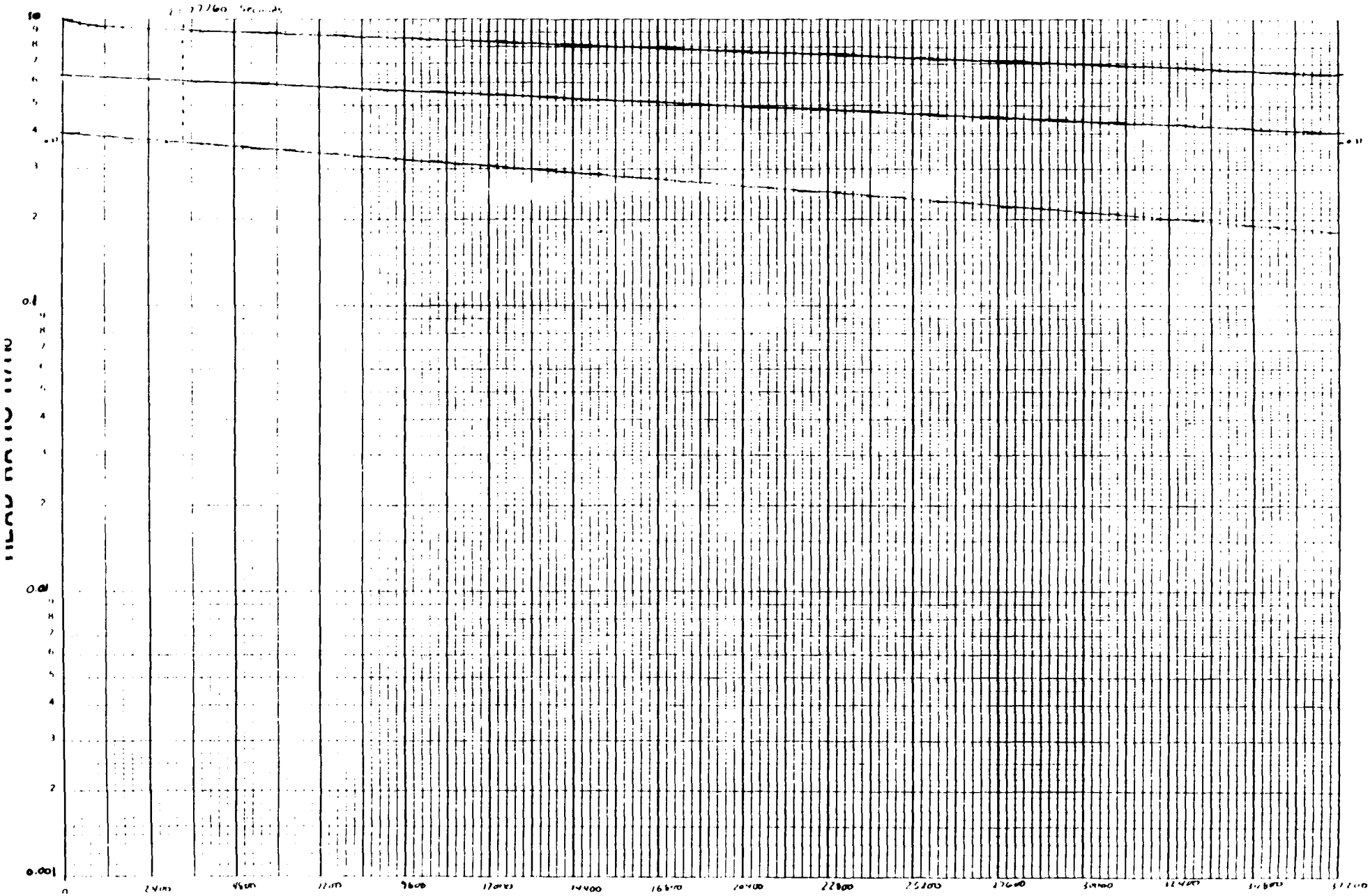
$$K = \frac{\pi (7.62)}{11 (3600)} \ln \frac{213.4}{172.7}$$

$$K = 1.27 \times 10^{-4} \text{ cm/sec}$$

$D = 7.62$ cm
$t_2 = 3600$ sec
$t_1 = 0$
$H_1 = 213.4$ cm
$H_2 = 172.7$ cm

Well S-76 (126-128')
GW level from ground surface = 11.0'
Casing stick up from ground level = 1.0'
Depth of borehole below ground level = 128.0'
Casing diameter = 3.0"
H_o = 144.0"

Time (t) (seconds)	H (inches)	H/H_o	Time (t) (seconds)	H (inches)	H/H_o
0	144	1.00	720	137.40	0.95
30	143,16	0.99	780	137.16	0.95
60	142.68	0.99	840	136.80	0.95
90	142.2	0.99	900	136.68	0.95
120	141.72	0.98	960	136.44	0.95
150	141.48	0.98	1020	136.20	0.95
180	141.24	0.98	1080	135.84	0.94
210	140.88	0.98	1140	135.72	0.94
240	140.52	0.98	1200	135.48	0.94
270	140.40	0.98	1260	135.12	0.94
300	139.92	0.97	1320	135.00	0.94
360	139.68	0.97	1380	135.00	0.94
420	139.20	0.97	1440	134.76	0.94
480	138.84	0.96	1500	134.64	0.94
540	138.36	0.96	1560	134.40	0.93
600	138.00	0.96	1620	134.16	0.93
660	137.52	0.96	1680	134.04	0.93



TIME (T) SECONDS

DRAWDOWN CURVE

H/H₀ vs TIME

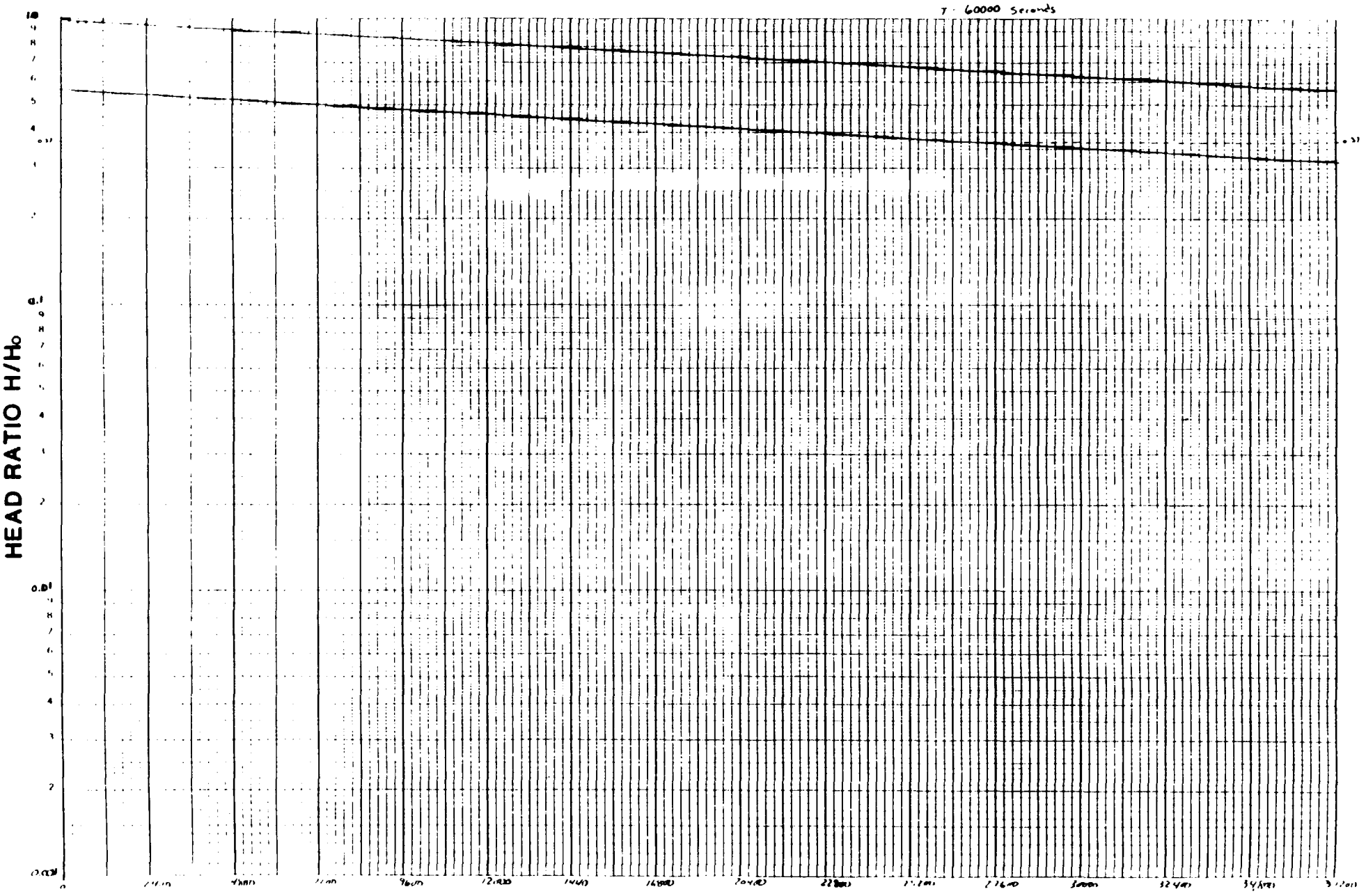
WELL S 76 (126-128')

NUS CORPORATION

A Halliburton Company

Well S-77 (30-32')
GW level from ground surface = 5.0'
Casing stick up from ground level = 2.0'
Depth of borehole below ground level = 32.0'
Casing diameter = 3.0"
H_o = 84.0"

Time (t) (seconds)	H (inches)	H/H_o	Time (t) (seconds)	H (inches)	H/H_o
0	84.00	1.00	720	81.50	0.97
30	83.5	0.99	780	81.50	0.97
60	83.12	0.99	840	81.37	0.97
90	83.00	0.99	900	81.25	0.97
120	82.87	0.99	1200	81.12	0.97
150	82.75	0.99	1500	80.50	0.96
180	82.62	0.98	1800	80.25	0.96
210	82.50	0.98	2100	80.00	0.95
240	82.37	0.98	24.00	79.75	0.95
270	82.25	0.98	2700	79.50	0.95
300	82.12	0.98	3000	79.25	0.94
360	82.00	0.98	3300	79.00	0.94
420	82.00	0.98	3600	78.75	0.94
480	81.87	0.97			
540	81.87	0.97			
600	81.75	0.97			
660	81.62	0.97			



DRAWDOWN CURVE

H/Ho vs TIME

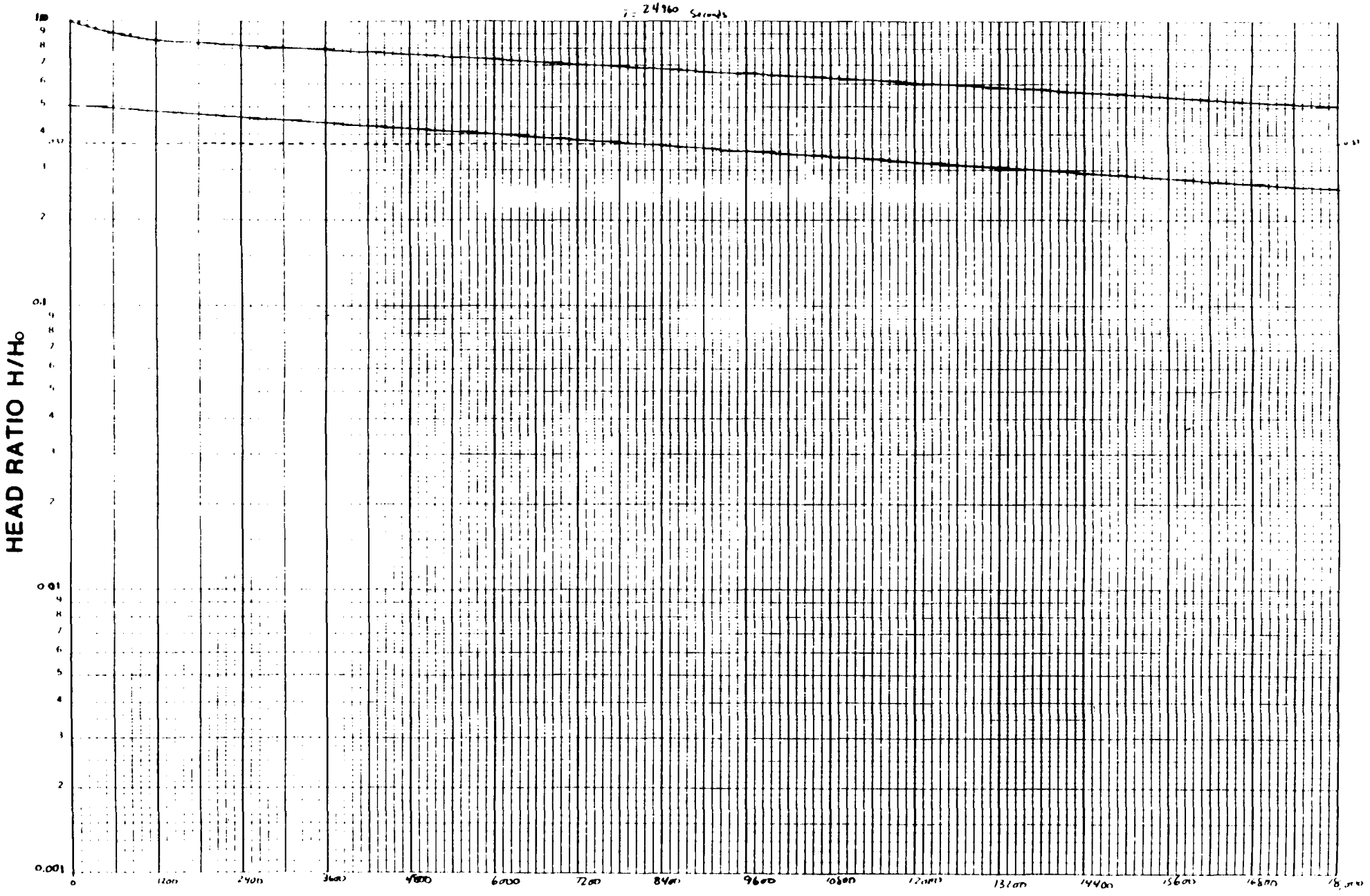
WELL S 77 (30-32')

NUS CORPORATION

A Halliburton Company

Well S-77 (73-75')
GW level from ground surface = 5.0'
Casing stick up from ground level = 2.0'
Depth of borehole below ground level = 75.0'
Casing diameter = 3.0"
H_o = 84.0"

Time (t) (seconds)	H (inches)	H/H_o	Time (t) (seconds)	H (inches)	H/H_o
0	84.00	1.00	510	77.25	0.92
30	83.40	0.99	540	77.00	0.92
60	83.00	0.99	570	76.62	0.91
90	82.62	0.98	600	76.25	0.91
120	82.25	0.98	660	75.75	0.90
150	81.62	0.97	720	75.12	0.89
180	01.37	0.97	780	74.75	0.89
210	81.00	0.96	840	74.37	0.89
240	80.75	0.96	900	73.87	0.88
270	80.25	0.96	960	73.37	0.87
300	79.75	0.95	1020	73.00	0.87
330	79.37	0.94	1080	72.62	0.86
360	79.00	0.94	1140	72.50	0.86
390	78.75	0.94	1200	72.12	0.86
420	78.50	0.93	1500	71.00	0.85
450	78.12	0.93	1800	70.00	0.83
480	77.50	0.92	2100	69.50	0.83



TIME (T) SECONDS

DRAWDOWN CURVE

H/Ho vs TIME

WELL S 77 (73-75')

NUS CORPORATION

A Halliburton Company

Well No. S-84 (16-18') Brown sand, some gravel.

Basic Time Lag

$$K = \frac{\pi D}{11 T} \qquad D = 7.62 \text{ cm} \quad T = 80160 \text{ sec}$$

$$K = \frac{\pi (7.62)}{11 (80160)}$$

$$K = 2.7 \times 10^{-5} \text{ cm/sec}$$

Falling Head

$$K = \frac{\pi D}{11 (t_2 - t_1)} \ln \frac{H_1}{H_2}$$

$$K = \frac{\pi (7.62)}{11 (3900)} \ln \frac{213.4}{203.5}$$

$$K = 2.63 \times 10^{-5} \text{ cm/sec}$$

$D = 7.62$ cm
$t_2 = 3900$ sec
$t_1 = 0$
$H_1 = 213.4$ cm
$H_2 = 203.5$ cm

Well No. S-84 (78-80') Brown gravel and sand, trace silt.

Basic Time Lag

$$K = \frac{\pi D}{11 T} \qquad D = 7.62 \text{ cm} \quad T = 19680 \text{ sec}$$

$$K = \frac{\pi (7.62)}{11 (19680)}$$

$$K = 1.1 \times 10^{-4} \text{ cm/sec}$$

Falling Head

$$K = \frac{\pi D}{11 (t_2 - t_1)} \ln \frac{H_1}{H_2}$$

$$K = \frac{\pi (7.62)}{11 (3600)} \ln \frac{213.4}{177.8}$$

$$K = 1.1 \times 10^{-4} \text{ cm/sec}$$

$D = 7.62$ cm
$t_2 = 3600$ sec
$t_1 = 0$
$H_1 = 213.4$ cm
$H_2 = 177.8$ cm

Well No. S-85 (15-17') Light gray fine sand.

Basic Time Lag

$$K = \frac{\pi D}{11 T} \qquad D = 7.62 \text{ cm} \quad T = 4050 \text{ sec}$$

$$K = \frac{\pi (7.62)}{11 (4050)}$$

$$K = 5.37 \times 10^{-4} \text{ cm/sec}$$

Falling Head

$$K = \frac{\pi D}{11 (t_2 - t_1)} \ln \frac{H_1}{H_2}$$

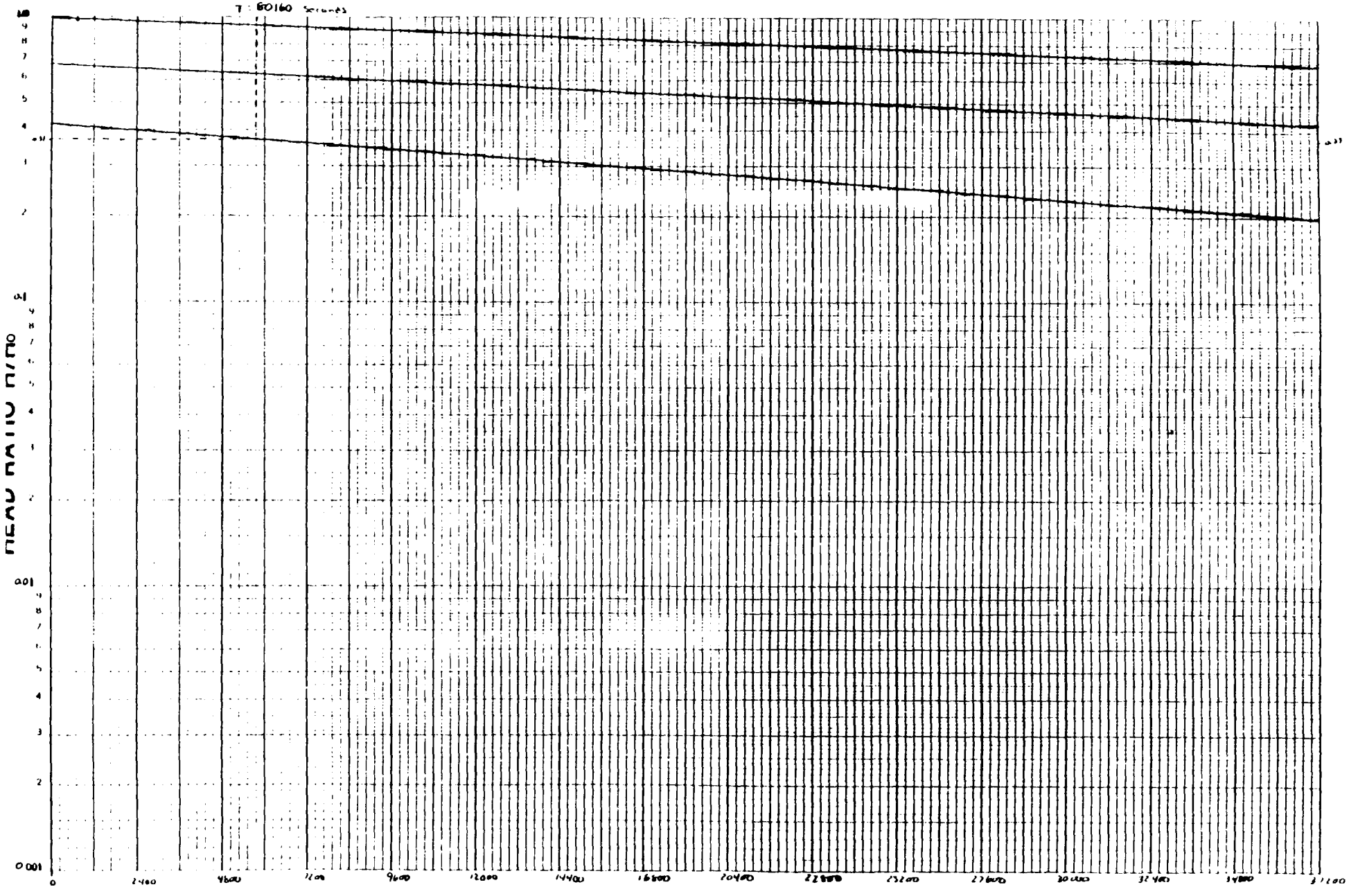
$$K = \frac{\pi (7.62)}{11 (3630)} \ln \frac{106.7}{44.0}$$

$$K = 5.30 \times 10^{-4} \text{ cm/sec}$$

$D = 7.62$ cm
$t_2 = 3630$ sec
$t_1 = 0$
$H_1 = 106.7$ cm
$H_2 = 44.0$ cm

Well S-84 (16-18')
GW level from ground surface = 5.0'
Casing stick up from ground level = 2.0'
Depth of borehole below ground level = 18.0'
Casing diameter = 3.0"
H_o = 84.0"

Time (t) (seconds)	H (inches)	H/H_o	Time (t) (seconds)	H (inches)	H/H_o
0	84"	1.00	720	82.56	0.98
30	83.94	1.00	780	82.50	0.98
60	83.75	1.00	840	82.50	0.98
90	83.62	1.00	900	82.44	0.98
120	83.50	0.99	1200	82.12	0.98
150	83.37	0.99	1500	82.00	0.98
180	83.37	0.99	1800	81.81	0.97
210	83.25	0.99	2100	81.75	0.97
240	83.12	0.99	2400	81.50	0.97
270	83.12	0.99	2700	81.37	0.97
300	83.12	0.99	3000	80.50	0.96
360	83.00	0.99	3300	80.62	0.96
420	83.00	0.99	3600	80.37	0.96
480	82.87	0.99	3900	80.12	0.95
540	82.75	0.99			
600	82.69	0.98			
660	82.62	0.98			



TIME (T) SECONDS

DRAWDOWN CURVE

H/H₀ vs TIME

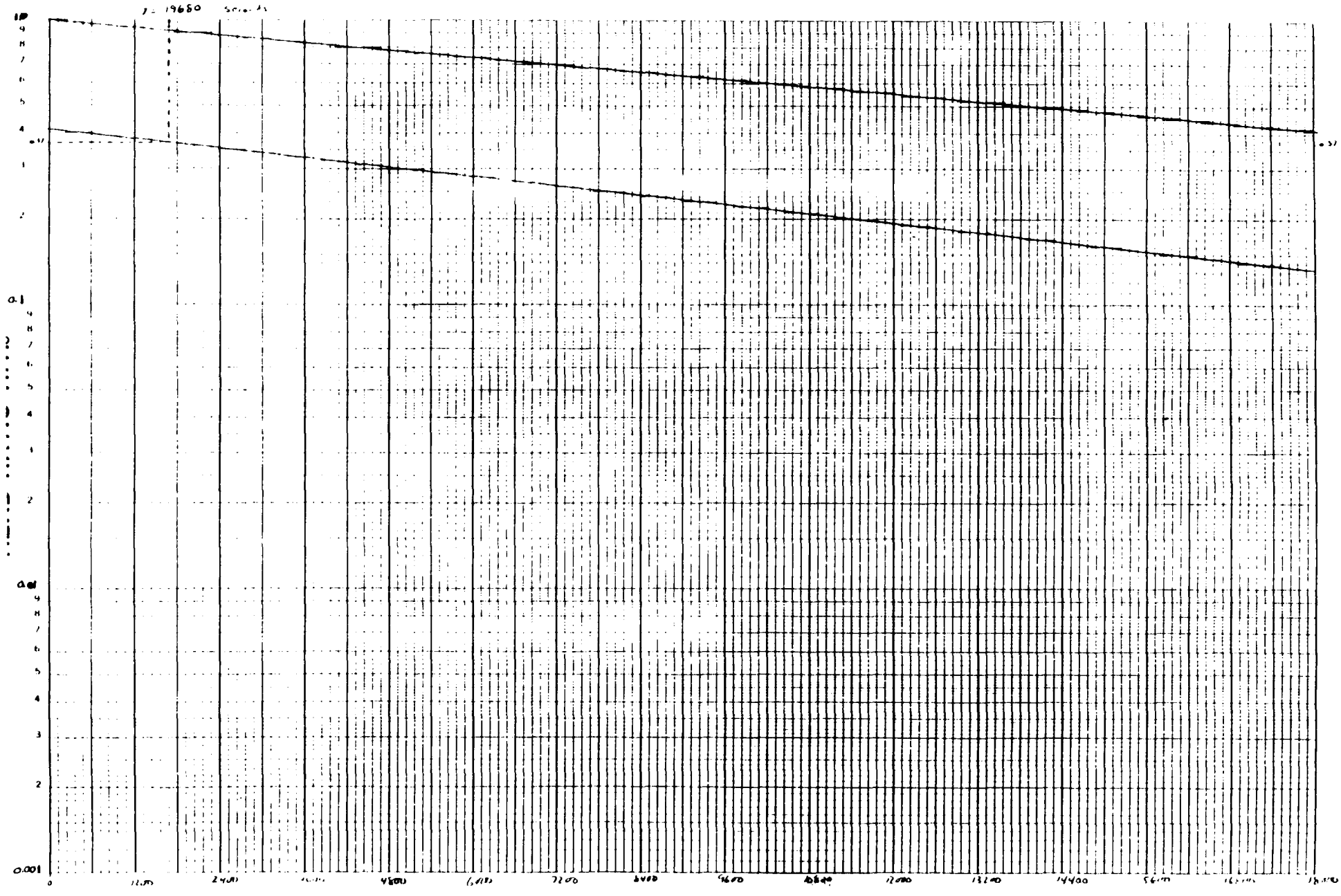
WELL S 84 (16-18')

NUS CORPORATION

A Halliburton Company

Well S-84 (78-80')
GW level from ground surface = 5.0'
Casing stick up from ground level = 2.0'
Depth of borehole below ground level = 80.0'
Casing diameter = 3.0"
H_o = 84.0"

Time (t) (seconds)	H (inches)	H/H_o	Time (t) (seconds)	H (inches)	H/H_o
0	84.00	1.00	1200	79.62	0.95
30	84.00	1.00	1500	78.00	0.93
60	83.87	1.00	1800	76.87	0.92
90	83.75	1.00	2100	75.00	0.89
120	83.62	1.00	2400	74.00	0.88
150	83.37	0.99	2700	73.00	0.87
180	83.00	0.99	3000	72.00	0.86
210	82.87	0.99	3300	71.00	0.85
240	82.81	0.99	3600	70.00	0.83
270	82.75	0.99			
300	82.63	0.98			
360	82.13	0.98			
420	82.00	0.98			
480	81.87	0.97			
540	81.75	0.97			
600	81.50	0.97			
900	81.37	0.97			



TIME (T) SECONDS

DRAWDOWN CURVE

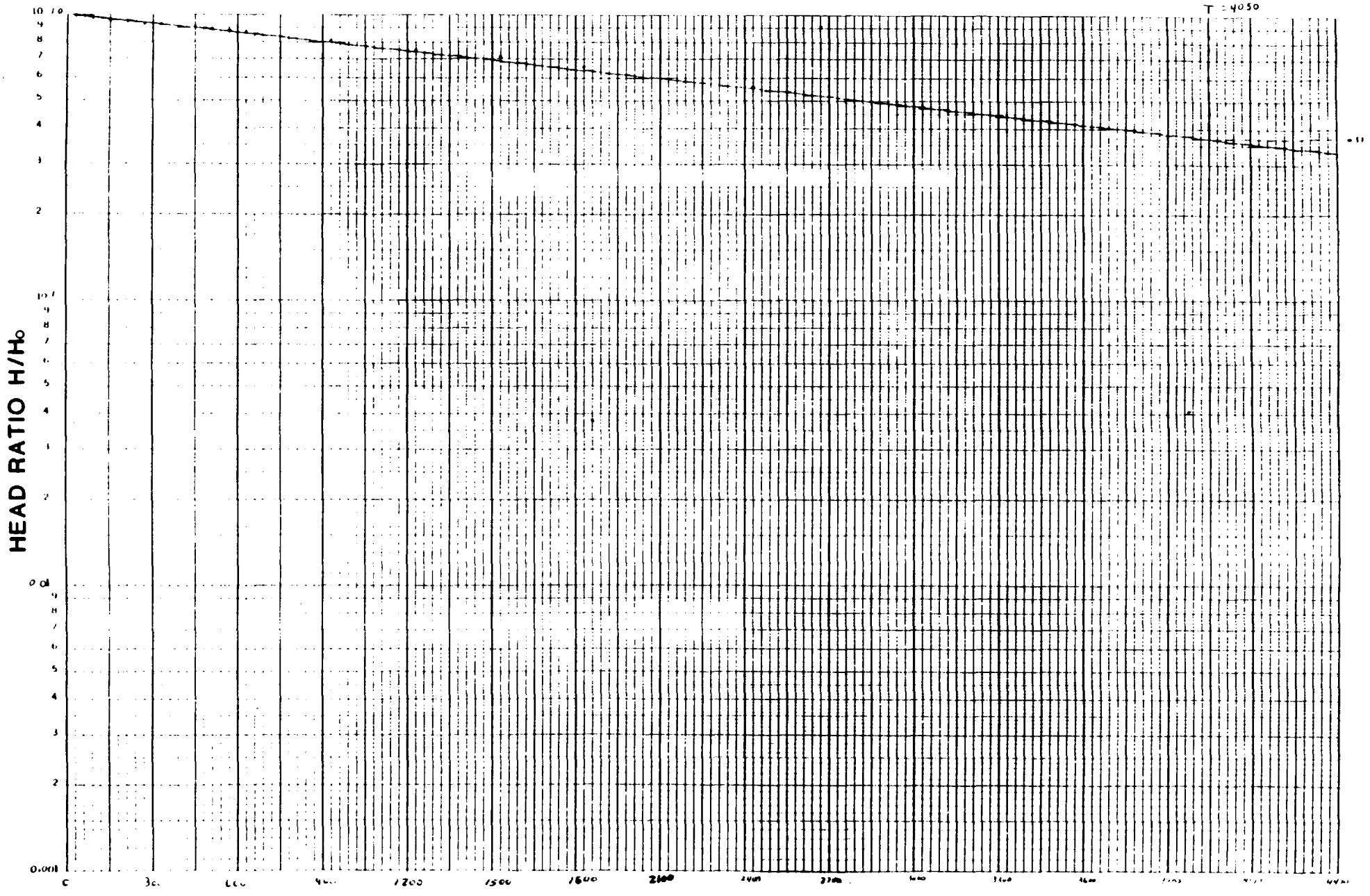
H/H₀ vs TIME

WELL S 84 (78-80')

NUS CORPORATION

Well S-85 (15-17')
GW level from TOC = 3.5'
Casing stick up from ground level = 2.5'
Depth of borehole below ground level = 17.0'
Casing diameter = 3.0"
H_o = 42.0"

Time (t) (seconds)	H (inches)	H/H_o	Time (t) (seconds)	H (inches)	H/H_o
0	42.00	1.00	930	34.12	0.81
30	41.88	1.00	1230	31.62	0.75
60	41.75	0.99	1530	29.62	0.71
90	41.00	0.98	1830	27.87	0.66
120	40.62	0.97	2430	23.62	0.56
150	40.37	0.96	3030	20.12	0.48
180	40.25	0.96	3630	17.32	0.41
210	40.00	0.95			
240	39.75	0.95			
270	39.25	0.93			
300	39.12	0.93			
330	39.00	0.93			
390	38.50	0.92			
450	38.12	0.91			
510	37.25	0.89			
570	36.50	0.87			
630	36.5	0.87			



TIME (T) SECONDS

DRAWDOWN CURVE

H/Ho vs TIME

WELL S 85 (15-17')

NUS CORPORATION

Well No. S-85 (35-37') Brown sand, some gravel.

Basic Time Lag

$$K = \frac{\pi D}{11 T} \qquad D = 7.62 \text{ cm} \quad T = 16080 \text{ sec}$$

$$K = \frac{\pi (7.62)}{11 (16080)}$$

$$K = 1.35 \times 10^{-4} \text{ cm/sec}$$

Falling Head

$$K = \frac{\pi D}{11 (t_2 - t_1)} \ln \frac{H_1}{H_2}$$

$$K = \frac{\pi (7.62)}{11 (3600)} \ln \frac{106.7}{75.2}$$

$$K = 2.11 \times 10^{-4} \text{ cm/sec}$$

$D = 7.62$ cm
$t_2 = 3600$ sec
$t_1 = 0$
$H_1 = 106.7$ cm
$H_2 = 75.2$ cm

Well No. S-86 (50-52') Brown sand, trace gravel and silt.

Basic Time Lag

$$K = \frac{\pi D}{11 T} \qquad D = 7.62 \text{ cm} \quad T = 21000 \text{ sec}$$

$$K = \frac{\pi (7.62)}{11 (21000)}$$

$$K = 1.04 \times 10^{-4} \text{ cm/sec}$$

Falling Head

$$K = \frac{\pi D}{11 (t_2 - t_1)} \ln \frac{H_1}{H_2}$$

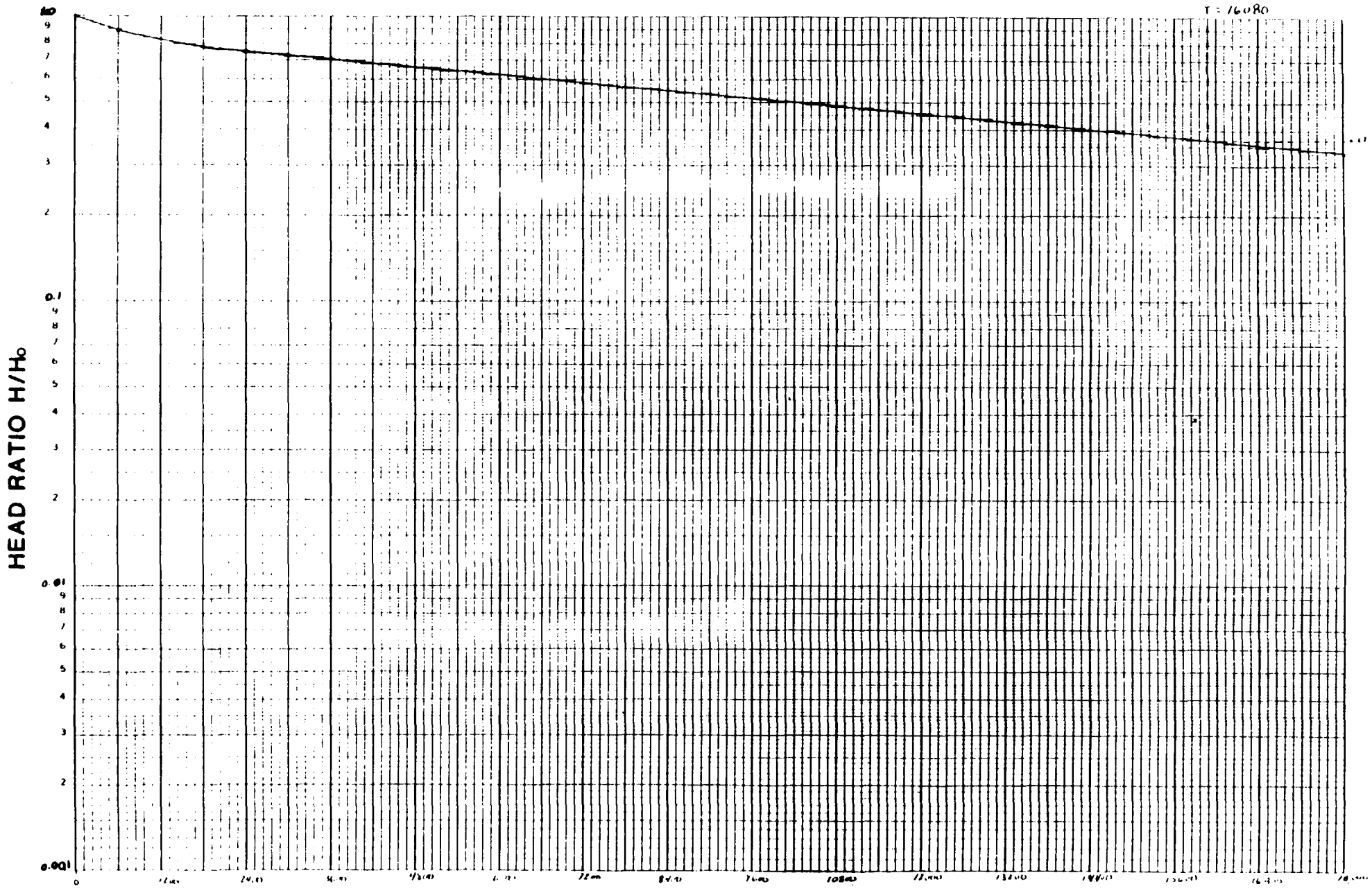
$$K = \frac{\pi (7.62)}{11 (3600)} \ln \frac{137.2}{107.0}$$

$$K = 1.50 \times 10^{-4} \text{ cm/sec}$$

$D = 7.62$ cm
$t_2 = 3600$ sec
$t_1 = 0$
$H_1 = 137.2$ cm
$H_2 = 107.0$ cm

Well S-85 (35-37')
GW level from TOC = 3.5'
Casing stick up from ground level = 2.68'
Depth of borehole below ground level = 37.0'
Casing diameter = 3.0"
H_o = 42.0"

Time (t) (seconds)	H (inches)	H/H_o	Time (t) (seconds)	H (inches)	H/H_o
0	42.00	1.00	1200	34.75	0.83
30	41.75	0.99	1500	33.75	0.80
60	40.87	0.97	1800	32.87	0.78
90	40.25	0.96	2400	31.62	0.75
120	39.87	0.95	3000	30.50	0.73
150	39.62	0.94	3600	29.62	0.71
180	39.32	0.94			
210	39.25	0.93			
240	39.12	0.93			
270	39.00	0.93			
300	38.87	0.93			
360	38.50	0.92			
420	38.12	0.91			
480	38.00	0.90			
540	37.62	0.90			
600	37.25	0.89			
900	36.00	0.85			



DRAWDOWN CURVE

H/Ho vs TIME

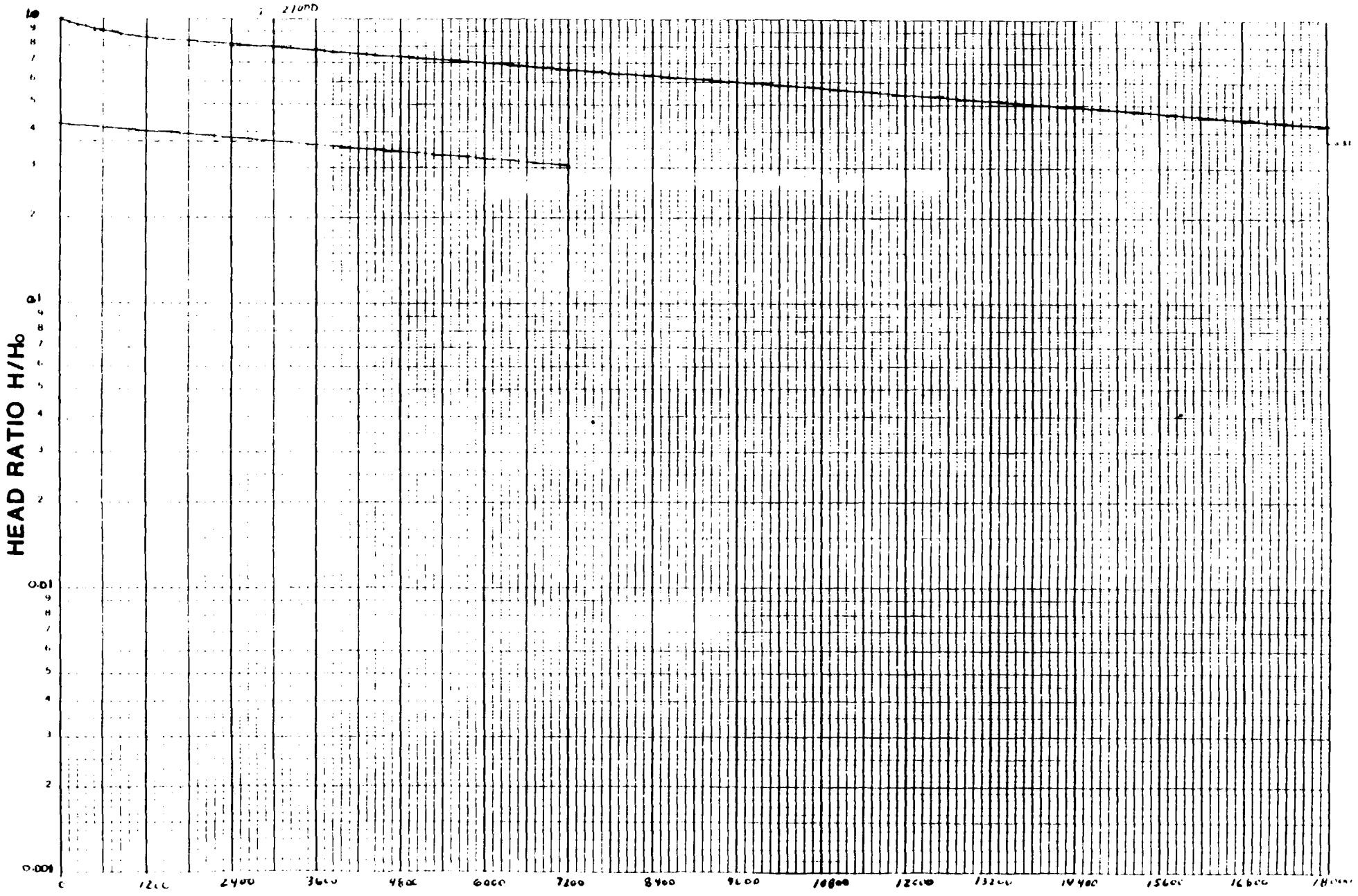
WELL S 85 (35-37')

NUS CORPORATION

A Halliburton Company

Well S-86 (50-52')
GW level from ground surface = 2.0'
Casing stick up from ground level = 2.5'
Depth of borehole below ground level = 52.0'
Casing diameter = 3.0"
H_o = 54.0"

Time (t) (seconds)	H (inches)	H/H_o	Time (t) (seconds)	H (inches)	H/H_o
0	54	1.00	720	48.50	0.90
30	53.50	0.99	780	48.00	0.89
60	53.00	0.98	840	47.75	0.88
90	52.87	0.98	900	47.50	0.88
120	52.62	0.97	1200	46.50	0.86
150	52.12	0.97	1500	45.50	0.84
180	52.00	0.96	1800	45.25	0.84
210	51.62	0.96	2100	44.75	0.83
240	51.25	0.95	2400	43.50	0.81
270	51.12	0.95	2700	42.87	0.79
300	50.87	0.94	3000	42.75	0.79
*360	50.5	0.94	3300	42.12	0.78
420	50.12	0.93	3600	42.12	0.78
480	49.75	0.92			
540	49.50	0.92			
600	48.87	0.91			
660	48.75	0.90			



TIME (T) SECONDS

DRAWDOWN CURVE

H/Ho vs TIME

WELL S 86 (50-52')

NUS CORPORATION

PERMEABILITY FROM GRAIN SIZE ANALYSIS*

Borehole	Depth (feet)	Particle** Size D_{10} (cm)	Permeability (cm/sec)	Sample description	Remarks
S-63	13	1.5×10^{-3}	2.25×10^{-4}	Brown sand, little gravel, trace silt	Low
S-64M	9	9.0×10^{-5}	8.1×10^{-7}	Brown sand, little gravel, trace silt	Very Low
S-64M	32	8.0×10^{-5}	6.4×10^{-7}	Brown silty sand, little clay and gravel	Very Low
S-66D	10	7.0×10^{-5}	4.9×10^{-7}	Brown silty sand, little clay	Very Low
S-67	15	8.5×10^{-5}	7.22×10^{-7}	Brown silty sand, little clay and gravel	Very Low
S-67	40	7.5×10^{-4}	5.62×10^{-5}	Brown and gray sand, little silt, trace gravel	Low
S-70	15	6.0×10^{-4}	3.6×10^{-5}	Brown and gray silty sand, some gravel, trace clay	Low
S-70D	35	5.0×10^{-5}	2.5×10^{-7}	Gray silty sand, some gravel, little clay	Very Low
S-70D	55	1.5×10^{-3}	2.25×10^{-4}	Brown sand, little gravel, trace silt and clay	Low
S-71	0	7.0×10^{-4}	4.9×10^{-5}	Black gravel, some sand, little silt	Low
S-71	2	8.0×10^{-4}	6.4×10^{-5}	Gray gravel and sand, little silt	Low
S-71	4	8.5×10^{-4}	7.22×10^{-5}	Gray sand, some gravel, little silt	Low

* Lambe & Whitman, Soil Mechanics p. 290

** D_{10} = the particle size where only 10 percent of sample is finer.

PERMEABILITY FROM GRAIN SIZE ANALYSIS* PAGE TWO

Borehole	Depth (feet)	Particle** Size D_{10} (cm)	Permeability (cm/sec)	Sample description	Remarks
S-71	6	3.0×10^{-4}	9.0×10^{-6}	Gray silty sand, some gravel, trace clay	Very Low
S-71	8	2.3×10^{-4}	5.29×10^{-6}	Gray sand, some gravel and silt	Very Low
S-71	10	6.0×10^{-4}	3.6×10^{-5}	Brown gravel, some sand, little silt	Low
S-71	12	6.0×10^{-4}	3.6×10^{-5}	Gray silty sand, some gravel, little silt	Low
S-71	14	2.3×10^{-3}	5.29×10^{-4}	Brown gravel and sand, trace silt	Low
S-72D	35	1.5×10^{-4}	2.25×10^{-6}	Gray and brown mottled sandy silt trace clay	Very Low
S-72D	55	1.3×10^{-4}	1.69×10^{-6}	Gray and brown mottled sandy silt, trace clay	Very Low
S-72D	80	1.5×10^{-3}	2.25×10^{-4}	Gray sand, trace silt	Low
S-74M	39	7.0×10^{-4}	4.9×10^{-5}	Brown sand, little silt	Low
S-74M	34	1.5×10^{-4}	2.25×10^{-6}	Brown silty sand, trace clay	Very Low
S-75D	10	2.0×10^{-3}	4.0×10^{-4}	Brown sand, little gravel, trace silt	Low
S-75D	40	6.0×10^{-4}	3.6×10^{-5}	Gray silty sand, trace clay	Low
S-75D	65	2.0×10^{-4}	4.0×10^{-6}	Gray and brown mottled sandy silt, trace clay	Very Low

* Lambe & Whitman, Soil Mechanics p. 290

** D_{10} = the particle size where only 10 percent of sample is finer.

PERMEABILITY FROM GRAIN SIZE ANALYSIS* PAGE THREE

Borehole	Depth (feet)	Particle** Size D_{10} (cm)	Permeability (cm/sec)	Sample description	Remarks
S-76	21	1.8×10^{-4}	3.24×10^{-6}	Brown silty sand, trace clay	Very Low
S-76M	60	4.5×10^{-4}	2.02×10^{-5}	Brown silty sand, trace clay	Low
S-77	20	1.5×10^{-3}	2.25×10^{-4}	Brown sand trace gravel	Low
S-77D	70	2.2×10^{-3}	4.84×10^{-4}	Brown sand, trace gravel	Low
S-77D	120	3.2×10^{-5}	1.02×10^{-7}	Brown and gray mottled sandy silt, some clay, little sand	Very Low
S-78	17	8.0×10^{-4}	6.4×10^{-5}	Brown sand trace gravel	Low
S-78	63	3.5×10^{-5}	1.22×10^{-7}	Brown and gray silty sand, little clay	Very Low
S-79	14	1.7×10^{-3}	2.89×10^{-4}	Brown sand, trace silt	Low
S-79	69	6.5×10^{-4}	4.22×10^{-5}	Brown sand, little gravel and silt	Low
S-80	8	1.5×10^{-4}	2.25×10^{-6}	Gray silty sand, trace clay	Very Low
S-80	-	7.0×10^{-4}	4.9×10^{-5}	Brown sand, some gravel, little silt, trace clay	Low
S-82	10	5.0×10^{-4}	2.5×10^{-5}	Brown and gray silty sand, some gravel, trace clay	Low
S-82	20	7.5×10^{-4}	5.62×10^{-5}	Brown sand, little silt, trace gravel	Low

