TRIAD ENVIRONMENTAL CONSULTANTS, INC. AND ASSOCIATES

3519 Clemmons Road
Clemmons, NC 27012
Telephone & Fax
(919) 766-0810

RECEIVED
JAN 22 1993

January 21, 1993

Ms. Kelly C. Gage
Guilford County Emergency Services
P.O. Box 18807
Greensboro, North Carolina 27419-8807

Re: Draper Corporation, 5644 Hornaday Road, Greensboro, NC
Copy of Water Sample Laboratory Reports and associated Chain of Custody Records for Surface Water Samples collected in Long Branch Creek December 3, 1992.

Dear Ms. Gage:

Enclosed, please find copies of the laboratory reports and chain of custody records for the water samples collected from Long Branch Creek. On December 3, 1992, samples were collected both upstream (SU-1) and downstream (SD-1). Long Branch Creek flows through the Draper facility near the western edge of the property. I have included a copy of the portion of the USGS 7.5 minute topographic quadrangle showing the area in which the Draper plant is now located (Identified as Site on Figure 1). Also included is a survey of plant area showing the exact locations where the surface water samples were collected (Figure 2). The location of the creek is highlighted on the enclosed figures.

The samples of the stream water were analyzed by the following methods:

EPA Method 601	-	Halogenated Volatile Organics
EPA Method 602	-	Aromatic Volatile Organics (Including MTBE and IPE)
EPA Method 8270	-	Acid/Base Neutral Extractables

In addition to these analyses, the samples were analyzed for Total Non-filterable Residue, Total Dissolved Residue, Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Total Kjeldahl Nitrogen (TKN) and six (6) common wastewater metals; Cadmium, Chromium, Copper, Lead, Nickel, and Zinc. Because of holding time constraints, the BOD, COD and TKN analyses were performed by R & A Laboratories, Inc. of Kernersville, NC. All of the other analyses were performed by Prism Laboratories. The results of the analyses are summarized in the tables on the next page. Compounds not listed were not present above the specified laboratory detection limit.

Surface Water Laboratory Analyses
Draper Corporation
5644 Hornaday Road
Greensboro, North Carolina

EPA Method 8010 - Halogenated Volatile Organics
Detected Components Only
Samples Collected December 3, 1992

Sample No.	Component Detected	Test Result (ug/L*)	Detection Limit (ug/L)
SU-1	Tetrachloroethene	1	1

* ug/L - micrograms per Liter = ppb (parts per billion)

Additional Surface Water Laboratory Analyses

Sample No.	Parameter	Test Result (mg/L*)
SU-1	Biological Oxygen Demand (BOD)	<2.0
	Chemical Oxygen Demand (COD)	11.0
	Total Kjeldahl Nitrogen (TKN)	1.12
	Total Dissolved Residue (TDR)	136.0
SD-1	Biological Oxygen Demand (BOD)	<2.0
	Chemical Oxygen Demand (COD)	14.0
	Total Kjeldahl Nitrogen (TKN)	1.96
	Total Dissolved Residue (TDR)	126.0

* mg/L - milligrams per Liter = ppm (parts per million)

After you review these data, if you have any questions or comments concerning this work, please contact me at 919-766-0810.