* Lambe & Whitman, Soil Mechanics p. 290

** D_{10} = the particle size where only 10 percent of sample is finer.

PERMEABILITY FROM GRAIN SIZE ANALYSIS* PAGE FOUR

Borehole	Depth (feet)	Particle** Size D_{10} (cm)	Permeability (cm/sec)	Sample description	Remarks
S-82	35	4.0×10^{-5}	1.6×10^{-7}	Brown silty sand, some gravel, little clay	Very Low
S-83	40	1.7×10^{-3}	2.89×10^{-4}	Brown sand, some gravel, trace silt	Low
S-83	60	2.5×10^{-3}	6.25×10^{-4}	Brown sand, trace gravel	Low
S-83	80	3.0×10^{-4}	9.0×10^{-6}	Brown silty sand, little gravel, trace clay	Very Low
S-84	10	2.5×10^{-3}	6.25×10^{-4}	Brown sand, some gravel	Low
S-84	40	1.5×10^{-3}	2.25×10^{-4}	Brown sand, some gravel, trace silt	Low
S-84	65	1.0×10^{-3}	1.0×10^{-4}	Brown gravel and sand, trace silt	Low
S-85	34	2.8×10^{-3}	7.84×10^{-4}	Brown sand, some gravel	Low
S-85	59	2.2×10^{-4}	4.84×10^{-6}	Brown and gray silty sand, some gravel, trace clay	Very Low
S-86D	25	2.0×10^{-3}	4.0×10^{-4}	Brown gravel and sand	Low
S-86D	50	2.3×10^{-3}	5.29×10^{-4}	Brown sand, trace gravel and silt	Low

* Lambe & Whitman, Soil Mechanics p. 290

** D_{10} = the particle size where only 10 percent of sample is finer.

MOISTURE AND GRADATION ANALYSIS

Gradation

Percentage Retained on Standard Sieve

BORING NUMBER	SAMPLE NUMBER	DEPTH (FT.)	MOISTURE (%)	3/4	4	10	20	40	60	140	200	SILT (%)	CLAY (%)	SOIL CLASS
S63	1	13	7.5	11.4	10.9	12.2	15.5	13.1	10.0	22.7	0.6	**	3.6	SP
S64M	2	9	16.1	0.0	0.8	3.2	10.1	18.4	23.2	17.0	1.5	20.0	5.8	SM
S64M	3	32	13.4	3.9	12.9	4.7	6.6	7.3	9.8	28.4	0.8	17.4	8.2	SM
S66D	5	10	7.5	0.0	12.6	6.0	8.9	12.0	10.0	16.3	4.6	21.2	8.4	SM
S67	6	15	9.1	10.1	12.3	7.9	8.9	10.5	9.5	13.7	3.1	17.1	6.9	SM
S67	7	40	18.3	0.0	0.1	0.1	0.3	2.0	28.0	54.0	5.5	8.9	1.1	SP-SM
70	8	15	4.3	5.0	24.6	15.8	15.3	10.3	6.7	8.1	1.2	9.3	3.7	SM
70D	9	35	5.0	19.7	6.9	7.2	8.1	8.4	17.1	1.1	2.1	19.5	9.9	SM
70D	10	55	10.9	9.2	10.7	13.1	16.6	17.7	13.2	11.4	1.7	5.3	1.1	SP-SM
Unifirst	11	0	7.6	21.1	45.2	5.4	4.7	3.3	2.6	4.4	1.4	10.8	1.1	GM
Unifirst	12	2	1.6	17.1	29.0	12.4	10.5	8.1	5.4	5.6	2.1	8.8	1.0	GP-GM
Unifirst	13	4	0.7	0.0	42.2	3.7	12.8	8.9	9.6	9.6	5.2	7.0	1.0	SP-SM
Unifirst	14	6	3.3	13.8	24.7	10.6	9.5	7.4	5.8	8.8	1.9	12.4	5.1	SM
Unifirst	15	8	2.5	25.1	12.8	7.5	8.0	7.5	6.5	10.1	2.2	14.9	5.4	SM

** Hydrometer Analysis Not Performed

MOISTURE AND GRADATION ANALYSIS

Gradation

Percentage Retained on Standard Sieve

BORING NUMBER	SAMPLE NUMBER	DEPTH (FT.)	MOISTURE (%)	3/4	4	10	20	40	60	140	200	SILT (%)	CLAY (%)	SOIL CLASS
Unifirst	16	10	0.8	32.0	18.3	4.7	6.7	6.7	5.6	9.3	2.8	12.6	1.3	GM
Unifirst	17	12	0.8	0.0	31.0	5.3	7.7	10.3	10.6	19.2	0.5	14.2	1.2	SM
Unifirst	18	14	5.1	24.2	31.5	9.5	8.5	8.3	6.8	9.4	1.6	**	0.2	GP
S72R	19	35	19.9	0.0	0.0	0.0	0.0	0.2	1.0	40.2	3.2	51.0	4.4	ML
S72R	20	55	19.7	0.0	0.2	0.5	0.5	0.3	0.2	40.0	1.2	52.6	4.5	ML
S72R	21	80	14.9	0.0	0.0	0.5	17.3	39.0	23.0	12.5	1.7	5.0	1.0	SP
S74M	22	39	19.6	0.0	0.0	0.1	0.0	37.7	27.4	20.8	2.8	10.2	1.0	SP
S74M	23	34	17.8	0.0	0.0	0.1	2.2	6.4	11.5	28.7	4.4	42.5	4.2	SM
S75D	24	10	6.7	0.0	13.9	12.0	26.5	24.9	10.0	7.3	0.5	**	4.9	SP
S75D	25	40	20.9	0.0	0.4	2.6	10.0	22.7	44.5	2.6	2.3	13.9	1.0	SM
S75D	26	65	19.2	0.0	0.0	0.1	0.7	2.3	3.3	8.0	1.8	77.2	6.6	ML
S76	27	21	19.8	0.0	0.0	0.0	0.0	0.3	0.6	57.5	2.8	35.5	3.3	SM
S76M	28	60	21.3	0.0	0.0	0.0	0.0	0.3	10.0	61.8	9.3	17.4	1.2	SM
S77	29	20	19.0	0.0	0.3	0.3	0.2	1.3	19.5	70.7	4.5	**	3.2	SP

** Hydrometer Analysis Not Performed

MOISTURE AND GRADATION ANALYSIS

Gradation

Percentage Retained on Standard Sieve

BORING NUMBER	SAMPLE NUMBER	DEPTH (FT.)	MOISTURE (%)	3/4	4	10	20	40	60	140	200	SILT (%)	CLAY (%)	SOIL CLASS
S77D	30	70	14.3	0.0	0.1	5.3	22.5	36.0	23.1	8.4	0.6	**	4.0	SP
S77D	31	120	17.3	0.0	0.0	0.0	0.0	0.0	0.1	4.7	3.2	78.0	14.0	ML
S78	32	17	19.0	0.0	0.5	1.6	1.9	2.8	17.4	59.7	7.2	**	8.9	SP
S78	33	63	20.4	0.0	0.0	0.0	0.1	0.2	4.6	48.7	5.9	28.4	12.1	SM
S79	34	14	20.1	0.0	0.0	0.5	1.5	7.1	30.2	57.3	1.4	**	2.0	SP
S79	35	69	15.7	0.0	16.4	14.9	11.4	6.4	3.9	33.8	1.4	10.6	1.2	SP-SM
S80	36	8	24.8	0.0	0.0	0.3	0.9	1.1	4.2	50.6	2.2	36.7	4.0	SM
S80	37	--	5.0	9.8	11.6	4.3	10.5	14.1	14.9	20.9	3.1	9.5	1.3	SP-SM
S82	38	10	12.3	0.0	22.3	9.4	9.8	10.1	8.6	21.3	2.7	14.7	1.1	SM
S82	39	20	18.9	0.0	1.3	0.9	1.4	5.8	24.9	54.0	1.3	9.4	1.0	SP-SM
S82	40	35	8.9	0.0	18.5	5.9	7.9	8.7	9.1	18.5	2.7	17.7	11.0	SM
S83	41	40	11.2	14.1	5.6	5.8	15.3	16.3	15.7	21.1	0.9	**	5.2	SP-SM
S83	42	60	12.7	3.6	4.0	13.3	27.1	26.2	16.8	2.1	0.7	**	6.2	SP-SM
S83	43	80	14.9	6.1	7.5	0.4	3.5	4.7	2.1	47.1	1.0	25.6	2.0	SM

** Hydrometer Analysis Not Performed

MOISTURE AND GRADATION ANALYSIS

Gradation

Percentage Retained on Standard Sieve

BORING NUMBER	SAMPLE NUMBER	DEPTH (FT.)	MOISTURE (%)	3/4	4	10	20	40	60	140	200	SILT (%)	CLAY (%)	SOIL CLASS
S84	44	10	8.4	12.3	29.7	16.3	17.8	9.4	4.7	5.2	0.8	**	3.8	SP
S84	45	40	9.0	15.4	17.6	5.2	10.7	17.2	13.8	11.7	1.1	6.3	1.0	SP-SM
S84	46	65	6.0	13.5	38.5	14.3	6.7	3.3	3.8	8.6	1.6	8.2	1.5	GP-GM
S85	47	34	10.1	15.8	26.0	11.1	14.1	14.9	10.5	4.1	0.4	**	3.1	SP
S85	48	59	7.7	10.3	21.1	12.2	9.5	5.8	5.1	11.1	2.4	17.5	5.0	SM
S86D	49	25	4.5	24.7	31.4	10.3	10.0	6.7	4.4	6.1	1.3	**	5.1	GP-GM
S86D	50	50	18.2	0.0	2.8	0.1	0.2	2.4	38.2	50.2	2.0	**	4.1	SP

** Hydrometer Analysis Not Performed

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

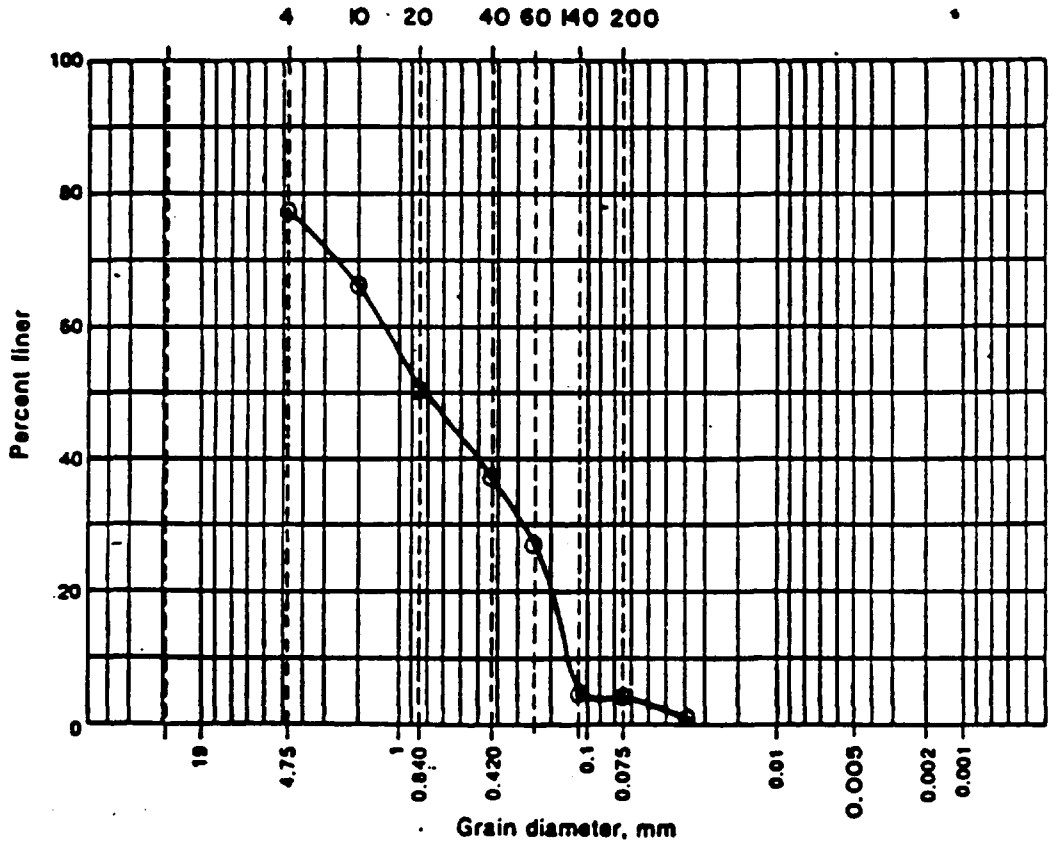
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-63 DEPTH OF SAMPLE 13 FT. MOISTURE 7.5 %

VISUAL DESCRIPTION OF SAMPLE Brown SAND, little gravel, trace silt (SP)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL 22.3 %	SAND 74.1 %	SILT *** %	CLAY 3.6 %

REMARKS *** Hydrometer Analysis not performed

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

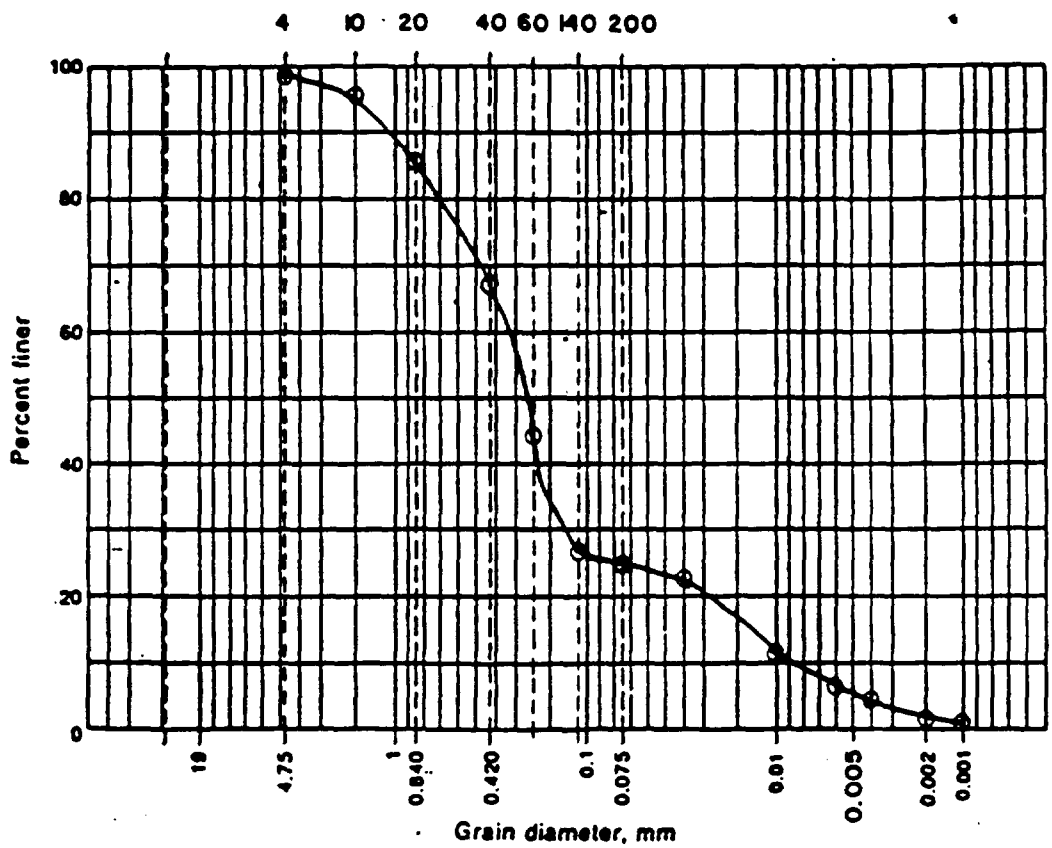
LOCATION WOBURN, MA DATE 9/29/85

BORING NO S-64M DEPTH OF SAMPLE 9 FT. MOISTURE 16.1 %

VISUAL DESCRIPTION OF SAMPLE Brown SILTY SAND, little clay, trace gravel [SM]

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
0.8 %	73.4 %	20.0 %	5.8 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

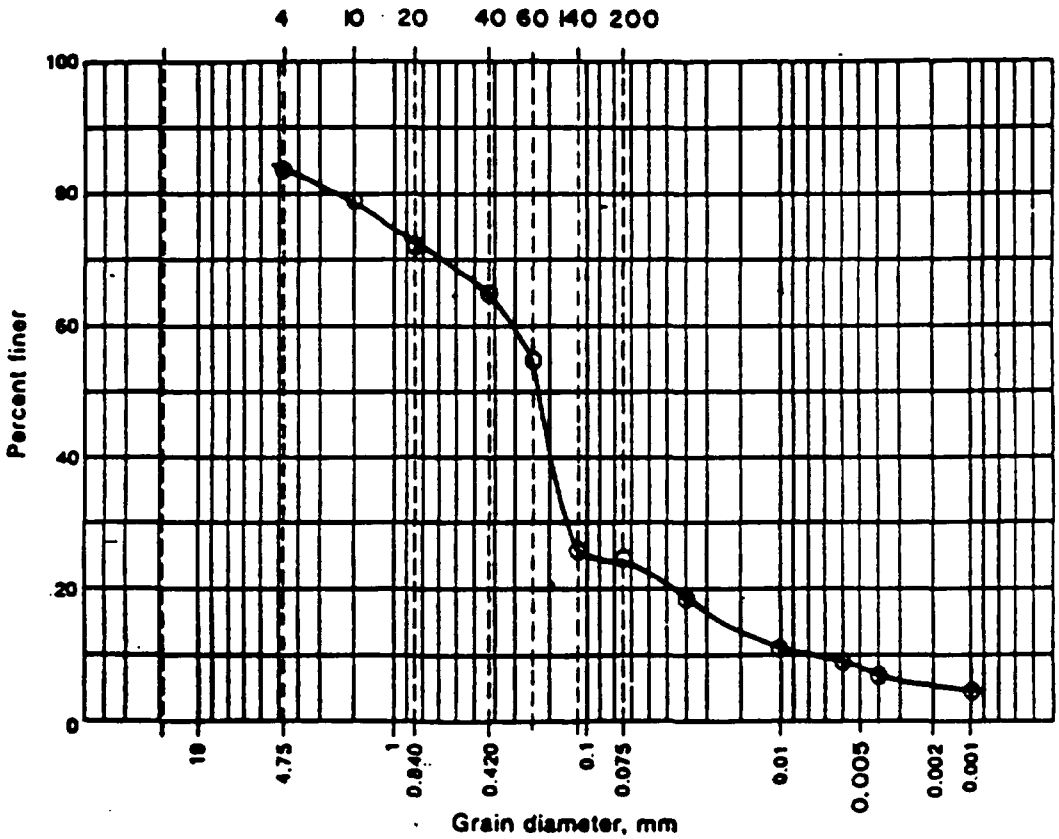
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-64M DEPTH OF SAMPLE 32 FT. MOISTURE 13.4 %

VISUAL DESCRIPTION OF SAMPLE Brown SILTY SAND, little clay and gravel (SM)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
16.8 %	57.6 %	17.4 %	8.2 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

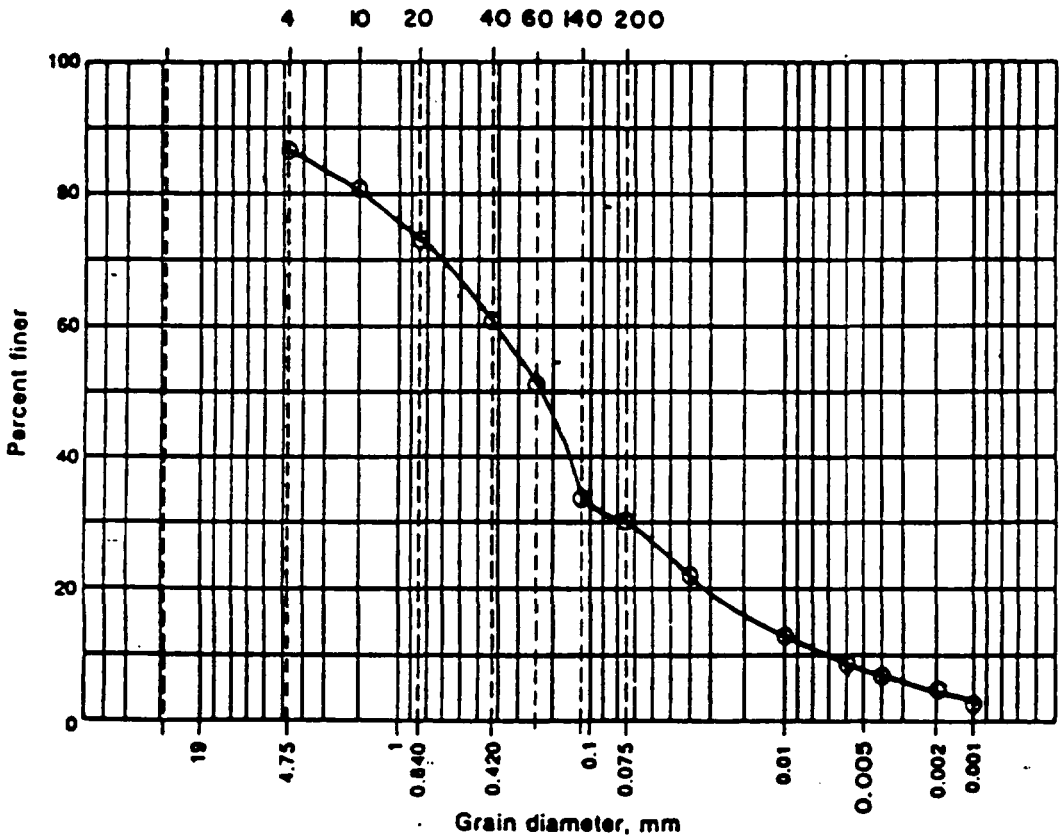
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-66D DEPTH OF SAMPLE 10 FT. MOISTURE 7.5 %

VISUAL DESCRIPTION OF SAMPLE Brown SILTY SAND, little clay and grave [SM]

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
12.6 %	57.8 %	21.2 %	8.4 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

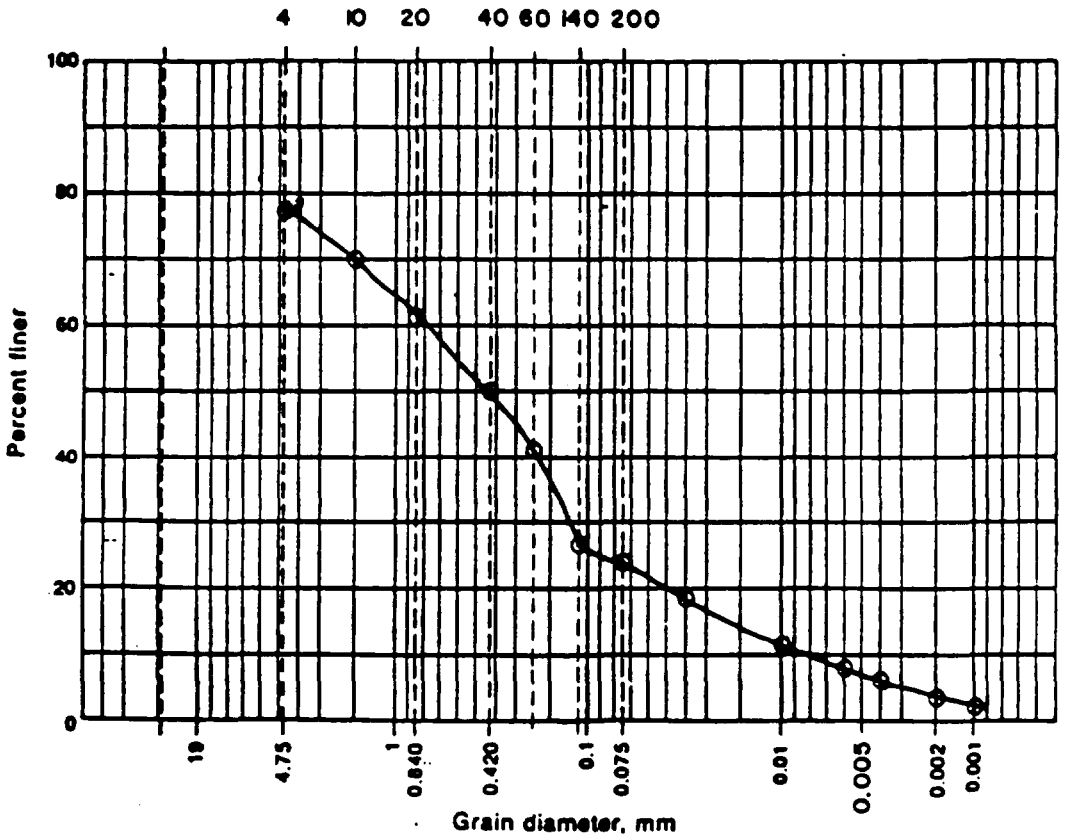
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-67 DEPTH OF SAMPLE 15 FT. MOISTURE 9.1 %

VISUAL DESCRIPTION OF SAMPLE Brown SILTY SAND, little clay and gravel [SM]

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL 22.4 %	SAND 53.6 %	SILT 17.1 %	CLAY 6.9 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

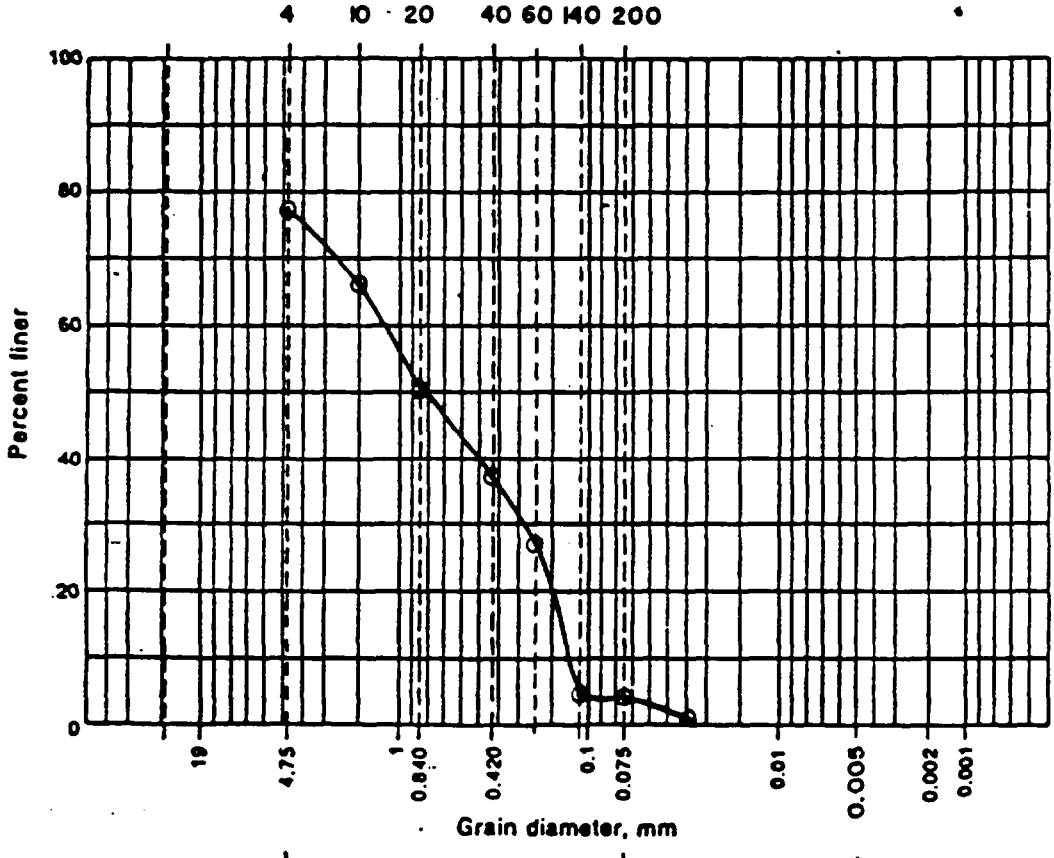
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-63 DEPTH OF SAMPLE 13 FT. MOISTURE 7.5 %

VISUAL DESCRIPTION OF SAMPLE Brown SAND, little gravel, trace silt (SP)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
22.3 %	74.1 %	*** %	3.6 %

REMARKS *** Hydrometer Analysis not performed

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

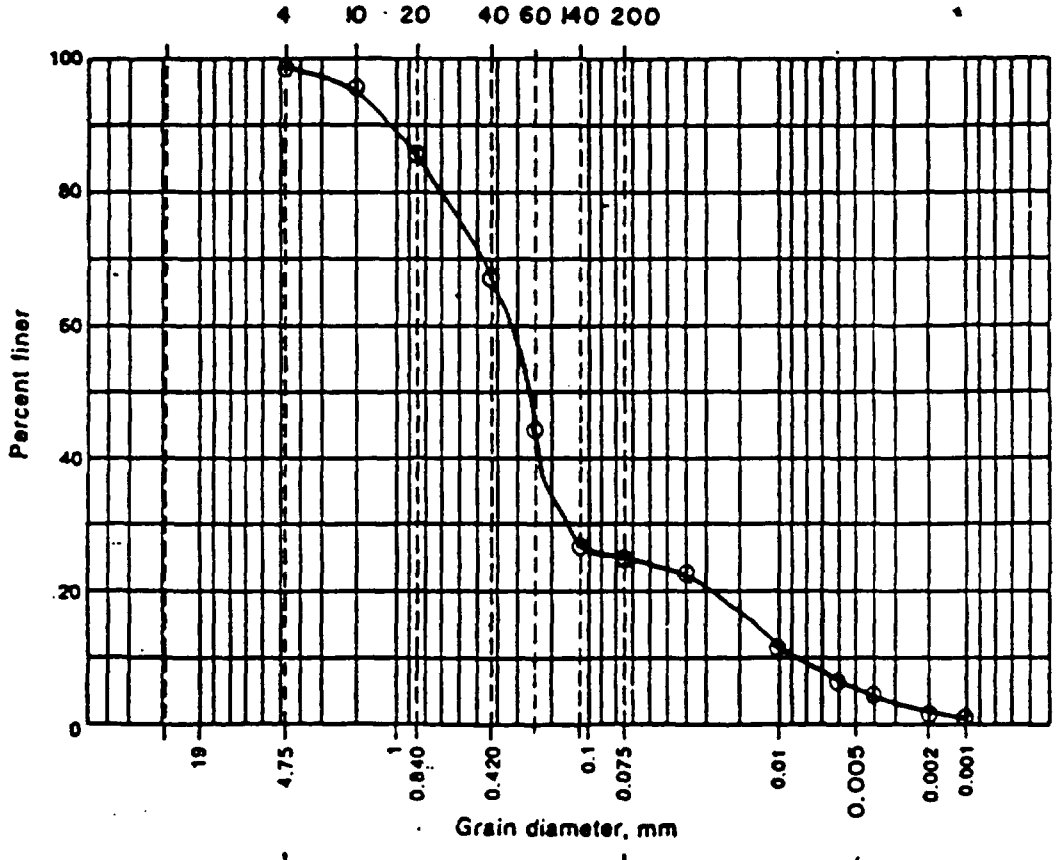
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-64M DEPTH OF SAMPLE 9 FT. MOISTURE 16.1 %

VISUAL DESCRIPTION OF SAMPLE Brown SILTY SAND, little clay, trace gravel (SM)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
0.8 %	73.4 %	20.0 %	5.8 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

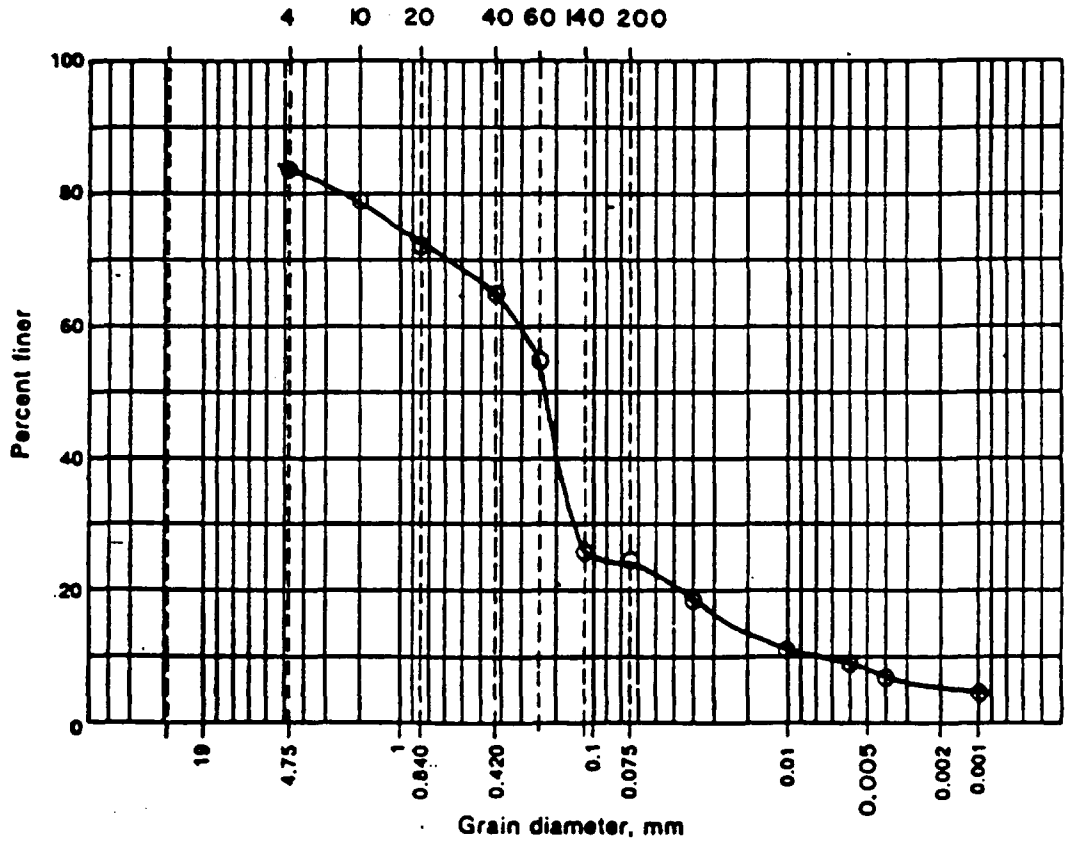
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-64M DEPTH OF SAMPLE 32 FT. MOISTURE 13.4 %

VISUAL DESCRIPTION OF SAMPLE Brown SILTY SAND, little clay and gravel [SM]

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL 16.8 %	SAND 57.6 %	SILT 17.4 %	CLAY 8.2 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

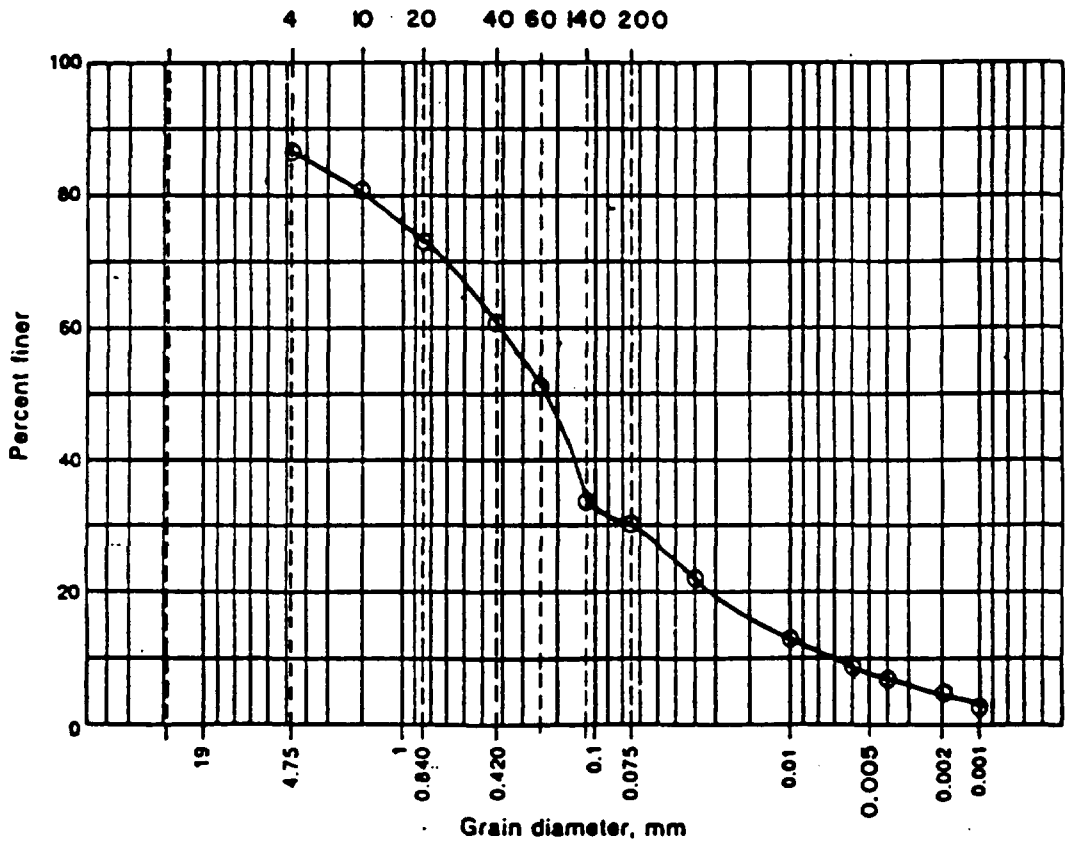
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-66D DEPTH OF SAMPLE 10 FT. MOISTURE 7.5 %

VISUAL DESCRIPTION OF SAMPLE Brown SILTY SAND, little clay and grave [SM]

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
12.6 %	57.8 %	21.2 %	8.4 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

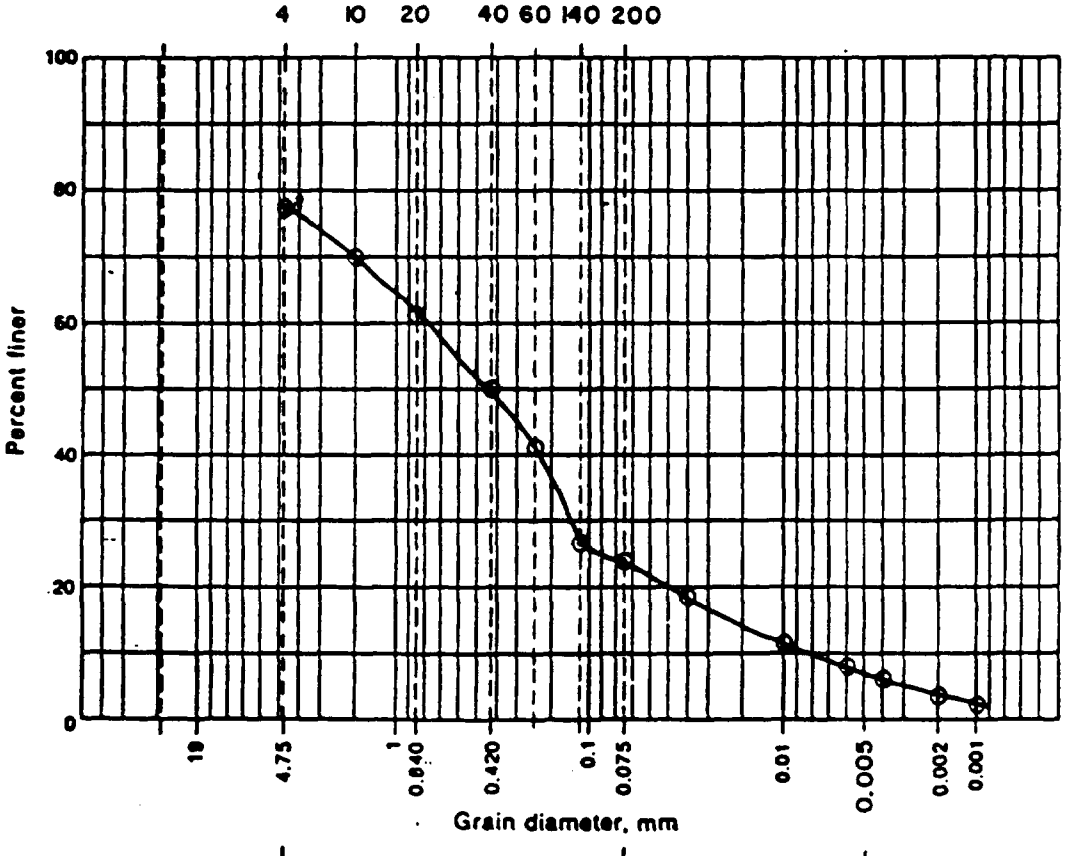
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-67 DEPTH OF SAMPLE 15 FT. MOISTURE 9.1 %

VISUAL DESCRIPTION OF SAMPLE Brown SILTY SAND, little clay and gravel (SM)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL 22.4 %	SAND 53.6 %	SILT 17.1 %	CLAY 6.9 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

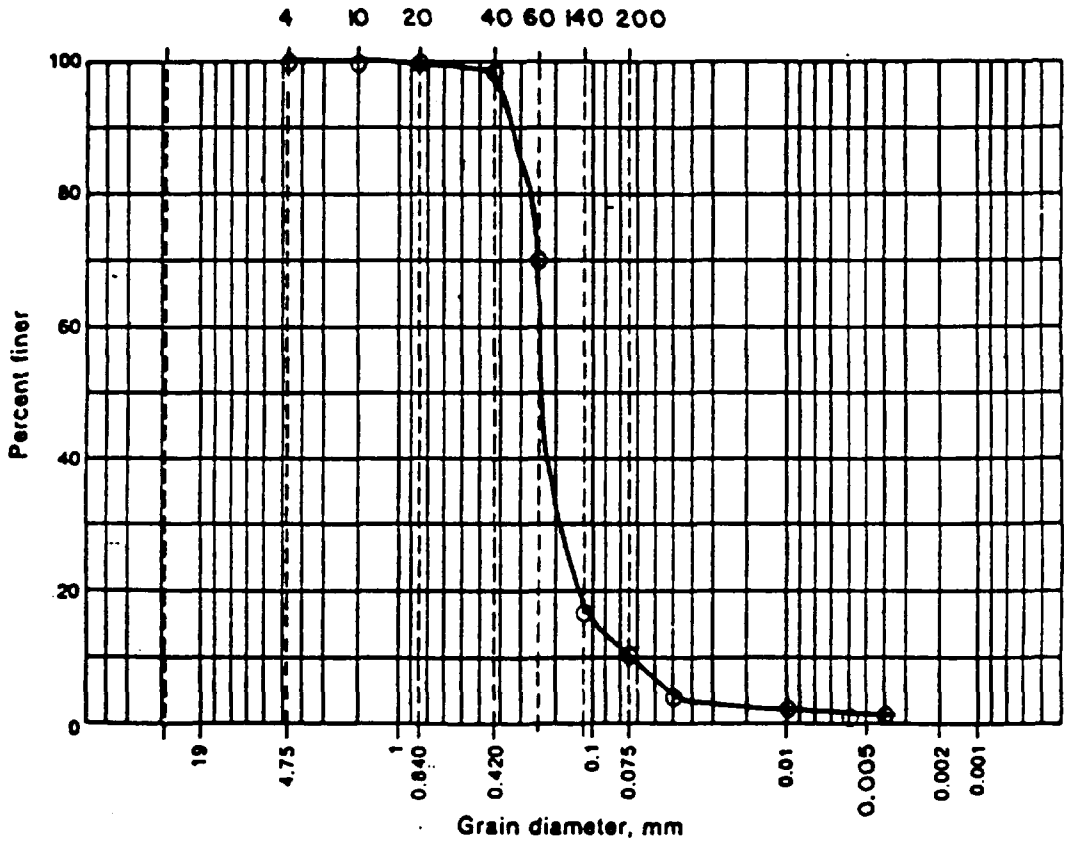
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-67 DEPTH OF SAMPLE 40 FT. MOISTURE 18.3 %

VISUAL DESCRIPTION OF SAMPLE Brown and gray SAND, little silt, trace gravel [SP-SM]

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
0.1 %	89.9 %	8.9 %	1.1 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

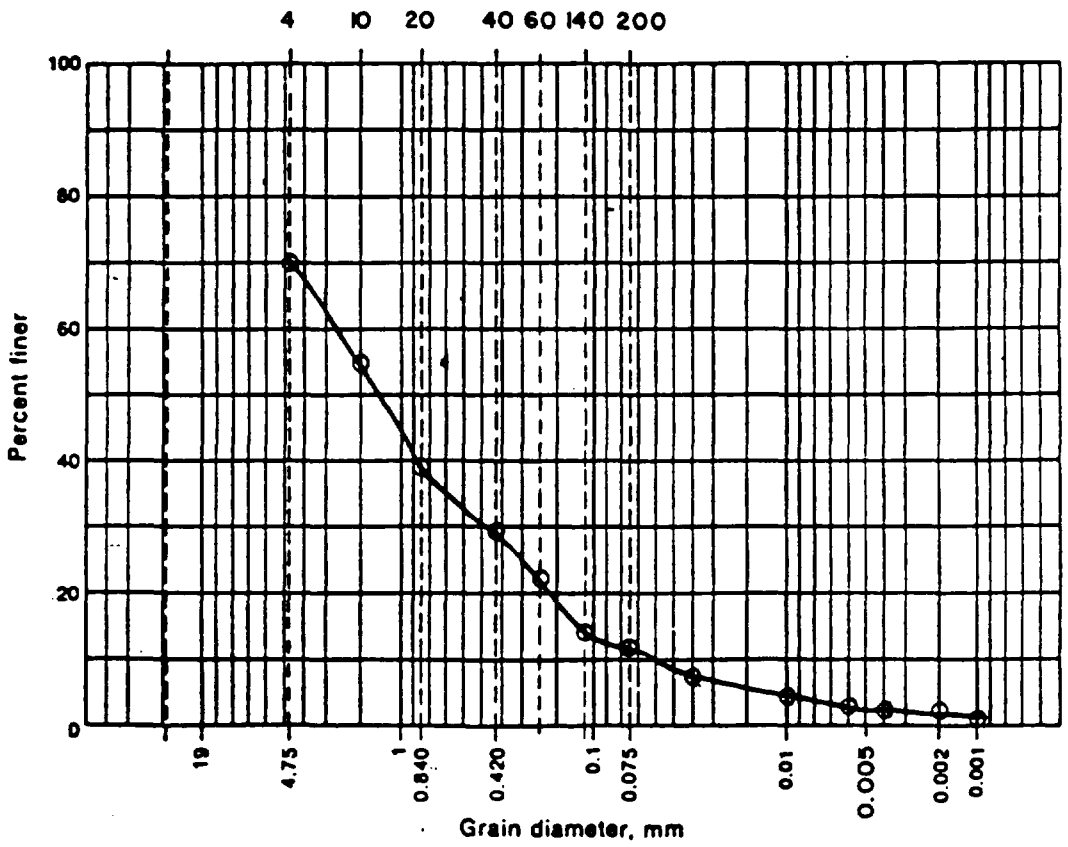
LOCATION WOBURN, MA DATE 8/29/85

BORING NO 70 DEPTH OF SAMPLE 15 FT. MOISTURE 4.3 %

VISUAL DESCRIPTION OF SAMPLE Brown and gray SILTY SAND, some gravel, trace clay [SM]

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL 29.6 %	SAND 57.4 %	SILT 9.3 %	CLAY 3.7 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

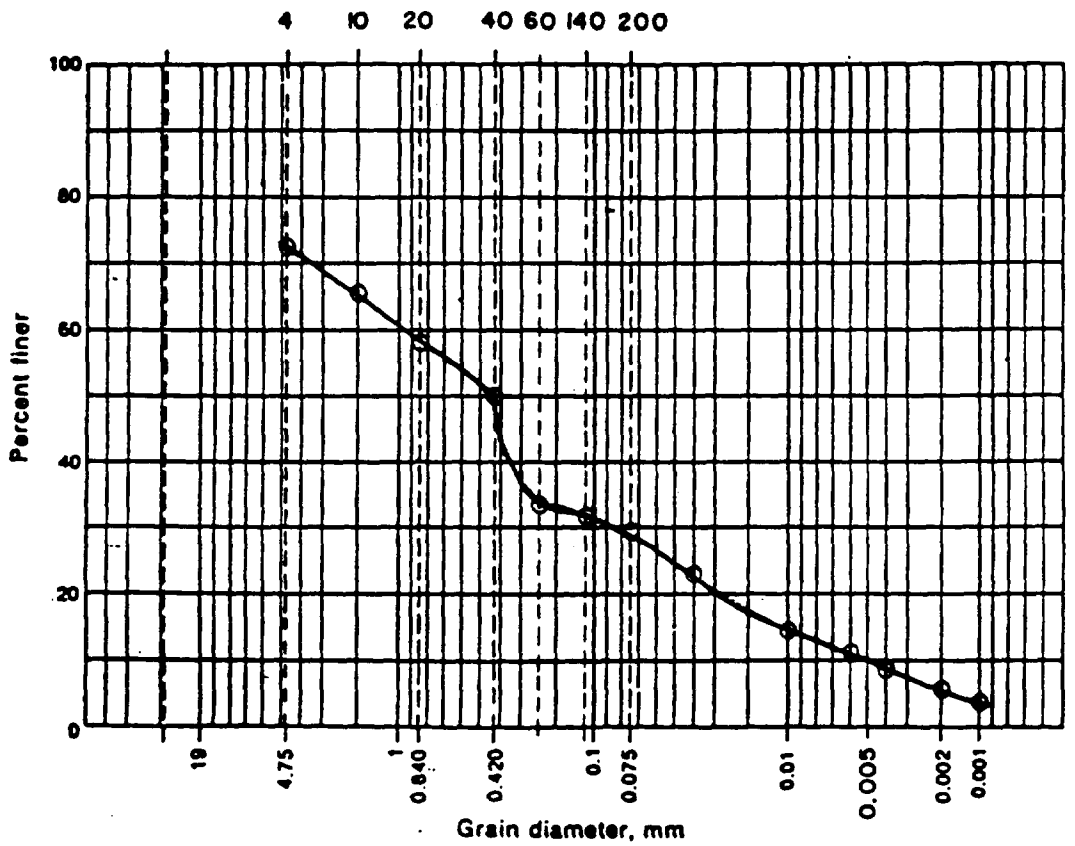
LOCATION WOBURN, MA DATE 8/29/85

BORING NO 70-D DEPTH OF SAMPLE 35 FT. MOISTURE 5.0 %

VISUAL DESCRIPTION OF SAMPLE Gray SILTY SAND, some gravel, little clay (SM)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL 26.6 %	SAND 44.0 %	SILT 19.5 %	CLAY 9.9 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

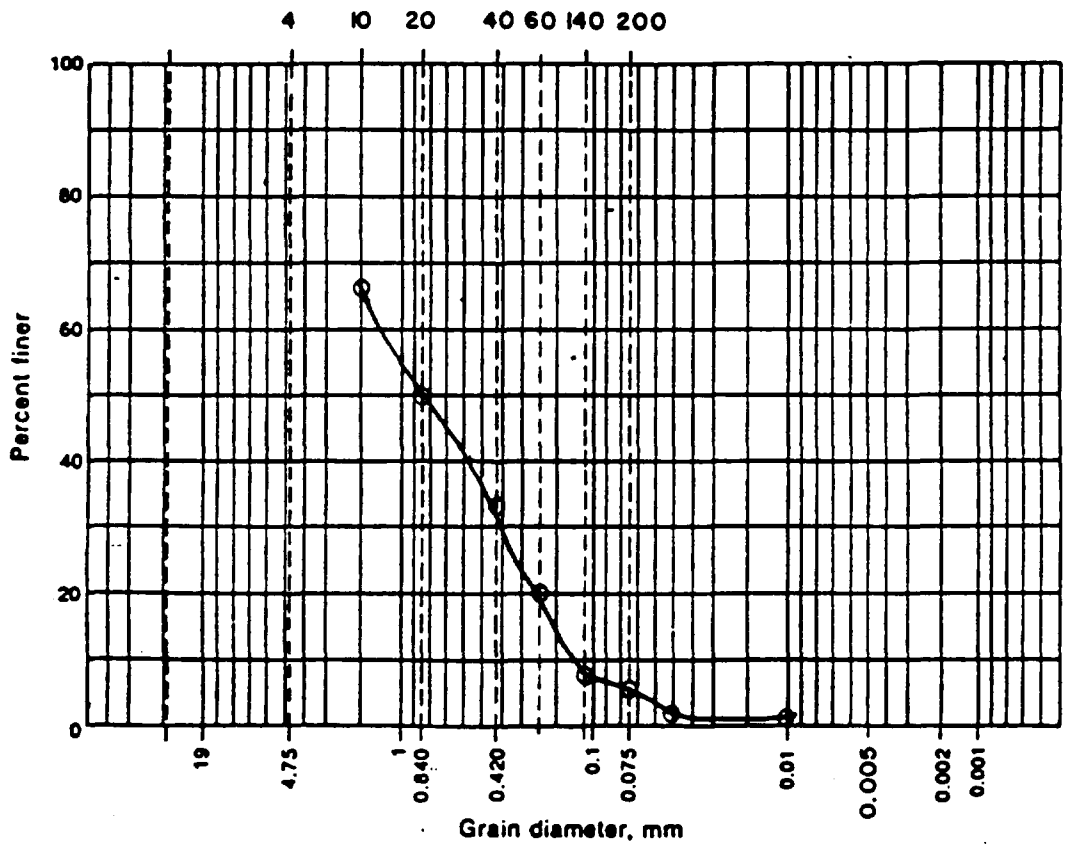
LOCATION WOBURN, MA DATE 8/29/85

BORING NO 70-D DEPTH OF SAMPLE 55 FT. MOISTURE 10.9 %

VISUAL DESCRIPTION OF SAMPLE Brown SAND, little gravel, trace silt and clay (SP)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL 19.9 %	SAND 73.7 %	SILT 5.3 %	CLAY 1.1 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

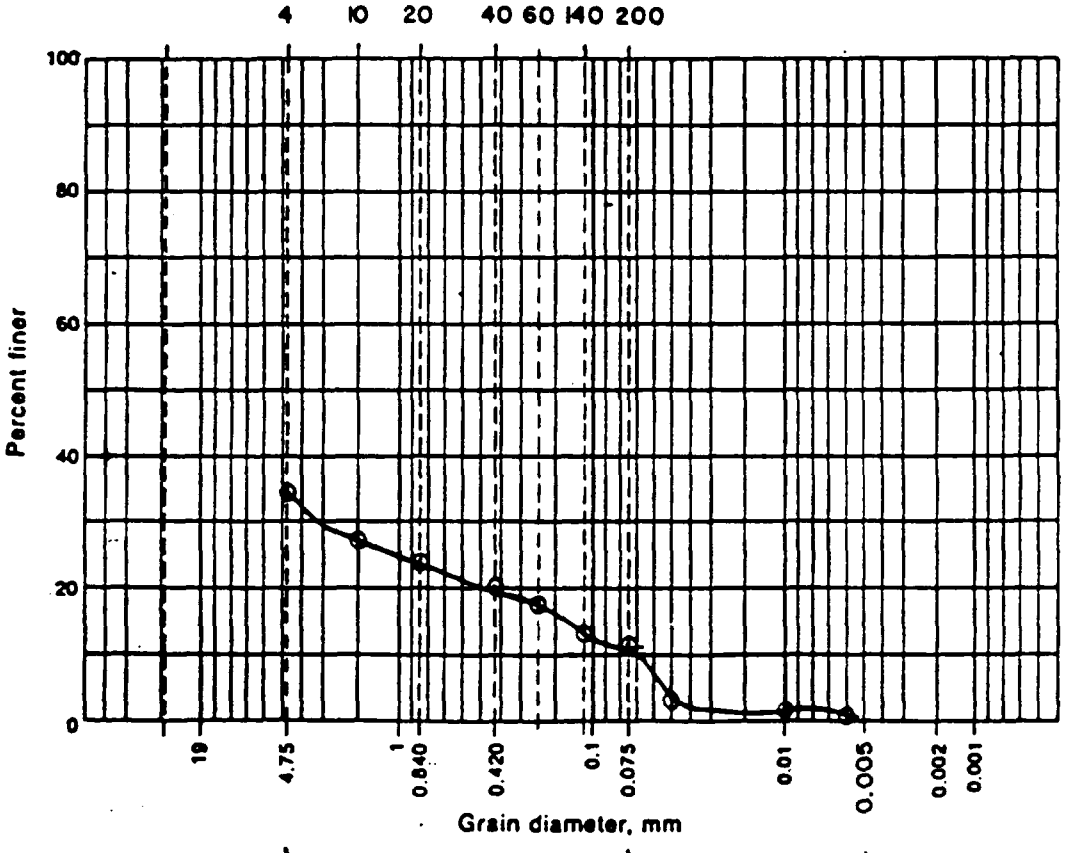
LOCATION WOBURN, MA DATE 8/29/85

BORING NO Unifirst DEPTH OF SAMPLE 0 FT. MOISTURE 7.6 %

VISUAL DESCRIPTION OF SAMPLE Black GRAVEL, some sand, little silt [GM]

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. Patel

GRAIN SIZE ANALYSIS



GRAVEL 66.3%	SAND 21.8 %	SILT 10.8 %	CLAY 1.1 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

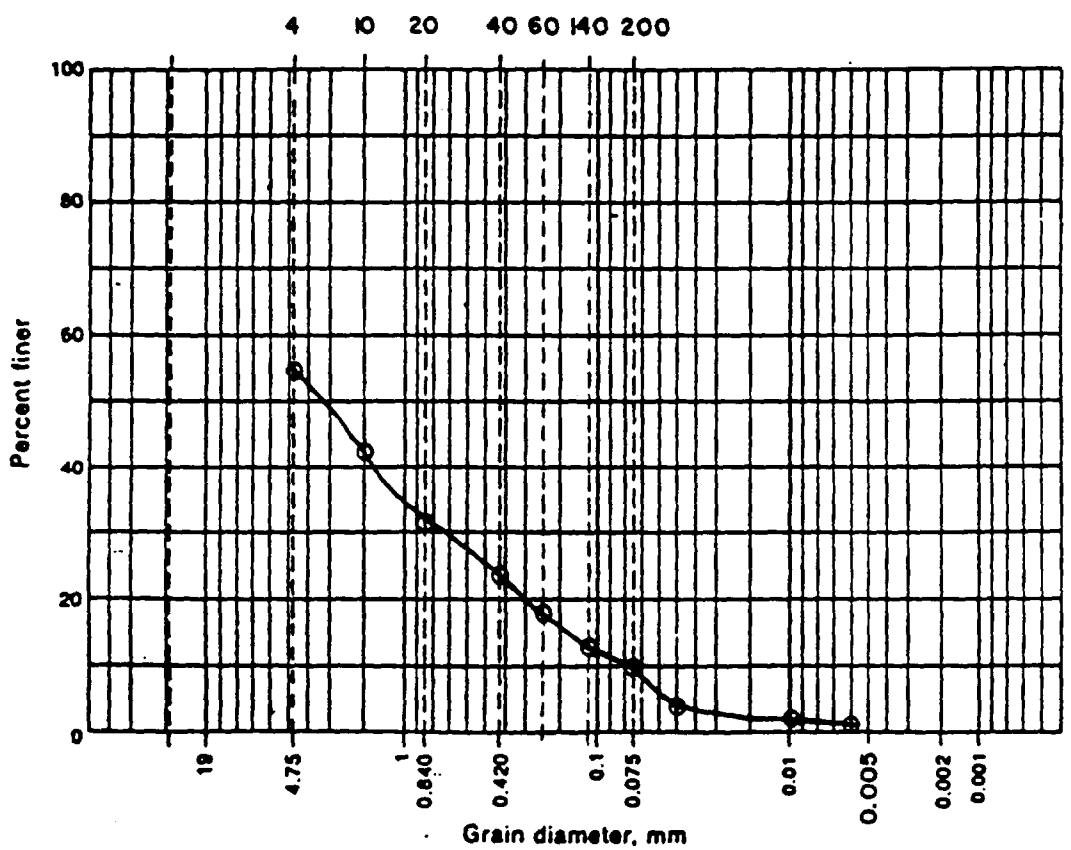
LOCATION WOBURN, MA DATE 8/29/85

BORING NO Unifirst DEPTH OF SAMPLE 2 FT. MOISTURE 1.6 %

VISUAL DESCRIPTION OF SAMPLE Gray GRAVEL AND SAND, little silt (GP-GM)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
46.1 %	44.1 %	8.8 %	1.0 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

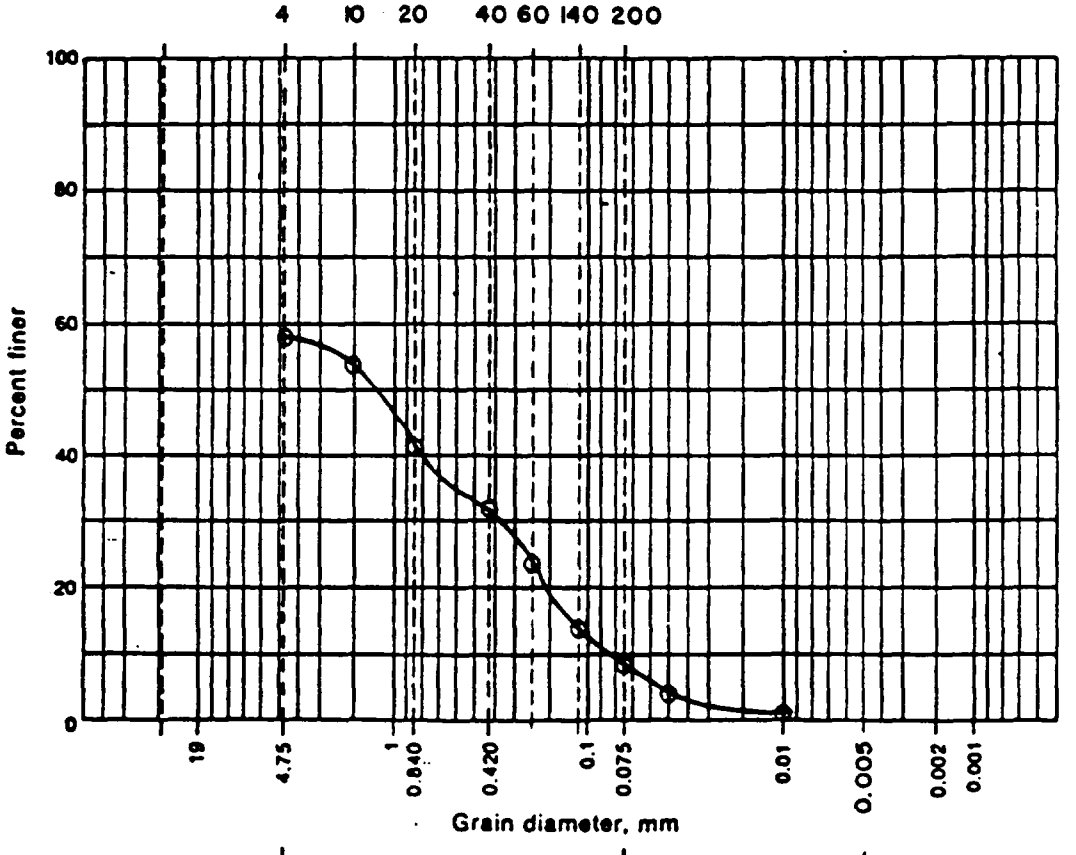
LOCATION WOBURN, MA DATE 8/29/85

BORING NO Unifirst DEPTH OF SAMPLE 4 FT. MOISTURE 0.7 %

VISUAL DESCRIPTION OF SAMPLE Gray SAND, some gravel, little silt (SP-SM)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
42.2 %	49.8 %	7.0 %	1.0 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

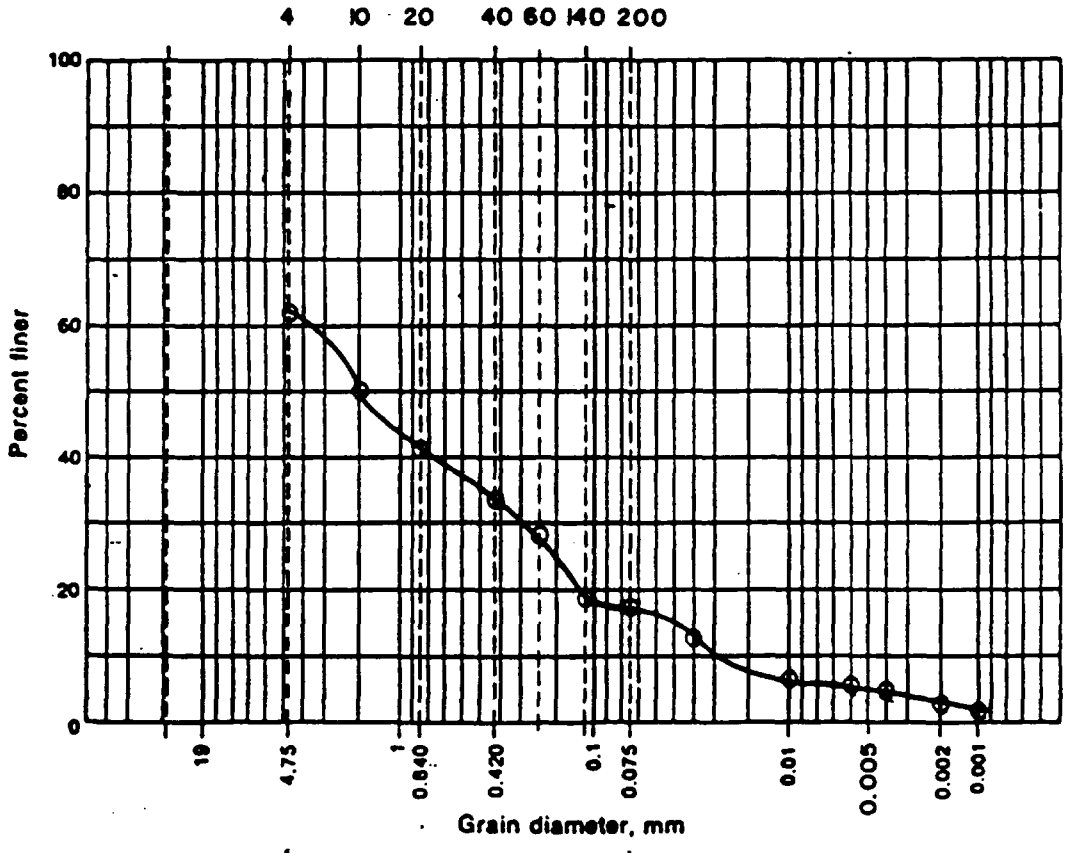
LOCATION WOBURN, MA DATE 8/29/85

BORING NO Unifirst DEPTH OF SAMPLE 6 FT. MOISTURE 3.3 %

VISUAL DESCRIPTION OF SAMPLE Gray SILTY SAND, some gravel, trace clay [SM]

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL 38.5 %	SAND 44.0 %	SILT 12.4 %	CLAY 5.1 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

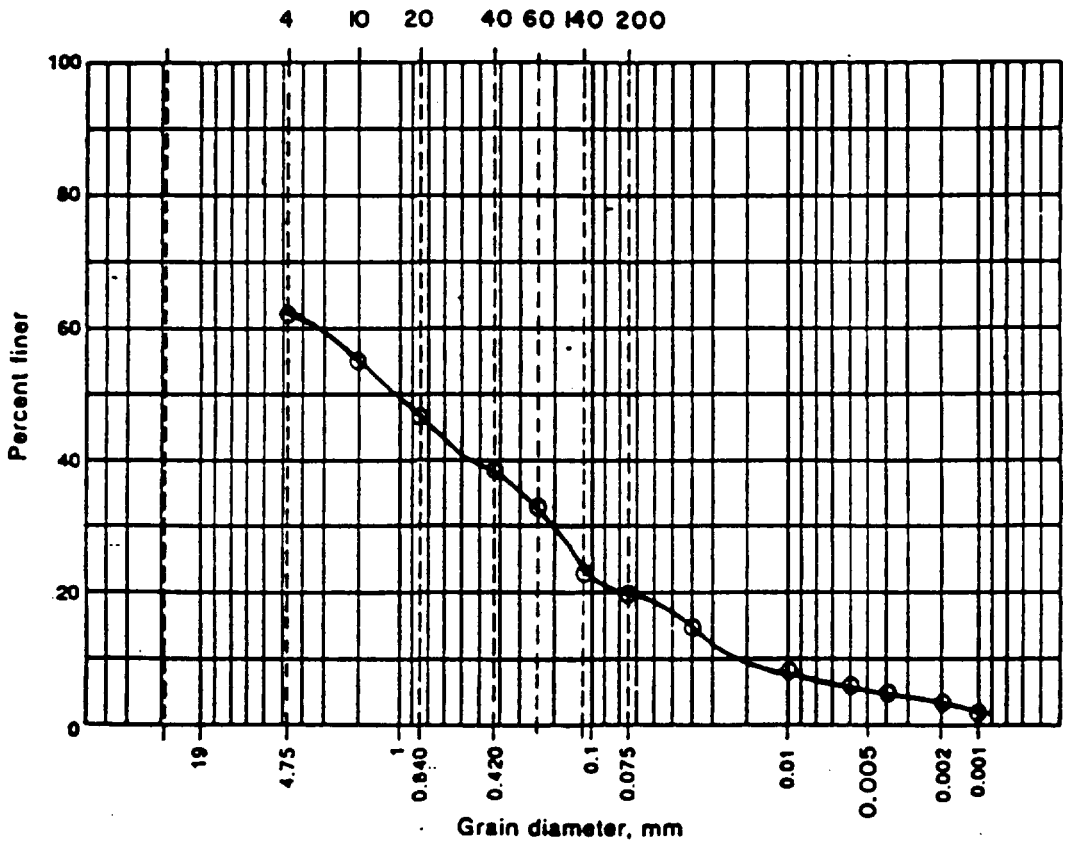
LOCATION WOBURN, MA DATE 8/29/85

BORING NO Unifirst DEPTH OF SAMPLE 8 FT. MOISTURE 2.5 %

VISUAL DESCRIPTION OF SAMPLE Gray SAND, some gravel and silt [SM]

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL 37.9 %	SAND 41.8 %	SILT 14.9 %	CLAY 5.4 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

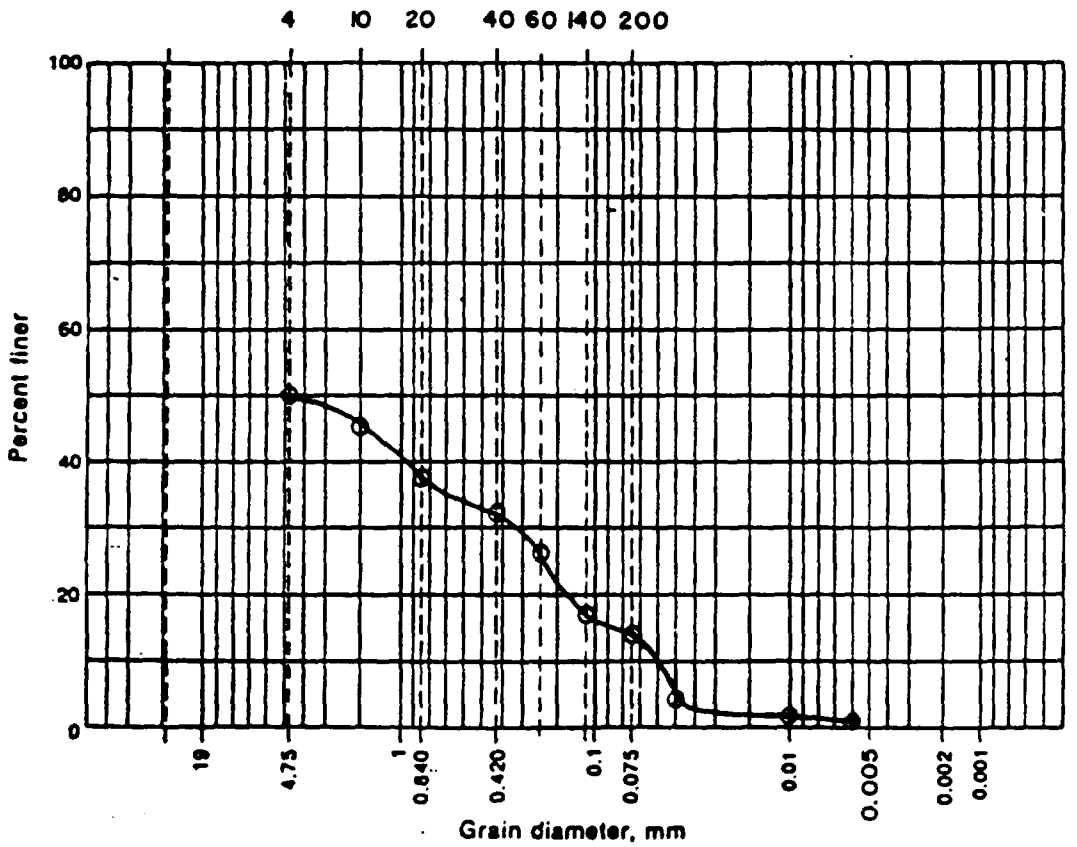
LOCATION WOBURN, MA DATE 8/29/85

BORING NO Unifirst DEPTH OF SAMPLE 10 FT. MOISTURE 0.8 %

VISUAL DESCRIPTION OF SAMPLE Brown GRAVEL, some sand, little silt (GM)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL 50.3 %	SAND 35.8 %	SILT 12.6 %	CLAY 1.3 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

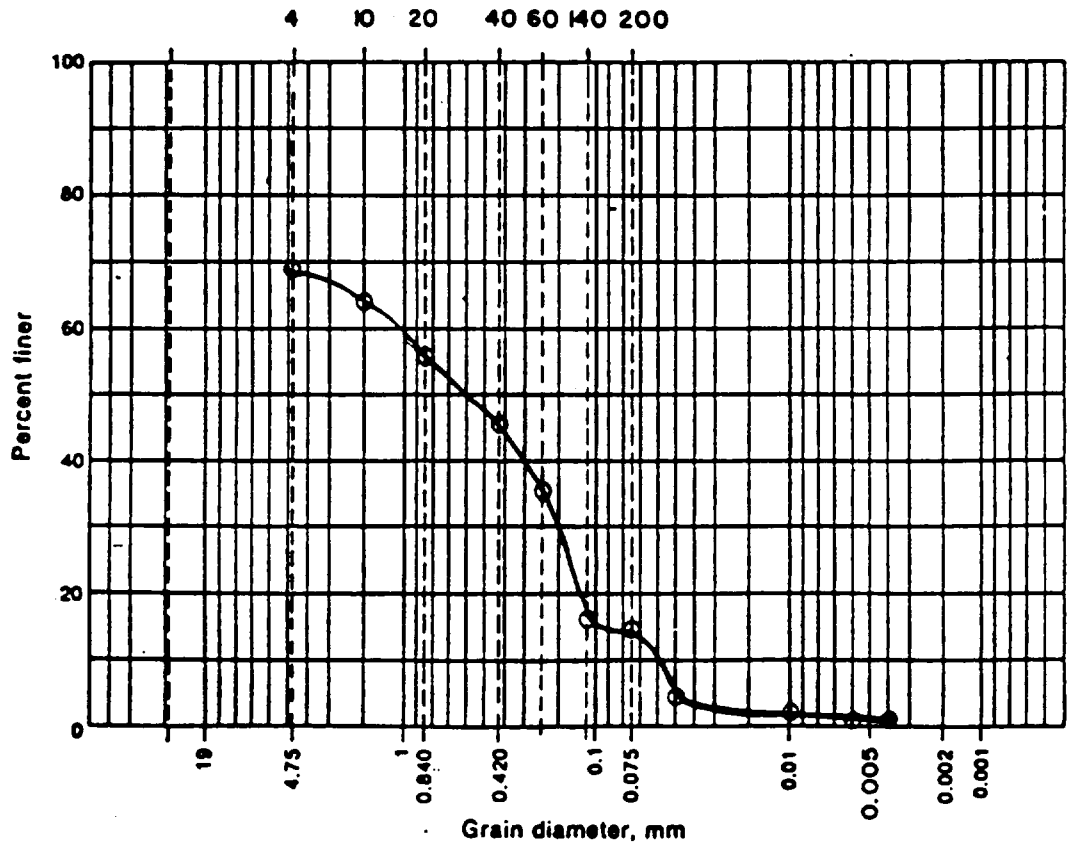
LOCATION WOBURN, MA DATE 8/29/85

BORING NO Unifirst DEPTH OF SAMPLE 12 FT. MOISTURE 0.8 %

VISUAL DESCRIPTION OF SAMPLE Gray SILTY SAND, some gravel, little silt (SM)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL 31.0 %	SAND 53.6 %	SILT 14.2 %	CLAY 1.2 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

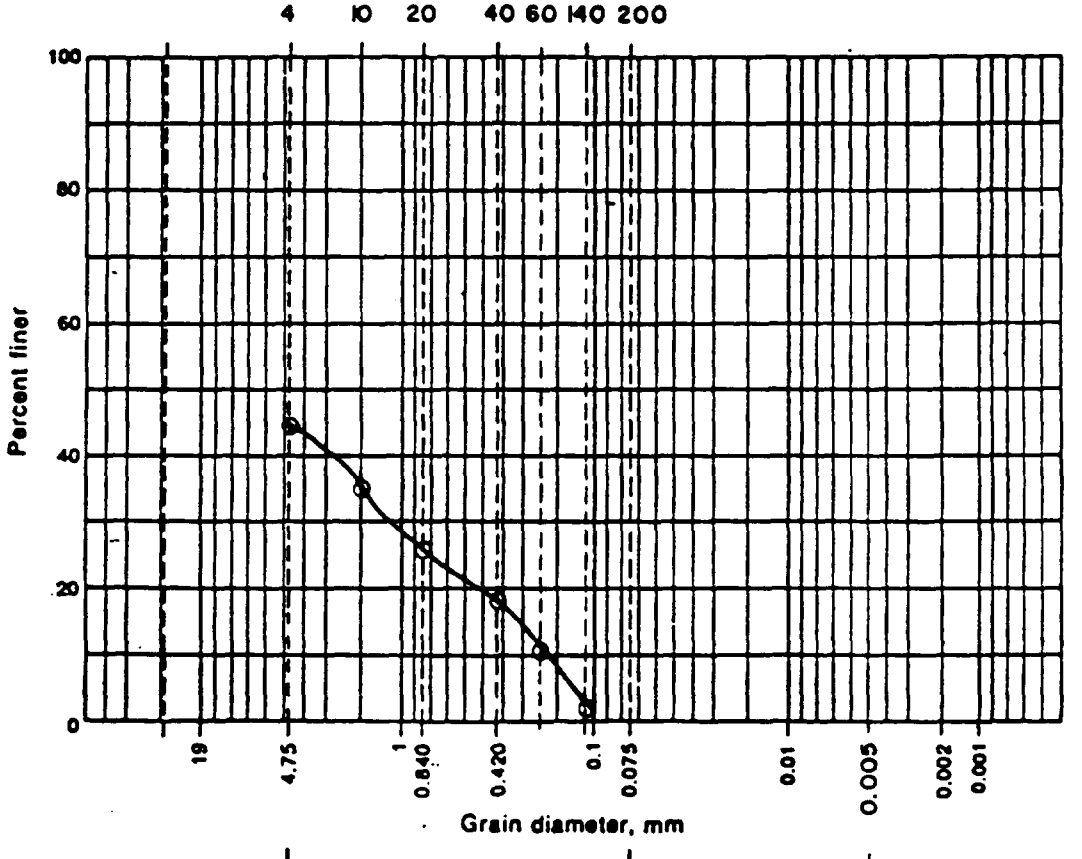
LOCATION WOBURN, MA DATE 8/29/85

BORING NO Unifirst DEPTH OF SAMPLE 14 FT. MOISTURE 5.1 %

VISUAL DESCRIPTION OF SAMPLE Brown GRAVEL and SAND, trace silt [GP]

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
55.7 %	44.1 %	** %	0.2 %

REMARKS ** Hydrometer Analysis not performed

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

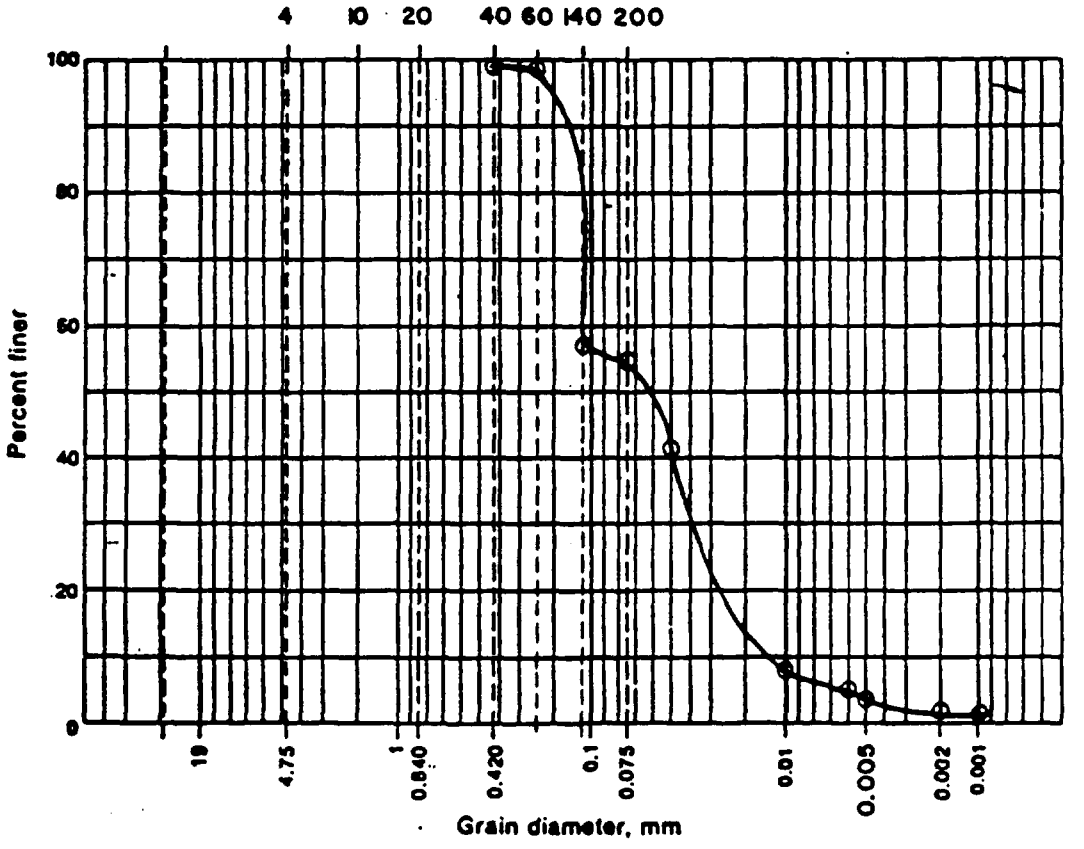
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-72R DEPTH OF SAMPLE 35 FT. MOISTURE 19.9 %

VISUAL DESCRIPTION OF SAMPLE Gray and brown mottled SANDY SILT, trace clay [ML]

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
0.0 %	44.6 %	51.0 %	4.4 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

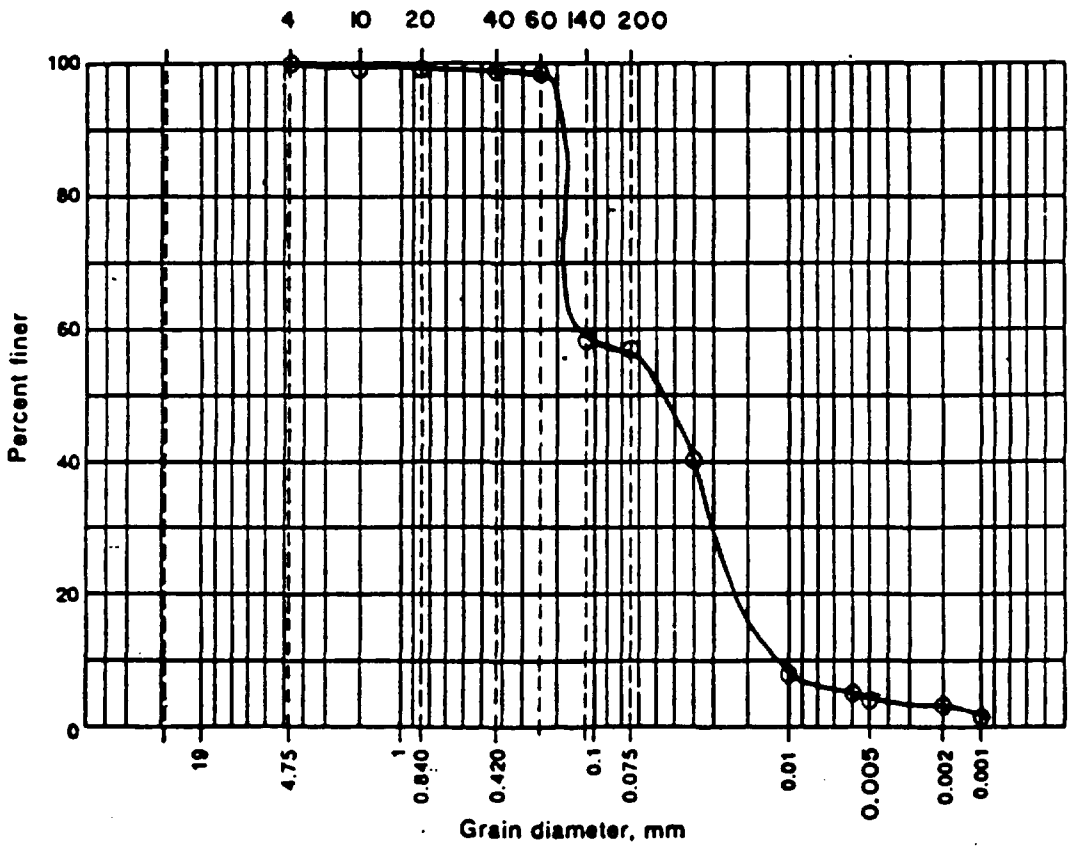
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-72R DEPTH OF SAMPLE 55 FT. MOISTURE 19.7 %

VISUAL DESCRIPTION OF SAMPLE Gray and brown mottled SANDY SILT, trace clay [ML]

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL 0.2 %	SAND 42.7 %	SILT 52.6 %	CLAY 4.5 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

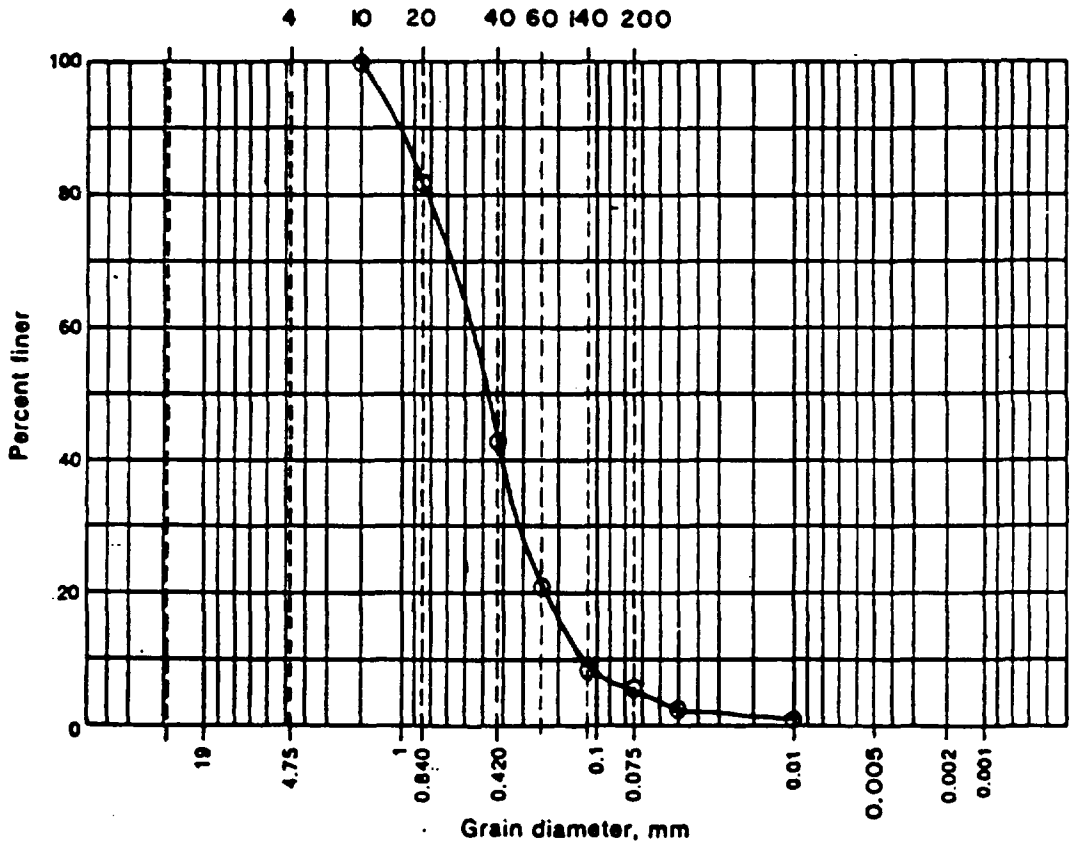
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-72R DEPTH OF SAMPLE 80 FT. MOISTURE 14.9 %

VISUAL DESCRIPTION OF SAMPLE Gray SAND, trace silt (SP)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
0.0 %	94.0 %	5.0 %	1.0 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

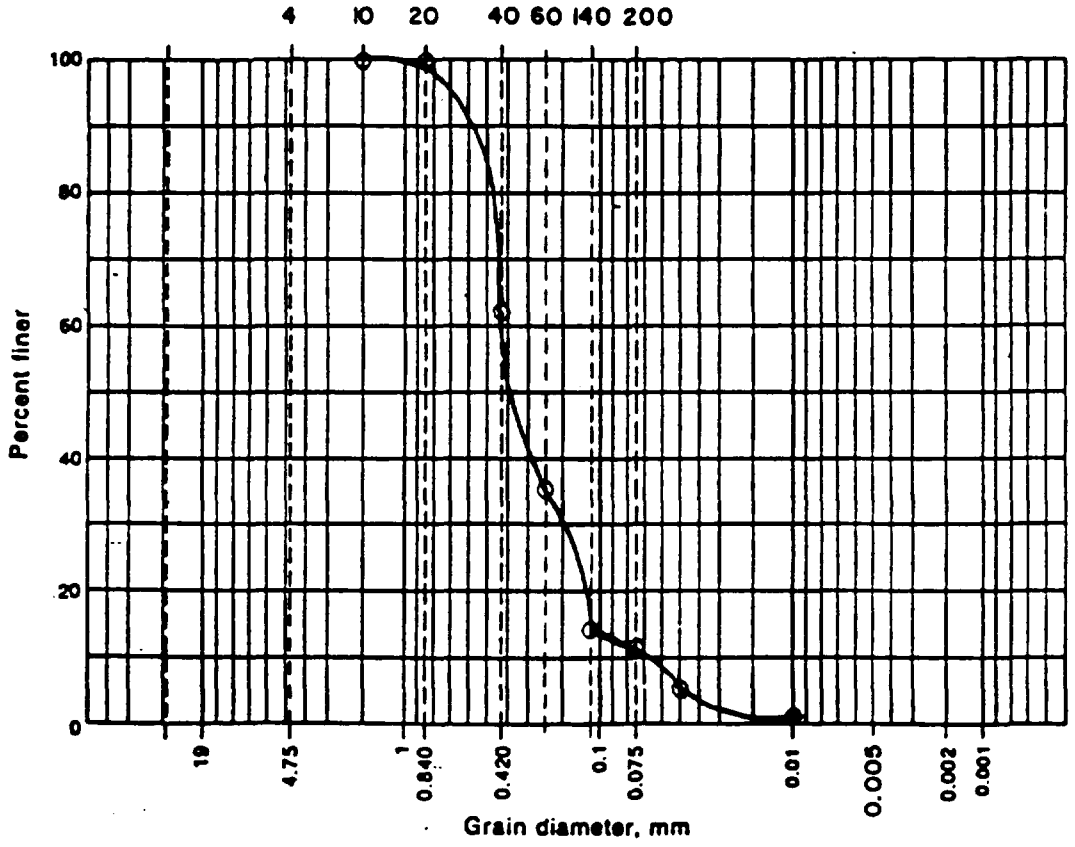
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-74M DEPTH OF SAMPLE 39 FT. MOISTURE 19.6 %

VISUAL DESCRIPTION OF SAMPLE Brown SAND, little silt [SP]

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
0.0 %	88.8 %	10.2 %	1.0 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

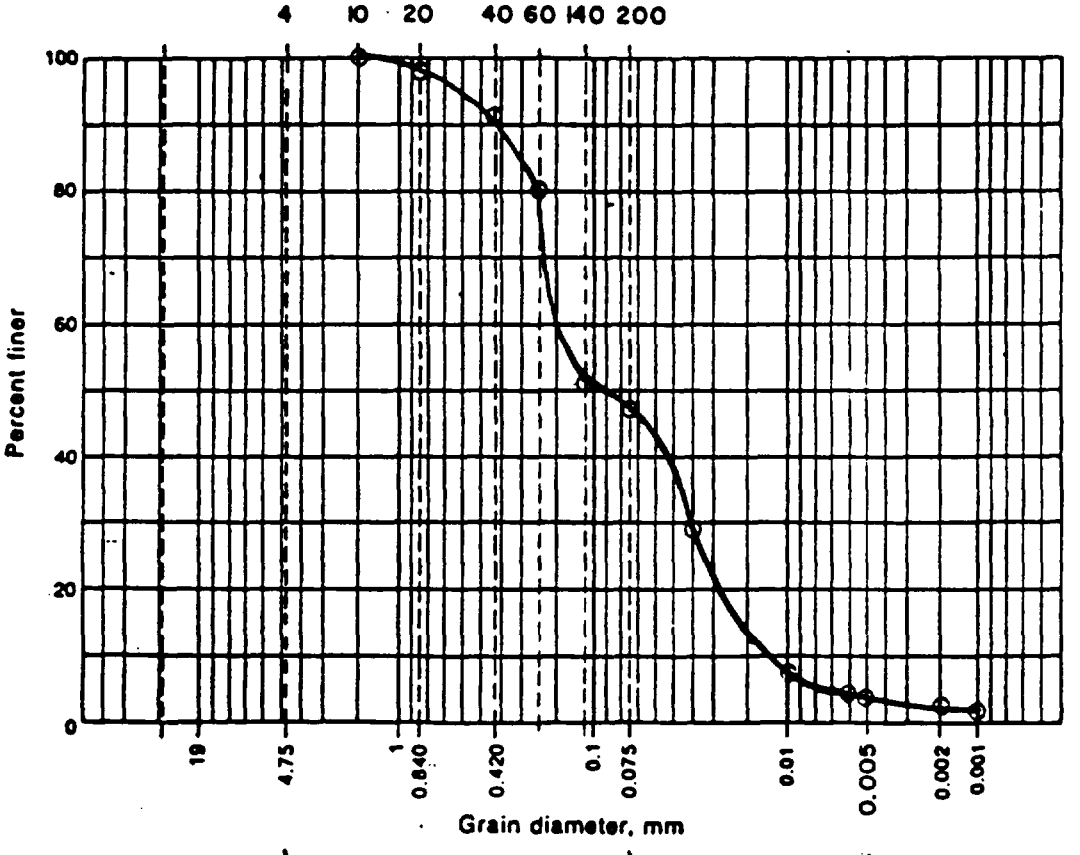
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-74M DEPTH OF SAMPLE 34 FT. MOISTURE 17.8 %

VISUAL DESCRIPTION OF SAMPLE Brown SILTY SAND, trace clay (SM)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
0.0 %	53.3 %	42.5 %	4.2 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

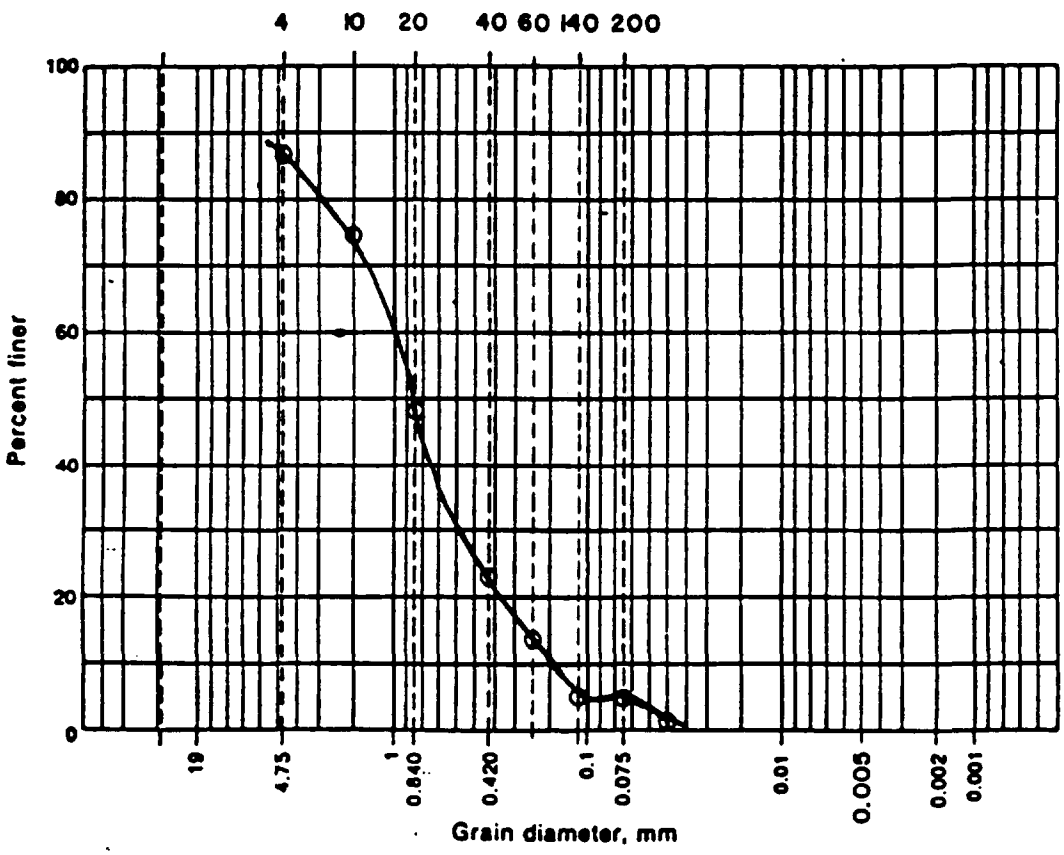
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-75D DEPTH OF SAMPLE 10 FT. MOISTURE 6.7 %

VISUAL DESCRIPTION OF SAMPLE Brown SAND, little gravel, trace silt [SP]