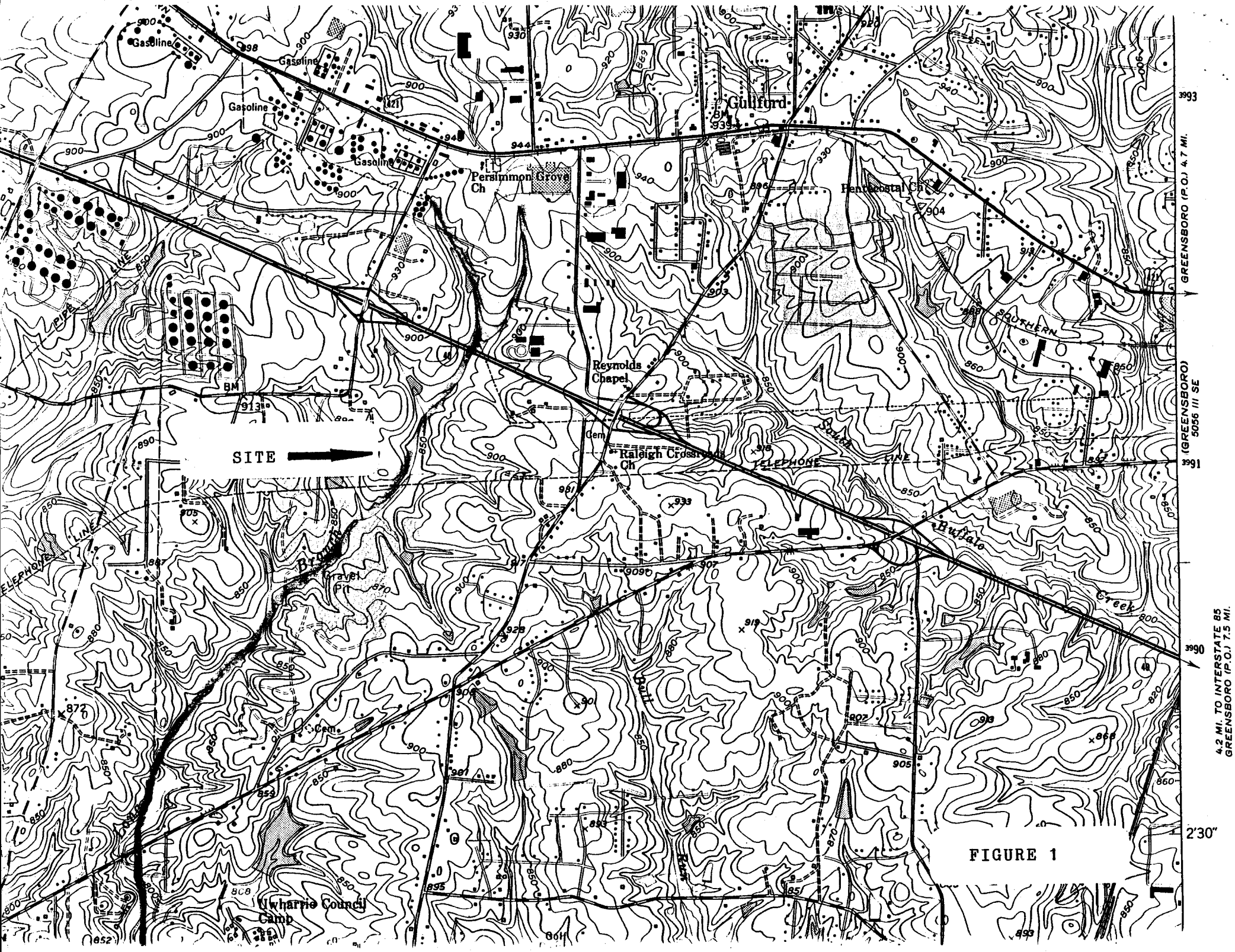
Respectfully,

M. Alex McGilvary

M. Alex McGilvary, P.G.
TRIAD ENVIRONMENTAL CONSULTANTS, INC.

MAM/kjl
encls/

cc: Ms. Sherri V. Knight, NCDEM
Jimmy Summers, Guilford Mills
C. Denny Walker, Draper Corporation



Gasoline
Gasoline
Gasoline
Gasoline
Gulford
Persimmon Grove Ch
Pentecostal Ch
Reynolds Chapel
Raleigh Crossroads Ch
SITE
PIPE LINE
TELEPHONE LINE
SOUTHERN
Buffalo Creek
Branch
Gravel Pit
Uwharrie Council Camp
GREENSBORO (P.O.) 4.7 MI.
(GREENSBORO) 5056 III SE
4.2 MI. TO INTERSTATE 85
GREENSBORO (P.O.) 7.5 MI.
2'30"