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
13.9 %	81.2 %	** %	4.9 %

REMARKS ** Hydrometer Analysis not performed

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

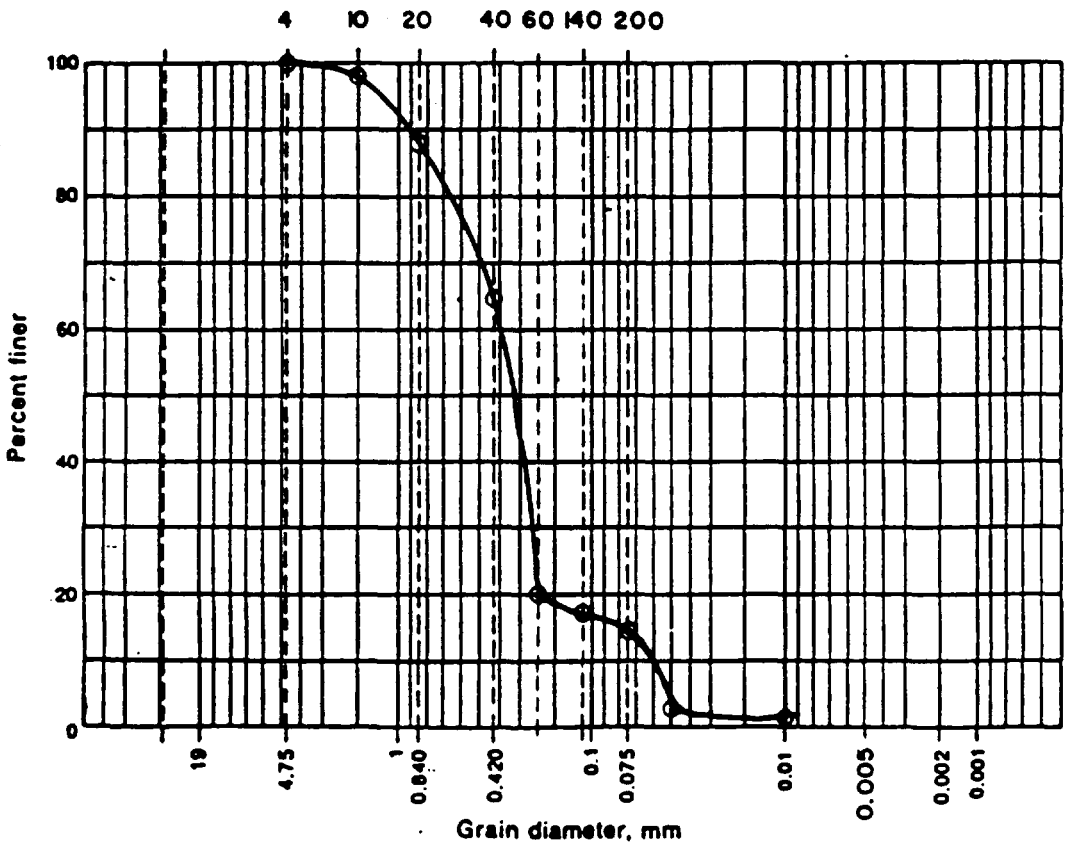
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-75D DEPTH OF SAMPLE 40 FT. MOISTURE 20.9 %

VISUAL DESCRIPTION OF SAMPLE Gray SILTY SAND, trace clay (SM)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
0.4 %	84.7 %	13.9 %	1.0 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

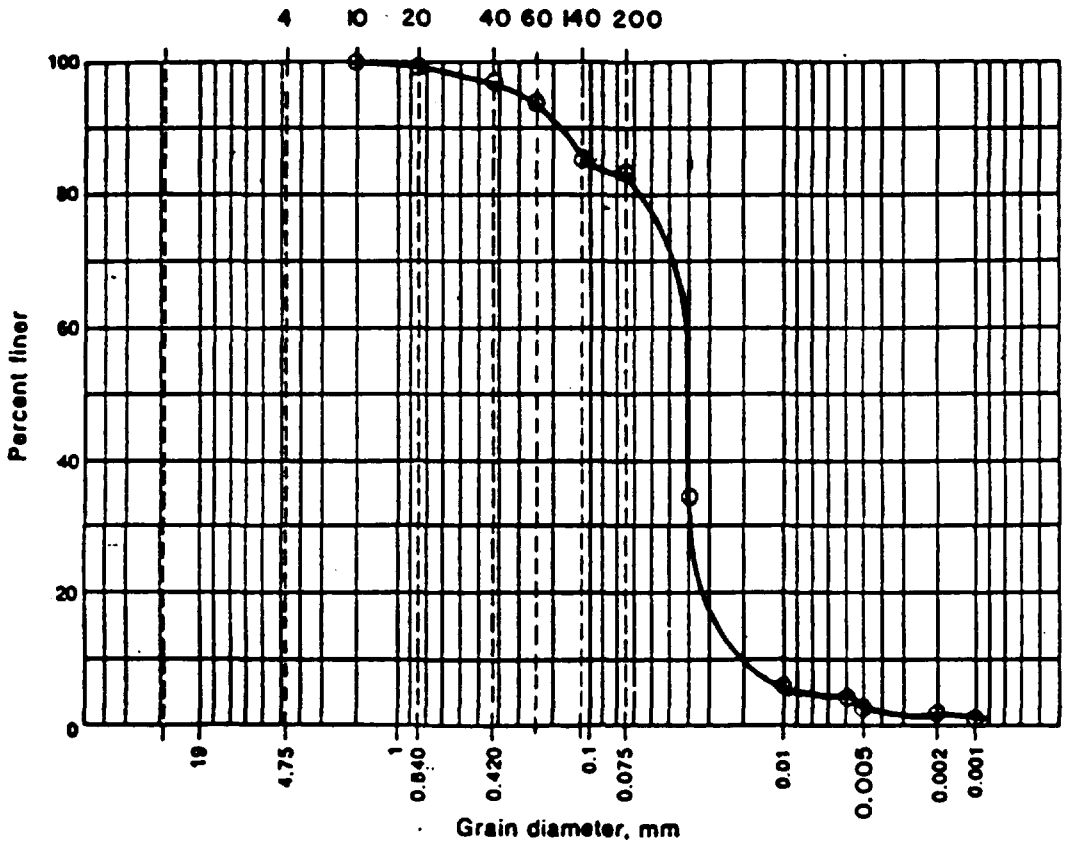
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-75D DEPTH OF SAMPLE 65 FT. MOISTURE 19.2 %

VISUAL DESCRIPTION OF SAMPLE Gray and brown mottled SANDY SILT, trace clay [ML]

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
0.0 %	16.2 %	77.2 %	6.6 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

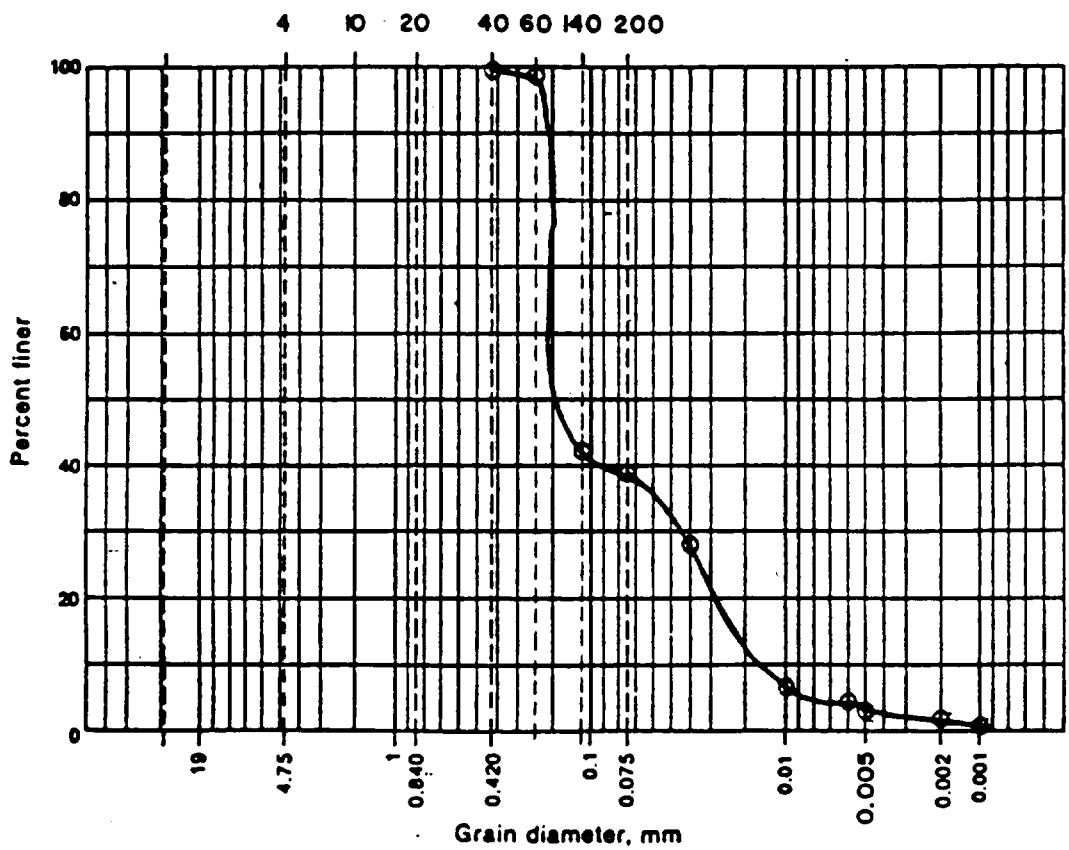
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-76 DEPTH OF SAMPLE 21 FT. MOISTURE 19.8 %

VISUAL DESCRIPTION OF SAMPLE Brown SILTY SAND, trace clay (SM)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
0.0 %	61.2 %	35.5 %	3.3 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

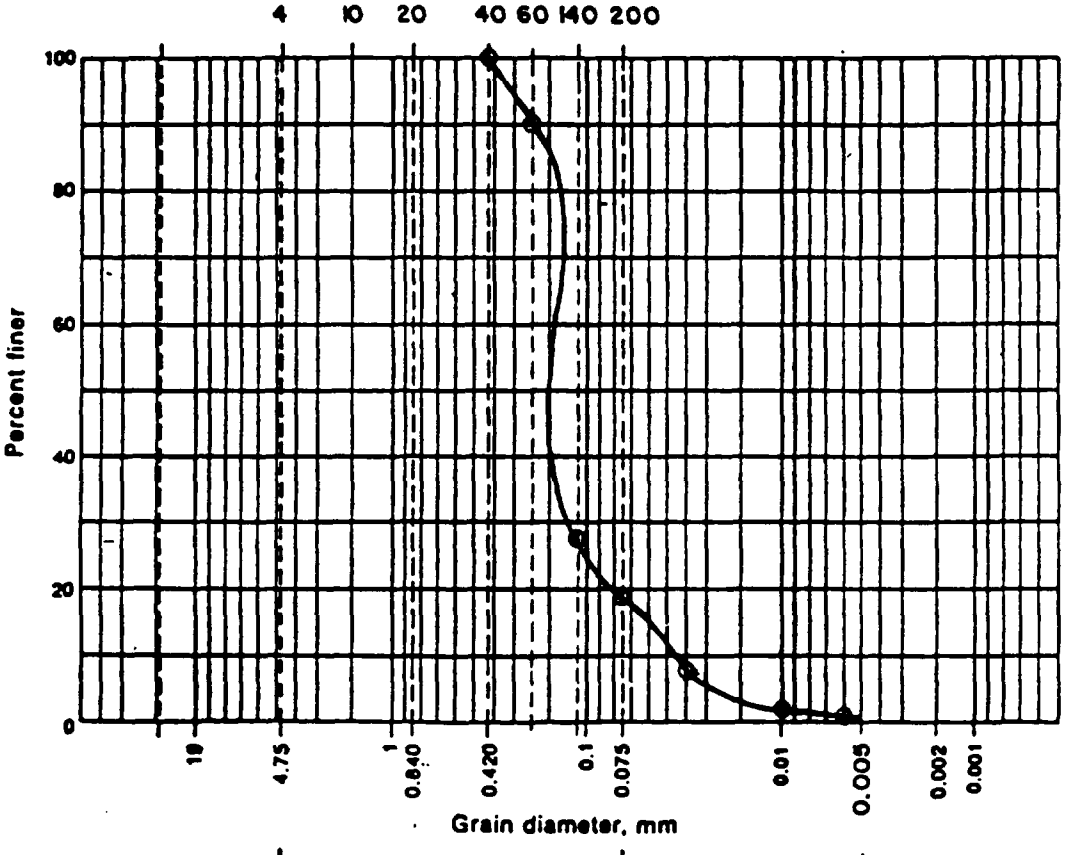
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-76M DEPTH OF SAMPLE 60 FT. MOISTURE 21.3 %

VISUAL DESCRIPTION OF SAMPLE Brown SILTY SAND, trace clay (SM)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
0.0 %	81.4 %	17.4 %	1.2 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

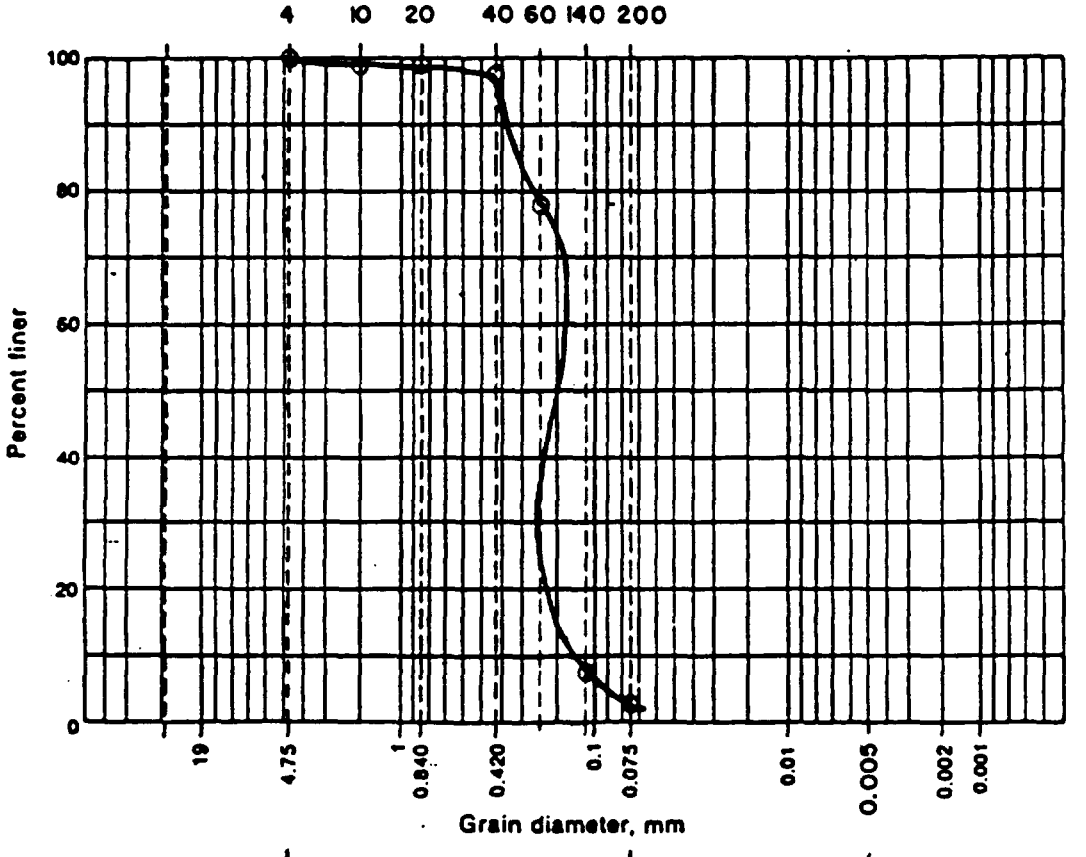
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-77 DEPTH OF SAMPLE 20 FT. MOISTURE 19.0 %

VISUAL DESCRIPTION OF SAMPLE Brown SAND, trace gravel (SP)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
0.3 %	96.5 %	** %	3.2 %

REMARKS ** Hydrometer Analysis not performed

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

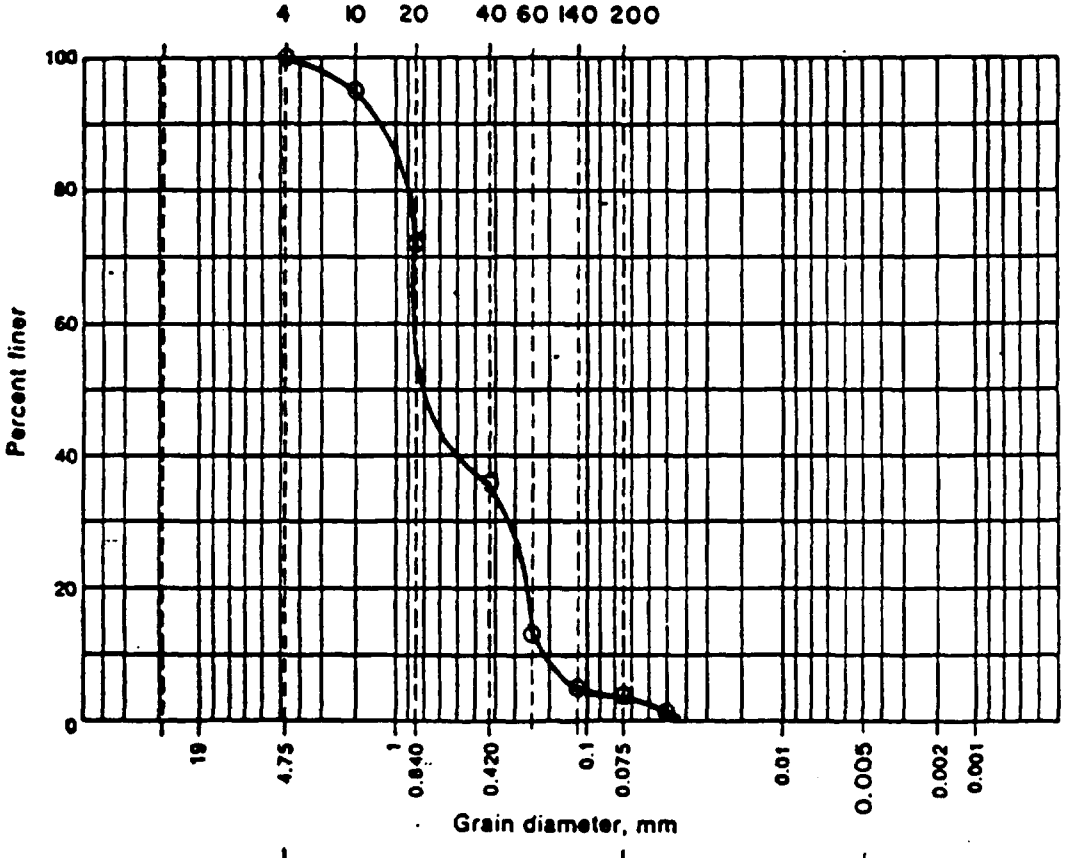
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-77D DEPTH OF SAMPLE 70 FT. MOISTURE 14.3 %

VISUAL DESCRIPTION OF SAMPLE Brown SAND, trace gravel (SP)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
0.1 %	95.9 %	** %	4.0 %

REMARKS ** Hydrometer Analysis not performed

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

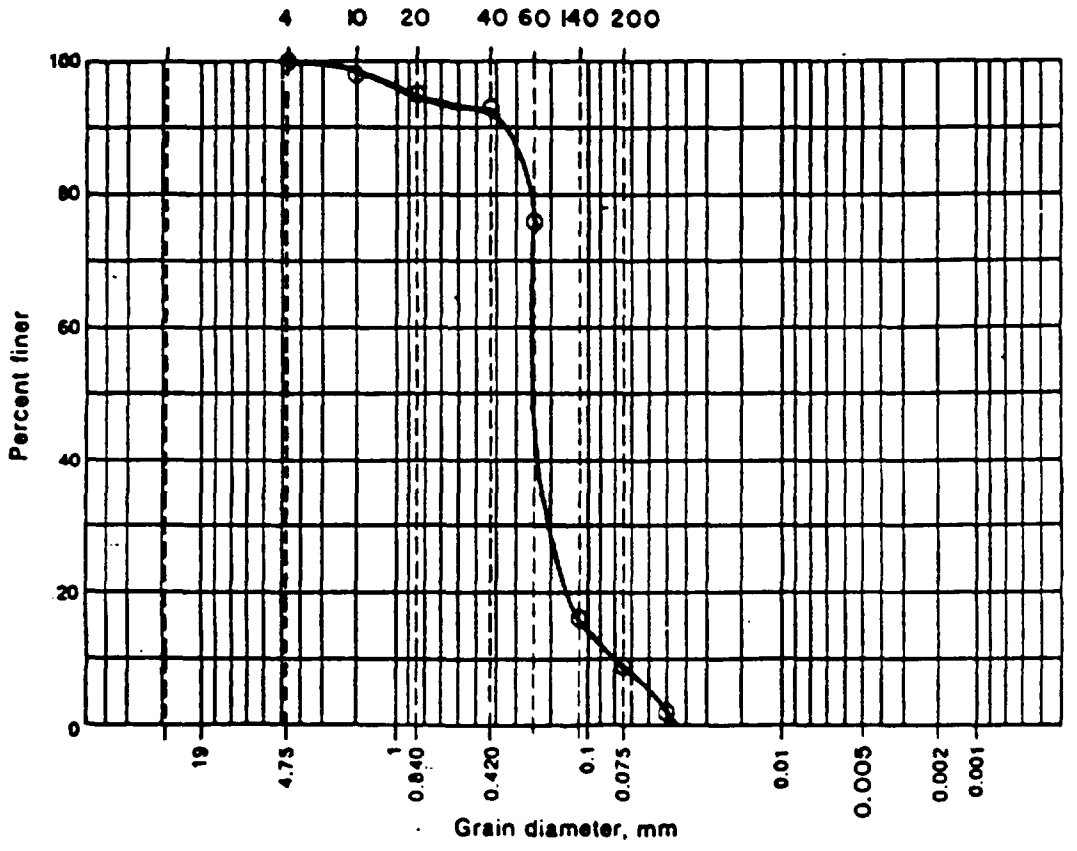
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-78 DEPTH OF SAMPLE 17 FT. MOISTURE 19.0 %

VISUAL DESCRIPTION OF SAMPLE Brown SAND, trace gravel (SP)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
0.5 %	90.6 %	** %	8.9 %

REMARKS ** Hydrometer Analysis not performed

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

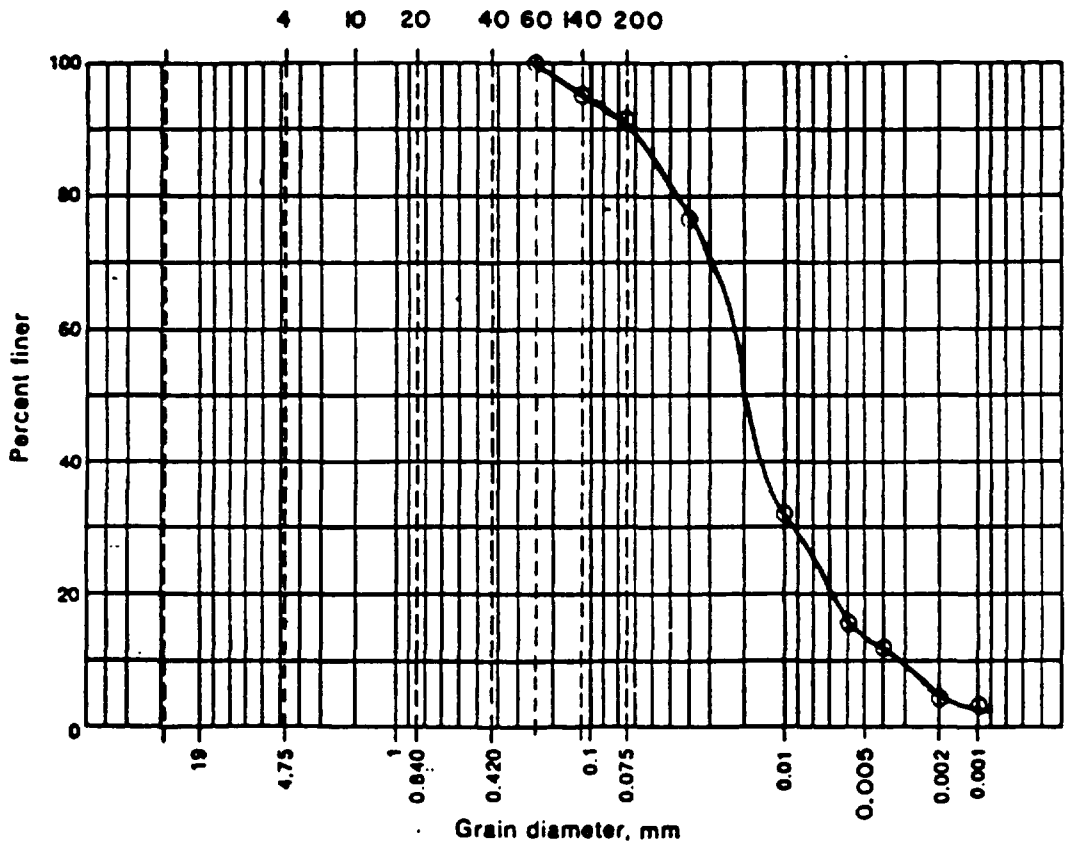
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-77D DEPTH OF SAMPLE 120 FT. MOISTURE 17.3 %

VISUAL DESCRIPTION OF SAMPLE Brown and gray mottled SANDY SILT, some clay, little sand [ML]

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
0.0 %	8.0 %	78.0 %	14.0 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

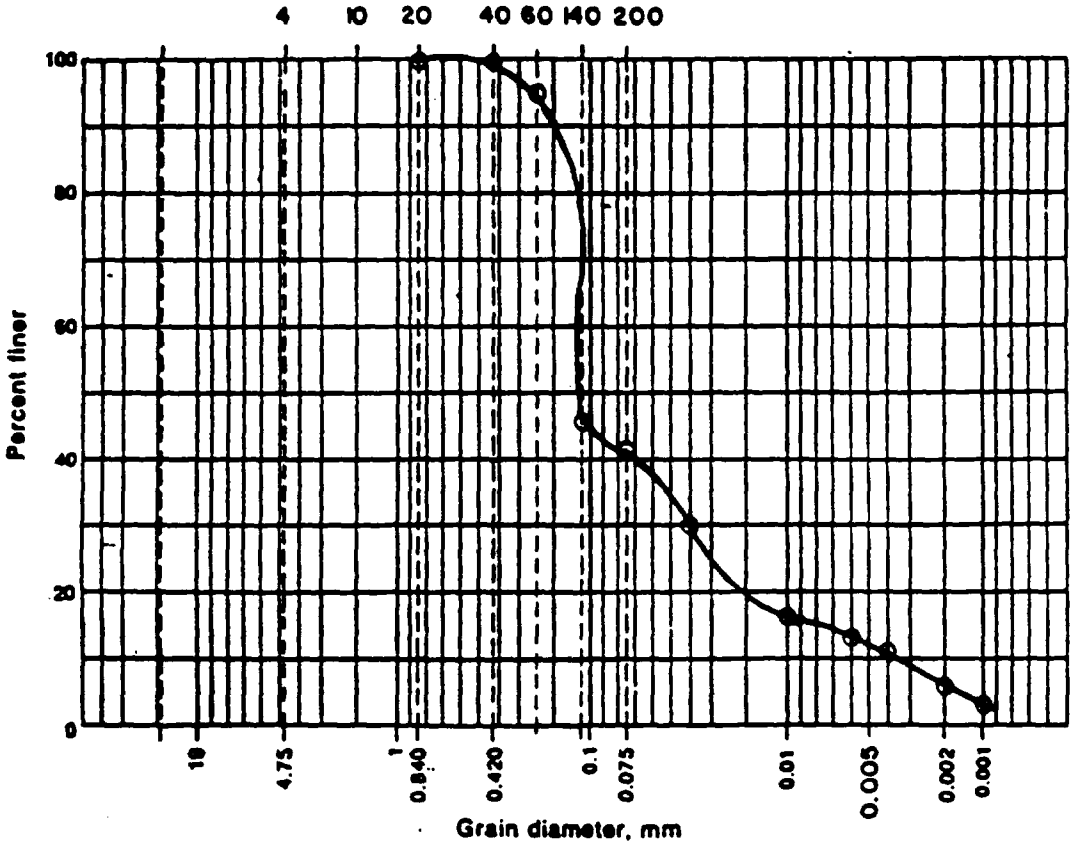
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-78 DEPTH OF SAMPLE 63 FT. MOISTURE 20.4 %

VISUAL DESCRIPTION OF SAMPLE Brown and gray SILTY SAND, little clay (SM)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
0.0 %	59.5 %	28.4 %	12.1 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

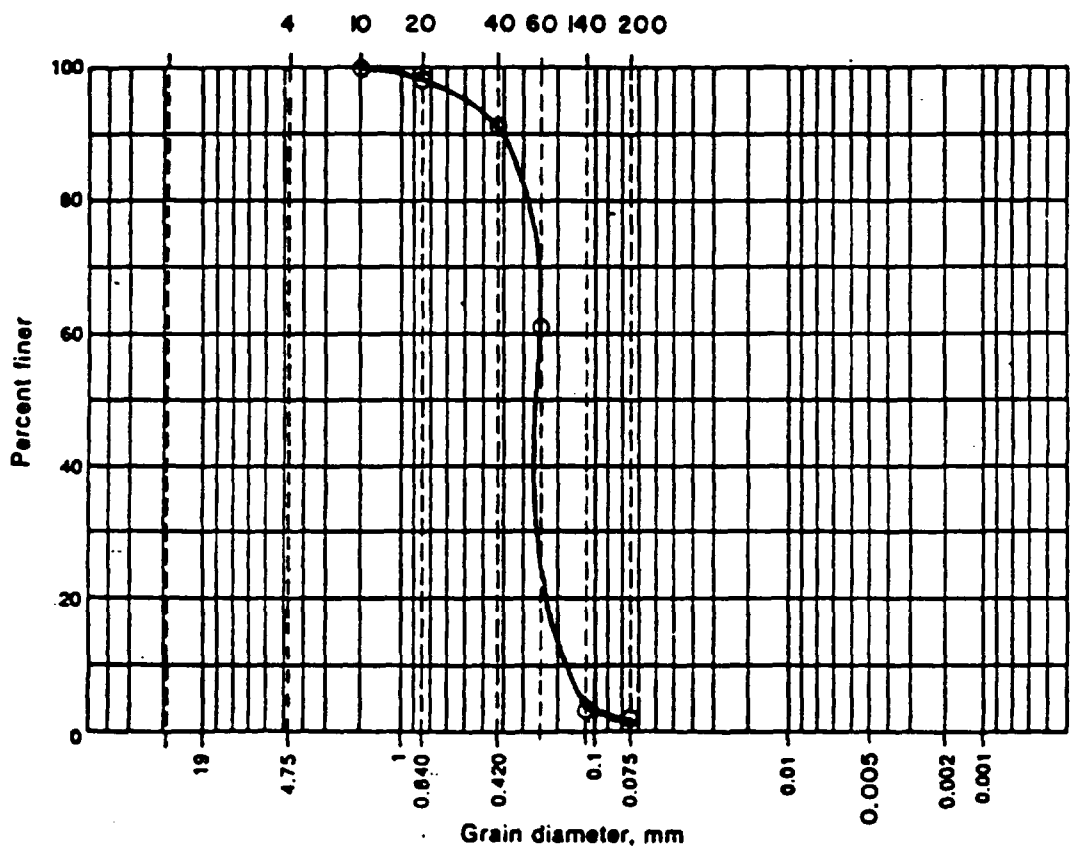
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-79 DEPTH OF SAMPLE 14 FT. MOISTURE 20.1 %

VISUAL DESCRIPTION OF SAMPLE Brown SAND, trace silt [SP]

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
0.0 %	98.0 %	** %	2.0 %

REMARKS ** Hydrometer Analysis not performed

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

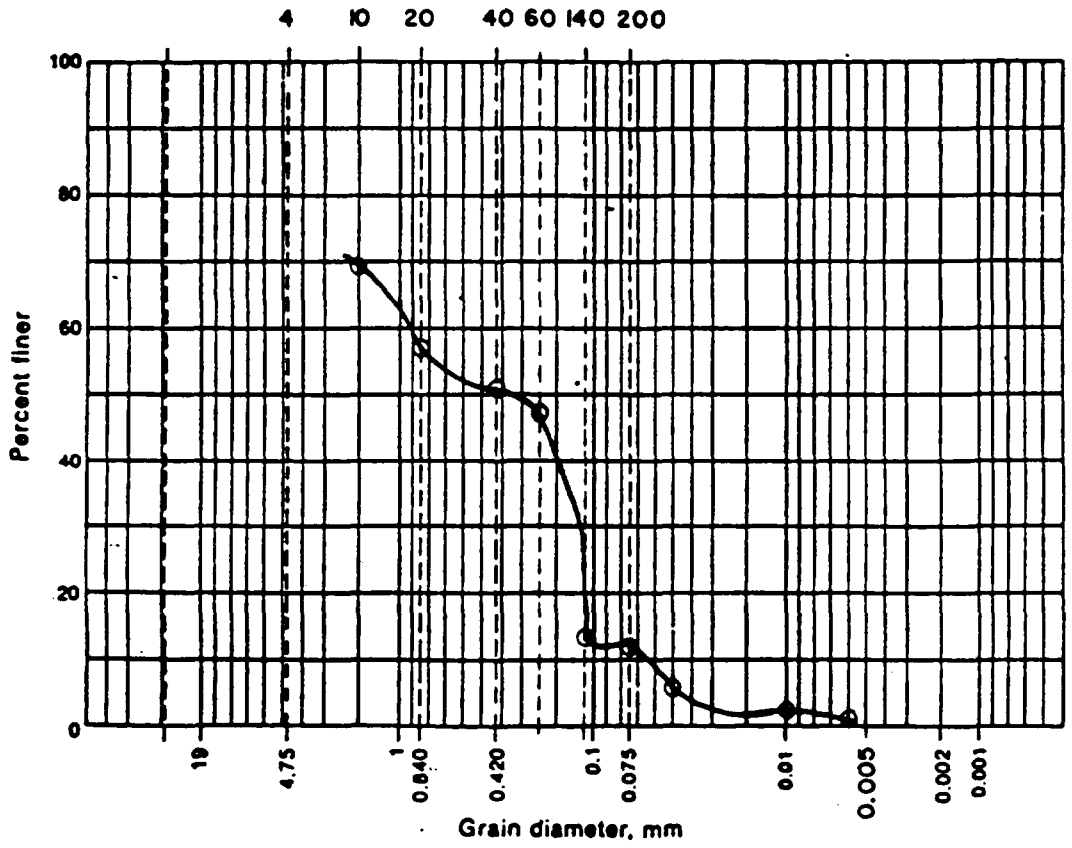
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-79 DEPTH OF SAMPLE 69 FT. MOISTURE 15.7 %

VISUAL DESCRIPTION OF SAMPLE Brown SAND, little gravel and silt (SP-SM)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
16.4 %	71.8 %	10.6 %	1.2 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

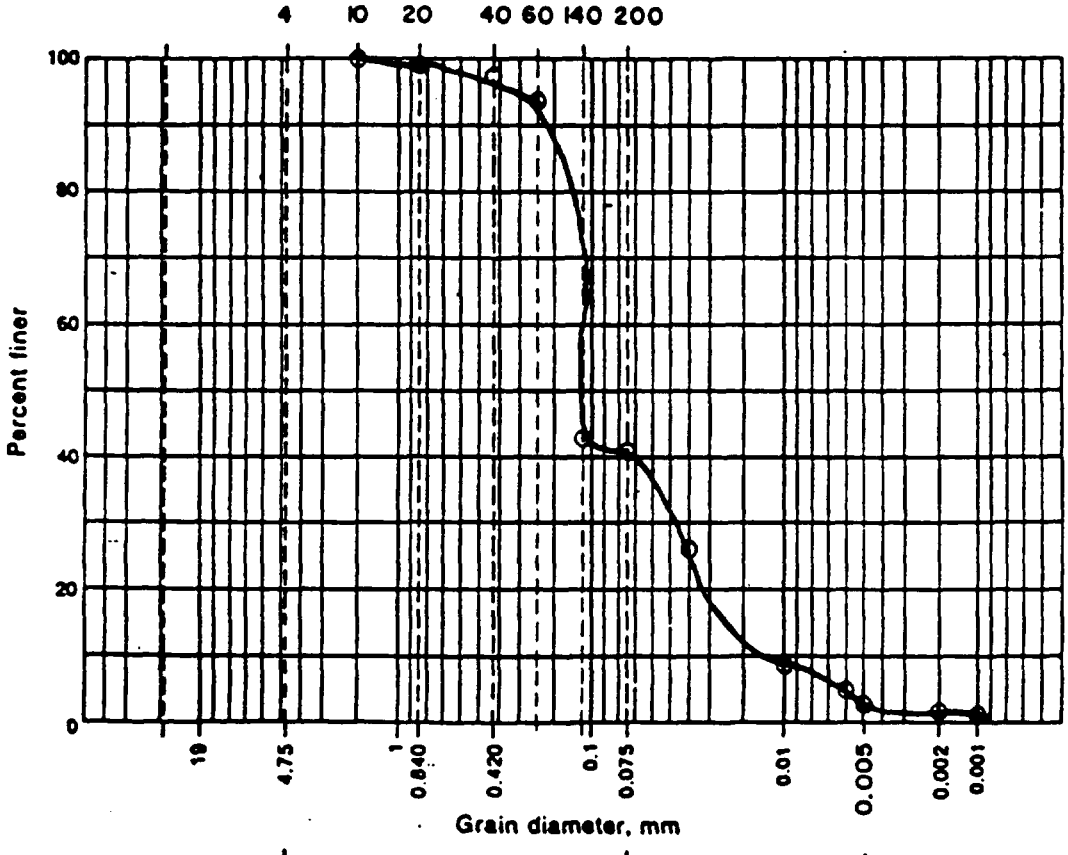
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-80 DEPTH OF SAMPLE 8 FT. MOISTURE 24.8 %

VISUAL DESCRIPTION OF SAMPLE Gray SILTY SAND, trace clay [SM]

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL 0.0 %	SAND 59.3 %	SILT 36.7 %	CLAY 4.0 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

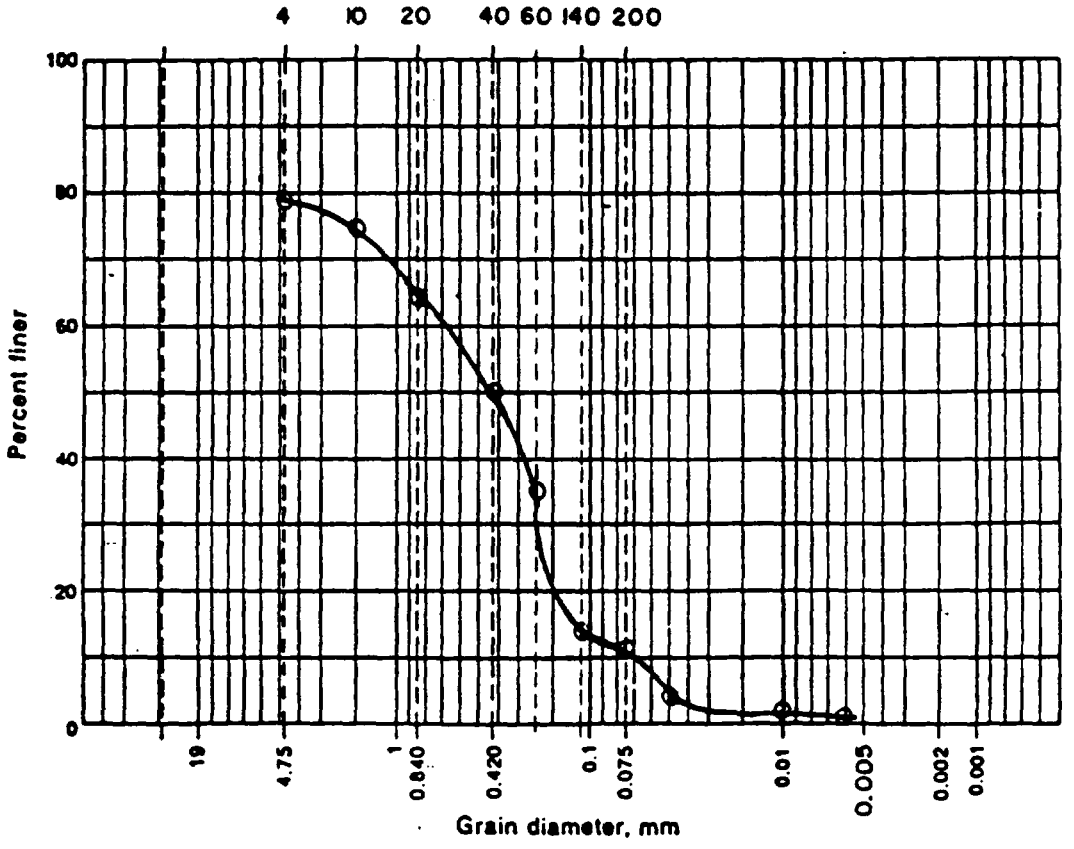
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-80 DEPTH OF SAMPLE -- FT. MOISTURE 5.0 %

VISUAL DESCRIPTION OF SAMPLE Brown SAND, some gravel, little silt, trace clay (SP-SM)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
21.4 %	67.8 %	9.5 %	1.3 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

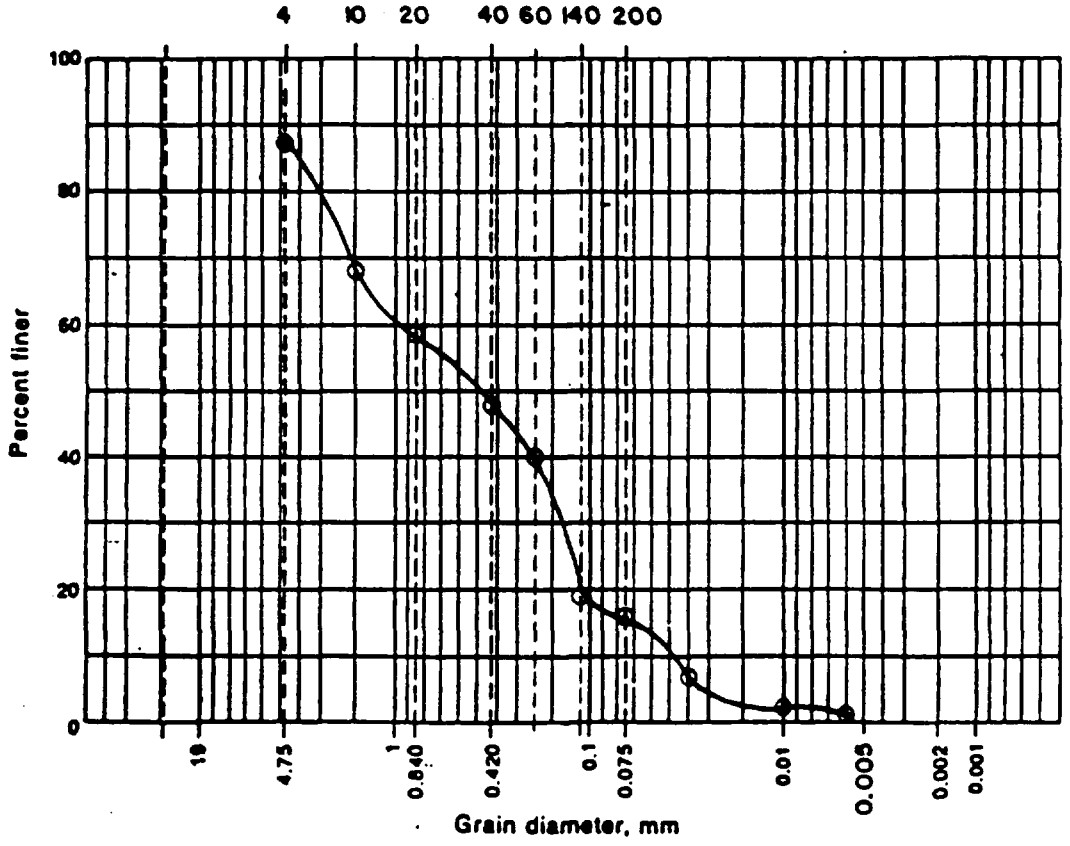
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-82 DEPTH OF SAMPLE 10 FT. MOISTURE 12.3 %

VISUAL DESCRIPTION OF SAMPLE Brown and gray SILTY SAND, some gravel, trace clay [SM]

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL 22.3 %	SAND 61.9 %	SILT 14.7 %	CLAY 1.1 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

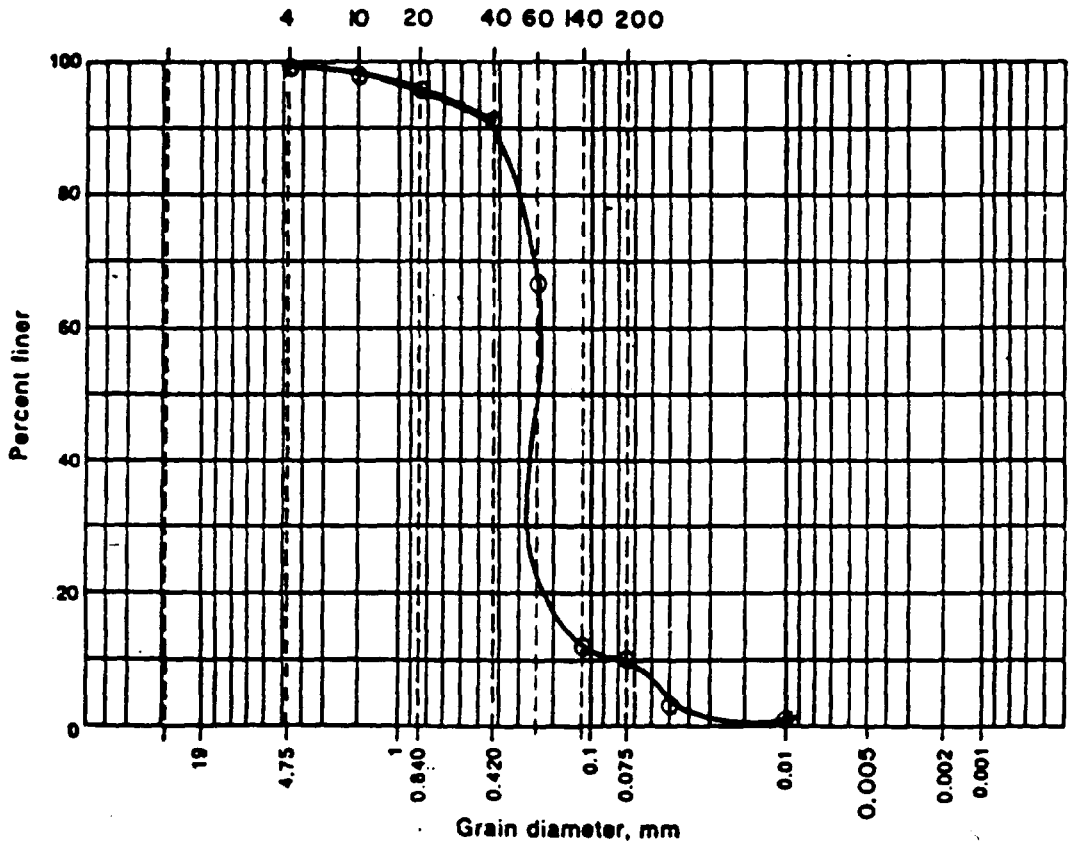
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-82 DEPTH OF SAMPLE 20 FT. MOISTURE 18.9 %

VISUAL DESCRIPTION OF SAMPLE Brown SAND, little silt, trace gravel (SP-SM)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
1.3 %	88.3 %	9.4 %	1.0 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

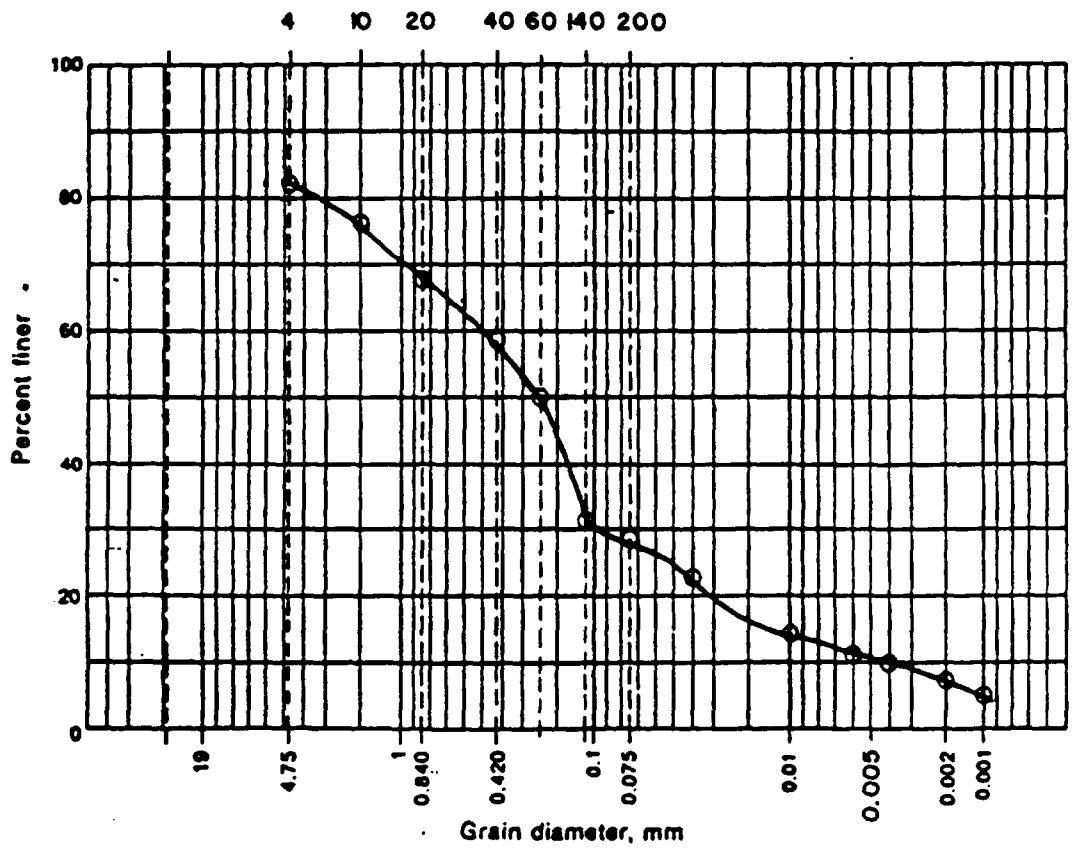
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-82 DEPTH OF SAMPLE 35 FT. MOISTURE 8.9 %

VISUAL DESCRIPTION OF SAMPLE Brown SILTY SAND, some gravel, little clay [SM]

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
18.5 %	52.8 %	17.7 %	11.0 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

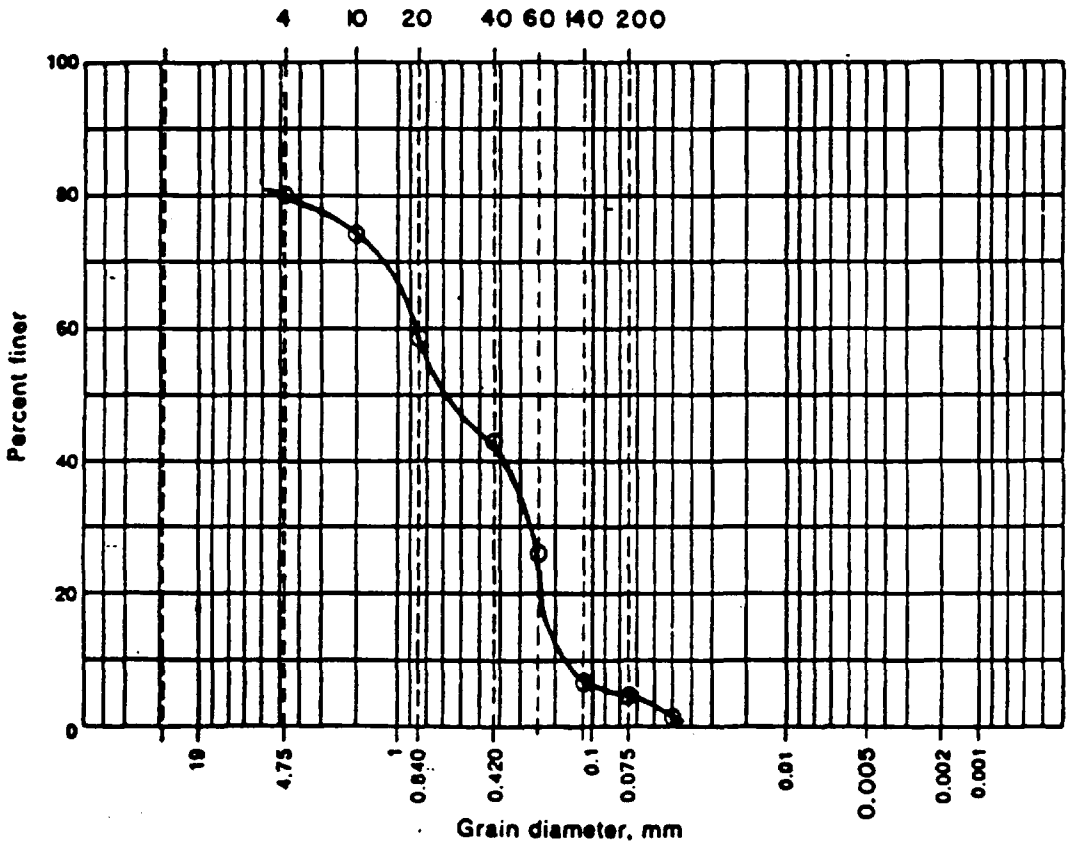
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-83 DEPTH OF SAMPLE 40 FT. MOISTURE 11.2 %

VISUAL DESCRIPTION OF SAMPLE Brown SAND, some gravel, trace silt [SP-SM]

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
19.7 %	75.1 %	** %	5.2 %

REMARKS ** Hydrometer Analysis not performed

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

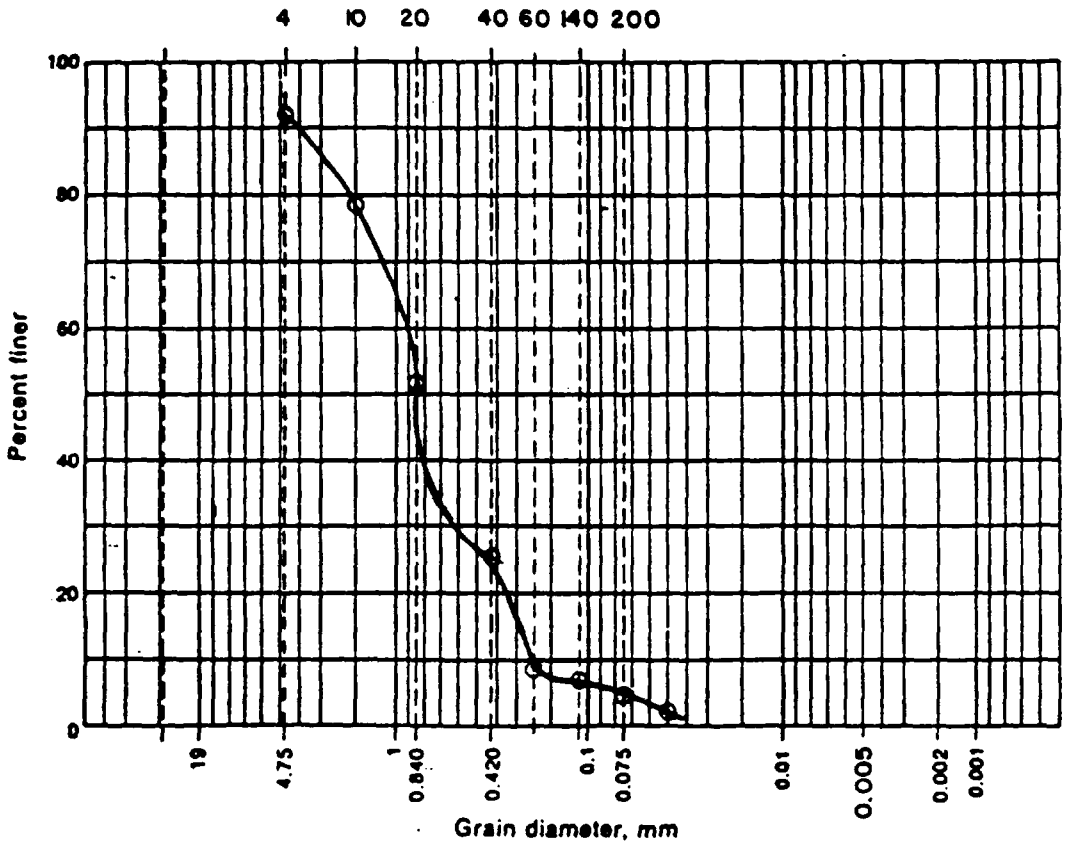
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-83 DEPTH OF SAMPLE 60 FT. MOISTURE 12.7 %

VISUAL DESCRIPTION OF SAMPLE Brown SAND, trace gravel [SP-SM]

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
7.6 %	86.2 %	** %	6.2 %

REMARKS ** Hydrometer Analysis not performed

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

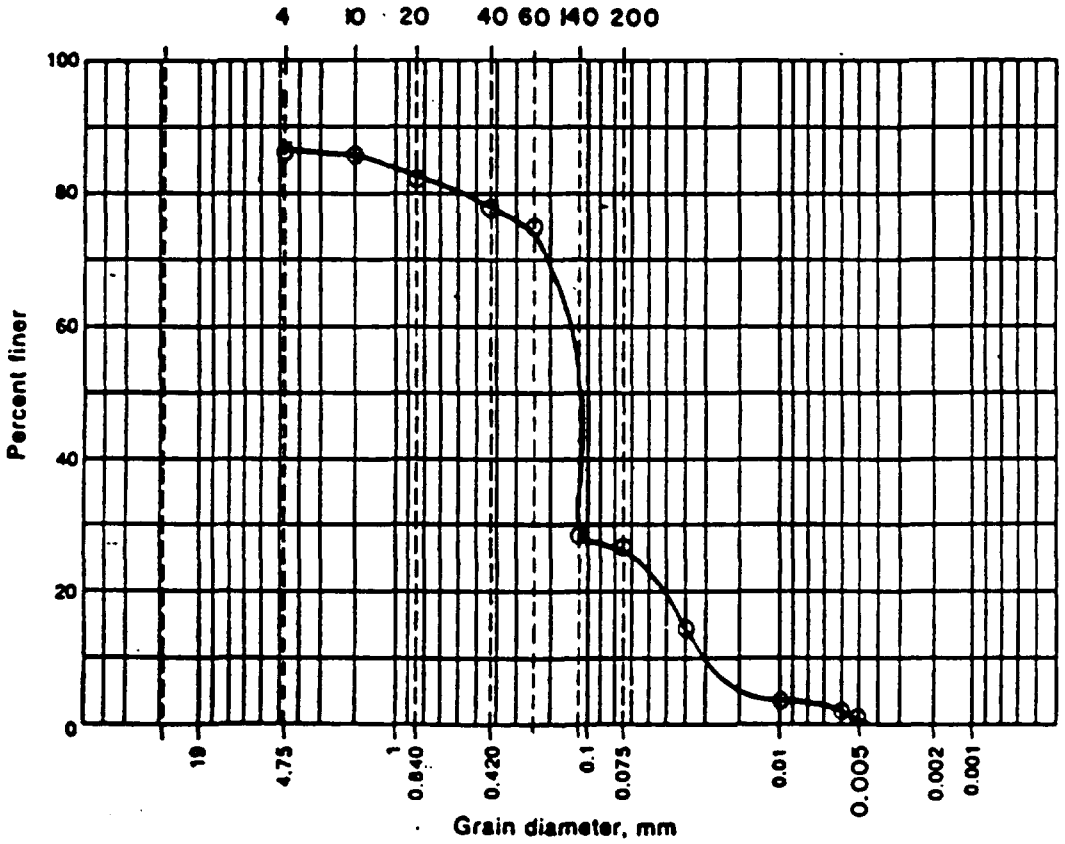
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-83 DEPTH OF SAMPLE 80 FT. MOISTURE 14.9 %

VISUAL DESCRIPTION OF SAMPLE Brown SILTY SAND, little gravel, trace clay [SM]

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
13.6 %	58.8 %	25.6 %	2.0 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

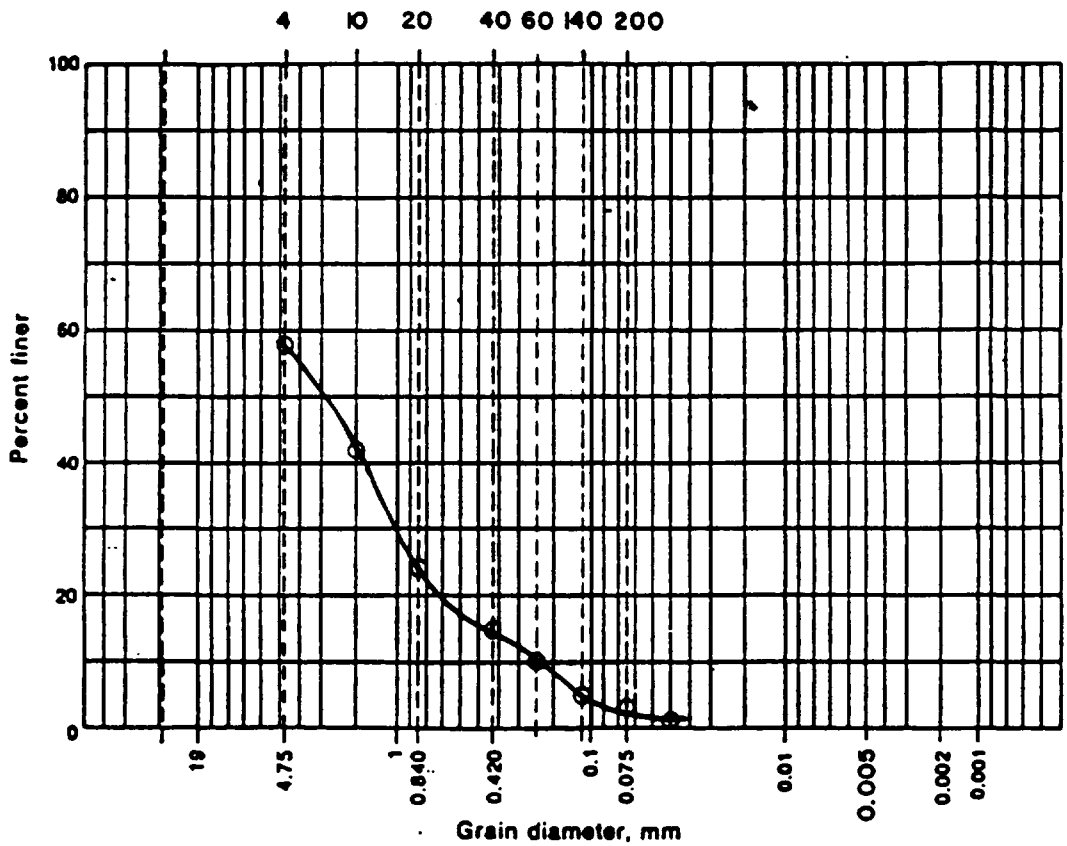
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-84 DEPTH OF SAMPLE 10 FT. MOISTURE 8.4 %

VISUAL DESCRIPTION OF SAMPLE Brown SAND, some gravel (SP)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
42.0 %	54.2 %	** %	3.8 %

REMARKS ** Hydrometer Analysis not performed

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

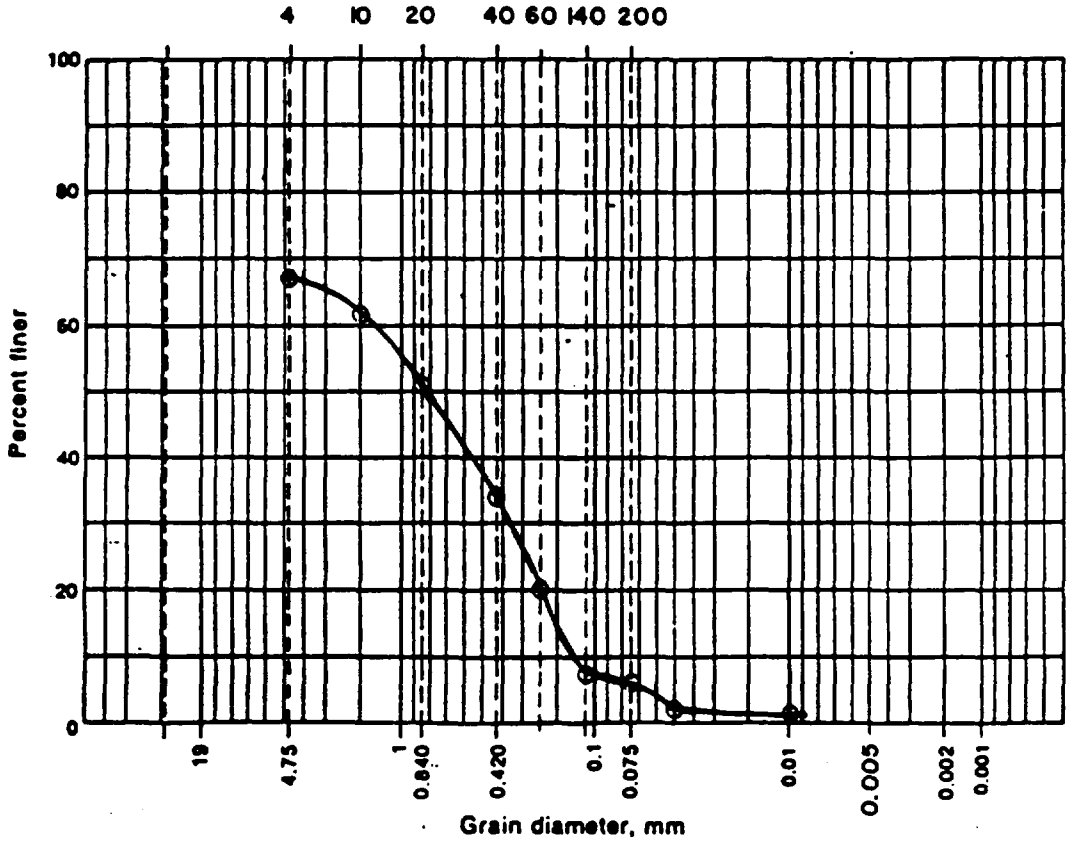
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-84 DEPTH OF SAMPLE 40 FT. MOISTURE 9.0 %

VISUAL DESCRIPTION OF SAMPLE Brown SAND, some gravel, trace silt (SP-SM)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL 33.0 %	SAND 60.0 %	SILT 6.0 %	CLAY 1.0 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

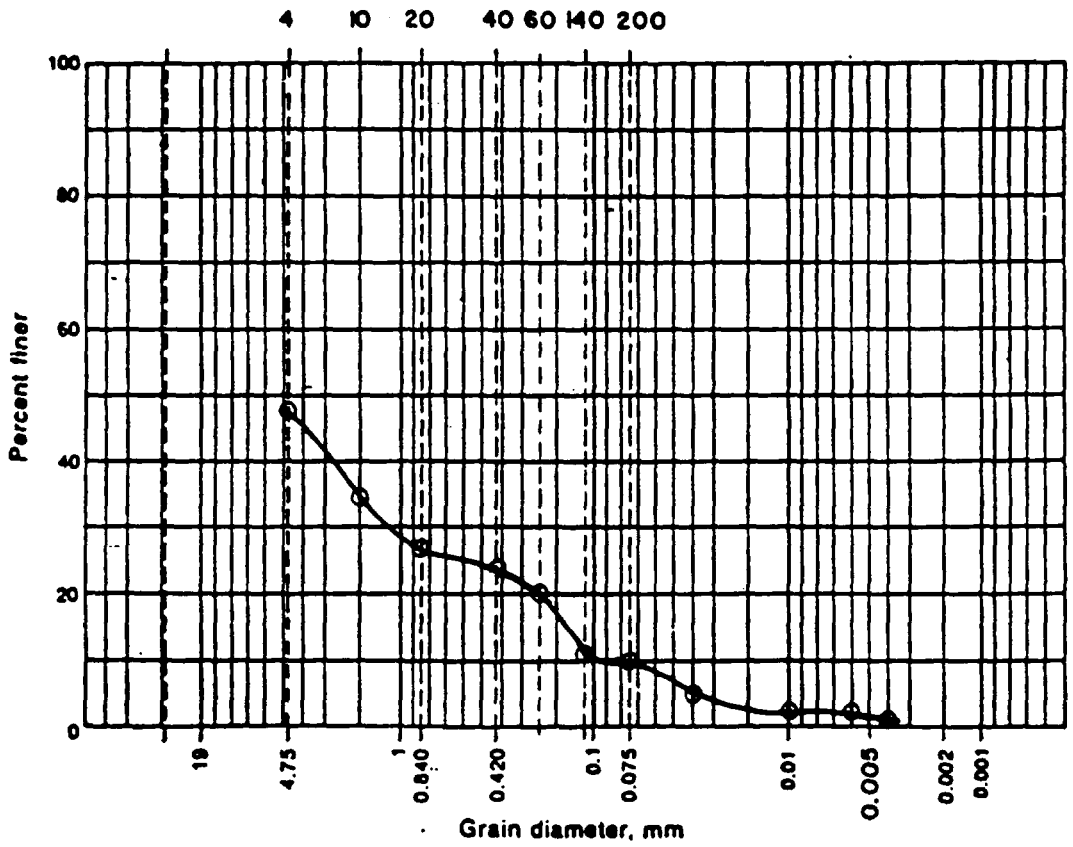
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-84 DEPTH OF SAMPLE 65 FT. MOISTURE 6.0 %

VISUAL DESCRIPTION OF SAMPLE Brown GRAVEL AND SAND, trace silt (GP-GM)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL 52.0 %	SAND 38.3 %	SILT 8.2 %	CLAY 1.5 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

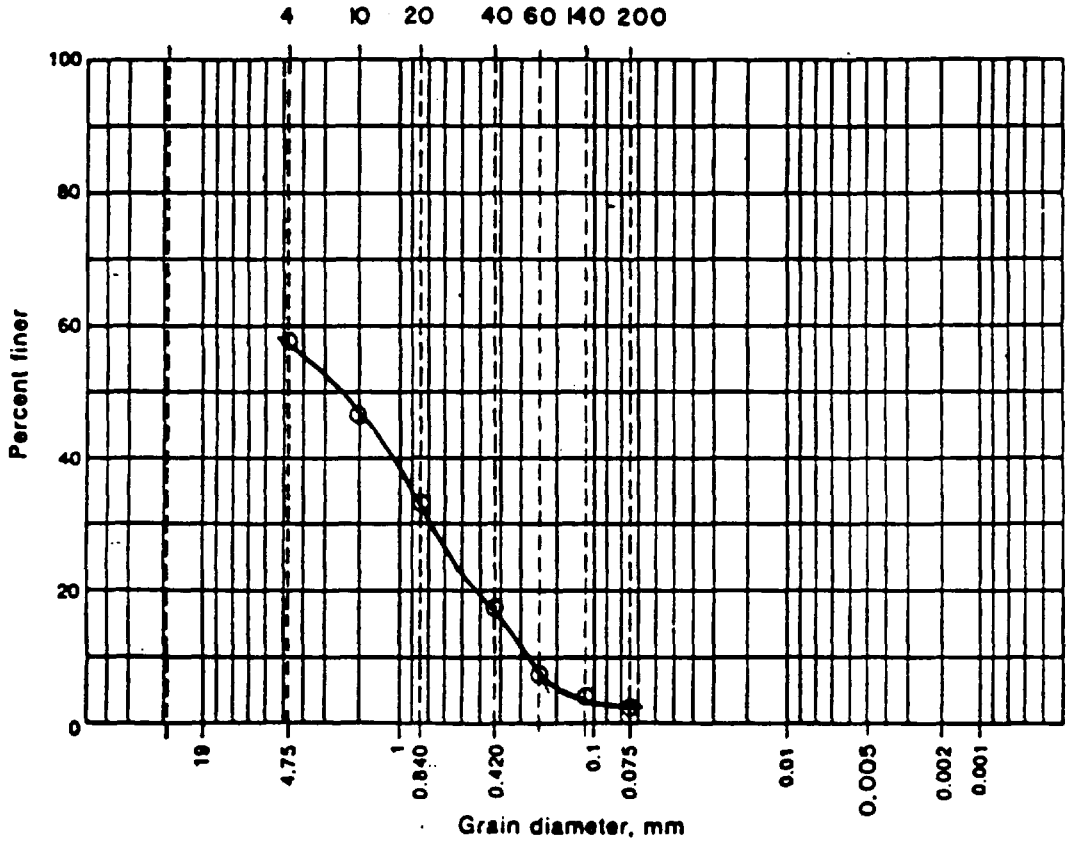
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-85 DEPTH OF SAMPLE 34 FT. MOISTURE 10.1 %

VISUAL DESCRIPTION OF SAMPLE Brown SAND, some gravel [SP]

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
41.8 %	55.1 %	** %	3.1 %

REMARKS ** Hydrometer Analysis not performed

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

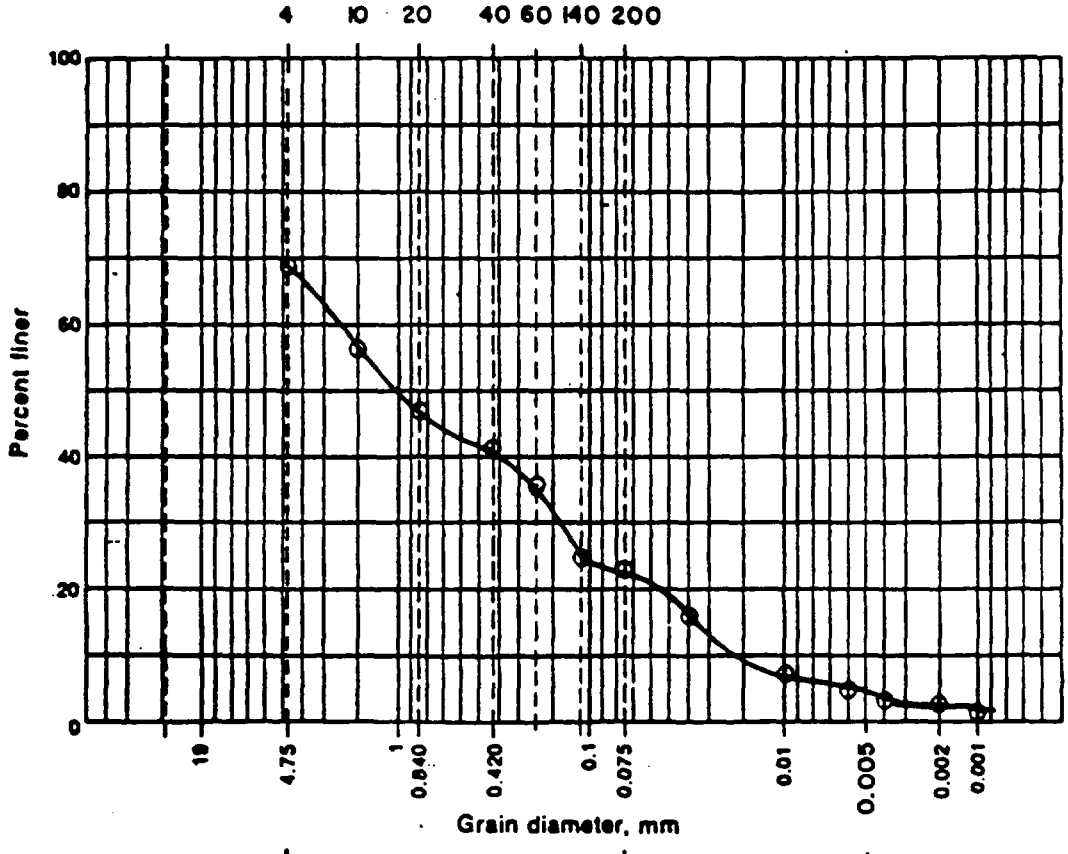
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-85 DEPTH OF SAMPLE 59 FT. MOISTURE 7.7 %

VISUAL DESCRIPTION OF SAMPLE Brown and gray SILTY SAND, some gravel, trace clay [SM]

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL 31.4 %	SAND 46.1 %	SILT 17.5 %	CLAY 5.0 %

REMARKS

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

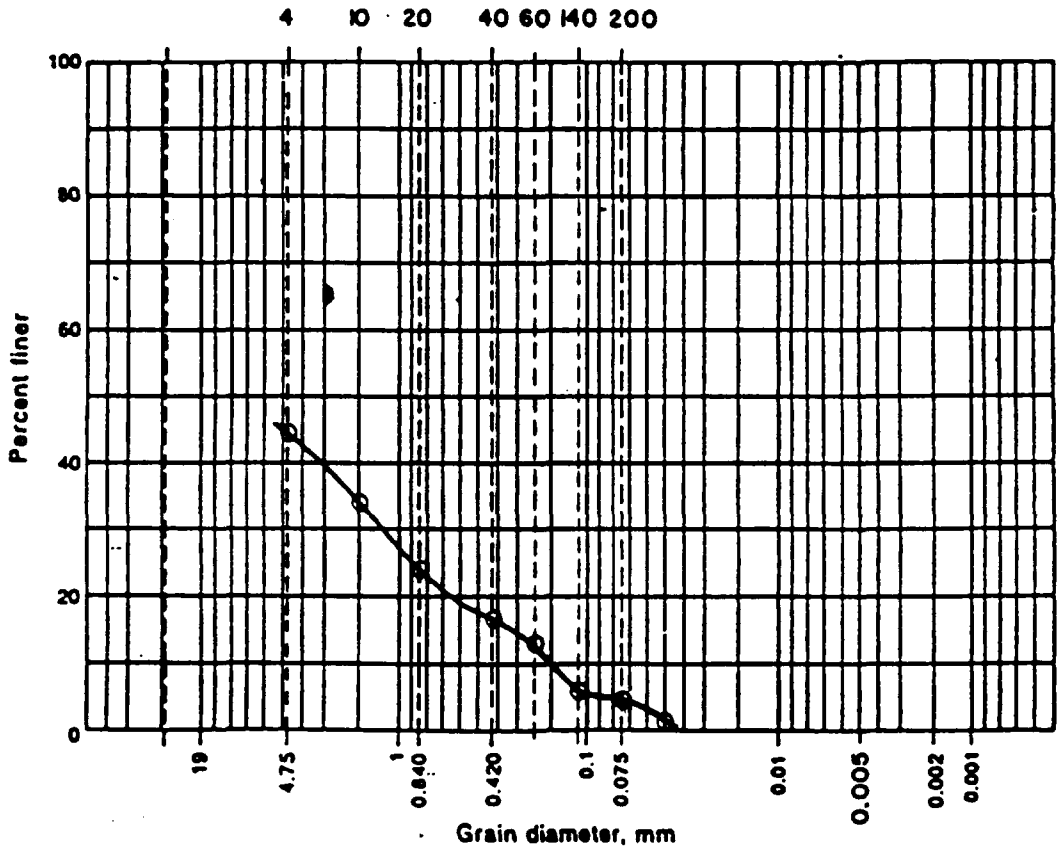
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-86D DEPTH OF SAMPLE 25 FT. MOISTURE 4.5 %

VISUAL DESCRIPTION OF SAMPLE Brown GRAVEL AND SAND (GP-GM)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
56.1 %	38.8 %	** %	5.1 %

REMARKS ** Hydrometer Analysis not performed

CLIENT NUS

PROJECT WELLS G AND H SITE PROJ NO. 850401

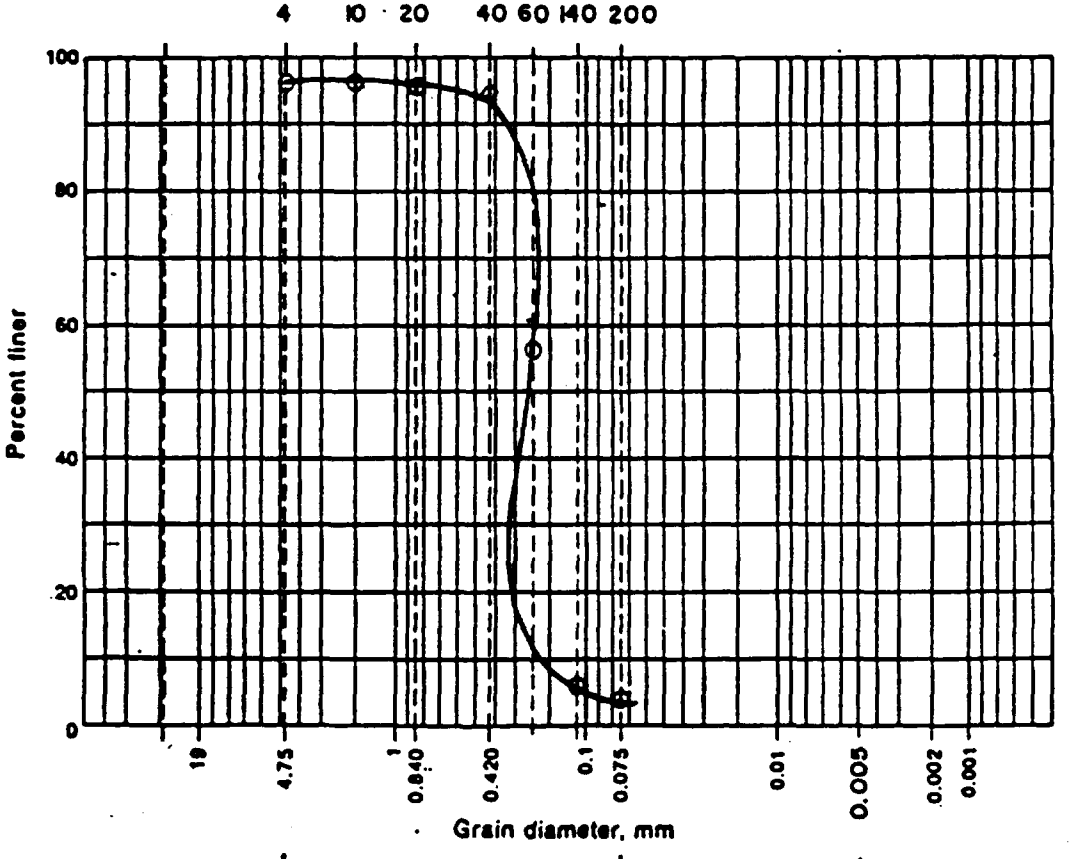
LOCATION WOBURN, MA DATE 8/29/85

BORING NO S-86D DEPTH OF SAMPLE 50 FT. MOISTURE 18.2 %

VISUAL DESCRIPTION OF SAMPLE Brown SAND, trace gravel and silt (SP)

ASTM TEST PROCEDURE ASTM D-422 TESTED BY S. PATEL

GRAIN SIZE ANALYSIS



GRAVEL	SAND	SILT	CLAY
2.8 %	93.1 %	** %	4.1 %

REMARKS ** Hydrometer Analysis not performed

APPENDIX G
NUS/FIT ANALYTICAL RESULTS

The following Appendix presents the analytical tables discussed in Chapter 5. Twenty-five tables are included as follows:

Table 1:	NUS/FIT Analytical Screening Results of NUS/FIT Initial Groundwater Sampling Round, August, 1984.
Table 2:	NUS/FIT Analytical Screening Results; Recently Installed Wells
Table 3 & 3a:	CLP Volatile Organic Analytical Results, NUS/FIT April, 1985 Sampling Round
Table 4 & 4a:	CLP Volatile Organic Analytical Results, NUS/FIT May, 1985 Sampling Round
Table 5 & 5a	CLP Volatile Organic Analytical Results, NUS/FIT June, 1985 Sampling Round
Table 6:	Mean Concentrations of Selected Volatile Organic Compounds from the NUS/FIT Final Sampling Rounds (April, May, and June, 1985)
Table 7:	CLP Extractable Organic Analytical Results, NUS/FIT April, 1985 Sampling Round
Table 8:	CLP Extractable Organic Analytical Results, NUS/FIT May, 1985 Sampling Round
Table 9:	CLP Extractable Organic Analytical Results, NUS/FIT June, 1985 Sampling Round
Table 10:	Groundwater CLP Inorganic Analytical Results, NUS/FIT April, 1985 Sampling Round.
Table 11:	Groundwater CLP Inorganic Analytical Results, NUS/FIT May, 1985 Sampling Round.
Table 12:	Groundwater CLP Inorganic Analytical Results, NUS/FIT June, 1985 Sampling Round.
Table 13:	The Distribution of Elements in Groundwater from the Bedrock and Overburden Aquifers.
Table 14:	The Ocurrences of Inorganic Elements in NUS/FIT Groundwater Sampling Rounds.
Table 15:	Element Concentration in Groundwater.

Table 16: Element Concentration in Soils.

Table 17: CLP Inorganic Analytical Results for Federal and State Drinking Water Quality Standards, NUS/FIT April, 1985 Sampling Round.

Table 18: CLP Inorganic Analytical Results for Federal and State Drinking Water Standards, NUS/FIT June, 1985 sampling round.

Table 19: CLP Inorganic Analytical Results for Federal and State Drinking Water Quality Standards, NUS/FIT April and June, 1985 Sampling Rounds.

Table 20: Inorganic Analytical Results for Federal and State Drinking Water Quality Standards, NUS/FIT April and June, 1985 Sampling Rounds.

Table 21: Microbiological Analytical Results for Federal and State Drinking Water Quality Standards, NUS/FIT April and June, 1985 Sampling Rounds.

Table 22: CLP Organic Analytical Results for Federal and State Drinking Water Quality Standards, NUS/FIT April and June, 1985 Sampling Rounds.

Table 23: NUS/FIT Analytical Results of Surface Water and Sediment Samples from NUS/FIT Initial Sampling Round, August, 1984.

Table 24: Surface Water CLP Volatile Organic Analytical Results, NUS/FIT April, May, and June, 1985 Sampling Rounds.

Table 25: Surface Water CLP Inorganic Analytical Results, NUS/FIT April, 1985 Sampling Round.

TABLE 1
NUS/FIT ANALYTICAL SCREENING RESULTS OF
NUS/FIT INITIAL GROUNDWATER SAMPLING ROUND
AUGUST, 1984

SAMPLE NUMBER SAMPLE LOCATION	77578 S-11	77568 S-8	77569 S-8	11211 S-21	11210 S-22	77579 GW-3S	77580 GW-3S	76270 GW-3D	77581 GW-4S	77582 GW-4D
Tentative Identification										
trichloroethene	**	**	**	***	**	***	***	****	**	***
trans-1,2-dichloroethene	-	-	-	-	-	-	-	-	-	-
tetrachloroethene	**	**	**	**	-	**	**	**	-	*
benzene	-	-	-	-	-	-	-	-	-	-
toluene	-	-	-	-	-	-	-	-	-	-
ethylbenzene	-	-	-	-	-	-	-	-	-	-
m-xylene	-	-	-	-	-	-	-	-	-	-
o-xylene	-	-	-	-	-	-	-	-	-	-

ppb	
<10.0	*
10-100	**
100-300	***
300-600	****
600-1000	*****
>1000	******
-	- not detected

All samples were screened in-house by NUS chemists utilizing a Photovac 10A10 GC for volatile organic headspace analysis. It should be stressed that the results garnered from this screening technique are qualitative and indicate the presence of contaminant compounds. They should not be used as quantitative results. Therefore, all concentrations are given in ranges. In addition, compound identification is tentative in that compounds were identified by comparison of retention time of sample compounds to the retention times of various standards.

TABLE 1
NUS/FIT ANALYTICAL SCREENING RESULTS OF NUS/FIT
INITIAL GROUNDWATER SAMPLING ROUND
AUGUST, 1984
PAGE TWO

SAMPLE NUMBER SAMPLE LOCATION	77502 BSW-1	77503 BW-1	76274 BSW-2	76275 BW-3	76276 BW-3	77501 BW-5	76277 S-46
Tentative Identification							
trichloroethene	***	-	*	**	**	***	***
trans-1,2-dichloroethene	-	-	-	*	*	-	*
tetrachloroethene	**	-	-	-	*	-	**
benzene	-	-	-	*	*	-	*
toluene	-	-	-	-	-	-	-
ethylbenzene	-	-	-	-	-	-	-
m-xylene	-	-	-	-	-	-	-
o-xylene	-	-	-	-	-	-	-

ppb	
<10.0	*
10-100	**
100-300	***
300-600	****
600-1000	*****
>1000	******
-	- not detected

All samples were screened in-house by NUS chemists utilizing a Photovac 10A10 GC for volatile organic headspace analysis. It should be stressed that the results garnered from this screening technique are qualitative and indicate the presence of contaminant compounds. They should not be used as quantitative results. Therefore, all concentrations are given in ranges. In addition, compound identification is tentative in that compounds were identified by comparison of retention time of sample compounds to the retention times of various standards.

TABLE 1
NUS/FIT ANALYTICAL SCREENING RESULTS OF NUS/FIT
INITIAL GROUNDWATER SAMPLING ROUND
AUGUST, 1984
PAGE THREE

SAMPLE NUMBER	77566	77565	77519	77567	77515	77517	77522	77521	77516	77520
SAMPLE LOCATION	S-5	S-6	S-60	OW-8	OW-7	OW-7	OW-20	OW-20A	OW-19	OW-19A
Tentative Identification										
trichloroethene	-	*	-	*	**	**	**	*	**	*
trans-1,2-dichloroethene	-	-	-	-	-	-	-	-	-	-
tetrachloroethene	*	***	-	-	*	-	-	*	-	-
benzene	-	-	-	*	-	-	-	-	-	-
toluene	-	-	-	*	-	-	-	-	-	-
ethylbenzene	-	-	-	-	-	-	-	-	-	-
m-xylene	-	-	-	-	-	-	-	-	-	-
o-xylene	-	-	-	-	-	-	-	-	-	-

ppb	
<10.0	*
10-100	**
100-300	***
300-600	****
600-1000	*****
>1000	******
-	- not detected

All samples were screened in-house by NUS chemists utilizing a Photovac 10A10 GC for volatile organic headspace analysis. It should be stressed that the results garnered from this screening technique are qualitative and indicate the presence of contaminant compounds. They should not be used as quantitative results. Therefore, all concentrations are given in ranges. In addition, compound identification is tentative in that compounds were identified by comparison of retention time of sample compounds to the retention times of various standards.

TABLE 1
NUS/FIT ANALYTICAL SCREENING RESULTS OF NUS/FIT
INITIAL GROUNDWATER SAMPLING ROUND
AUGUST, 1984
PAGE FOUR

SAMPLE NUMBER SAMPLE LOCATION	77585* BSW-1	77586* BW-1	77587* BSW-2	77588* BW-2	77589* BW-3	77590* BW-4	77591* BW-5	77592* BSWW-6	77593* BSW-6	77594* BSW-7	77595* BW-7
Tentative Identification											
trichloroethene	***	*	*	**	**	*	***	******	******	**	*
trans-1,2-dichloroethene	-	-	-	-	-	-	-	-	-	-	-
tetrachloroethene	*	-	-	-	**	-	-	**	*	**	-
benzene	-	-	-	-	-	-	-	***	-	-	-
toluene	-	-	-	-	-	-	-	*	*	-	-
ethylbenzene	-	-	-	-	-	-	-	***	**	-	-
m-xylene	-	-	-	-	-	-	-	*****	***	-	-
o-xylene	-	-	-	-	-	-	-	*****	**	-	-

ppb	
<10.0	*
10-100	**
100-300	***
300-600	****
600-1000	*****
>1000	******
-	- not detected

All samples were screened in-house by NUS chemists utilizing a Photovac 10A10 GC for volatile headspace analysis. It should be stressed that the results garnered from this screening technique are qualitative and indicate the presence of contaminant compounds. They should not be used as quantitative results. Therefore, all concentrations are given in ranges. In addition, compound identification is tentative in that compounds were identified by comparison of retention time of sample compounds to the retention times of various standards.

* Results of split samples collected by Woodward-Clyde.

TABLE I
NUS/FIT ANALYTICAL SCREENING RESULTS OF NUS/FIT
INITIAL GROUNDWATER SAMPLING ROUND
AUGUST, 1984
PAGE FIVE

SAMPLE NUMBER	77504	77518	77523	77611	76269	77583	11212
SAMPLE LOCATION	Blank	Blank	Blank	Blank	Blank	Blank	Blank
Tentative Identification							
trichloroethene	-	-	-	-	-	-	-
trans-1,2-dichloroethene	-	-	-	-	-	-	-
tetrachloroethene	-	-	-	-	-	-	-
benzene	-	-	-	-	-	*	-
toluene	-	-	-	-	-	*	-
ethylbenzene	-	-	-	-	-	-	-
m-xylene	-	-	-	-	-	*	-
o-xylene	-	-	-	-	-	-	-

ppb	
<10.0	*
10-100	**
100-300	***
300-600	****
600-1000	*****
>1000	******
-	- not detected

All samples were screened in-house by NUS chemists utilizing a Photovac 10A10 GC for volatile organic headspace analysis. It should be stressed that the results garnered from this screening technique are qualitative and indicate the presence of contaminant compounds. They should not be used as quantitative results. Therefore, all concentrations are given in ranges. In addition, compound identification is tentative in that compounds were identified by comparison of retention time of sample compounds to the retention times of various standards.

TABLE 2
NUS/FIT ANALYTICAL SCREENING RESULTS
RECENTLY INSTALLED WELLS

Sample Location		S63S	S63D	S64S	S64M	S64D	S65S	S65M	S65D	S66D	S67S	S67M	S67D	S68S	S68M
Tenatively Identified Compounds	Detection Limits														
Trichloroethene	1 ppb	***	****	***	***	****	*	**	**	**	**	**	**	***	***
Benzene	1ppb	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	3 ppb	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	3ppb	***	***	**	**	**	*	**	**	*	-	-	-	***	***
Chlorobenzene	5 ppb	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	5 ppb	-	-	-	-	-	-	-	-	-	-	-	-	-	-
m-Xylene	5 ppb	-	-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	10 ppb	-	-	-	-	-	-	-	-	-	-	-	-	-	-

- - Not Detected
* - <10 ppb
** - 10-70 ppb
*** - 70-200 ppb
**** - 200-350 ppb
***** - 350-1000 ppb
****** - 1000-5000 ppb

All samples were screened in-house by NUS chemists utilizing a Photovac 10A10 GC for volatile organic headspace analysis. It should be stressed that the results garnered from this screening technique are qualitative and indicate the presence of contaminant compounds. They should not be used as quantitative results. Therefore, all concentrations are given in ranges. In addition, compound identification is tentative in that compounds were identified by comparison of retention time of sample compounds to the retention times of various standards.

TABLE 2
NUS/FIT ANALYTICAL SCREENING RESULTS
RECENTLY INSTALLED WELLS
PAGE TWO

Sample Location		S69D	S70S	S70M	S71M	S71D	S72S	S72M	S72D	S73S	S73D	S74M	S74D
Tenatively Identified Compounds	Detection Limits												
Trichloroethene	1 ppb	-	-	-	-	*	*	**	**	**	-	-	-
Benzene	3 ppb	-	-	-	-	-	-	-	-	*	-	-	-
Toluene	3 ppb	-	-	-	*	-	-	-	-	*	-	-	-
Tetrachloroethene	5 ppb	-	-	-	**	****	*	*	*	-	-	-	-
Chlorobenzene	5 ppb	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	5 ppb	-	-	-	-	-	-	-	-	-	-	-	-
m-Xylene	5 ppb	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	10 ppb	-	-	-	-	-	-	-	-	-	-	-	-

- - Not Detected
* - <10 ppb
** - 10-70 ppb
*** - 70-200 ppb
**** - 200-350 ppb
***** - 350-1000 ppb
****** - 1000-5000 ppb

All samples were screened in-house by NUS chemists utilizing a Photovac 10A10 GC for volatile organic headspace analysis. It should be stressed that the results garnered from this screening technique are qualitative and indicate the presence of contaminant compounds. They should not be used as quantitative results. Therefore, all concentrations are given in ranges. In addition, compound identification is tentative in that compounds were identified by comparison of retention time of sample compounds to the retention times of various standards.

TABLE 2
NUS/FIT ANALYTICAL SCREENING RESULTS
RECENTLY INSTALLED WELLS
PAGE THREE

Sample Location		S75S	S75M	S75D	S76S	S76M	S76D	S77SS	S77S	S77M	S77D	S78S	S78D
Tenatively Identified Compounds	Detection Limits												
Trichloroethene	1 ppb	*	*	-	-	-	-	-	***	**	****	******	-
Benzene	3 ppb	**	***	**	-	-	-	-	-	-	-	-	-
Toluene	3 ppb	****	*	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5 ppb	-	-	-	-	-	-	-	**	**	**	*****	-
Chlorobenzene	5 ppb	-	-	-	-	-	-	-	-	-	-	>10,000	-
Ethylbenzene	5 ppb	***	**	-	-	-	-	-	-	-	-	*****	-
m-Xylene	5 ppb	****	**	-	-	-	-	-	-	-	-	-	-
o-Xylene	10 ppb	****	**	-	-	-	-	-	-	-	-	-	-

- - Not Detected
* - <10 ppb
** - 10-70 ppb
*** - 70-200 ppb
**** - 200-350 ppb
***** - 350-1000 ppb
****** - 1000-5000 ppb

All samples were screened in-house by NUS chemists utilizing a Photovac 10A10 GC for volatile organic headspace analysis. It should be stressed that the results garnered from this screening technique are qualitative and indicate the presence of contaminant compounds. They should not be used as quantitative results. Therefore, all concentrations are given in ranges. In addition, compound identification is tentative in that compounds were identified by comparison of retention time of sample compounds to the retention times of various standards.

TABLE 2
NUS/FIT ANALYTICAL SCREENING RESULTS
RECENTLY INSTALLED WELLS
PAGE FOUR

Sample Location		S79M	S79D	S80S	S80M	S81S	S81M	S81D	S82	S83	S84S	S84M	S84D	S85S	S85M	S86S	S86M
Tenatively Identified Compounds	Detection Limits																
Trichloroethene	1 ppb	-	-	-	-	**	*	*	**	*****	**	**	*	***	***	*	**
Benzene	3 ppb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	3 ppb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5 ppb	-	-	-	-	*****	***	**	**	****	**	*	*	***	*****	**	*
Chlorobenzene	5 ppb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	5 ppb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
m-Xylene	5 ppb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	10 ppb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

- - Not Detected
* - <10 ppb
** - 10-70 ppb
*** - 70-200 ppb
**** - 200-350 ppb
***** - 350-1000 ppb
****** - 1000-5000 ppb

All samples were screened in-house by NUS chemists utilizing a Photovac 10A10 GC for volatile organic headspace analysis. It should be stressed that the results garnered from this screening technique are qualitative and indicate the presence of contaminant compounds. They should not be used as quantitative results. Therefore, all concentrations are given in ranges. In addition, compound identification is tentative in that compounds were identified by comparison of retention time of sample compounds to the retention times of various standards.

TABLE 3 CLP VOLATILE ORGANIC ANALYTICAL RESULTS
NUS/FIT APRIL 1985 SAMPLING ROUND (ppb)

SAMPLE LOCATION		S-4	S-5	S-6	S-10	S-11	S-21	S-22	S-41	S-46	S-46	S63S	S63D	S64S	S64M	S64M	S64D	S64D	S65S
SAMPLE NUMBER		12406	12392	12393	12408	12399	12387	12481	12487	12430	12431	12493	12494	12376	12380	12381	12377	12378	12367
TRAFFIC REPORT NUMBER		AB369	AB353	AB358	AB371	AB363	AB348	AB513	AB517	AB382	AB383	AB503	AB504	AB337	AB341	AB342	AB338	AB339	AB329
VOLATILE COMPOUNDS	CRQL																		
CHLOROMETHANE	10																		
BROMOMETHANE	10																		
VINYL CHLORIDE	10																		
CHLOROETHANE	10		13																
METHYLENE CHLORIDE	5	*	*	*	*	*				*	*								
ACETONE	10																		
CARBON DISULFIDE	5																		
1,1-DICHLOROETHENE	5																		
1,1-DICHLOROETHANE	5		10							9	8								
trans-1,2-DICHLOROETHENE	5			3 J		26	150 J			28	24	44 J	91	65 J	85 J	86 J	85 J	80 J	
CHLOROFORM	5																		
1,2-DICHLOROETHANE	5																		
2-BUTANONE	10						*						*		*		*	*	*
1,1,1-TRICHLOROETHANE	5					14				26	25		10		3 J	3 J	3 J	3 J	
CARBON TETRACHLORIDE	5																		
VINYL ACETATE	10																		
BROMODICHLOROMETHANE	5																		
1,1,2,2-TETRACHLOROETHANE	5			3 J															
1,2-DICHLOROPROPANE	5																		
trans-1,3-DICHLOROPROPENE	5																		
TRICHLOROETHENE	5					130	190 J		3 J	220	220	72 J	140	80 J	130 J	130 J	180 J	170 J	
DIBROMOCHLOROMETHANE	5																		
1,1,2-TRICHLOROETHANE	5																		
BENZENE	5																		
cis-1,3-DICHLOROPROPENE	5																		
2-CHLOROETHYL VINYL ETHER	10																		
BROMOFORM	5																		
2-HEXANONE	10																		
4-METHYL-2-PENTANONE	10																		
TETRACHLOROETHENE	5			140		34	27 J		3 J	12	12	86 J	270	30 J	48 J	47 J	44 J	42 J	
TOLUENE	5																		
CHLOROBENZENE	5																		
ETHYLBENZENE	5																		
STYRENE	5																		
TOTAL-XYLENE	5																		
DILUTION FACTOR		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

NOTES: "BLANK SPACE" - Indicates the compound was not detected.
J - Quantitation is approximate due to quality control review (data validation).
* - Value is rejected due to blank contamination identified in quality control review. The detection limit for blank
CRQL - Contract required detection limit (multiply by dilution factor to obtain sample detection limit).

TABLE 3
CLP VOLATILE ORGANIC ANALYTICAL RESULTS
NUS/FIT APRIL 1985 SAMPLING ROUND (ppb) PAGE TWO

SAMPLE LOCATION		S65N	S65D	S66D	S67S	S67N	S67D	S68S	S68N	S69D	S70S	S70N	S71N	S71D	S72S	S72N	S72D	S73S	S73D
SAMPLE NUMBER		12366	12365	12407	12384	12385	12386	12477	12478	12364	12370	12371	12432	12433	12394	12396	12395	12474	12473
TRAFFIC REPORT NUMBER		A0328	A0327	A0370	A0345	A0346	A0347	A0533	A0542	A0326	A0332	A0333	A0505	A0534	A0359	A0384	A0360	A0511	A0510
VOLATILE COMPOUNDS	CRDL																		
CHLOROMETHANE	10																		
BROMOMETHANE	10																		
VINYL CHLORIDE	10																		
CHLOROETHANE	10																		
METHYLENE CHLORIDE	5			*				*						*		*	*		
ACETONE	10		*							*		*	*			*			
CARBON DISULFIDE	5																		
1,1-DICHLOROETHENE	5				2 J	3 J													3 J
1,1-DICHLOROETHANE	5														6				18
trans-1,2-DICHLOROETHENE	5	20 J	31 J	5					*				64	5000 J		*		12	31
CHLOROFORM	5							*								*			
1,2-DICHLOROETHANE	5																		
2-BUTANONE	10	*	*		*	*	*			*	*	*							
1,1,1-TRICHLOROETHANE	5				15 J	23 J		1700 J	15 J				91			*			
CARBON TETRACHLORIDE	5																		
VINYL ACETATE	10																		
BROMODICHLOROMETHANE	5																		
1,1,2,2-TETRACHLOROETHANE	5															10			
1,2-DICHLOROPROPANE	5																		
trans-1,3-DICHLOROPROPENE	5																		
TRICHLOROETHENE	5	34 J	44 J	10	17 J	56 J	33 J		*					16000 J	4 J	74 J	9	7	37
DIBROMOCHLOROMETHANE	5																		
1,1,2-TRICHLOROETHANE	5																		
BENZENE	5													1700 J		*			
cis-1,3-DICHLOROPROPENE	5																		
2-CHLOROETHYL VINYL ETHER	10																		
BROMOFORM	5													3000 J					
2-HEXANONE	10																		
4-METHYL-2-PENTANONE	10																		
TETRACHLOROETHENE	5	9 J	16 J	3 J		1 J			*			4 J	1500	7300 J	6				
TOLUENE	5											1 J							
CHLOROBENZENE	5																		
ETHYLBENZENE	5													7400 J					
STYRENE	5																		
TOTAL-XYLENE	5													2900 J					
DILUTION FACTOR		1	1	1	1	1	1	500	1	1	1	1	10	500	1	1	1	1	1

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* - Value is rejected due to blank contamination identified in quality control review. The detection limit for blank
CRDL - Contract required detection limit (multiply by dilution factor to obtain sample detection limit).

TABLE 3
CLP VOLATILE ORGANIC ANALYTICAL RESULTS
MUS/FIT APRIL 1985 SAMPLING ROUND (ppb) PAGE THREE

SAMPLE LOCATION		S74N	S74D	S75G	S75N	S75D	S77SS	S77S	S77N	S77D	S78S	S78D	S78D	S79D	SB06	S80N	S80N	SB15	SB15
SAMPLE NUMBER		12475	12476	12388	12389	12390	12402	12401	12400	12427	12416	12404	12405	12360	12359	12357	12358	12412	12411
TRAFFIC REPORT NUMBER		AB536	AB512	AB349	AB350	AB351	AB365	AB364	AB385	AB381	AB389	AB367	AB368	AB322	AB321	AB319	AB320	AB388	AB395
VOLATILE COMPOUNDS	CRDL																		
CHLOROMETHANE	10																		
BROMOMETHANE	10																		
VINYL CHLORIDE	10																		
CHLOROETHANE	10																		
METHYLENE CHLORIDE	5	*					*	*	*	*	*	*	*					*	*
ACETONE	10								*			*							*
CARBON DISULFIDE	5																		
1,1-DICHLOROETHENE	5								81 J										
1,1-DICHLOROETHANE	5																		
trans-1,2-DICHLOROETHENE	5						12	5		15								*	*
CHLOROFORM	5	*							*		*							*	*
1,2-DICHLOROETHANE	5																		
2-BUTANONE	10			*	*	*													
1,1,1-TRICHLOROETHANE	5								34 J									110 J	*
CARBON TETRACHLORIDE	5																		
VINYL ACETATE	10																		
BROMODICHLOROMETHANE	5																		
1,1,2,2-TETRACHLOROETHANE	5																		
1,2-DICHLOROPROPANE	5																		
trans-1,3-DICHLOROPROPENE	5																		
TRICHLOROETHENE	5	*					2 J	96	370 J	210	160000 J							*	100 J
DIBROMOCHLOROMETHANE	5																		
1,1,2-TRICHLOROETHANE	5																		
BENZENE	5			2200 J	260 J	76 J													
cis-1,3-DICHLOROPROPENE	5																		
2-CHLOROETHYL VINYL ETHER	10																		
BROMOFORM	5																		
2-HEXANONE	10																		
4-METHYL-2-PENTANONE	10																		
TETRACHLOROETHENE	5	*						14	750 J	10	50000 J							1100 J	1000 J
TOLUENE	5			330 J	11 J	4 J													
CHLOROBENZENE	5																		
ETHYLBENZENE	5			100 J	49 J	13 J					*								
STYRENE	5			130 J															
TOTAL-XYLENE	5			650 J	130 J	34 J					6100 J								
DILUTION FACTOR		1	1	10	1	1	1	1	1	1	500	1	1	1	1	1	1	10	1

NOTES: "BLANK SPACE" - Indicates the compound was not detected.
J - Quantitation is approximate due to quality control review (data validation).
* - Value is rejected due to blank contamination identified in quality control review. The detection limit for blank
CRDL - Contract required detection limit (multiply by dilution factor to obtain sample detection limit).

TABLE 3
CLP VOLATILE ORGANIC ANALYTICAL RESULTS
NUS/FIT APRIL 1985 SAMPLING ROUND (ppb) PAGE FOUR

SAMPLE LOCATION		S01N	S01D	B02	S03	B03	S04S	B04N	S04D	S05S	B05N	S06S	S06N	TN 2C	TN 4C	NUS-2A	NUS-2B	NUS-2C	GB-16
SAMPLE NUMBER		12369	12368	12379	12479	12480	12472	12471	12437	12397	12398	12410	12409	12502	12491	12375	12373	12372	12456
TRAFFIC REPORT NUMBER		A8331	A8330	A8340	A8530	A8539	A8509	A8508	A8507	A8361	A8362	A8387	A8386	A8502	A8501	A8336	A8335	A8334	A8520
VOLATILE COMPOUNDS	CRQL																		
CHLOROMETHANE	10																		
BROMOMETHANE	10																		
VINYL CHLORIDE	10																		
CHLOROETHANE	10																		
METHYLENE CHLORIDE	5				*	*				*	*	*	*						*
ACETONE	10								*	*		*	*					*	
CARBON DISULFIDE	5																		
1,1-DICHLOROETHENE	5																		
1,1-DICHLOROETHANE	5																		
trans-1,2-DICHLOROETHENE	5		3 J	30 J			10	7	8	68	22			44	38				
CHLOROFORM	5				*	*						*	*						*
1,2-DICHLOROETHANE	5																		
2-BUTANONE	10		*	*					*							*	*	*	
1,1,1-TRICHLOROETHANE	5		21 J							8	34	17 J		6	6				
CARBON TETRACHLORIDE	5																		
VINYL ACETATE	10																		
BROMODICHLOROMETHANE	5																		
1,1,2,2-TETRACHLOROETHANE	5																		
1,2-DICHLOROPROPANE	5																		
trans-1,3-DICHLOROPROPENE	5																		
TRICHLOROETHENE	5	2 J	6 J	48 J		1400 J	24	17	23	110	48	18 J	17 J	90	93				*
DIBROMOCHLOROMETHANE	5																		
1,1,2-TRICHLOROETHANE	5																		
BENZENE	5											*	*						
cis-1,3-DICHLOROPROPENE	5																		
2-CHLOROETHYL VINYL ETHER	10																		
BROMOFORM	5																		
2-HEXANONE	10																		
4-METHYL-2-PENTANONE	10																		
TETRACHLOROETHENE	5	34 J	200 J	24 J			20	11	10	56	150	56 J	48 J	56	39		2 J		*
TOLUENE	5														6				
CHLOROBENZENE	5																		
ETHYLBENZENE	5																		
STYRENE	5																		
TOTAL-XYLENE	5														6				
DILUTION FACTOR		1	1	1	100	100	1	1	1	1	1	1	1	1	1	1	1	1	1

NOTES:
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- * - Value is rejected due to blank contamination identified in quality control review. The detection limit for blank
- CRQL - Contract required detection limit (multiply by dilution factor to obtain sample detection limit).

TABLE 3
CLP VOLATILE ORGANIC ANALYTICAL RESULTS
NMS/FIT APRIL 1985 SAMPLING ROUND (ppb) PAGE FIVE

SAMPLE LOCATION		GO-1D	GO-1DD	GW-3S	GW-3D	GW-3DD	GW-4S	GW-4D	GW-7S	GW-7D	GW-9	GW-11S	GW-11D	GW-12S	GW-12D	GW-1	DGW-1	GW-2	DGW-2
SAMPLE NUMBER		12458	12457	12453	12454	12455	12441	12443	12439	12440	12438	12447	12450	12448	12449	12417	12428	12425	12424
TRAFFIC REPORT NUMBER		AB530	AB529	AB531	AB532	AB535	AB519	AB520	AB525	AB526	AB527	AB521	AB522	AB523	AB524	AB374	AB393	AB380	AB379
VOLATILE COMPOUNDS	CRDL																		
CHLOROMETHANE	10																		
BROMOMETHANE	10																		
VINYL CHLORIDE	10								15										33 J
CHLOROETHANE	10																		
METHYLENE CHLORIDE	5	*	*	*	*	*		*								*	*	*	*
ACETONE	10								*					*	*		*	*	*
CARBON DISULFIDE	5																		
1,1-DICHLOROETHENE	5											72	220	95	300				
1,1-DICHLOROETHANE	5																		28
trans-1,2-DICHLOROETHENE	5			1400 J	1800 J	7500 J	21	790	340									5 J	920
CHLOROFORM	5	*	*		*	*											*		
1,2-DICHLOROETHANE	5																		
2-BUTANONE	10																		
1,1,1-TRICHLOROETHANE	5		34 J													3 J			26
CARBON TETRACHLORIDE	5																		
VINYL ACETATE	10																		
BROMODICHLOROMETHANE	5																		
1,1,2,2-TETRACHLOROETHANE	5																		
1,2-DICHLOROPROPANE	5																		
trans-1,3-DICHLOROPROPENE	5																		
TRICHLOROETHENE	5		*	*	*	*	19	200	310			85	70	420	640	31	590 J	19	130
DIBROMOCHLOROMETHANE	5																		
1,1,2-TRICHLOROETHANE	5																		
BENZENE	5																		
cis-1,3-DICHLOROPROPENE	5																		
2-CHLOROETHYL VINYL ETHER	10																		
BROMOFORM	5																		
2-HEXANONE	10																		
4-METHYL-2-PENTANONE	10																		
TETRACHLOROETHENE	5	*	370 J			1100 J			8			2 J	12		11 J	14		3 J	14 J
TOLUENE	5																		
CHLOROBENZENE	5																		
ETHYLBENZENE	5																		
STYRENE	5																		
TOTAL-XYLENE	5																		
DILUTION FACTOR		100	10	100	100	500	1	10	1	1	1	1	1	5	5	1	10	1	4.17

NOTES: "BLANK SPACE" - Indicates the compound was not detected.
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CRDL - Contract required detection limit (multiply by dilution factor to obtain sample detection limit).

TABLE 3
CLP VOLATILE ORGANIC ANALYTICAL RESULTS
NUS/FIT APRIL 1985 SAMPLING ROUND (ppb) PAGE SIX

SAMPLE LOCATION		BW-3	BW-4	BW-5	BSW-6	BSW-6	BSSW-6	BW-7	BSW-7	OW-7	OW-8	OW-19	OW19A	OW-20	OW-20A	SW-01	SW-02	SW-02	BW-03
SAMPLE NUMBER		12413	12423	12426	12419	12420	12418	12422	12421	12409	12490	12207	12206	12204	12205	12361	12362	12363	12402
TRAFFIC REPORT NUMBER		AB372	AB378	AB391	AB375	AB376	AB392	AB377	AB390	AB492	AB493	AB400	AB399	AB397	AB398	AB323	AB324	AB325	AB514
VOLATILE COMPOUNDS	CRQL																		
CHLOROMETHANE	10																		
BROMOMETHANE	10																		
VINYL CHLORIDE	10																		
CHLOROETHANE	10																		
METHYLENE CHLORIDE	5	*	*	*	1300 J	1200 J	*	*	*										
ACETONE	10			*	3600 J	5000 J		*								*	*	*	
CARBON DISULFIDE	5																		
1,1-DICHLOROETHENE	5																		
1,1-DICHLOROETHANE	5	5 J																	
trans-1,2-DICHLOROETHENE	5	20						6	*										
CHLOROFORM	5			*	2000	3000	*		*										
1,2-DICHLOROETHANE	5	4 J																	
2-BUTANONE	10								1.3 J							*	*	*	
1,1,1-TRICHLOROETHANE	5	8		*	3000	3200	*			6						2 J	5 J	5 J	5
CARBON TETRACHLORIDE	5																		
VINYL ACETATE	10																		
BROMODICHLOROMETHANE	5																		
1,1,2,2-TETRACHLOROETHANE	5																		
1,2-DICHLOROPROPANE	5																		
trans-1,3-DICHLOROPROPENE	5																		
TRICHLOROETHENE	5	130	14	3500 J	100000	110000	440000J	37	23 J	10		4 J	2 J	3 J					
DIBROMOCHLOROMETHANE	5																		
1,1,2-TRICHLOROETHANE	5																		
BENZENE	5																		
cis-1,3-DICHLOROPROPENE	5																		
2-CHLOROETHYL VINYL ETHER	10																		
BROMOFORM	5																		
2-HEXANONE	10																		
4-METHYL-2-PENTANONE	10																		
TETRACHLOROETHENE	5	7	3 J	*															
TOLUENE	5						3000 J		*								1 J		
CHLOROBENZENE	5																		
ETHYLBENZENE	5																		
STYRENE	5																		
TOTAL-XYLENE	5				3000	4100	14000 J												
DILUTION FACTOR		1	1	20	454	500	1000	1	1	1	1	1	1	1	1	1	1	1	1

NOTES: "BLANK SPACE" - Indicates the compound was not detected.
J - Quantitation is approximate due to quality control review (data validation).
* - Value is rejected due to blank contamination identified in quality control review. The detection limit for blank
CRQL - Contract required detection limit (multiply by dilution factor to obtain sample detection limit).

TABLE 3
CLP VOLATILE ORGANIC ANALYTICAL RESULTS
NUS/FIT APRIL 1985 SAMPLING ROUND (ppb) PAGE SEVEN

SAMPLE LOCATION		SW-03	SW-04	SW-05	SW-06
SAMPLE NUMBER		12483	12484	12485	12486
TRAFFIC REPORT NUMBER		A0515	A0540	A0516	A0541
VOLATILE COMPOUNDS	CRDL				
CHLOROMETHANE	10				
BROMOMETHANE	10				
VINYL CHLORIDE	10				
CHLOROETHANE	10				
METHYLENE CHLORIDE	5		*		*
ACETONE	10				
CARBON DISULFIDE	5				
1,1-DICHLOROETHENE	5				
1,1-DICHLOROETHANE	5				
trans-1,2-DICHLOROETHENE	5				
CHLOROFORM	5				
1,2-DICHLOROETHANE	5				
2-BUTANONE	10				
1,1,1-TRICHLOROETHANE	5	6	7 J	8	10 J
CARBON TETRACHLORIDE	5				
VINYL ACETATE	10				
BROMODICHLOROMETHANE	5				
1,1,2,2-TETRACHLOROETHANE	5				
1,2-DICHLOROPROPANE	5				
trans-1,3-DICHLOROPROPENE	5				
TRICHLOROETHENE	5				*
DIBROMOCHLOROMETHANE	5				
1,1,2-TRICHLOROETHANE	5				
BENZENE	5				
cis-1,3-DICHLOROPROPENE	5				
2-CHLOROETHYL VINYL ETHER	10				
BROMOFORM	5				
2-HEXANONE	10				
4-METHYL-2-PENTANONE	10				
TETRACHLOROETHENE	5				
TOLUENE	5				
CHLOROBENZENE	5				
ETHYLBENZENE	5				
STYRENE	5				
TOTAL-XYLENE	5				
DILUTION FACTOR		1	1	1	1

NOTES:
- "BLANK SPACE" - Indicates the compound was not detected.
- J - Quantitation is approximate due to quality control review (data validation).
- * - Value is rejected due to blank contamination identified in quality control review. The detection limit for blank
- CRDL - Contract required detection limit (multiply by dilution factor to obtain sample detection limit).

TABLE 3a
CLP VOLATILE ORGANIC ANALYTICAL RESULTS
NUS/FIT APRIL 1985 SAMPLING ROUND (ppb)

SAMPLE LOCATION			BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK
LABORATORY IDENTIFICATION			ERCB	AQUATEC	AQUATEC	AQUATEC	GCA	AQUATEC	AQUATEC	GCA	COMPUCHEM	COMPUCHEM
CASE NUMBER			4150	4150	4150	4150	4179	4179	4179	4193	4193	4193
TRAFFIC REPORT NUMBER			AB318	AB343	AB344	AB352	AB537	AB506	AB510	AB394	AB366	AB373
ANALYSIS			NGL	VOA	VOA	VOA	VOA	VOA	VOA	NGL	VOA	VOA
VOLATILE COMPOUNDS	CRDL	DL FACTOR										
Chloromethane	10	5										
Bromomethane	10	5										
Vinyl Chloride	10	5										
Chloroethane	10	5										
Methylene Chloride	5	10	490	320	300	210	15	8	8	16	11	12
Acetone	10	10										
Carbon Disulfide	5	5										
1,1-Dichloroethene	5	5								1.9 J		
1,1-Dichloroethane	5	5								3.0 J		
trans-1,2,-Dichloroethene	5	5								1.8 J		
Chloroform	5	5					2 J			3.4 J		
1,2-Dichloroethane	5	5										
2-Butanone	10	10		1 J	1 J	1 J						
1,1,1-Trichloroethane	5	5								3.5 J		
Carbon Tetrachloride	5	5								2.0 J		
Vinyl Acetate	10	5										
Bromodichloromethane	5	5								2.2 J		
1,1,2,2-Tetrachloroethane	5	5										
1,2-Dichloropropane	5	5								1.4 J		
trans-1,3-Dichloropropane	5	5										
Trichloroethene	5	5								3.1 J		
Dibromochloromethane	5	5								2.7 J		
1,1,2-Trichloroethane	5	5										
Benzene	5	5								1.5 J		
cis-1,3-Dichloropropene	5	5										
2-Chloroethyl vinyl ether	10	5										
Bromoform	5	5								1.3 J		
2-Hexanone	10	5										
4-Methyl-2-Pentanone	10	5										
Tetrachloroethene	5	5								2.5 J		
Toluene	5	5										
Chlorobenzene	5	5										
Ethylbenzene	5	5								0.83 J		
Styrene	5	5								1.5 J		
Total Xylenes	5	5								1.9 J		
Dilution Factor			1	1	1	1	1	1	1	1	1	1

NOTES:

"Blank Space" - Indicates the compound was not detected.

J - Quantitation is approximate when the Mass Spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit and greater than zero.

CRDL - Contract Required Detection Limit (multiply dilution factor, detection limit factor, and amount found in the sample to obtain sample detection limits).

TABLE 4 CLP VOLATILE ORGANIC ANALYTICAL RESULTS
MUS/FIT MAY 1985 SAMPLING ROUND (ppb)

SAMPLE LOCATION		S-5	S-6	S-6	S-21	S-22	S-44	S63S	S63N	S64S	S64N	S64W	S64E	S65S	S65N	S65W	S65E	S66E	S67S
SAMPLE NUMBER		12765	12766	12767	12804	12805	12802	12775	12774	12734	12735	12737	12736	12748	12749	12751	12750	12781	12779
TRAFFIC REPORT NUMBER		A0822	A0821	A0820	A0916	A0915	A0913	A0812	A0813	A0707	A0708	A0710	A0709	A0725	A0726	A0728	A0727	A0806	A0808
VOLATILE COMPOUNDS	CRDL																		
CHLOROMETHANE	10																		
BROMOMETHANE	10																		
VINYL CHLORIDE	10																		
CHLOROETHANE	10	18																	
METHYLENE CHLORIDE	5	*	*	*	*		*	*	*									*	*
ACETONE	10	*	*			*		*	*									*	*
CARBON DISULFIDE	5																		
1,1-DICHLOROETHENE	5																		4 J
1,1-DICHLOROETHANE	5	9																	
trans-1,2-DICHLOROETHENE	5		3 J		150	19		41	84	49 J	58 J	92	70 J		19	16	21	7	
CHLOROFORM	5							*		*	*								
1,2-DICHLOROETHANE	5							*	*										
2-BUTANONE	10	*	*	*														*	*
1,1,1-TRICHLOROETHANE	5				3 J		5 J		4 J										18
CARBON TETRACHLORIDE	5																		
VINYL ACETATE	10																		
BROMODICHLOROMETHANE	5																		
1,1,2,2-TETRACHLOROETHANE	5																		
1,2-DICHLOROPROPANE	5																		
trans-1,3-DICHLOROPROPENE	5																		
TRICHLOROETHENE	5		3 J		210	34	3 J	64	130	95 J	110 J	120	200 J	4 J	29	26	33	12	20
DIBROMOCHLOROMETHANE	5																		
1,1,2-TRICHLOROETHANE	5																		
BENZENE	5																		
cis-1,3-DICHLOROPROPENE	5																		
2-CHLOROETHYL VINYL ETHER	10																		
BROMOFORM	5																		
2-HEXANONE	10																		
4-METHYL-2-PENTANONE	10																		
TETRACHLOROETHENE	5		160	56	74			69	140	34 J	41 J	190	43 J		8	7	10	*	
TOLUENE	5																		
CHLOROBENZENE	5																		
ETHYLBENZENE	5																		
STYRENE	5																		
TOTAL-XYLENE	5				3 J														
DILUTION FACTOR		1	1	1	1	1	1	1	1	1	1	10	1	1	1	1	1	1	1

NOTES:
- "BLANK SPACE" - Indicates the compound was not detected.
- J - Quantitation is approximate due to quality control review (data validation).
- * - Value is rejected due to blank contamination identified in quality control review. The detection limit for blank contaminants is determined by the amount detected in blank, detailed in Appendix B.
- CRDL - Contract required detection limit (multiply by dilution factor to obtain sample detection limit).

TABLE 4
CLP VOLATILE ORGANIC ANALYTICAL RESULTS
MWS/FIT MAY 1985 SAMPLING ROUND (ppb) PAGE TWO

SAMPLE LOCATION		S67N	S67D	S68S	S68N	S68N	S70S	S70N	S71N	S71D	S72S	S72N	S72D	S72D	S73S	S73D	S74N	S74D	S75S
SAMPLE NUMBER		12770	12780	12753	12754	12755	12758	12759	12760	12761	12773	12772	12777	12776	12769	12768	12770	12771	12782
TRAFFIC REPORT NUMBER		A0009	A0007	A0730	A0731	A0732	A0029	A0028	A0027	A0026	A0014	A0015	A0010	A0011	A0018	A0019	A0017	A0016	A0004
VOLATILE COMPOUNDS	CRQL																		
CHLOROMETHANE	10																		
BROMOMETHANE	10																		
VINYL CHLORIDE	10																		
CHLOROETHANE	10																		
METHYLENE CHLORIDE	5	*	*				*	*	*	*	*	*	*	*	*	*	*		*
ACETONE	10	*	*				*	*	*	*	*	*	*	*		*	*		*
CARBON DISULFIDE	5																		
1,1-DICHLOROETHENE	5	4 J													2 J	5 J			
1,1-DICHLOROETHANE	5										6				5 J	17			
trans-1,2-DICHLOROETHENE	5			29	37	36			110		1 J				20	36			
CHLOROFORM	5						*	*											
1,2-DICHLOROETHANE	5																		
2-BUTANONE	10	*	*						42	110	*	*	*	*	*	*	*	*	49
1,1,1-TRICHLOROETHANE	5	18		6	13	12			130	110									
CARBON TETRACHLORIDE	5																		
VINYL ACETATE	10																		
BROMODICHLOROMETHANE	5																		
1,1,2,2-TETRACHLOROETHANE	5																		
1,2-DICHLOROPROPANE	5																		
trans-1,3-DICHLOROPROPENE	5																		
TRICHLOROETHENE	5	56	37	54	88	86			19 J		5	16	12	11	9	52			
DIBROMOCHLOROMETHANE	5																		
1,1,2-TRICHLOROETHANE	5																		
BENZENE	5											3 J							1000
cis-1,3-DICHLOROPROPENE	5																		
2-CHLOROETHYL VINYL ETHER	10																		
BROMOFORM	5																		
2-HEXANONE	10																		
4-METHYL-2-PENTANONE	10																		
TETRACHLOROETHENE	5			47	88	83		*	1900	2500	*	*	*	*	*	*	*		
TOLUENE	5																		200
CHLOROBENZENE	5																		
ETHYLBENZENE	5																		100
STYRENE	5																		190
TOTAL-XYLENE	5																		590
DILUTION FACTOR		1	1	1	1	1	1	1	10	20	1	1	1	1	1	1	1	1	10

NOTES:
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- * - Value is rejected due to blank contamination identified in quality control review. The detection limit for blank contaminants is determined by the amount detected in blank, detailed in Appendix B.
- CRQL - Contract required detection limit (multiply by dilution factor to obtain sample detection limit).

TABLE 4
CLP VOLATILE ORGANIC ANALYTICAL RESULTS
NUS/FIT MAY 1985 SAMPLING ROUND (ppb) PAGE THREE

SAMPLE LOCATION		S75N	S75N	S75D	S76S	S76N	S76N	S76D	S77SS	S77S	S77N	S77N	S77D	S78S	S78D	S79N	S79D	S80S	S80N
SAMPLE NUMBER		12784	12783	12785	12789	12787	12788	12786	12797	12798	12799	12800	12804	12801	12803	12794	12793	12796	12795
TRAFFIC REPORT NUMBER		AB903	AB905	AB902	AB896	AB897	AB898	AB899	AB908	AB909	AB910	AB911	AB900	AB912	AB914	AB905	AB904	AB907	AB906
VOLATILE COMPOUNDS	CRDL																		
CHLOROMETHANE	10																		
BROMOMETHANE	10																		
VINYL CHLORIDE	10																		
CHLOROETHANE	10																		
METHYLENE CHLORIDE	5	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*	*	*
ACETONE	10	*	*	*						*	*			*	*				*
CARBON DISULFIDE	5																		
1,1-DICHLOROETHENE	5																		
1,1-DICHLOROETHANE	5																		
trans-1,2-DICHLOROETHENE	5								8	6	24	23							
CHLOROFORM	5																		
1,2-DICHLOROETHANE	5																		
2-BUTANONE	10	*	*	*															
1,1,1-TRICHLOROETHANE	5										13	12							
CARBON TETRACHLORIDE	5																		
VINYL ACETATE	10																		
BROMODICHLOROMETHANE	5																		
1,1,2,2-TETRACHLOROETHANE	5																		
1,2-DICHLOROPROPANE	5																		
trans-1,3-DICHLOROPROPENE	5																		
TRICHLOROETHENE	5				9				12	130	97	96	200	110					
DIBROMOCHLOROMETHANE	5																		
1,1,2-TRICHLOROETHANE	5																		
BENZENE	5	110	110	170															
cis-1,3-DICHLOROPROPENE	5																		
2-CHLOROETHYL VINYL ETHER	10																		
BROMOFORM	5																		
2-HEXANONE	10																		
4-METHYL-2-PENTANONE	10																		
TETRACHLOROETHENE	5									15	46	47	13	32					
TOLUENE	5	16	16 J	10															
CHLOROBENZENE	5																		
ETHYLBENZENE	5	38	38 J	30															
STYRENE	5	3 J																	
TOTAL-XYLENE	5	90	93 J	78										3 J					
DILUTION FACTOR		1	2	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1

NOTES:
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- * - Value is rejected due to blank contamination identified in quality control review. The detection limit for blank contaminants is determined by the amount detected in blank, detailed in Appendix B.
- CRDL - Contract required detection limit (multiply by dilution factor to obtain sample detection limit).

TABLE 4
CLP VOLATILE ORGANIC ANALYTICAL RESULTS
MUS/FIT MAY 1985 SAMPLING ROUND (ppb) PAGE FOUR

SAMPLE LOCATION		SB1B	SB1M	SB1D	SB2	SB2	SB3	SB4S	SB4M	SB4D	SB5G	SB5M	SB6G	SB6M	TW 2A	TW 2C	TW 4B	GB-1G	GB-1B
SAMPLE NUMBER		12746	12745	12744	12730	12731	12814	12741	12742	12743	12738	12739	12752	12757	12756	12740	12747	12727	12729
TRAFFIC REPORT NUMBER		AB723	AB713	AB714	AB715	AB716	AB924	AB720	AB721	AB722	AB711	AB712	AB729	AB734	AB733	AB719	AB724	AB703	AB705
VOLATILE COMPOUNDS	CRQL																		
CHLOROMETHANE	10																		
BROMOMETHANE	10																		
VINYL CHLORIDE	10																		
CHLOROETHANE	10																		
METHYLENE CHLORIDE	5	*	*				*					*							
ACETONE	10	*					*									*			
CARBON DISULFIDE	5																		
1,1-DICHLOROETHENE	5																		
1,1-DICHLOROETHANE	5																		
trans-1,2-DICHLOROETHENE	5				21	24	110	10		11	62				8	75	37		
CHLOROFORM	5		17 J									13 J							
1,2-DICHLOROETHANE	5																		
2-BUTANONE	10														*				
1,1,1-TRICHLOROETHANE	5	99														11	6		27 J
CARBON TETRACHLORIDE	5																		
VINYL ACETATE	10																		
BROMODICHLOROMETHANE	5																		
1,1,2,2-TETRACHLOROETHANE	5																		
1,2-DICHLOROPROPANE	5																		
trans-1,3-DICHLOROPROPENE	5																		
TRICHLOROETHENE	5	30			37	39	470	21	16	26	92	39 J	3 J	3 J	4 J	120	66		7 J
DIBROMOCHLOROMETHANE	5																		
1,1,2-TRICHLOROETHANE	5																		
BENZENE	5																		
cis-1,3-DICHLOROPROPENE	5																		
2-CHLOROETHYL VINYL ETHER	10																		
BROMOFORM	5																		
2-HEXANONE	10																		
4-METHYL-2-PENTANONE	10																		
TETRACHLOROETHENE	5	670	35 J	140	33	34	15	18	11	9	22 J	170	12	13	5	110	47	*	900 J
TOLUENE	5																		
CHLOROBENZENE	5																		
ETHYLBENZENE	5																		
STYRENE	5																		
TOTAL-XYLENE	5																		
DILUTION FACTOR		5	10	10	1	1	2.94	1	1	1	10	10	1	1	1	1	1	1	1

NOTES:
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- * - Value is rejected due to blank contamination identified in quality control review. The detection limit for blank contaminants is determined by the amount detected in blank, detailed in Appendix B.
- CRQL - Contract required detection limit (multiply by dilution factor to obtain sample detection limit).

TABLE 4
CLP VOLATILE ORGANIC ANALYTICAL RESULTS
NBS/FIT MAY 1985 SAMPLING ROUND (ppb) PAGE FIVE

SAMPLE LOCATION		GO-100	GW-3S	GW-3D	GW-300	SW-01	SW-02	SW-03	SW-03	SW-04	SW-05	SW-06
SAMPLE NUMBER		12720	12724	12725	12726	12807	12808	12809	12810	12811	12812	12813
TRAFFIC REPORT NUMBER		A0704	A0396	A0704	A0702	A0917	A0918	A0919	A0920	A0921	A0922	A0923
VOLATILE COMPOUNDS	CRQL											
CHLOROMETHANE	10											
BROMOMETHANE	10											
VINYL CHLORIDE	10		40	220 J	40 J							
CHLOROETHANE	10											
METHYLENE CHLORIDE	5	*				*	*	*	*	*	*	*
ACETONE	10					*					*	*
CARBON DISULFIDE	5											
1,1-DICHLOROETHENE	5	4 J										
1,1-DICHLOROETHANE	5											
trans-1,2-DICHLOROETHENE	5	5 J	920	1100 J	670 J			22	21			
CHLOROFORM	5	*										
1,2-DICHLOROETHANE	5											
2-BUTANONE	10											
1,1,1-TRICHLOROETHANE	5	95 J				4 J	3 J			3 J	5	7
CARBON TETRACHLORIDE	5											
VINYL ACETATE	10											
BROMODICHLOROMETHANE	5											
1,1,2,2-TETRACHLOROETHANE	5											
1,2-DICHLOROPROPANE	5											
trans-1,3-DICHLOROPROPENE	5											
TRICHLOROETHENE	5	10 J	1200	2000 J	1800 J			26	25			
DIBROMOCHLOROMETHANE	5											
1,1,2-TRICHLOROETHANE	5											
BENZENE	5											
cis-1,3-DICHLOROPROPENE	5											
2-CHLOROETHYL VINYL ETHER	10											
BROMOFORM	5											
2-HEXANONE	10											
4-METHYL-2-PENTANONE	10											
TETRACHLOROETHENE	5	2000 J	29 J	49 J	34 J			4 J	3 J			
TOLUENE	5											
CHLOROBENZENE	5											
ETHYLBENZENE	5											
STYRENE	5											
TOTAL-XYLENE	5											
DILUTION FACTOR		1	1	1	1	1	1	1	1	1	1	1

NOTES: "BLANK SPACE" - Indicates the compound was not detected.
J - Quantitation is approximate due to quality control review (data validation).
* - Value is rejected due to blank contamination identified in quality control review. The detection limit for blank contaminants is determined by the amount detected in blank, detailed in Appendix B.
CRQL - Contract required detection limit (multiply by dilution factor to obtain sample detection limit).

TABLE 4a
CLP VOLATILE ORGANIC ANALYTICAL RESULTS
MUS/FIT MAY 1985 SAMPLING ROUND (ppb)

SAMPLE LOCATION			BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK
LABORATORY IDENTIFICATION			CAA	AQUATEC	AQUATEC	AQUATEC	AQUATEC	AQUATEC	COMPUCHEM	COMPUCHEM	COMPUCHEM
CASE NUMBER			4344	4344	4344	4395	4395	4395	4433	4433	4433
TRAFFIC REPORT NUMBER			AB706	AB717	AB718	AB823	AB824	AB825	AB901	AB902	AB903
ANALYSIS			MSL	VOA	VOA	VOA	VOA	VOA	VOA	VOA	VOA
VOLATILE COMPOUNDS	CRDL	DL FACTOR									
Chloromethane	10	5									
Bromomethane	10	5									
Vinyl Chloride	10	5									
Chloroethane	10	5									
Methylene Chloride	5	10		1 J	2 J	6	4 J	5	4.2 J	3.3 J	6.6
Acetone	10	10				2 J					
Carbon Disulfide	5	5									
1,1-Dichloroethene	5	5									
1,1-Dichloroethane	5	5									
trans-1,2,-Dichloroethene	5	5									
Chloroform	5	5	1 J								
1,2-Dichloroethane	5	5									
2-Butanone	10	10									
1,1,1-Trichloroethane	5	5									
Carbon Tetrachloride	5	5									
Vinyl Acetate	10	5									
Bromodichloromethane	5	5									
1,1,2,2-Tetrachloroethane	5	5									
1,2-Dichloropropane	5	5									
trans-1,3-Dichloropropane	5	5									
Trichloroethene	5	5									
Dibromochloromethane	5	5									
1,1,2-Trichloroethane	5	5									
Benzene	5	5									
cis-1,3-Dichloropropene	5	5									
2-Chloroethyl vinyl ether	10	5									
Bromoform	5	5									
2-Hexanone	10	5									
4-Methyl-2-Pentanone	10	5									
Tetrachloroethene	5	5	4 J								
Toluene	5	5									
Chlorobenzene	5	5									
Ethylbenzene	5	5									
Styrene	5	5									
Total Xylenes	5	5									
Dilution Factor			1	1	1	1	1	1	1	1	1

NOTES:

"Blank Space" - Indicates the compound was not detected.

J - Quantitation is approximate when the Mass Spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit and greater than zero.

CRDL - Contract Required Detection Limit (multiply dilution factor, detection limit factor,

TABLE 5 CLP VOLATILE ORGANIC ANALYTICAL RESULTS
NUS/FIT JUNE 1985 SAMPLING ROUND (ppb)

SAMPLE LOCATION		S-4	S-5	S-6	S-10	S-11	S-44	S63S	S63D	S64S	S64S	S64N	S64N	S64D	S65S	S65N	S65D	S66D	S67D
SAMPLE NUMBER		13273	13254	13246	13257	13256	13258	13238	13239	13184	13186	13294	13296	13207	13233	13232	13226	13234	13236
TRAFFIC REPORT NUMBER		AC233	AC228	AB957	AC231	AC230	AC232	AB949	AB950	AC425	AC440	AC430	AC434	AC462	AB944	AB943	AB937	AB945	AB947
VOLATILE COMPOUNDS	CRDL																		
CHLOROMETHANE	10																		
BROMOMETHANE	10	110																	
VINYL CHLORIDE	10	140 J																	
CHLOROETHANE	10	170																	
METHYLENE CHLORIDE	5	*		*		*		*	*	*	*	*	*		*	*	*	*	*
ACETONE	10					*		*	*		**		**		*		*	*	*
CARBON DISULFIDE	5																		
1,1-DICHLOROETHENE	5	12 J										*							3
1,1-DICHLOROETHANE	5	15																	
trans-1,2-DICHLOROETHENE	5					58 J		31	90	*	*	110 J	87 J	150 J	7	18	24	9	
CHLOROFORM	5	*			1 J									*					
1,2-DICHLOROETHANE	5																		
2-BUTANONE	10	*									**								
1,1,1-TRICHLOROETHANE	5	*				69 J	*	3	8	*	*	*	*						17
CARBON TETRACHLORIDE	5	15																	
VINYL ACETATE	10																		
BROMODICHLOROMETHANE	5																		
1,1,2,2-TETRACHLOROETHANE	5																		
1,2-DICHLOROPROPANE	5	17																	
trans-1,3-DICHLOROPROPENE	5																		
TRICHLOROETHENE	5	17		83		150 J	2 J	40	150	*	*	*	*	100 J	11	33	37	16	49
DIBROMOCHLOROMETHANE	5	16																	
1,1,2-TRICHLOROETHANE	5	15																	
BENZENE	5																		
cis-1,3-DICHLOROPROPENE	5																		
2-CHLOROETHYL VINYL ETHER	10																		
BROMOFORM	5																		
2-HEXANONE	10																		
4-METHYL-2-PENTANONE	10																		
TETRACHLOROETHENE	5	17		3300 J		70 J		56 J	170 J	*	*	*	*	40 J	4	10 J	11	5	
TOLUENE	5	6																	
CHLOROBENZENE	5	17																	
ETHYLBENZENE	5																		
STYRENE	5																		
TOTAL-XYLENE	5																		
DILUTION FACTOR		5	1	20.0	1	1	1	1	1	1	1	1	1	5	1	1	1	1	1

"BLANK SPACE" - Indicates the compound was not detected.
J - Quantitation is approximate due to quality control review (data validation).
* - Value is rejected due to blank contamination identified in quality control review. The detection limit for blank contaminants is determined by the amount detected in blank, detailed in Appendix B.
** - Value is rejected due to other contractual requirements identified in quality control review.
CRDL - Contract required detection limit (multiply by dilution factor to obtain sample detection limit).

TABLE 5
CLP VOLATILE ORGANIC ANALYTICAL RESULTS
NMS/FIT JUNE 1985 SAMPLING ROUND (ppb) PAGE TWO

SAMPLE LOCATION		S67N	S67D	S68S	S68N	S70S	S70N	S71N	S71D	S72S	S72N	S72D	S73S	S73D	S75S	S75S	S75N	S75D	S76G
SAMPLE NUMBER		13237	13235	13188	13187	13291	13290	13292	13289	13298	13299	13185	13229	13230	13227	13206	13228	13231	13193
TRAFFIC REPORT NUMBER		AD948	AD946	AC453	AC452	AC439	AC438	AC436	AC445	AC431	AC427	AC424	AD940	AD941	AD938	AC460	AD939	AD942	AC426
VOLATILE COMPOUNDS	CRQL																		
CHLOROMETHANE	10																		
BROMOMETHANE	10																		
VINYL CHLORIDE	10																		
CHLOROETHANE	10																		
METHYLENE CHLORIDE	5	*	*	*	*	*	*	*	*	*	*	*	*	*				*	*
ACETONE	10	*	*			**	**	*		**			*					*	
CARBON DISULFIDE	5																		
1,1-DICHLOROETHENE	5	4								*			3	3					
1,1-DICHLOROETHANE	5										*	*	7	13 J					
trans-1,2-DICHLOROETHENE	5			55	80 J			115 J	100	*	*		23	27					
CHLOROFORM	5			*															
1,2-DICHLOROETHANE	5																		
2-BUTANONE	10			*		**													
1,1,1-TRICHLOROETHANE	5	19		*	29 J			*	100									*	
CARBON TETRACHLORIDE	5																		
VINYL ACETATE	10																		
BROMODICHLOROMETHANE	5																		
1,1,2,2-TETRACHLOROETHANE	5																		
1,2-DICHLOROPROPANE	5																		
trans-1,3-DICHLOROPROPENE	5																		
TRICHLOROETHENE	5	54	34	50 J	73 J				13	*	*	*	12	38					*
DIBROMOCHLOROMETHANE	5																		
1,1,2-TRICHLOROETHANE	5																		
BENZENE	5										5 J				2000	5700 J	67	160	
cis-1,3-DICHLOROPROPENE	5																		
2-CHLOROETHYL VINYL ETHER	10																		
BROMOFORM	5																		
2-HEXANONE	10																		
4-METHYL-2-PENTANONE	10																		
TETRACHLOROETHENE	5			50	85 J			*	2450	*	*	*							
TOLUENE	5					*	*					5			440	600 J	5	11	*
CHLOROBENZENE	5																		
ETHYLBENZENE	5														270	300 J	24	32	
STYRENE	5														330	140 J			
TOTAL-XYLENE	5					5 J									850	600 J	51 J	74	
DILUTION FACTOR		1	1	5	1	1	1	25	10	1	1	1	1	1	20	20	1	1	1

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TABLE 5
CLP VOLATILE ORGANIC ANALYTICAL RESULTS
NUS/FIT JUNE 1985 SAMPLING ROUND (ppb) PAGE THREE

SAMPLE LOCATION		S76N	S76B	S77BB	S77S	S77N	S77D	S78S	S78D	S81S	S81N	S81N	S81D	S82	S83	S83	S84S	S84N	S84D
SAMPLE NUMBER		13191	13192	13205	13204	13255	13208	13203	13202	13194	13297	13287	13190	13245	13222	13223	13197	13196	13182
TRAFFIC REPORT NUMBER		AC442	AC433	AC489	AC458	AC229	AC429	AC457	AC437	AC449	AC447	AC448	AC461	AD956	AD933	AD934	AC435	AC432	AC443
VOLATILE COMPOUNDS	CRQL																		
CHLOROMETHANE	10																		
BROMOMETHANE	10																		
VINYL CHLORIDE	10																		
CHLOROETHANE	10																		
METHYLENE CHLORIDE	5	*	*	*			*		*		*	*		*	*	*	*	*	*
ACETONE	10	**	**			6100 J	*		*					*	*	*	**	**	**
CARBON DISULFIDE	5																		
1,1-DICHLOROETHENE	5																		
1,1-DICHLOROETHANE	5		*																
trans-1,2-DICHLOROETHENE	5					48 J	*						1 J	38	93	100	*	*	*
CHLOROFORM	5	*		*	*	*				*	*	*						*	
1,2-DICHLOROETHANE	5																		
2-BUTANONE	10	**																	
1,1,1-TRICHLOROETHANE	5	*	*	*	*	*				340	*	*	16 J	3			*	*	*
CARBON TETRACHLORIDE	5																		
VINYL ACETATE	10																		
BROMODICHLOROMETHANE	5																		
1,1,2,2-TETRACHLOROETHANE	5																		
1,2-DICHLOROPROPANE	5																		
trans-1,3-DICHLOROPROPENE	5																		
TRICHLOROETHENE	5			390	160 J	120	300 J	80000 J		*			3 J	68	440	470	*	*	*
DIBROMOCHLOROMETHANE	5																		
1,1,2-TRICHLOROETHANE	5																		
BENZENE	5																		
cis-1,3-DICHLOROPROPENE	5																		
2-CHLOROETHYL VINYL ETHER	10																		
BROMOFORM	5																		
2-HEXANONE	10																		
4-METHYL-2-PENTANONE	10																		
TETRACHLOROETHENE	5			180	20 J	50	*	22000 J		580	75	71	98 J	86 J	12	14	*	*	*
TOLUENE	5																*		
CHLOROBENZENE	5																		
ETHYLBENZENE	5																		
STYRENE	5																		
TOTAL-XYLENE	5							1824 J			25						5 J		
DILUTION FACTOR		1	1	5	10	10	1	1000	1	10	5	5	1	1	3.33	3.33	1	1	1

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TABLE 5
CLP VOLATILE ORGANIC ANALYTICAL RESULTS
MUS/FIT JUNE 1985 SAMPLING ROUND (ppb) PAGE FOUR

SAMPLE LOCATION		SB5S	SB5S	SB5M	SB5M	SB6S	SB6M	TW 2C	TW 4D	GD-1S	GD-1DD	GW-3S	GW-3S	GW-3D	GW-3D	GW-3DD	GW-3DD	GW-4S	GW-4D
SAMPLE NUMBER		13217	13220	13219	13221	13224	13225	13241	13240	13271	13272	13265	13266	13267	13268	1269	13270	13259	13260
TRAFFIC REPORT NUMBER		AD929	AD931	AD930	AD932	AD935	AD936	AD952	AD951	AC247	AC248	AC241	AC242	AC243	AC244	AC245	AC246	AC235	AC236
VOLATILE COMPOUNDS	CRDL																		
CHLOROMETHANE	10									90									
BROMOMETHANE	10																		
VINYL CHLORIDE	10											140 J	180 J	350 J	290 J	140 J	125 J		
CHLOROETHANE	10																		
METHYLENE CHLORIDE	5	*	*	*	*	*		*	*		*	*	*		*		*		*
ACETONE	10	*	*		*	*		*	*										
CARBON DISULFIDE	5																		
1,1-DICHLOROETHENE	5			3															
1,1-DICHLOROETHANE	5																		
trans-1,2-DICHLOROETHENE	5	76	77	23	23			74	37		*	2500	3000	4400	4200	1700	1900	*	1900 J
CHLOROFORM	5									*	*	*	*	*	*	*	*	*	*
1,2-DICHLOROETHANE	5																		
2-BUTANONE	10																		*
1,1,1-TRICHLOROETHANE	5	13	13	32	39	3		21	9		260								*
CARBON TETRACHLORIDE	5																		
VINYL ACETATE	10																		
BROMODICHLOROMETHANE	5																		
1,1,2,2-TETRACHLOROETHANE	5																		
1,2-DICHLOROPROPANE	5																		
trans-1,3-DICHLOROPROPENE	5																		
TRICHLOROETHENE	5	140	140	46	49	4	3	140	76		20	610	1200	2700	2600	2300	2200	10 J	390 J
DIBROMOCHLOROMETHANE	5																		
1,1,2-TRICHLOROETHANE	5																		
BENZENE	5																		
cis-1,3-DICHLOROPROPENE	5																		
2-CHLOROETHYL VINYL ETHER	10																		
BROMOFORM	5																		
2-HEXANONE	10																		
4-METHYL-2-PENTANONE	10																		
TETRACHLOROETHENE	5	82	85	170	190	12	8	120 J	51 J		3000	15	30	75	50	50	45		
TOLUENE	5																		
CHLOROBENZENE	5																		
ETHYLBENZENE	5																		
STYRENE	5																		
TOTAL-XYLENE	5																		
DILUTION FACTOR		1	1	1.25	1	1	1	1	1	5	5	5	5	5	5	10	5	1	5

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TABLE 5
CLP VOLATILE ORGANIC ANALYTICAL RESULTS
NUS/FIT JUNE 1985 SAMPLING ROUND (ppb) PAGE FIVE

SAMPLE LOCATION		GW-11S	GW-11D	GW-12S	GW-12D	DW-1	DSW-1	DW-2	DSW-2	DW-3	DW-4	DW-5	DSW-6	DSSW-6	DW-7	DSW-7	SW-01	SW-02	SW-03
SAMPLE NUMBER		13261	13262	13263	13264	13201	13251	13249	13248	13200	13250	13253	13247	13252	13199	13198	13274	13275	13276
TRAFFIC REPORT NUMBER		AC237	AC238	AC239	AC240	AC441	AC225	AC223	AC222	AC456	AC224	AC227	AC221	AC226	AC455	AC454	AC234	AC249	AC250
VOLATILE COMPOUNDS	CRQL																		
CHLOROMETHANE	10																		
BROMOMETHANE	10																		
VINYL CHLORIDE	10								300 J										
CHLOROETHANE	10																		
METHYLENE CHLORIDE	5	*	*	*	*	*	*			*						*		*	*
ACETONE	10	*	*	*	*	**													
CARBON DISULFIDE	5																		
1,1-DICHLOROETHENE	5																		
1,1-DICHLOROETHANE	5																		
trans-1,2-DICHLOROETHENE	5	*	300	130 J	570			*	2100 J						80 J				
CHLOROFORM	5	*	*	*	*		*	*	*	*	*	*	*	*	*	*		*	*
1,2-DICHLOROETHANE	5																		
2-BUTANONE	10	*	*	*	*	**	*			*						*		*	
1,1,1-TRICHLOROETHANE	5	*	*	*	*	*	*		*	*		*	7000 J			*	*		
CARBON TETRACHLORIDE	5																		
VINYL ACETATE	10			1500															
BROMODICHLOROMETHANE	5																		
1,1,2,2-TETRACHLOROETHANE	5																		
1,2-DICHLOROPROPANE	5																		
trans-1,3-DICHLOROPROPENE	5																		
TRICHLOROETHENE	5	100	80	640	1100		480 J	32 J	200 J	80	6.2	2300	140000 J	180000 J	13 J				
DIBROMOCHLOROMETHANE	5																		
1,1,2-TRICHLOROETHANE	5																		
BENZENE	5																		
cis-1,3-DICHLOROPROPENE	5																		
2-CHLOROETHYL VINYL ETHER	10																		
BROMOFORM	5																		
2-HEXANONE	10																		
4-METHYL-2-PENTANONE	10																		
TETRACHLOROETHENE	5			5	15			1 J							3 J				
TOLUENE	5																		
CHLOROBENZENE	5																		
ETHYLBENZENE	5																		
STYRENE	5																		
TOTAL-XYLENE	5												2000 J						
DILUTION FACTOR		5	5	5	5	1	5	1	10	5	1	10	500	1000	1	5	1	5	5

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CRQL - Contract required detection limit (multiply by dilution factor to obtain sample detection limit).

TABLE 5
CLP VOLATILE ORGANIC ANALYTICAL RESULTS
NUS/FIT JUNE 1985 SAMPLING ROUND (ppb) PAGE SIX

SAMPLE LOCATION		SW-04	SW-04	SW-05	SW-06
SAMPLE NUMBER		13277	13278	13279	13280
TRAFFIC REPORT NUMBER		AC251	AC252	AC253	AC254
VOLATILE COMPOUNDS	CRDL				
CHLOROMETHANE	10				
BROMOMETHANE	10				
VINYL CHLORIDE	10				
CHLOROETHANE	10				
METHYLENE CHLORIDE	5	*	*	*	*
ACETONE	10				
CARBON DISULFIDE	5				
1,1-DICHLOROETHENE	5				
1,1-DICHLOROETHANE	5				
trans-1,2-DICHLOROETHENE	5				
CHLOROFORM	5	*	*	*	
1,2-DICHLOROETHANE	5				
2-BUTANONE	10	*	*		
1,1,1-TRICHLOROETHANE	5			*	
CARBON TETRACHLORIDE	5				
VINYL ACETATE	10				
BROMODICHLOROMETHANE	5				
1,1,2,2-TETRACHLOROETHANE	5				
1,2-DICHLOROPROPANE	5				
trans-1,3-DICHLOROPROPENE	5				
TRICHLOROETHENE	5				
DIBROMOCHLOROMETHANE	5				
1,1,2-TRICHLOROETHANE	5				
BENZENE	5				
cis-1,3-DICHLOROPROPENE	5				
2-CHLOROETHYL VINYL ETHER	10				
BROMOFORM	5				
2-HEXANONE	10				
4-METHYL-2-PENTANONE	10				
TETRACHLOROETHENE	5				
TOLUENE	5				
CHLOROBENZENE	5				
ETHYLBENZENE	5				
STYRENE	5				
TOTAL-XYLENE	5				
DILUTION FACTOR		5	5	5	5

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CRDL - Contract required detection limit (multiply by dilution factor to obtain sample detection limit).

TABLE 5a
CLP VOLATILE ORGANIC ANALYTICAL RESULTS
MUS/FIT JUNE 1985 SAMPLING ROUND (ppb)

SAMPLE LOCATION			BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK
LABORATORY IDENTIFICATION			GCA	GCA	COMPUCHEM	COMPUCHEM	COMPUCHEM	GCA	GCA	GCA	GCA
CASE NUMBER			4574	4574	4515	4515	4515	4536	4536	4536	4536
TRAFFIC REPORT NUMBER			AC446	AC451	A8953	A8954	A8955	AC255	AC256	AC256	AC257
ANALYSIS			MSL	MSL	VOA	VOA	VOA	VOA	VOA	VOA	VOA
VOLATILE COMPOUNDS	CRDL	DL FACTOR									
Chloromethane	10	5									
Bromomethane	10	5									
Vinyl Chloride	10	5									
Chloroethane	10	5									
Methylene Chloride	5	10		60	8.4	6	4.9 J	50			55
Acetone	10	10			11						
Carbon Disulfide	5	5									
1,1-Dichloroethene	5	5									
1,1-Dichloroethane	5	5									
trans-1,2,-Dichloroethene	5	5									
Chloroform	5	5	32.5	470		4.5 J	9.4	510		70	540
1,2-Dichloroethane	5	5									
2-Butanone	10	10		260				250			240
1,1,1-Trichloroethane	5	5		15 J							20 J
Carbon Tetrachloride	5	5									
Vinyl Acetate	10	5									
Bromodichloromethane	5	5									
1,1,2,2-Tetrachloroethane	5	5									
1,2-Dichloropropane	5	5									
trans-1,3-Dichloropropene	5	5									
Trichloroethene	5	5									
Dibromochloromethane	5	5									
1,1,2-Trichloroethane	5	5									
Benzene	5	5									
cis-1,3-Dichloropropene	5	5									
2-Chloroethyl vinyl ether	10	5									
Bromoform	5	5									
2-Hexanone	10	5									
4-Methyl-2-Pentanone	10	5									
Tetrachloroethene	5	5									
Toluene	5	5									
Chlorobenzene	5	5									
Ethylbenzene	5	5									
Styrene	5	5									
Total Xylenes	5	5									
Dilution Factor			1	5	1	1	1	5	1	5	5

NOTES:

"BLANK SPACE"	-	Indicates the compound was not detected.
J	-	Quantitation is approximate when the Mass Spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit and greater than zero.
CRDL	-	Contract Required Detection Limit (multiply dilution factor, detection limit factor

TABLE 5a
CLP VOLATILE ORGANIC ANALYTICAL RESULTS
NUS/FIT JUNE 1985 SAMPLING ROUND (ppb) PAGE TWO

SAMPLE LOCATION			BLANK	BLANK	BLANK
LABORATORY IDENTIFICATION			GCA	ENVIROMDYNE	ENVIROMDYNE
CASE NUMBER			4536	4574	4574
TRAFFIC REPORT NUMBER			AC258	AC428	AC444
ANALYSIS			VOA	VOA	VOA
VOLATILE COMPOUNDS	CRDL	DL FACTOR			
Chloromethane	10	5			
Bromomethane	10	5			
Vinyl Chloride	10	5			
Chloroethane	10	5			
Methylene Chloride	5	10	35	6.9	5 J
Acetone	10	10		17	10 J
Carbon Disulfide	5	5			
1,1-Dichloroethene	5	5			5 J
1,1-Dichloroethane	5	5			5 J
trans-1,2,-Dichloroethene	5	5			15
Chloroform	5	5	330		5 J
1,2-Dichloroethane	5	5			
2-Butanone	10	10	170		
1,1,1-Trichloroethane	5	5	10 J		190
Carbon Tetrachloride	5	5			
Vinyl Acetate	10	5			
Bromodichloromethane	5	5			
1,1,2,2-Tetrachloroethane	5	5			
1,2-Dichloropropane	5	5			
trans-1,3-Dichloropropane	5	5			
Trichloroethene	5	5			37
Dibromochloromethane	5	5			
1,1,2-Trichloroethane	5	5			
Benzene	5	5			
cis-1,3-Dichloropropene	5	5			
2-Chloroethyl vinyl ether	10	5			
Bromoform	5	5			
2-Hexanone	10	5		46	
4-Methyl-2-Pentanone	10	5		15	
Tetrachloroethene	5	5			500
Toluene	5	5			
Chlorobenzene	5	5			
Ethylbenzene	5	5			
Styrene	5	5			
Total Xylenes	5	5			5
Dilution Factor			5	1	1

NOTES: "BLANK SPACE" - Indicates the compound was not detected.
J - Quantitation is approximate when the Mass Spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit and greater than zero.
CRDL - Contract Required Detection Limit (multiply dilution factor, detection limit factor, and amount found in the sample to obtain sample detection limits).

TABLE 6 MEAN CONCENTRATIONS OF SELECTED VOLATILE ORGANIC COMPOUNDS FROM THE NUS/FIT FINAL SAMPLING ROUNDS (APRIL, MAY, JUNE 1985)(PPB)

SAMPLING LOCATIONS	S-4			S-5				S-6						S-10		
COMPOUNDS	RD I	RD III	MEAN	RD I	RD II	RD III	MEAN	RD I	RD II	DUP	RD III	MEAN	RD I	RD III	MEAN
TRICHLOROETHENE	0	17	9	0	0	0	0	0	3	0	**	1	0	0	0
TETRACHLOROETHENE	0	17	9	0	0	0	0	140	160	54	**	119	0	0	0
trans-1,2-DICHLOROETHENE	0	0	0	0	0	0	0	3	3	0	0	1	0	0	0
1,1,1-TRICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1-DICHLOROETHANE	0	0	0	10	9	0	6	0	0	0	0	0	0	0	0
1,1,2,2-TETRACHLOROETHANE	0	0	0	0	0	0	0	3	0	0	0	1	0	0	0
1,2-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1-DICHLOROETHENE	0	15	8	0	0	0	0	0	0	0	0	0	0	0	0
BENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ETHYLBENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOLUENE	0	6	3	0	0	0	0	0	0	0	0	0	0	0	0
VINYL CHLORIDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STYRENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL-XYLENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL (SELECTED) VOLATILES			29				6					122			0

SAMPLING LOCATIONS	S-11			S-21			S-22			S-44			S63S
COMPOUNDS	RD I	RD III	MEAN	RD I	RD II	MEAN	RD I	RD II	MEAN	RD II	RD III	MEAN	RD I
TRICHLOROETHENE	130	150	140	190	210	200	0	34	17	3	2	3	72
TETRACHLOROETHENE	34	70	52	27	74	51	0	0	0	0	0	0	86
trans-1,2-DICHLOROETHENE	26	58	42	150	150	150	0	19	10	0	0	0	44
1,1,1-TRICHLOROETHANE	14	69	42	0	3	2	0	0	0	5	*	5	0
1,1-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1,2,2-TETRACHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0
1,2-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1-DICHLOROETHENE	0	0	0	0	0	0	0	0	0	0	0	0	0
BENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0
ETHYLBENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0
TOLUENE	0	0	0	0	0	0	0	0	0	0	0	0	0
VINYL CHLORIDE	0	0	0	0	0	0	0	0	0	0	0	0	0
STYRENE	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL-XYLENE	0	0	0	0	3	2	0	0	0	0	0	0	0
TOTAL (SELECTED) VOLATILES			276			405			27			8	

NOTES:

*-Value rejected due to quality control review (data validation).

**-Value rejected due to statistical test for outliers.

RD I-April 1985 Sampling Round

RD II-May 1985 Sampling Round

RD III-June 1985 Sampling Round

TABLE 6 MEAN CONCENTRATIONS OF SELECTED VOLATILE ORGANIC COMPOUNDS FROM THE NUS/FIT FINAL SAMPLING ROUNDS (APRIL, MAY, JUNE 1985)(PPB)

SAMPLING LOCATIONS	S63S			S63D				S64S					S64M		
COMPOUNDS	RD II	RD III	MEAN	RD I	RD II	RD III	MEAN	RD I	RD II	RD III	DUP	MEAN	RD I	DUP	RD II
TRICHLOROETHENE	64	48	61	140	130	150	140	88	95	*	*	92	130	130	110
TETRACHLOROETHENE	69	56	70	270	140	170	193	30	34	38	37	35	47	48	**
trans-1,2-DICHLOROETHENE	41	31	39	91	84	90	88	65	49	*	*	57	85	86	58
1,1,1-TRICHLOROETHANE	0	3	1	10	4	8	7	0	0	*	*	0	3	3	0
1,1-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1,2,2-TETRACHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,2-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1-DICHLOROETHENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ETHYLBENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOLUENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VINYL CHLORIDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STYRENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL-XYLENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL (SELECTED) VOLATILES			171				428					184			

SAMPLING LOCATIONS	S64M				S64D					S65S				S65M	
COMPOUNDS	DUP	RD III	DUP	MEAN	RD I	DUP	RD II	RD III	MEAN	RD I	RD II	RD III	MEAN	RD I	RD II
TRICHLOROETHENE	120	*	*	123	100	170	200	100	183	0	4	11	5	34	29
TETRACHLOROETHENE	41	*	*	45	44	42	43	40	42	0	0	**	0	9	8
trans-1,2-DICHLOROETHENE	92	110	87	86	80	85	70	150	96	0	0	**	0	20	19
1,1,1-TRICHLOROETHANE	0	*	*	2	3	3	0	0	2	0	0	0	0	0	0
1,1-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1,2,2-TETRACHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,2-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1-DICHLOROETHENE	0	5	0	1	0	0	0	0	0	0	0	0	0	0	0
BENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ETHYLBENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOLUENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VINYL CHLORIDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STYRENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL-XYLENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL (SELECTED) VOLATILES				257					323				5		

NOTES: *-Value rejected due to quality control review (data validation).
**-Value rejected due to statistical test for outliers.
RD I-April 1985 Sampling Round
RD II-May 1985 Sampling Round
RD III-June 1985 Sampling Round

TABLE 6 MEAN CONCENTRATIONS OF SELECTED VOLATILE ORGANIC COMPOUNDS FROM THE HUS/FIT FINAL SAMPLING ROUNDS (APRIL, MAY, JUNE 1985)(PPB)

SAMPLING LOCATIONS	S65N			S65D				S66				S67S			
COMPOUNDS	DUP	RD III	MEAN	RD I	RD II	RD III	MEAN	RD I	RD II	RD III	MEAN	RD I	RD II	RD III	MEAN
TRICHLOROETHENE	26	33	31	44	33	37	38	13	12	16	13	17	20	49	29
TETRACHLOROETHENE	7	10	9	16	10	11	12	3	0	5	3	0	0	0	0
trans-1,2-DICHLOROETHENE	16	18	18	31	21	24	25	5	7	9	7	0	0	0	0
1,1,1-TRICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	15	18	17	17
1,1-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1,2,2-TETRACHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,2-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1-DICHLOROETHENE	0	0	0	0	0	0	0	0	0	0	0	2	4	3	3
BENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ETHYLBENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOLUENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VINYL CHLORIDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STYRENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL-XYLENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL (SELECTED) VOLATILES			58				75				23				49

SAMPLING LOCATIONS	S67N				S67D				S68S				S68N	
COMPOUNDS	RD I	RD II	RD III	MEAN	RD I	RD II	RD III	MEAN	RD I	RD II	RD III	MEAN	RD I	RD II
TRICHLOROETHENE	56	56	54	55	33	37	34	35	**	54	50	52	*	88
TETRACHLOROETHENE	1	0	0	0	0	0	0	0	**	47	50	49	*	83
trans-1,2-DICHLOROETHENE	0	0	0	0	0	0	0	0	0	29	55	28	*	37
1,1,1-TRICHLOROETHANE	23	18	19	20	0	0	0	0	**	**	*	0	15	13
1,1-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1,2,2-TETRACHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,2-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1-DICHLOROETHENE	3	4	4	4	0	0	0	0	0	0	0	0	0	0
BENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ETHYLBENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOLUENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VINYL CHLORIDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STYRENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL-XYLENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL (SELECTED) VOLATILES				79				35				129		

NOTES: *-Value rejected due to quality control review (data validation).
**-Value rejected due to statistical test for outliers.
RD I-April 1985 Sampling Round
RD II-May 1985 Sampling Round
RD III-June 1985 Sampling Round

TABLE 6 MEAN CONCENTRATIONS OF SELECTED VOLATILE ORGANIC COMPOUNDS FROM THE NUS/FIT FINAL SAMPLING ROUNDS (APRIL, MAY, JUNE 1985)(PPB)

SAMPLING LOCATIONS	S60N			S70S				S70N				S71N			
COMPOUNDS	BKP	RD III	MEAN	RD I	RD II	RD III	MEAN	RD I	RD II	RD III	MEAN	RD I	RD II	RD III	MEAN
TRICHLOROETHENE	86	73	82	0	0	0	0	0	0	0	0	0	**	0	0
TETRACHLOROETHENE	88	85	85	0	0	0	0	**	0	0	0	1500	1900	*	1700
trans-1,2-DICHLOROETHENE	36	**	37	0	0	0	0	0	0	0	0	64	110	115	96
1,1,1-TRICHLOROETHANE	12	29	17	0	0	0	0	0	0	0	0	91	130	*	111
1,1-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1,2,2-TETRACHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,2-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1-DICHLOROETHENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ETHYLBENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOLUENE	0	0	0	0	0	0	0	**	0	0	0	**	0	0	0
VINYL CHLORIDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STYRENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL-XYLENE	0	0	0	0	0	**	0	0	0	0	0	0	0	0	0
TOTAL (SELECTED) VOLATILES			221				0				0				1907

SAMPLING LOCATIONS	S71D				S72S				S72N				S72D	
COMPOUNDS	RD I	RD II	RD III	MEAN	RD I	RD II	RD III	MEAN	RD I	RD II	RD III	MEAN	RD I	RD II
TRICHLOROETHENE	**	0	13	7	4	5	*	5	74	16	*	45	9	12
TETRACHLOROETHENE	**	2500	2450	2475	6	0	*	3	12	0	*	6	0	0
trans-1,2-DICHLOROETHENE	**	0	100	50	0	1	*	1	*	0	*	0	0	0
1,1,1-TRICHLOROETHANE	**	110	180	145	0	0	0	0	*	0	0	0	0	0
1,1-DICHLOROETHANE	**	0	0	0	6	4	0	4	0	0	**	0	0	0
1,1,2,2-TETRACHLOROETHANE	**	0	0	0	0	0	0	0	**	0	0	0	0	0
1,2-DICHLOROETHANE	**	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1-DICHLOROETHENE	**	0	0	0	0	0	*	0	0	0	0	0	0	0
BENZENE	**	0	0	0	0	0	0	0	0	3	5	3	0	0
ETHYLBENZENE	**	0	0	0	0	0	0	0	0	0	0	0	0	0
TOLUENE	**	0	0	0	0	0	0	0	0	0	0	0	0	0
VINYL CHLORIDE	**	0	0	0	0	0	0	0	0	0	0	0	0	0
STYRENE	**	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL-XYLENE	**	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL (SELECTED) VOLATILES				2677				13				54		

NOTES:

*-Value rejected due to quality control review (data validation).
**-Value rejected due to statistical test for outliers.
RD I-April 1985 Sampling Round
RD II-May 1985 Sampling Round
RD III-June 1985 Sampling Round

TABLE 6 MEAN CONCENTRATIONS OF SELECTED VOLATILE ORGANIC COMPOUNDS FROM THE NUS/FIT FINAL SAMPLING ROUNDS (APRIL, MAY, JUNE 1985)(PPB)

SAMPLING LOCATIONS	S72D			S73S				S73D				S74A		
COMPOUNDS	DUP	RD III	MEAN	RD I	RD II	RD III	MEAN	RD I	RD II	RD III	MEAN	RD I	RD II	MEAN
TRICHLOROETHENE	11	*	11	7	9	12	9	37	52	38	42	0	0	0
TETRACHLOROETHENE	0	*	0	0	0	0	0	0	0	0	0	0	0	0
trans-1,2-DICHLOROETHENE	0	0	0	12	20	23	18	31	36	27	31	0	0	0
1,1,1-TRICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1-DICHLOROETHANE	0	**	0	0	5	7	4	18	17	13	16	0	0	0
1,1,2,2-TETRACHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,2-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1-DICHLOROETHENE	0	0	0	0	2	3	2	3	5	3	4	0	0	0
BENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ETHYLBENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOLUENE	0	**	0	0	0	0	0	0	0	0	0	0	0	0
VINYL CHLORIDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STYRENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL-XYLENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL (SELECTED) VOLATILES			11				33				93			0

SAMPLING LOCATIONS	S74D			S75S					S75N					S75D	
COMPOUNDS	RD I	RD II	MEAN	RD I	RD II	RD III	DUP	MEAN	RD I	RD II	DUP	RD III	MEAN	RD I	RD II
TRICHLOROETHENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TETRACHLOROETHENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
trans-1,2-DICHLOROETHENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1,1-TRICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1,2,2-TETRACHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,2-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1-DICHLOROETHENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BENZENE	0	0	0	2200	1800	2000	5700	3125	**	110	110	67	96	76	170
ETHYLBENZENE	0	0	0	180	180	270	380	253	49	38	38	24	37	13	30
TOLUENE	0	0	0	330	280	440	680	433	11	16	16	5	12	4	10
VINYL CHLORIDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STYRENE	0	0	0	130	190	330	140	198	0	**	0	0	0	0	0
TOTAL-XYLENE	0	0	0	650	590	850	480	693	130	93	90	51	91	34	70
TOTAL (SELECTED) VOLATILES			0					4702					236		

NOTES:
*-Value rejected due to quality control review (data validation).
**-Value rejected due to statistical test for outliers.
RD I-April 1985 Sampling Round
RD II-May 1985 Sampling Round
RD III-June 1985 Sampling Round

TABLE 6 MEAN CONCENTRATIONS OF SELECTED VOLATILE ORGANIC COMPOUNDS FROM THE NUS/FIT FINAL SAMPLING ROUNDS (APRIL, MAY, JUNE 1985)(PPB)

SAMPLING LOCATIONS	S75B		S76B				S76N			S76D			S77BG		
COMPOUNDS	RD III	MEAN	RD II	RD III	MEAN	RD II	RD III	MEAN	RD II	RD III	MEAN	RD I	RD II	RD III
TRICHLOROETHENE	0	0	9	0	5	0	0	0	0	0	0	2	12	**
TETRACHLOROETHENE	0	0	0	0	0	0	0	0	0	0	0	0	0	**
trans-1,2-DICHLOROETHENE	0	0	0	0	0	0	0	0	0	0	0	12	8	0
1,1,1-TRICHLOROETHANE	0	0	0	0	0	0	*	0	0	*	0	0	0	*
1,1-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	*	0	0	0	0
1,1,2,2-TETRACHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,2-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1-DICHLOROETHENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BENZENE	160	135	0	0	0	0	0	0	0	0	0	0	0	0
ETHYLBENZENE	32	25	0	0	0	0	0	0	0	0	0	0	0	0
TOLUENE	11	8	0	0	0	0	0	0	0	0	0	0	0	0
VINYL CHLORIDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STYRENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL-XYLENE	74	62	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL (SELECTED) VOLATILES		230			5			0			0			

SAMPLING LOCATIONS	S77SS	S77G				S77M					S77O			
COMPOUNDS	MEAN	RD I	RD II	RD III	MEAN	RD I	RD II	DUP	RD III	MEAN	RD I	RD II	RD III	MEAN
TRICHLOROETHENE	7	96	130	160	129	**	97	96	120	104	210	280	300	263
TETRACHLOROETHENE	0	14	15	20	16	**	47	46	50	48	10	13	*	12
trans-1,2-DICHLOROETHENE	7	5	6	0	4	0	24	23	48	24	15	0	*	8
1,1,1-TRICHLOROETHANE	0	0	0	0	0	**	13	12	*	8	0	0	0	0
1,1-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1,2,2-TETRACHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,2-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1-DICHLOROETHENE	0	0	0	0	0	**	0	0	0	0	0	0	0	0
BENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ETHYLBENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOLUENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VINYL CHLORIDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STYRENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL-XYLENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL (SELECTED) VOLATILES	14				149					184				283

NOTES: *-Value rejected due to quality control review (data validation).
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RD I-April 1985 Sampling Round
RD II-May 1985 Sampling Round
RD III-June 1985 Sampling Round

TABLE 6 MEAN CONCENTRATIONS OF SELECTED VOLATILE ORGANIC COMPOUNDS FROM THE NUS/FIT FINAL SAMPLING ROUNDS (APRIL, MAY, JUNE 1985)(PPB)

SAMPLING LOCATIONS	S788				S788				S790			S806		
COMPOUNDS	RD I	RD II	RD III	MEAN	RD I	RD II	RD III	MEAN	RD I	RD II	MEAN	RD I	RD II	MEAN
TRICHLOROETHENE	160000	110	80000	80037	0	0	0	0	0	0	0	0	0	0
TETRACHLOROETHENE	50000	32	22000	26677	0	0	0	0	0	0	0	0	0	0
trans-1,2-DICHLOROETHENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1,1-TRICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1,2,2-TETRACHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,2-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1-DICHLOROETHENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ETHYLBENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOLUENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VINYL CHLORIDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STYRENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL-XYLENE	6100	3	1024	2642	0	0	0	0	0	0	0	0	0	0
TOTAL (SELECTED) VOLATILES				109356				0			0			0

SAMPLING LOCATIONS	S804			S816					S818					S818	
COMPOUNDS	RD I	RD II	MEAN	RD I	DUP	RD II	RD III	MEAN	RD I	RD II	RD III	DUP	MEAN	RD I	RD II
TRICHLOROETHENE	0	0	0	*	**	53	46	38	**	0	0	0	0	6	0
TETRACHLOROETHENE	0	0	0	1100	1000	670	500	838	34	35	75	71	54	200	140
trans-1,2-DICHLOROETHENE	0	0	0	0	*	0	0	0	0	0	0	0	0	3	0
1,1,1-TRICHLOROETHANE	0	0	0	*	110	99	340	183	0	0	*	*	0	21	0
1,1-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1,2,2-TETRACHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,2-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1-DICHLOROETHENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ETHYLBENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOLUENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VINYL CHLORIDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STYRENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL-XYLENE	0	0	0	0	0	0	0	0	0	0	**	0	0	0	0
TOTAL (SELECTED) VOLATILES			0					1059					54		

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RD I-April 1985 Sampling Round
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RD III-June 1985 Sampling Round

TABLE 6 MEAN CONCENTRATIONS OF SELECTED VOLATILE ORGANIC COMPOUNDS FROM THE NWS/FIT FINAL SAMPLING ROUNDS (APRIL, MAY, JUNE 1985)(PPB)

SAMPLING LOCATIONS	S01D		S02					S03						S04S	
COMPOUNDS	RD III	MEAN	RD I	RD II	DUP	RD III	MEAN	RD I	DUP	RD II	RD III	DUP	MEAN	RD I	RD II
TRICHLOROETHENE	3	3	40	37	39	**	41	**	**	470	440	470	460	24	21
TETRACHLOROETHENE	98	146	24	33	34	**	30	**	**	15	12	14	14	20	18
trans-1,2-DICHLOROETHENE	1	1	30	21	24	38	28	**	**	110	93	100	101	10	10
1,1,1-TRICHLOROETHANE	16	12	0	0	0	**	0	**	**	0	0	0	0	0	0
1,1-DICHLOROETHANE	0	0	0	0	0	0	0	**	**	0	0	0	0	0	0
1,1,2,2-TETRACHLOROETHANE	0	0	0	0	0	0	0	**	**	0	0	0	0	0	0
1,2-DICHLOROETHANE	0	0	0	0	0	0	0	**	**	0	0	0	0	0	0
1,1-DICHLOROETHENE	0	0	0	0	0	0	0	**	**	0	0	0	0	0	0
BENZENE	0	0	0	0	0	0	0	**	**	0	0	0	0	0	0
ETHYLBENZENE	0	0	0	0	0	0	0	**	**	0	0	0	0	0	0
TOLUENE	0	0	0	0	0	0	0	**	**	0	0	0	0	0	0
VINYL CHLORIDE	0	0	0	0	0	0	0	**	**	0	0	0	0	0	0
STYRENE	0	0	0	0	0	0	0	**	**	0	0	0	0	0	0
TOTAL-XYLENE	0	0	0	0	0	0	0	**	**	0	0	0	0	0	0
TOTAL (SELECTED) VOLATILES		162					99						575		

SAMPLING LOCATIONS	S04G		S04N				S04O				S05S				
COMPOUNDS	RD III	MEAN	RD I	RD II	RD III	MEAN	RD I	RD II	RD III	MEAN	RD I	RD II	RD III	DUP	MEAN
TRICHLOROETHENE	*	23	17	16	*	17	23	26	*	25	110	92	140	140	121
TETRACHLOROETHENE	*	19	11	11	*	11	10	9	*	10	56	22	82	85	61
trans-1,2-DICHLOROETHENE	*	10	7	0	*	4	8	11	*	10	68	62	77	76	71
1,1,1-TRICHLOROETHANE	*	0	0	0	*	0	0	0	*	0	8	0	13	13	9
1,1-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1,2,2-TETRACHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,2-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1-DICHLOROETHENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ETHYLBENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOLUENE	*	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VINYL CHLORIDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STYRENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL-XYLENE	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL (SELECTED) VOLATILES		54				32				45					262

NOTES:

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**-Value rejected due to statistical test for outliers.
RD I-April 1985 Sampling Round
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RD III-June 1985 Sampling Round

TABLE 6 MEAN CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS FROM THE NUS/FIT FINAL SAMPLING ROUNDS (APRIL, MAY, JUNE 1985)(PPB)

SAMPLING LOCATIONS	SB3N				SB4S				SB4M				TW 2C		
COMPOUNDS	RD I	RD II	RD III	MEAN	RD I	RD II	RD III	MEAN	RD I	RD II	RD III	MEAN	RD I	RD II	RD III
TRICHLOROETHENE	48	39	48	45	**	3	4	4	**	3	3	3	90	120	140
TETRACHLOROETHENE	150	170	180	167	**	12	12	12	**	13	8	11	56	110	120
trans-1,2-DICHLOROETHENE	22	**	23	23	**	0	0	0	**	0	0	0	**	75	74
1,1,1-TRICHLOROETHANE	34	**	36	35	**	0	3	2	**	0	0	0	6	11	21
1,1-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1,2,2-TETRACHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,2-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1-DICHLOROETHENE	0	0	**	0	0	0	0	0	0	0	0	0	0	0	0
BENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ETHYLBENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOLUENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VINYL CHLORIDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STYRENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL-XYLENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL (SELECTED) VOLATILES				270				18				14			

SAMPLING LOCATIONS	TW-2C	TW 4B			GD-1S				GD-1D			GD-1BB		
COMPOUNDS	MEAN	RD II	RD III	MEAN	RD I	RD II	RD III	MEAN	RD I	RD II	MEAN	RD I	RD II	RD III
TRICHLOROETHENE	117	66	76	71	0	0	0	0	0	7	4	*	10	20
TETRACHLOROETHENE	95	47	51	49	0	*	0	0	*	900	900	370	2000	3000
trans-1,2-DICHLOROETHENE	75	37	37	37	0	0	0	0	0	0	0	0	5	*
1,1,1-TRICHLOROETHANE	13	6	9	8	0	0	0	0	0	27	14	34	95	260
1,1-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1,2,2-TETRACHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,2-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1-DICHLOROETHENE	0	0	0	0	0	0	0	0	0	0	0	0	**	0
BENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ETHYLBENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOLUENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VINYL CHLORIDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STYRENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL-XYLENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL (SELECTED) VOLATILES	300			165				0			918			

NOTES: *-Value rejected due to quality control review (data validation).
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RD I-April 1985 Sampling Round
RD II-May 1985 Sampling Round
RD III-June 1985 Sampling Round

TABLE 6 MEAN CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS FROM THE NUS/FIT FINAL SAMPLING ROUNDS (APRIL, MAY, JUNE 1985)(PPB)

SAMPLING LOCATIONS	GW-18D	GW-3S					GW-3D					GW-3DD			
COMPOUNDS	MEAN	RD I	RD II	RD III	DUP	MEAN	RD I	RD II	RD III	DUP	MEAN	RD I	RD II	RD III	DUP
TRICHLOROETHENE	15	*	1200	610	1200	1003	*	2000	2700	2600	2433	*	1800	2300	2200
TETRACHLOROETHENE	1790	0	29	15	30	19	0	49	75	50	44	**	34	50	45
trans-1,2-DICHLOROETHENE	3	1400	920	2500	3000	1955	1800	1100	4400	4200	2875	**	670	1700	1900
1,1,1-TRICHLOROETHANE	130	0	0	0	0	0	0	0	0		0	0	0	0	0
1,1-DICHLOROETHANE	0	0	0	0	0	0	0	0	0		0	0	0	0	0
1,1,2,2-TETRACHLOROETHANE	0	0	0	0	0	0	0	0	0		0	0	0	0	0
1,2-DICHLOROETHANE	0	0	0	0	0	0	0	0	0		0	0	0	0	0
1,1-DICHLOROETHENE	0	0	0	0	0	0	0	0	0		0	0	0	0	0
BENZENE	0	0	0	0	0	0	0	0	0		0	0	0	0	0
ETHYLBENZENE	0	0	0	0	0	0	0	0	0		0	0	0	0	0
TOLUENE	0	0	0	0	0	0	0	0	0		0	0	0	0	0
VINYL CHLORIDE	0	0	40	140	100	92	0	220	350	290	215	0	40	140	125
STYRENE	0	0	0	0	0	0	0	0	0		0	0	0	0	0
TOTAL-XYLENE	0	0	0	0	0	0	0	0	0		0	0	0	0	0
TOTAL (SELECTED) VOLATILES	1930					3069					5567				

SAMPLING LOCATIONS	GW-3DD	GW-4S			GW-4D			GW-11S			GW-11D		
COMPOUNDS	MEAN	RD I	RD III	MEAN	RD I	RD III	MEAN	RD I	RD III	MEAN	RD I	RD III	MEAN
TRICHLOROETHENE	2100	19	10	15	200	390	295	85	100	93	70	80	75
TETRACHLOROETHENE	43	0	0	0	0	0	0	2	0	1	12	0	6
trans-1,2-DICHLOROETHENE	1423	21	*	21	790	1900	1345	0	*	0	0	300	150
1,1,1-TRICHLOROETHANE	0	0	0	0	0	*	0	0	*	0	0	*	0
1,1-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1,2,2-TETRACHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0
1,2-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1-DICHLOROETHENE	0	0	0	0	0	0	0	72	0	36	220	0	110
BENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0
ETHYLBENZENE	0	0	0	0	0	60	60	0	0	0	0	0	0
TOLUENE	0	0	0	0	0	0	0	0	0	0	0	0	0
VINYL CHLORIDE	76	0	0	0	0	0	0	0	0	0	0	0	0
STYRENE	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL-XYLENE	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL (SELECTED) VOLATILES	3642			36			1700			130			341

NOTES:

*-Value rejected due to quality control review (data validation).

**-Value rejected due to statistical test for outliers.

RD I-April 1985 Sampling Round

RD II-May 1985 Sampling Round

RD III-June 1985 Sampling Round

TABLE 6 MEAN CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS FROM THE NUS/FIT FINAL SAMPLING ROUNDS (APRIL, MAY, JUNE 1985)(PPB)

SAMPLING LOCATIONS	GW-12S			GW-12D			DW-1			DGW-1			DW-2	
COMPOUNDS	RD I	RD III	MEAN	RD I	RD III	MEAN	RD I	RD III	MEAN	RD I	RD III	MEAN	RD I	RD III
TRICHLOROETHENE	420	640	530	640	1100	870	31	0	16	590	480	535	19	32
TETRACHLOROETHENE	0	5	3	11	15	13	14	0	7	0	0	0	3	1
trans-1,2-DICHLOROETHENE	0	130	65	0	570	570	0	0	0	0	0	0	5	0
1,1,1-TRICHLOROETHANE	0	0	0	0	30	30	3	0	3	0	0	0	0	0
1,1-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1,2,2-TETRACHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,2-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1-DICHLOROETHENE	95	0	48	300	0	150	0	0	0	0	0	0	0	0
BENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ETHYLBENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOLUENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VINYL CHLORIDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STYRENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL-XYLENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL (SELECTED) VOLATILES			646			1633			26			535		

SAMPLING LOCATIONS	DW-2	DGW-2			DW-3			DW-4			DW-5		
COMPOUNDS	MEAN	RD I	RD III	MEAN	RD I	RD III	MEAN	RD I	RD III	MEAN	RD I	RD III	MEAN
TRICHLOROETHENE	26	130	200	165	130	80	105	14	6	10	3500	2300	2900
TETRACHLOROETHENE	2	14	0	7	7	0	3	3	0	2	0	0	0
trans-1,2-DICHLOROETHENE	5	920	2100	1510	20	0	10	0	0	0	0	0	0
1,1,1-TRICHLOROETHANE	0	26	0	26	0	0	0	0	0	0	0	0	0
1,1-DICHLOROETHANE	0	28	0	14	5	0	3	0	0	0	0	0	0
1,1,2,2-TETRACHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0
1,2-DICHLOROETHANE	0	0	0	0	4	0	2	0	0	0	0	0	0
1,1-DICHLOROETHENE	0	0	0	0	0	0	0	0	0	0	0	0	0
BENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0
ETHYLBENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0
TOLUENE	0	0	0	0	0	0	0	0	0	0	0	0	0
VINYL CHLORIDE	0	33	300	167	0	0	0	0	0	0	0	0	0
STYRENE	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL-XYLENE	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL (SELECTED) VOLATILES	33			1809			131			12			2900

NOTES:
- *-Value rejected due to quality control review (data validation).
- **-Value rejected due to statistical test for outliers.
- RD I-April 1985 Sampling Round
- RD II-May 1985 Sampling Round
- RD III-June 1985 Sampling Round

TABLE 6 MEAN CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS FROM THE NUS/FIT FINAL SAMPLING ROUNDS (APRIL, MAY, JUNE 1985)(PPB)

SAMPLING LOCATIONS	BSSW-6			BSW-6				BSW-7			BW-7		
COMPOUNDS	RD I	RD III	MEAN	RD I	DUP	RD III	MEAN	RD I	RD III	MEAN	RD I	RD II	MEAN
TRICHLOROETHENE	440000	180000	310000	100000	110000	140000	116667	23	0	12	37	13	25
TETRACHLOROETHENE	0	0	0	0	0	0	0	4	0	2	0	3	2
trans-1,2-DICHLOROETHENE	0	0	0	0	0	0	0	0	0	0	6	80	43
1,1,1-TRICHLOROETHANE	0	0	0	3000	3200	7000	4667	0	0	0	0	0	0
1,1-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1,2,2-TETRACHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0
1,2-DICHLOROETHANE	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1-DICHLOROETHENE	0	0	0	0	0	0	0	0	0	0	0	0	0
BENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0
ETHYLBENZENE	0	0	0	0	0	0	0	0	0	0	0	0	0
TOLUENE	0	0	0	0	0	0	0	0	0	0	0	0	0
VINYL CHLORIDE	0	0	0	0	0	0	0	0	0	0	0	0	0
STYRENE	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL-XYLENE	14000	0	7000	3950	4100	2000	3350	0	0	0	0	0	0
TOTAL (SELECTED) VOLATILES			317000				124684			14			70

*-Value rejected due to quality control review (data validation).
**-Value rejected due to statistical test for outliers.
RD I-April 1985 Sampling Round
RD II-May 1985 Sampling Round
RD III-June 1985 Sampling Round

TABLE 7 CLP EXTRACTABLE ORGANIC ANALYTICAL RESULTS
NWS/FIT APRIL 1985 SAMPLING ROUND (PPB)

SAMPLE LOCATIONS		S600	S600	S710	S720	S740	S770	S780	S790	S800	S800	S800
SAMPLE NUMBER		12477	12478	12433	12396	12475	12400	12416	12360	12359	12357	12358
TRAFFIC REPORT NUMBER		A8533	A8542	A8534	A8304	A8536	A8305	A8309	A8322	A8321	A8319	A8320
SEMIVOLATILE COMPOUNDS	CRQL											
PHENOL	10											
1,2-DICHLOROBENZENE	10		3 K					160				
BENZOIC ACID	50											
NAPHTHALENE	10											
2-METHYLNAPHTHALENE	10											
ACENAPHTHYLENE	10											
ACENAPHTHENE	10											
PHENANTHRENE	10											
FLUORANTHENE	10											
BIS(2-ETHYLHEXYL) PHTHALATE	10		5 K						1400	100	22	9 K
CHRYSENE	10											
DI-N-OCTYL PHTHALATE	10											
DILUTION FACTOR:		1	1	1	1	1	1	1	1	1	1	1
PESTICIDE COMPOUND												
CHLORDANE	0.50											

NOTES:

- Appendix B lists all of the compounds analyzed for in the samples.
- "BLANK SPACE" - Indicates the compound was not detected.
- K - Indicates the Mass Spectra data meets identification for the compound detected, but the quantitative result is less than the specified detection limit but greater than zero.
- CRQL - Contract required detection limit (multiply by dilution factor to obtain sample detection limit).

TABLE 7
CLP EXTRACTABLE ORGANIC ANALYTICAL RESULTS
NWS/FIT APRIL 1985 SAMPLING ROUND (ppb) PAGE TWO

SAMPLE LOCATIONS		SB1S	SB1D	SB3	SB3	SB6S	SB6M	GW-1S	GW-1D	GW-1DD	GW-3S	GW-3D
SAMPLE NUMBER		12411	12412	12479	12480	12410	12409	12456	12458	12457	12453	12454
TRAFFIC REPORT NUMBER		AB395	AB388	AB538	AB539	AB387	AB386	AB528	AB530	AB529	AB531	AB532
SEMIVOLATILE COMPOUNDS	CRQL											
PHENOL	10						2.5 K					
1,2-DICHLOROBENZENE	10											
BENZOIC ACID	50											
NAPHTHALENE	10											
2-METHYLNAPHTHALENE	10											
ACENAPHTHYLENE	10											
ACENAPHTHENE	10											
PHENANTHRENE	10											
FLUORANTHENE	10											
BIS(2-ETHYLHEXYL) PHTHALATE	10			19					18	17		17
CHRYSENE	10											
DI-N-OCTYL PHTHALATE	10											
DILUTION FACTOR:		1	1	1	1	1	1	1	1	1	1	1
PESTICIDE COMPOUND												
CHLORDANE	0.50											

NOTES:

- Appendix B lists all of the compounds analyzed for in the samples.
- "BLANK SPACE" - Indicates the compound was not detected.
- K - Indicates the Mass Spectra data meets identification for the compound detected, but the quantitative result is less than the specified detection limit but greater than zero.
- CRQL - Contract required detection limit (multiply by dilution factor to obtain sample detection limit).

TABLE 7
CLP EXTRACTABLE ORGANIC ANALYTICAL RESULTS
NUS/FIT APRIL 1985 SAMPLING ROUND (ppb) PAGE THREE

SAMPLE LOCATIONS		GW-300	BW-5	BSW-1	BSW-7	BSSW-6	SW-04	SW-06	BLANK	BLANK	BLANK
SAMPLE NUMBER		12455	12426	12420	12421	12418	12404	12406	12356	12415	12436
TRAFFIC REPORT NUMBER		AB535	AB391	AB393	AB390	AB392	AB540	AB541	AB318	AB394	AB537
SEMIVOLATILE COMPOUNDS	CRQL										
PHENOL	10										
1,2-DICHLOROBENZENE	10					5.6 K					
BENZOIC ACID	50		50 J								
NAPHTHALENE	10					5.2 K					
2-METHYLNAPHTHALENE	10					3.1 K					
ACENAPHTHYLENE	10										
ACENAPHTHENE	10										
PHENANTHRENE	10										
FLUORANTHENE	10										
BIS(2-ETHYLHEXYL) PHTHALATE	10	230									
CHRYSENE	10										
DI-N-OCTYL PHTHALATE	10								4 K		
DILUTION FACTOR:		1	1	1	1	1	1	1	1	1	1
PESTICIDE COMPOUND											
CHLORDANE	0.50					0.25					

NOTES:
- Appendix B lists all of the compounds analyzed for in the samples.
- "BLANK SPACE" - Indicates the compound was not detected.
- J - Quantitation is approximate due to quality control review (data validation).
- K - Indicates the Mass Spectra data meets identification for the compound detected, but the quantitative result is less than the specified detection limit but greater than zero.
- CRQL - Contract required detection limit (multiply by dilution factor to obtain sample detection limit).

TABLE 8 CLP EXTRACTABLE ORGANIC ANALYTICAL RESULTS
NUG/FIT MAY 1985 SAMPLING ROUND (ppb)

SAMPLE LOCATIONS		5648	5648	5648	5648	5818	5818	5856	5858	60-1S	60-1D	60-1DD
SAMPLE NUMBER		12734	12735	12737	12736	12745	12744	12738	12739	12727	12729	12457
TRAFFIC REPORT NUMBER		AB707	AB708	AB710	AB709	AB713	AB714	AB711	AB712	AB703	AB705	AB704
SEMIVOLATILE COMPOUNDS	CRQL											
PHENOL	10											
1,2-DICHLOROBENZENE	10											
BENZOIC ACID	50											
NAPHTHALENE	10											
2-METHYLNAPHTHALENE	10											
ACENAPHTHYLENE	10											
ACENAPHTHENE	10											
PHENANTHRENE	10											
FLUORANTHENE	10											
BIS(2-ETHYLHEXYL) PHTHALATE	10		95 J		19 J				79 J			43 J
CHRYSENE	10											
DI-N-OCTYL PHTHALATE	10											
DILUTION FACTOR:		1	1	1	1	1	1	1	1	1	1	1

NOTES:
- Appendix B lists all of the compounds analyzed for in the samples.
- "BLANK SPACE" - Indicates the compound was not detected.
- J - Quantitation is approximate due to quality control review (data validation).
- CRQL - Contract required detection limit (multiply by dilution factor to obtain sample detection limit).

TABLE 8
CLP EXTRACTABLE ORGANIC ANALYTICAL RESULTS
MWG/FIT MAY 1985 SAMPLING ROUND (ppb) PAGE TWO

SAMPLE LOCATIONS		GW-3S	GW-3D	GW-3DD	BLANK
SAMPLE NUMBER		12724	12725	12726	12723
TRAFFIC REPORT NUMBER		AB396	AB701	AB702	AB706
SEMIVOLATILE COMPOUNDS	CRDL				
PHENOL	10				
1,2-DICHLOROBENZENE	10				
BENZOIC ACID	50				
NAPHTHALENE	10				
2-METHYLNAPHTHALENE	10				
ACENAPHTHYLENE	10				
ACENAPHTHENE	10				
PHENANTHRENE	10				
FLUORANTHENE	10				
BIS(2-ETHYLHEXYL) PHTHALATE	10	100 J		88 J	
CHRYSENE	10				
DI-N-OCTYL PHTHALATE	10				
DILUTION FACTOR:		1	1	1	1

NOTES:
- Appendix B lists all of the compounds analyzed for in the samples.
- "BLANK SPACE" - Indicates the compound was not detected.
- J - Quantitation is approximate due to quality control review (data validation).
- CRDL - Contract required detection limit (multiply by dilution factor to obtain sample detection limit).

TABLE 9 CLP EXTRACTABLE ORGANIC ANALYTICAL RESULTS
MWG/FIT JUNE 1985 SAMPLING ROUND (ppb) PAGE ONE

SAMPLE LOCATIONS		S64B	S68S	S68N	S71B	S75S	S77S	S77SS	S78S	S81S	S81S	S81N
SAMPLE NUMBER		13207	13188	13187	13209	13206	13204	13205	13203	13194	13195	13297
TRAFFIC REPORT NUMBER		AC462	AC453	AC452	AC445	AC460	AC458	AC459	AC457	AC449	AC450	AC447
				a		b	b		b	b	b	
SEMIVOLATILE COMPOUNDS	CRDL											
PHENOL	10											
1,2-DICHLOROBENZENE	10								70 J			
BENZOIC ACID	50											
NAPHTHALENE	10					1244 J						
2-METHYLNAPHTHALENE	10					192 J						
ACENAPHTHYLENE	10					74 J						
ACENAPHTHENE	10					11 J						
PHENANTHRENE	10					32 J						
FLUORANTHENE	10					19 J						
BIS(2-ETHYLHEXYL) PHTHALATE	10	*		*		*	*	*	*	*		*
CHRYSENE	10				3.3 J							
DI-N-OCTYL PHTHALATE	10											
DILUTION FACTOR:		1	1	1	1	1	1	1	1	1	1	1

NOTES:

	-	Appendix D lists all of the compounds analyzed for in the samples.
"BLANK SPACE"	-	Indicates the compound was not detected.
J	-	Quantitation is approximate due to quality control review (data validation).
*	-	Value is rejected due to blank contamination identified in quality control review
CRDL	-	Contract required detection limit (multiply by dilution factor to obtain sample detection limit).
a	-	Base/neutral fraction rejected due to quality control review
b	-	Acid fraction rejected due to quality control review

TABLE 9
CLP EXTRACTABLE ORGANIC ANALYTICAL RESULTS
NMS/FIT JUNE 1985 SAMPLING ROUND (ppb) PAGE TWO

SAMPLE LOCATIONS		SB1N	SB1D	BN-3	BN-7	BSN-7	BLANK	BLANK
SAMPLE NUMBER		13287	13190	13200	13199	13198	13293	13295
TRAFFIC REPORT NUMBER		AC440	AC461	AC456	AC455	AC454	AC451	AC446
SEMIVOLATILE COMPOUNDS	CRDL							
PHENOL	10							
1,2-DICHLOROBENZENE	10							
BENZOIC ACID	50							
NAPHTHALENE	10							
2-METHYLNAPHTHALENE	10							
ACENAPHTHYLENE	10							
ACENAPHTHENE	10							
PHENANTHRENE	10							
FLUORANTHENE	10							
BIS(2-ETHYLHEXYL) PHTHALATE	10	a	a	a	a	a	11	48
CHRYSENE	10							
DI-N-OCTYL PHTHALATE	10							
DILUTION FACTOR:		1	1	1	1	1	1	1

NOTES:
- Appendix B lists all of the compounds analyzed for in the samples.
- "BLANK SPACE" - Indicates the compound was not detected.
- a - Value is rejected due to blank contamination identified in quality control review
- CRDL - Contract required detection limit (multiply by dilution factor to obtain sample detection limit).
- a - Base/neutral fraction rejected due to quality control review.
- b - Acid fraction rejected due to quality control review.

TABLE 10

GROUNDWATER CLP INORGANIC ANALYTICAL RESULTS
NUS/FIT APRIL 1985 SAMPLING ROUND

Sample Location		S79D	S80S	S80M	S80M(Dup.)	Blank
Sample No.		12360	12359	12357	12358	12356
Traffic Report No.		MAA215	MAA214	MAA212	MAA213	MAA21
Inorganic Elements	Detection Limits (ppb)					
Aluminum	1150	-	*	-	*	*
Antimony	50	-	-	-	-	-
Arsenic	6.1	32	-	-	-	-
Barium	78	-	-	-	-	-
Beryllium	1.1	-	-	-	-	-
Cadmium	5.0	-	-	-	-	-
Calcium	1000	41,000	20,000	24,000	24,000	-
Chromium	10	-	-	-	-	-
Cobalt	13	-	-	-	-	-
Copper	25	-	-	-	-	-
Iron	56	-	6100	-	-	-
Lead	2.1	-	2.3	-	3.0	-
Magnesium	720	4,600	5,600	6,500	6,800	-
Manganese	11	-	430	840	820	-
Mercury	0.20	-	-	-	-	-
Nickel	40	-	-	-	-	-
Potassium	890	8,800	3,100	3,900	4,200	-
Selenium	1.1	-	-	-	-	-
Silver	9.4	-	-	-	-	-
Sodium	750	20,000	61,000	37,000	38,000	-
Thallium	7.9	-	-	-	-	-
Tin	40	-	-	57J	-	-
Vanadium	17	-	-	-	-	-
Zinc	19	19	19	30	22	-

TABLE 10
GROUNDWATER CLP INORGANIC ANALYTICAL RESULTS
NUS/FIT APRIL 1985 SAMPLING ROUNDS
PAGE TWO

Sample Location		S68S	S68M	S71D	S74M	S83	S83(Dup.)	GW3S	GW3D
Sample No.		12477	12478	12433	12475	12479	12480	12453	12454
Traffic Report No.		MAA219	MAA220	MAA216	MAA218	MAA221	MAA222	MAA225	MAA226
Inorganic Elements	Detection Limits (ppb)								
Aluminum	23	1,000	5,800	2,800	5,900	710	740	41	-
Antimony	46	-	-	-	-	-	-	-	-
Arsenic	4	-	-	-	13	-	-	-	-
Barium	12	30	70	79	96	30	28	18	15
Beryllium	0.5	-	0.6	-	0.6	-	-	-	-
Cadmium	5	-	5.9	-	-	8	-	-	-
Calcium	290	37,000	75,000	74,000	150,000	62,000	62,000	53,000	86,000
Chromium	4	7.4	5.7	-	25	-	-	-	-
Cobalt	7	-	23	-	-	7.4	7.9	-	-
Copper	25	*	49	*	69	*	*	*	*
Iron	100	2,900	7,400	7,400	25,000	2,000	2,000	94	86
Lead	2	-	-	-	-	-	-	-	-
Magnesium	330	8,400	16,000	8,200	34,000	12,000	12,000	19,000	18,000
Mangenese	3	100	1,100	220	1,700	740	740	540	-
Mercury	0.1	-	-	-	-	-	-	-	-
Nickel	40	*	*	*	*	*	-	*	-
Potassium	470	2,500	4,400	8,800	7,200	4,900	5,100	10,000	3,100
Selenium	2	-	**	-	**	**	-	-	-
Silver	4	-	-	4.4J	-	-	-	-	-
Sodium	880	27,000	27,000	52,000	32,000	85,000	88,000	43,000	28,000
Thallium	4	-	-	-	-	-	-	-	-
Tin	36	-	-	-	-	-	-	-	-
Vanadium	4	11	27	8.2	11	-	-	-	-
Zinc	20	56	72	44	55	35	35	23	*

TABLE 10
GROUNDWATER CLP INORGANIC ANALYTICAL RESULTS
NUS/FIT APRIL 1985 SAMPLING ROUND
PAGE THREE

Sample Location		GW3DB	G0S1S	G0S1D	G0S1DB
Sample No.		12455	12456	12458	12457
Traffic Report No.		MAA227	MAA228	MAA230	MAA229
Inorganic Elements	Detection Limits (ppb)				
Aluminum	23	-	-	79	47
Antimony	46	-	-	-	-
Arsenic	4	-	-	-	-
Barium	12	-	-	-	21
Beryllium	0.5	-	-	-	-
Cadmium	5	-	-	6.4	-
Calcium	290	63,000	21,000	77,000	36,000
Chromium	4	-	-	-	-
Cobalt	7	-	-	-	-
Copper	25	-	-	-	-
Iron	100	*	*	250	150
Lead	2	-	-	-	-
Magnesium	330	7,700	3,400	6,000	3,700
Mangenese	3	9.3	15	6.6	15
Mercury	0.1	-	-	-	-
Nickel	40	-	*	*	*
Potassium	470	3,300	2,600	1,200	2,100
Selenium	2	-	-	-	-
Silver	4	-	-	-	-
Sodium	880	17,000	24,000	23,000	23,000
Thallium	4	-	-	-	-
Tin	36	-	-	-	-
Vanadium	4	-	-	-	-
Zinc	20	*	22	27	48

- \- Element is not detected
J - Quantitation is approximate due to quality control review (data validation).
* - Value is rejected due to presence of blank contamination detected below contract required detection limit.
** - Value is rejected due to other contractual requirements identified in quality control review.

TABLE 11

GROUNDWATER CLP INORGANIC ANALYTICAL RESULTS
NUS/FIT MAY 1985 SAMPLING ROUND

Sample Location		S64S	S64M	S64M(Dup)	S64D	S81M	S81D	S85S	S85M
Sample No.		12734	12735	12737	12736	12745	12744	12738	12739
Traffic Report No.		MAA410	MAA411	MAA413	MAA412	MAA401	MAA402	MAA414	MAA415
Inorganic Elements	Detection Limits (ppb)								
Aluminum	1000	-	*	-	*	*	-	*	*
Antimony	60	-	-	-	-	-	-	-	-
Arsenic	10	-	-	-	-	-	-	-	-
Barium	100	-	-	-	-	-	-	-	-
Beryllium	5	19	-	-	25	-	-	16	-
Cadmium	65	*	*	*	*	*	*	*	*
Calcium	1000	46,400	50,000	50,000	89,000	56,000	24,000	39,000	64,000
Chromium	10	13	76	110	34	340	-	-	-
Cobalt	25	-	-	-	-	-	-	-	-
Copper	20	-	-	-	-	-	-	-	-
Iron	100	380	1000	-	750	2100	-	140	500
Lead	5	-	5.4	-	-	-	-	-	-
Magnesium	1000	9,100	11,000	11,000	12,000	-	3,600	6,100	15,000
Manganese	12	14	41	40	37	-	20	160	57
Mercury	0.2	-	-	-	-	-	-	-	-
Nickel	12	110	130	130	100	110	110	96	120
Potassium	2000	4,500	5,400	5,600	4,000	3,400	-	9,700	3,300
Selenium	5	-	-	-	-	-	-	-	-
Silver	10	-	-	-	-	-	-	-	-
Sodium	2000	56,000	58,000	60,000	33,000	12,000	14,000	47,000	28,000
Thallium	5	-	-	-	-	-	-	-	-
Tin	40	-	-	-	-	-	-	-	-
Vanadium	40	-	-	-	-	-	-	-	-
Zinc	15	20J	57J	32J	97J	24J	24J	27J	38J

TABLE 11
GROUNDWATER CLP INORGANIC ANALYTICAL RESULTS
NUS/FIT MAY 1985 SAMPLING ROUND
PAGE TWO

Sample Location		GW3S	GW3D	GW3DB	G0S1S	G0S1D	G0S1DB	Blank
Sample No.		12724	12725	12726	12727	12729	12728	12723
Traffic Report No.		MAA403	MAA404	MAA405	MAA406	MAA408	MAA407	MAA409
Inorganic Elements	Detection Limits (ppb)							
Aluminum	1000	-	*	*	-	-	*	*
Antimony	60	-	-	-	-	-	-	-
Arsenic	10	-	-	-	-	-	-	-
Barium	100	-	-	-	-	-	-	-
Beryllium	5	-	-	-	-	-	6	-
Cadmium	65	*	*	*	*	-	*	*
Calcium	1000	46,000	71,000	61,000	19,000	37,000	70,000	-
Chromium	10	-	-	-	-	-	-	-
Cobalt	25	-	-	-	-	-	-	-
Copper	20	-	-	-	-	-	-	-
Iron	100	-	-	-	-	-	-	-
Lead	5	-	-	-	-	-	-	-
Magnesium	1000	41,000	17,000	7,600	3,100	3,700	5,600	-
Manganese	12	460	98	-	-	-	-	-
Mercury	0.2	-	0.23J	-	-	-	-	-
Nickel	12	130	140	110	88	79	87	-
Potassium	2000	7,800	2,600	2,100	2,000	-	-	-
Selenium	5	-	-	-	-	-	-	-
Silver	10	-	-	-	-	13	-	-
Sodium	2000	41,000	27,000	16,000	24,000	21,000	23,000	-
Thallium	5	-	-	-	-	-	-	-
Tin	40	-	-	-	-	-	-	-
Vanadium	40	-	-	-	-	-	-	-
Zinc	15	39J	49J	-	18J	33J	59J	-

- - Element is not detected
J - Quantitation is approximate due to quality control review (data validation).
* - Value is rejected due to blank contamination identified in quality control review.

TABLE 12
GROUNDWATER CLP INORGANIC ANALYTICAL RESULTS
NUS/FIT JUNE 1985 SAMPLING ROUND

Sample Location		S64D	S68S	S68M	S71D	S75S	S77S	S77SS	S78S
Sample No.		13207	13188	13187	13289	13206	13204	13205	13203
Traffic Report No.		MAA663	MAA655	MAA654	MAA647	MAA662	MAA660	MAA661	MAA659
Inorganic Elements	Detection Limits (ppb)								
Aluminum	590	*	*	*	7230J	*	*	*	2290J
Antimony	345	*	*	*	-	*	*	*	*
Arsenic	15.5	*	*	*	*	16J	24J	*	*
Barium	120	*	*	*	223J	*	*	*	*
Beryllium	0.6	-	-	-	-	-	-	-	-
Cadmium	1.9	2.0	-	2.9	5.4	-	-	-	6.5
Calcium	2560	83900J	33600J	53300J	78600J	42400J	38200J	36100J	30300J
Chromium	2.9	-	-	-	-	-	-	-	5.4J
Cobalt	3.3	-	-	-	6.6	-	8.5	-	3.7
Copper	22.5	*	-	-	46J	*	*	*	*
Iron	690	*	*	*	18200J	17400J	1720J	1560J	2220J
Lead	8.5	21J	*	*	18J	-	-	-	-
Magnesium	565	12400J	8960J	13200J	10800J	6360J	7260J	7550J	7560J
Manganese	15.5	31J	17J	352J	435J	8710J	3880J	833J	2810J
Mercury	0.2	-	-	-	0.35	0.23	-	0.21	0.21
Nickle	5.0	-	-	-	11	-	9.8	-	6.3
Potassium	80	4300J	2000J	4300J	4500J	8000J	4500J	4800J	2300J
Selenium	4.8	-	-	-	-	-	-	-	-
Silver	3.9	4.9J	4.2J	13J	-	12J	-	13J	7.5J
Sodium	3185	33000J	27900J	27900J	49900J	14300J	62700J	50000J	27900J
Thallium	4.6	-	-	-	-	-	9.6	-	5.8
Tin	9.7	22J	-	14J	40J	19J	-	-	-
Vanadium	3.1	5.7J	10J	13J	16J	8.0J	-	9.1J	9.9J
Zinc	475	*	*	*	*	*	*	*	*

TABLE 12
GROUNDWATER CLP INORGANIC ANALYTICAL RESULTS
NUS/FIT JUNE 1985 SAMPLING ROUND
PAGE TWO

Sample Location		S81D	BW3	BSW7	BW7	Blank
Sample No.		13190	13200	13198	13199	13295
Traffic Report No.		MAA664	MAA658	MAA656	MAA657	MAA648
Inorganic Elements	Detection Limits (ppb)					
Aluminum	590	*	*	*	*	118
Antimony	345	*	*	*	-	69
Arsenic	15.5	*	-	*	*	4.0
Barium	120	*	*	*	*	24
Beryllium	0.6	-	-	-	-	-
Cadmium	1.9	-	-	-	5.0	-
Calcium	2560	21300J	26200J	27100J	31400J	512
Chromium	2.9	-	-	-	-	-
Cobalt	3.3	-	-	3.8	12	-
Copper	22.5	*	*	-	*	5.9
Iron	690	*	*	3520J	16400J	138
Lead	8.5	10J	-	17J	-	3.1
Magnesium	565	3400J	5620J	5080J	6920J	113
Manganese	15.5	25J	538J	500J	728J	3.1
Mercury	0.2	0.5	0.20	-	-	-
Nickle	5.0	-	-	5.4	-	-
Potassium	80	-	2300J	4300J	4000J	-
Selenium	4.8	-	-	-	-	-
Silver	3.9	-	8.2J	-	-	-
Sodium	3185	15700J	33100J	17600J	30300J	-
Thallium	4.6	-	-	-	-	-
Tin	9.7	-	-	19J	-	-
Vanadium	3.1	3.1J	5.9J	4.6J	-	-
Zinc	475	*	*	*	*	95

NOTES: "-" - Indicates compound was not detected.
J - Quantitation is approximate due to quality control review (data validation).
* - Value is rejected due to blank contamination identified in quality control review.

TABLE 13
THE DISTRIBUTION OF ELEMENTS
IN GROUNDWATER FROM THE BEDROCK AND OVERBURDEN AQUIFERS
(ppb)

	Bedrock	Overburden
Aluminum (Al)	ND-7,230J	ND-5,900
Antimony (Sb)	ND	ND
Arsenic (As)	ND-32J	ND-24J
Barium (Ba)	ND-223J	ND-96
Beryllium (Be)	ND-25	ND-19
Cadmium (Cd)	ND-6.4	ND-8.0
Calcium (Ca)	21,300J-89,000	19,000-150,000
Chromium (Cr)	ND-34	ND-340
Cobalt (Co)	ND-6.6	ND-23
Copper (Cu)	ND-46J	ND-69
Iron (Fe)	ND-18,200J	ND-25,000
Lead (Pb)	ND-21J	ND-17J
Magnesium (Mg)	3,400-12,400	ND-41,000
Manganese (Mn)	ND-435J	ND-3,880J
Mercury (Hg)	ND-0.5	ND-0.23
Nickel (Ni)	ND-140	ND-130
Potassium (K)	ND-8,800	2,000-7,200
Selenium (Se)	ND	ND
Silver (Ag)	ND-13	ND-13J
Sodium (Na)	14,000-52,000	12,300-85,000
Thallium (Tl)	ND	ND-9.6
Tin (Sn)	ND-40J	ND-57J
Vanadium (V)	ND-16J	ND-27
Zinc (Zn)	ND-97J	22-72

NOTES: ND- Not detected
J - Quantitation approximate
Based on NUS/FIT sampling results conducted in April, May and June, 1985.

TABLE 14
THE OCURRENCES OF INORGANIC ELEMENTS
IN NUS/FIT GROUNDWATER SAMPLING ROUNDS

Sampling Round	April 1985	May 1985	June 1985
Element			
Aluminum (Al)	9 occurrences (41-5800 ppb)	ND-Many values rejected due to blank contamination.	2 occurrences (2290J, 7230J) Many values rejected due to blank contamination.
Antimony (Sb)	ND	ND	Rejected in most samples because of blank contamination.
Arsenic (As)	1 occurrence (32 ppb)	ND	2 occurrences(16J and 24J ppb) Many values rejected due to blank contamination.
Barium (Ba)	9 occurrences (15-96 ppb)	ND (note detection limit of 100 ppb)	1 occurrence (223J ppb) Many values rejected to due blank contamination.
Beryllium (Be)	2 occurrences (0.6 ppb)	4 occurrences (6-25 ppb)	ND
Cadmium (Cd)	3 occurrences (5.9-8.0 ppb)	All values rejected due to blank contamination	5 occurrences (2.0-6.5 ppb)
Calcium (Ca)	16 occurrences (20,000-150,000 ppb)	14 occurrences (19,000-89,000 ppb)	12 occurrences (21,300J-83,900J ppb)
Chromium (Cr)	3 occurrences (5.7-25 ppb)	5 occurrences (13-340 ppb)	1 occurrence (5.4J ppb)
Cobalt (Co)	3 occurrences (7.4-23 ppb)	ND	5 occurrences (3.7-12 ppb)
Copper (Cu)	2 occurrences (49,69 ppb)	ND	1 occurrence (46Jppb) Many values rejected due to blank contamination.
Iron (Fe)	11 occurrences (86-25,000 ppb)	6 occurrences (140-2100 ppb)	7 occurrences (1,560J-18,200J)
Lead (Pb)	2 occurrences (2.3-3.0 ppb)	1 occurrence (5.4 ppb)	4 occurrences (10J-21J ppb) A few values rejected due to blank contamination.

TABLE 14
THE OCCURRENCES OF INORGANIC ELEMENTS
IN NUS/FIT GROUNDWATER SAMPLING ROUNDS
PAGE TWO

Sampling Round	April 1985	May 1985	June 1985
Element			
Magnesium (Mg)	16 occurrences (3,400-34,000 ppb)	13 occurrences (3,100-41,000 ppb)	12 occurrences (2,970J-12,400J ppb)
Manganese (Mn)	14 occurrences (6.6-1700 ppb)	9 occurrences (14-460 ppb)	12 occurrences (17J-8,710J ppb)
Mercury (Hg)	ND	1 occurrence (0.23J)	6 occurrences (0.2-0.5 ppb)
Nickel (Ni)	ND-Some values rejected rejected due to blank contamination.	14 occurrences (79-140 ppb)	4 occurrences (5.4-11 ppb)
Potassium (K)	16 occurrences (1,200-8,800 ppb)	11 occurrences (2,100-9,700 ppb)	11 occurrences (2,000J-8,000J ppb)
Selenium (Se)	ND-Some values rejected as a result of quality control review.	ND	ND
Silver (Ag)	1 occurrence (4.4J ppb)	1 occurrence (13 ppb)	7 occurrences (4.2J-13J ppb)
Sodium (Na)	16 occurrences (1,200-88,000 ppb)	14 occurrences (12,000-60,000 ppb)	12 occurrences (14,300J-62,700J ppb)
Thallium (Tl)	ND	ND	2 occurrences (5.8, 9.6 ppb)
Tin (Sn)	1 occurrence (57J ppb)	ND	5 occurrences (14J-40J ppb)
Vanadium (V)	4 occurrences (8.2-27 ppb)	ND	10 occurrences (3.1-16 ppb)
Zinc (Zn)	14 occurrences (19-72 ppb)	13 occurrences (18J-97J ppb)	All values rejected due to blank contamination.
Total number of sampling locations	16	14	12

NOTES: ND -Element is not detected.
J -Quantitation is approximate due to quality control review (data validation).

TABLE 15

ELEMENT CONCENTRATION IN GROUNDWATER
(ppb)

	Groundwater*	Massachusetts Northeast Drainage Basin Range	Area** median	NUS/FIT Data Range
Alumium (Al)	-	-	-	ND-7,230J
Antimony (Sb)	-	-	-	ND
Arsenic (As)	-	-	-	ND-32
Barium (Ba)	-	-	-	ND-223J
Beryllium (Be)	-	-	-	ND-25
Cadmium (Cd)	-	-	-	ND-25
Calcium (Ca)	-	4,600-62,000	21,000	19,000-150,000
Chromium (Cr)	-	-	-	ND-340
Cobalt (Co)	-	-	-	ND-23
Copper (Cu)	3.0	ND-900	20	ND-49
Iron (Fe)	-	ND-72,100	600	ND-25,000
Lead (Pb)	-	-	-	ND-21
Magnesium (Mg)	-	1,800-33,000	4,700	ND-41,000
Manganese (Mn)	15	ND-6,000	110	ND-1,700
Mercury (Hg)	-	-	-	ND-0.5
Nickel (Ni)	1.5	-	-	ND-140
Potassium (K)	-	1,000-6,000	2,200	ND-10,000
Selenium (Se)	0.4	-	-	ND
Silver (Ag)	-	-	-	ND-13J
Sodium (Na)	-	9,000-100,000	22,000	12,000-85,000
Thallium (Tl)	-	-	-	ND-9.6
Tin (Sn)	0.09	-	-	ND-57J
Vanadium (V)	2.0	-	-	ND-27
Zinc (Zn)	-	-	-	ND-97

NOTES: J - Quantitation is approximate
- - Value not available
ND- Not detected
* - Information from Geochemistry in Mineral Exploration 2nd Ed. by A.W. Rose, H.E. Hawkes, and J.S. Webb, 1979, Academic Press, N.Y.
** - Information from Delaney; D.F. and F.B. Gay 1980 Hydrology and Water Resources of the Coastal Drainage Basins of Northeastern Massachusetts, from Castle Neck River, Ipswich, to Mystic River, Boston. U.S. Geological Survey Hydrologic Investigations Atlas HA-589.

TABLE 16

ELEMENT CONCENTRATIONS IN SOILS
(ppm)

	Typical range in soils*	Regional mean concentration**
Aluminum (Al)	-	30,000
Antimony (Sb)	0.15-1.2	ND
Arsenic (As)	5-10	6.5
Barium (Ba)	100-1000	300
Beryllium (Be)	-	1-1.5
Cadmium (Cd)	0.15-1.0	-
Calcium (Ca)	-	7,900-12,000
Chromium (Cr)	12-100	30
Cobalt (Co)	5-12	7
Copper (Cu)	8-80	15
Iron (Fe)	-	15,000
Lead (Pb)	10-100	15
Magnesium (Mg)	-	5,000-7,000
Manganese (Mn)	120-1000	700
Mercury (Hg)	0.08-0.15	0.2-5.1
Nickel (Ni)	8-15	15
Potassium (K)	-	20,000
Selenium (Se)	0.10-1.0	0.3
Silver (Ag)	0.05-1.0	-
Sodium (Na)	-	10,000
Thallium (Tl)	0.05-1.0	ND
Tin (Sn)	1-8	ND
Vanadium (V)	80-110	70
Zinc (Zn)	12-100	45

NOTES:

- - No value provided
ND- Not detected
* - Taken from Trace Elements in Soils and Plants by A. Kabata-Pendias and H. Pendias 1984. CRC Press, Boca Raton, Florida.
** - Taken from Element Concentrations in Soils and Other Surficial Material in the Conterminous United States. U.S. Geological Survey Professional Paper 1270 1984.

TABLE 17
CLP INORGANIC ANALYTICAL RESULTS FOR FEDERAL AND STATE DRINKING WATER QUALITY STANDARDS
NUS/FIT APRIL 1985 SAMPLING ROUND

Sample Location		S22	S68S	S68M	S73S	S73S(Dup)	S73D	S74M	S74D
Sample Number		12481	12477	12478	13082	12474	12473	12475	12476
Case Number 1623A									
Inorganic Elements	Detection Limits (ppb)								
Arsenic (As)	3	15	-	-	-	70	-	17	-
Barium (Ba)	1	324	68	15	89	516	105	413	42
Cadmium (Cd)	60	-	-	-	-	*	-	-	-
Calcium (Ca)	6	45,100	31,900	59,400	60,900	71,900	88,900	135,000	39,100
Chromium (Cr)	215	*	*	-	*	242	*	*	-
Copper (Cu)	165	*	*	*	*	450	*	185	*
Iron (Fe)	2	**	**	**	**	**	**	**	**
Lead (Pb)	1995	-	-	-	-	-	-	-	-
Manganese (Mn)	1	**	**	**	**	**	**	**	**
Mercury (Hg)	0.2	-	-	-	-	-	-	-	-
Selenium (Se)	3	-	-	-	-	-	-	-	-
Silver (Ag)	160	-	-	-	-	-	-	-	-
Sodium (Na)	30	91,400	25,100	28,400	26,600	75,200	16,500	32,200	20,400
Zinc (Zn)	90	183	*	*	*	396	121	215	*

NOTES: - - Indictates the compound was not detected.
* - Value is rejected due to blank contamination identified in quality control review.
** - Value is rejected due to other contractual requirements identified in quality control review.

TABLE 17
CLP INORGANIC ANALYTICAL RESULTS FOR FEDERAL AND STATE DRINKING WATER QUALITY STANDARDS
NUS/FIT APRIL 1985 SAMPLING ROUND
PAGE TWO

Sample Location		OW-7	OW-8	OW-19	OW-19A	OW-20	OW-20A	Blank
Sample Number		12481	12477	12478	13082	12474	12473	12475
Case Number 1623A								
Inorganic Elements	Detection Limits (ppb)							
Arsenic (As)	3	108	-	-	15	15	342	-
Barium (Ba)	1	21	26	21	21	24	48	13
Cadmium (Cd)	60	-	-	-	-	-	-	12
Calcium (Ca)	6	32,300	129,000	21,500	17,800	46,700	40,900	199
Chromium (Cr)	215	-	-	-	-	-	*	43
Copper (Cu)	165	*	*	*	*	*	*	33
Iron (Fe)	2	**	**	**	**	**	**	65
Lead (Pb)	1995	-	-	-	-	-	-	665
Manganese (Mn)	1	**	**	**	**	**	**	1.1
Mercury (Hg)	0.2	-	-	-	-	-	0.5	-
Selenium (Se)	3	-	-	-	-	-	-	-
Silver (Ag)	160	-	-	-	-	-	-	32
Sodium (Na)	30	18,200	28,300	51,900	33,500	22,900	131,000	232
Zinc (Zn)	90	*	*	357	226	*	123	18

NOTES: - - Indictates the compound was not detected.
* - Value is rejected due to blank contamination identified in quality control review.
** - Value is rejected due to other contractual requirements identified in quality control review.

TABLE 18
CLP INORGANIC ANALYTICAL RESULTS FOR FEDERAL AND STATE DRINKING WATER QUALITY STANDARDS
NUS/FIT JUNE 1985 SAMPLING ROUND

Sample Locations		S64S	S64M	S72S	S72M	Blank	Blank
Sample Numbers		MAA643	MAA644	MAA646	MAA645	MAA642	MAA651
Case Number 4574							
Inorganic Element	Detection Limits (ppb)						
Aluminum	25	-	-	55	27	-	-
Antimony	31	-	-	-	-	-	-
Arsenic	3	-	-	-	-	-	-
Barium	12	22	21	104	45	-	-
Beryllium	0.3	-	-	-	-	-	-
Cadmium	4	-	4.4	5.7	-	-	-
Calcium	2780	41,000	51,800	77,800	68,500	556	-
Chromium	4	-	-	-	-	-	-
Cobalt	4	-	-	9.8	-	-	-
Copper	3	-	5.6	-	-	-	-
Iron	15	-	30	4930	6110	-	-
Lead	16.5	*	*	*	*	3.5	-
Magnesium	250	-	-	17,200	11,900	-	-
Manganese	25.5	7,300	10,100	5,650	872	-	5.1
Mercury	0.1	17	38	-	-	-	-
Nickel	5	-	-	11	-	-	-
Potassium	990	5,500	5,530	6,660	5,070	-	-
Selenium	3	-	-	-	-	-	-
Silver	3	-	-	-	-	-	-
Sodium	590	58,900J	63,800J	111,000J	40,400J	1,160	-
Thallium	3	-	-	-	-	-	-
Tin	17	-	-	-	-	-	-
Vanadium	4	-	-	-	-	-	-
Zinc	590	*	*	*	*	118	-

NOTES: "-" - Indicates the compound was not detected.
J - Quantitation is approximate due to quality control review (data validation).
* - Value is rejected due to blank contamination identified in quality control review.

TABLE 18
CLP INORGANIC ANALYTICAL RESULTS FOR FEDERAL AND STATE DRINKING WATER QUALITY STANDARDS
NUS/FIT JUNE 1985 SAMPLING ROUND
PAGE TWO

Sample Locations		S86S	S68M	S76S	S76M	S76D	S78S	S84S	S84M	S84D	BW-1
Sample Numbers		MAA636	MAA635	MAA637	MAA638	MAA639	MAA630	MAA628	MAA627	MAA633	MAA629
Case Number 4574											
Inorganic Element	Detection Limits (ppb)										
Aluminum	25	-	-	2880	39	1200	87	27	35	588	-
Antimony	31	-	-	-	-	-	-	-	-	-	-
Arsenic	3	-	-	-	-	-	-	-	-	-	-
Barium	12	-	12	74	23	45	-	57	-	28	-
Beryllium	0.3	-	0.8	-	-	-	-	-	-	-	-
Cadmium	4	-	4.2J	6.1J	-	37J	5.7J	-	-	5.8J	-
Calcium	280	35,200	52,200	30,300	41,200	66,300	32,200	24,900	20,500	38,000	23,000
Chromium	4	-	-	4J	5.2J	5.1J	-	-	-	4.8J	-
Cobalt	4	-	4.3	-	-	-	-	-	-	-	-
Copper	15.3	5J	5.4J	34J	*	132J	*	*	*	52J	*
Iron	120	*	*	972J	133J	2650J	*	136J	*	1,230J	*
Lead	10.5	7910	-	12J	*	*	-	*	-	*	-
Magnesium	250	-	11,600	4590	8,830	8,920	6,420	5,460	4,440	8,330	5,230
Manganese	5	-	329	443	50	258	2,820	171	129	226	14
Mercury	0.1	-	-	-	-	-	-	-	-	-	-
Nickel	5	2,440	6.8	6.2	6.5	7.6	5.9	-	-	-	5.7
Potassium	990	-	3,970	8,110	3,250	4,190	2,570	2,590	2,760	3,320	2,120
Selenium	3	-	-	-	-	-	-	-	-	-	-
Silver	3	32,600	-	-	4.5	-	-	-	-	-	-
Sodium	13850	-	34,600	30,800	45,700	16,100	29,900	26,100	17,200	17,600	15,900
Thallium	3	-	-	-	-	-	-	-	-	-	-
Tin	17	-	-	-	-	-	-	-	-	-	-
Vanadium	4	128	-	-	-	-	-	-	-	-	-
Zinc	2	-	-	55	404	743	42	54	54	73	42

NOTES: "-" - Indicates the compound was not detected.
J - Quantitation is approximate due to quality control review (data validation).
* - Value is rejected due to the presence of blank contamination detected below CRDL (Contract Required Detection Limit).

TABLE 19
CLP INORGANIC ANALYTICAL RESULTS FOR FEDERAL AND STATE DRINKING WATER QUALITY STANDARDS
NUS/FIT APRIL AND JUNE, 1985 SAMPLING ROUNDS

Sample Location		S22	S68S	S68M	S68M (Dup)	S73S	S73D	S74M	S74D
Sample Number		12481	12477	12478	13082	12474	12473	12475	12476
Case Number 1623A									
	Detection Limit								
pH	0.01 units	6.23	7.30	7.56	7.51	5.65	6.55	6.73	8.14
MBAS (Surfactants)	0.1 ppm	0.11	-	-	-	-	0.27	-	-
Fluoride	0.2 ppm	-	-	-	-	-	-	-	0.276
Nitrate	0.05 ppm	7.20	-	3.56	3.59	-	-	-	-
Sulfate	1.0 ppm	67.4	43.7	56.2	60.0	21.7	27.3	49.6	27.3
Chloride	1.0 ppm	299.0	69.3	98.3	86.6	117.0	330.0	205.0	81.0
Total Dissolved Solids	5.0 ppm	474	182	505	425	201	684	623	461
Langlier Saturation Index @ 25°C		-2.4	-1.9	-0.3	-0.2	-2.0	-0.6	0.1	0.3
Color (chloroplatinate units)		0	0	0	0	500	225	0	0
Threshold of Odor Number	1	16	8	8	16	2	4	8	8
Alkalinity	0.6 ppm	32.4	39.0	101.0	100.0	49.8	190.0	190.0	38.0

NOTES: "-" - Indicates the compound was not detected.
* - Indicates odor was not observed.

TABLE 19
CLP INORGANIC ANALYTICAL RESULTS FOR FEDERAL AND STATE DRINKING WATER QUALITY STANDARDS
PAGE TWO

Sample Location		OW-7	OW-8	OW19	OW19A	OW20	OW20A	Blank
Sample Number		12489	12990	12207	12206	12204	12205	12435
Case Number 1623A								
	Detection Limit							
pH	0.01 units	5.92	7.51	6.75	7.05	6.98	7.14	6.02
MBAS (Surfactants)	0.1 ppm	-	-	-	-	-	-	-
Fluoride	0.2 ppm	-	-	0.232	0.624	-	3.89	-
Nitrate	0.05 ppm	-	0.89	0.19	-	0.14	-	-
Sulfate	1.0 ppm	45.0	65.6	120.0	69.0	61.0	180.0	-
Chloride	1.0 ppm	86.5	139.0	28.4	22.5	56.0	103.0	-
Total Dissolved Solids	5.0 ppm	248	562	426	256	339	667	10
Langlier Saturation Index @ 25°C		-2.0	0.4	-2.2	-2.1	-0.7	-0.5	-6.4
Color (chloroplatinate units)		20	5	15	30	15	175	0
Threshold of Odor Number	1	4	*	*	2	*	8	*
Alkalinity	0.6 ppm	53.0	181.0	49.0	58.0	85.0	170.0	1.0

NOTES: "-" - Indicates the compound was not detected.
* - Indicates odor was not observed.

TABLE 20
INORGANIC ANALYTICAL RESULTS FOR FEDERAL AND STATE DRINKING WATER QUALITY STANDARDS
NUS/FIT APRIL AND JUNE, 1985 SAMPLING ROUNDS

Sample Location	S64S	S64M	S68M	S68D	S72S	S72M	S76S	S76M	S76D	S78S	S81S*	S81M	BW-1	Blank	Blank	Blank	Blank
Sample Number	13184	13294	13188	13187	13298	13299	13193	13191	13192	13203	13194/95	13297	13201	13293	13295	13281	13282
Analysis																	
pH Standard Units	7.9	7.7	7.5	7.8	7.3	7.9	7.8	8.0	7.8	7.3	6.9/7.5	8.0/9.4	7.6	5.6	5.5	7.0/9.5	7.9
Alkalinity Total ($CaCo_3$)	48	53	39	75	102	88	37	90	90	66	29/31	18	53	3.0	0	13	1.9
Chemical Oxygen Demand	49	9.6	55	36	146	47	33	51	51	48	69/59	19	13	1.9	0	13	19
Hardness ($CaCO_3$)	85	118	95	140	180	163	55	85	155	68	190/225	45	53	-	-	48	120
Calcium (Ca)	34	47	38	56	72	65	22	34	61	27	76/90	18	21	0.1	0	19	48
Suspended Solids	123	24	6.0	90	8.0	16	4.0	2.0	12	6.0	16/6.0	10	33	0	0	6.0	4.8
Sulfate (SO_4)	42	42	40	42	31	38	41	45	41	43	30/31	17	35	3.0	4.0	18	38
Chloride (Cl)	100	120	75	95	95	125	40	56	58	43	305/290	42	39	1.0	2.0	40	60
Nitrogen (nitrate)	3.2	4.8	3.4	3.2	0	0	3.3	4.0	0.4	0	1.5/0.6	0.5	1.3	0	0	0.5	1.2
Total Solids	410	460	340	410	850	590	250	350	360	250	1060/810	270	230	20	0	260	230
Total Dissolved Solids	382	458	334	382	842	574	246	348	348	244	1044/804	260	230	20	0	254	224

NOTES: Analysis provided by the Commonwealth of Massachusetts Department of Environmental Quality Engineering Lawrence Experimental Station.
* - Duplicate Samples

All results reported in parts per million (ppm) except pH (standard units).

TABLE 21
MICROBIOLOGICAL ANALYTICAL RESULTS FOR FEDERAL AND STATE DRINKING WATER QUALITY STANDARDS
NUS/FIT APRIL AND JUNE, 1985 SAMPLING ROUNDS

Sample Location Sample Number	S64S 13184	S64M 13294	S68M 13188	S68D 13187	S72S 13298	S72M 13299	S76S 13193	S76M 13191	S76D 13192	S81S 13194	S81S 13195	S81M 13287	S81M 13297	S84D 13182	Blank 13293	Blank 13295
Fermentation Tube Method																
Total Coliform (MPN/100 ml)	2.0	4.5	33	7.8	33	23	<2.0	<2.0	<2.0	<2.0	23	<2.0	4.5	13	<2.0	<2.0
Fecal Coliform (MPN/100 ml)	<2.0	<2.0	<2.0	<2.0	33	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Membrane Filter Method																
Coliform (MFC/100 ml)	*	*	*	*	*	*	*	0	*	0	*	*	*	*	0	0
Fecal (MFC/100 ml)	*	*	*	*	*	*	*	0	*	0	*	*	*	*	0	0

NOTES:

MPN/100 ml - multitube counts per 100 ml
MFC/100 ml - membrane filter count per 100 ml

* - Sample was not analyzed due to high turbidity.

TABLE 22
CLP ORGANIC ANALYTICAL RESULTS FOR FEDERAL AND STATE DRINKING WATER QUALITY STANDARDS
NUS/FIT APRIL AND JUNE, 1985 SAMPLING ROUNDS

Sample Location		S22	S68S	S68M	S68M	S73S	S73D	S74M	S74D
Sample Number		12481	12477	12478	13082	12474	12473	12475	12476
Case Number 1623A									
SDWA Pesticides	Detection Limit (ppb)								
Lindane	0.004	-	-	-	-	-	-	-	-
Endrin	0.006	-	-	-	-	-	-	-	-
Methoxychlor	0.25	-	-	-	-	-	-	-	-
Toxaphene	0.24	-	-	-	-	-	-	-	-
SDWA Herbicides									
2,4-D	0.1	-	-	-	-	-	-	-	-
2,4,5-TP (Silvex)	0.05	-	-	-	-	-	-	-	-
Dilution Factor		1	1	1	1	1	1	1	1

NOTES: "-" - Indicates the compound was not detected.
Detection Limit - Multiply by dilution factor to obtain sample detection limit.
SDWA - Safe Drinking Water Act.

TABLE 22
CLP ORGANIC ANALYTICAL RESULTS FOR FEDERAL AND STATE DRINKING WATER QUALITY STANDARDS
NUS/FIT APRIL AND JUNE, 1985 SAMPLING ROUNDS
PAGE TWO

Sample Location		OW-7	OW-8	OW19	OW19A	OW20	OW20A	Blank
Sample Number		12489	12490	12207	12206	12204	12205	12435
Case Number 1623A								
SDWA Pesticides	Detection Limit (ppb)							
Lindane	0.004	-	-	-	-	-	-	-
Endrin	0.006	-	-	-	-	-	-	-
Methoxychlor	0.25	-	-	-	-	-	-	-
Toxaphene	0.24	-	-	-	-	-	-	-
SDWA Herbicides								
2,4-D	0.1	-	-	-	-	-	-	-
2,4,5-TP (Silvex)	0.05	-	-	-	-	-	-	-
Dilution Factor		1	1	1	1	1	1	2

NOTES: "-" - Indicates the compound was not detected.
Detection Limit - Multiply by dilution factor to obtain sample detection limit.
SDWA - Safe Drinking Water Act.

TABLE 23
NUS/FIT ANALYTICAL SCREENING RESULTS OF SURFACE WATER AND SEDIMENT SAMPLES FROM NUS/FIT INITIAL SAMPLING ROUND AUGUST, 1984

SAMPLE NUMBER	77570	77571	77574	77575	77576	77577	77572	77573
SAMPLE LOCATION	SW-01	SS-01	SW-02	SW-02	SS-02	SS-02	SW-04	SS-04
Tentative Identification								
trichloroethene	*	D*	*	*	-	D*	*	-
trans-1,2-dichloroethene	-	-	-	-	-	-	-	-
tetrachloroethene	-	-	-	-	-	-	-	-
benzene	-	-	-	-	-	-	-	-
toluene	-	-	-	-	-	-	-	-
ethylbenzene	-	-	-	-	-	-	-	-
m-xylene	-	-	-	-	-	-	-	-
o-xylene	-	-	-	-	-	-	-	-

ppb
<10.0 *
- not detected

D* - Detected, but headspace analysis of soils and sediments can not be quantified.
SW - surface water sample
SS - sediment sample

All samples were screened in-house by NUS chemists utilizing a Photovac 10A10 GC for volatile organic headspace analysis. It should be stressed that the results garnered from this screening technique are qualitative and indicate the presence of contaminant compounds. They should not be used as quantitative results. Therefore, all concentrations are given in ranges. In addition, compound identification is tentative in that compounds were identified by comparison of retention time of sample compounds to the retention times of various standards.

TABLE 24
SURFACE WATER CLP
VOLATILE ORGANIC ANALYTICAL RESULTS
NUS/FIT APRIL, MAY, JUNE 1985 SAMPLING ROUNDS

		April 1985 Sampling Round								May 1985 Sampling Round						
Sample Locations		SW-01	SW-02	SW-02	SW-03	SW-03	SW-04	SW-05	SW-06	SW-01	SW-02	SW-03	SW-03	SW-04	SW-05	SW-06
Sample Number		12361	12362	12363	12482	12483	12484	12485	12486	12807	12808	12809	12810	12811	12812	12813
Traffic Report Number		AB323	AB324	AB325	AB514	AB515	AB540	AB516	AB541	AB917	AB918	AB919	AB920	AB921	AB922	AB923
Volatile Compounds	CRDL															
Chloromethane	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoethane	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride	5	-	-	-	-	-	*	-	*	*	*	*	*	*	*	*
Acetone	10	*	*	*	-	-	-	-	-	*	-	-	-	-	*	*
Carbon Disulfide	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichlorethane	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	5	-	-	-	-	-	-	-	-	-	-	22	21	-	-	-
Chloroform	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone	10	*	*	*	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	5	2 J	5 J	5 J	5	6	7 J	8	10 J	4 J	3 J	-	-	3 J	5	7
Carbon Tetrachloride	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Acetate	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropane	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	5	-	-	-	-	-	-	-	*	-	-	26	25	-	-	-
1,1,2-Trichloroethane	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropane	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloroethyl vinyl ether	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-Pentanone	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	5	-	1 J	-	-	-	-	-	-	-	-	4 J	3 J	-	-	-
Chlorobenzene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Xylene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dilution Factor		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

NOTES:
- \- Indicates compound was not detected.
- J - Quantitation is approximate due to quality control review (data validation).
- * - Value is rejected due to blank contamination identified in quality control review.
- CRDL - Contract Required Detection Limit (multipy by dilution factor to obtain sample detection limit).

TABLE 24
SURFACE WATER CLP
VOLATILE ORGANIC ANALYTICAL RESULTS
NUS/FIT APRIL, MAY, JUNE 1985 SAMPLING ROUNDS
PAGE TWO

June 1985 Sampling Round

Sample Location		SW-01	SW-02	SW-03	SW-04	SW-04	SW-05	SW-06
Sample Number		13274	13275	13276	13277	13278	13279	13280
Traffic Report Number		AC234	AC249	AC250	AC251	AC252	AC253	AC254
Volatile Compounds	CRDL							
Chloromethane	10	-	-	-	-	-	-	-
Bromoethane	10	-	-	-	-	-	-	-
Vinyl Chloride	10	-	-	-	-	-	-	-
Chloroethane	10	-	-	-	-	-	-	-
Methylene Chloride	5	-	*	*	*	*	*	*
Acetone	10	-	-	-	-	-	-	-
Carbon Disulfide	5	-	-	-	-	-	-	-
1,1-Dichloroethene	5	-	-	-	-	-	-	-
1,1-Dichlorethane	5	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	5	-	-	-	-	-	-	-
Chloroform	5	-	*	*	*	*	*	-
1,2-Dichloroethane	5	-	-	-	-	-	-	-
2-Butanone	10	-	*	-	*	*	-	-
1,1,1-Trichloroethane	5	*	-	-	-	-	*	-
Carbon Tetrachloride	5	-	-	-	-	-	-	-
Vinyl Acetate	10	-	-	-	-	-	-	-
Bromodichloromethane	5	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	5	-	-	-	-	-	-	-
1,2-Dichloropropane	5	-	-	-	-	-	-	-
trans-1,3-Dichloropropane	5	-	-	-	-	-	-	-
Trichloroethene	5	-	-	-	-	-	-	-
Dibromochloromethane	5	-	-	-	-	-	-	-
1,1,2-Trichloroethane	5	-	-	-	-	-	-	-
Benzene	5	-	-	-	-	-	-	-
cis-1,3-Dichloropropane	5	-	-	-	-	-	-	-
2-Chloroethyl vinyl ether	10	-	-	-	-	-	-	-
Bromoform	5	-	-	-	-	-	-	-
2-Hexanone	10	-	-	-	-	-	-	-
4-Methyl-2-Pentanone	10	-	-	-	-	-	-	-
Tetrachloroethene	5	-	-	-	-	-	-	-
Toluene	5	-	-	-	-	-	-	-
Chlorobenzene	5	-	-	-	-	-	-	-
Ethylbenzene	5	-	-	-	-	-	-	-
Styrene	5	-	-	-	-	-	-	-
Total Xylene	5	-	-	-	-	-	-	-
Dilution Factor		1	5	5	5	5	5	5

NOTES:
- \- Indicates compound was not detected.
- J - Quantitation is approximate due to quality control review (data validation).
- * - Value is rejected due to blank contamination identified in quality control review.
- CRDL - Contract Required Detection Limit (multipy by dilution factor to obtain sample detection limit).

TABLE 25
SURFACE WATER CLP INORGANIC ANALYTICAL RESULTS
NUS/FIT APRIL, 1985 SAMPLING ROUND

Sample Location		SW04	SW06	Blank
Sample No.		12484	12486	12436
Traffic Report No.		MAA223	MAA224	MAA217
Inorganic Elements	Detection Limits (ug/L)			
Aluminum	23	-	25	-
Antimony	46	-	-	-
Arsenic	4	-	-	-
Barium	12	-	24	-
Beryllium	0.5	-	0.7	-
Cadmium	5	-	6	-
Calcium	290	43,000	39,000	-
Chromium	4	-	4.3	-
Cobalt	7	-	-	-
Copper	25	*	*	4.9
Iron	100	290	340	-
Lead	2	-	-	-
Magnesium	330	8,100	7,400	-
Manganese	3	460	480	-
Mercury	0.1	-	-	-
Nickel	40	-	*	-
Potassium	470	5,700	4,700	-
Selenium	2	-	-	-
Silver	4	-	5.9	-
Sodium	880	70,000	59,000	-
Thallium	4	-	-	-
Tin	36	-	-	-
Vanadium	4	-	-	-
Zinc	20	150	170	7.1

- - Element is not detected.
* - Value is rejected due to presence of blank contamination detected below contract required detection limit.