FIGURE 1

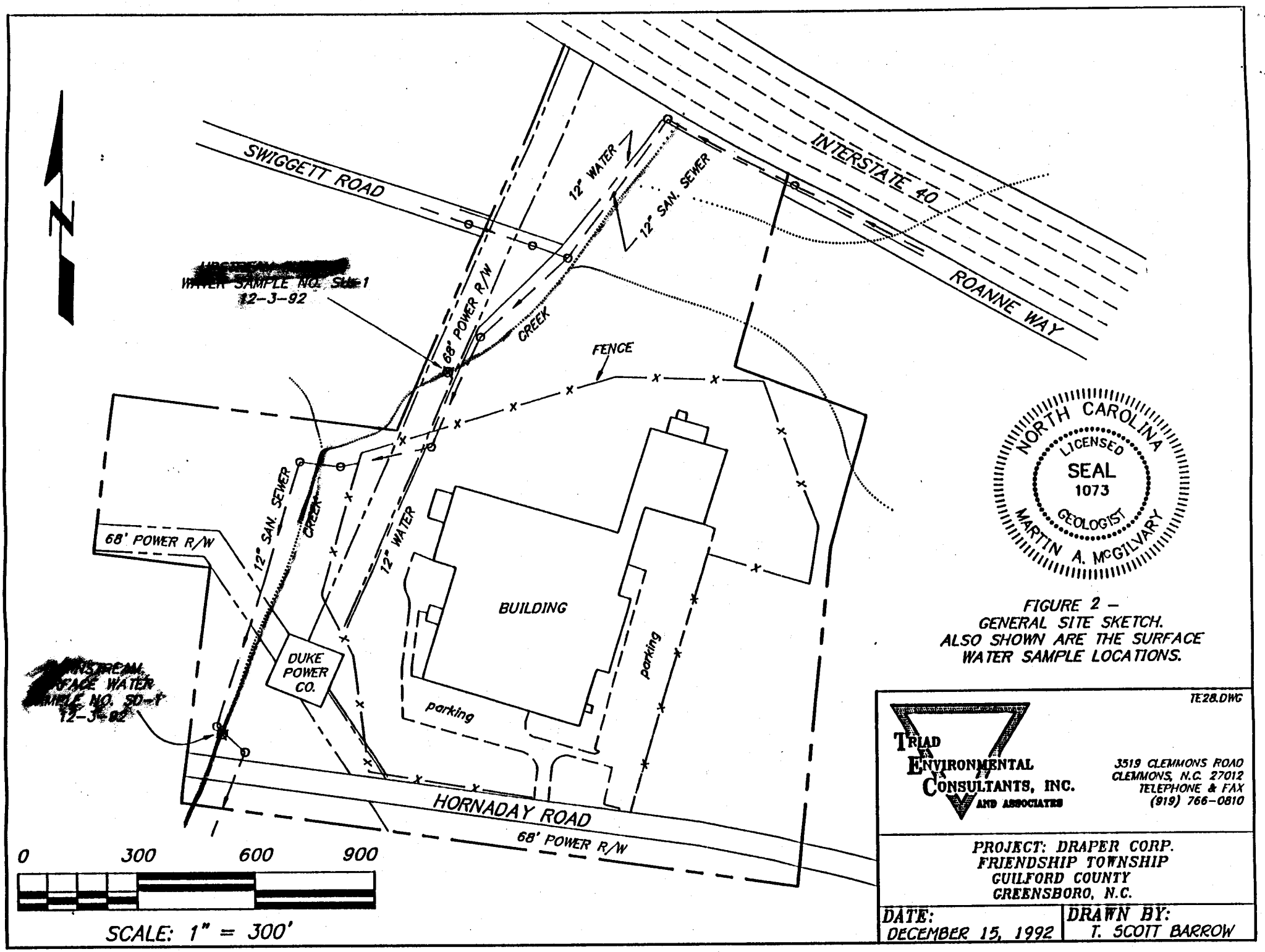


FIGURE 2 –
GENERAL SITE SKETCH.
ALSO SHOWN ARE THE SURFACE
WATER SAMPLE LOCATIONS.

Lab Report

PRISM LABORATORIES, INC.

Full Service Analytical & Environmental Solutions

December 23, 1992

Triad Environmental
Attn: Steve Johnson
3519 Clemmons Road
Clemmons, NC 27012

Dear Mr. Johnson:

Below are results of analysis of 2 samples received for examination on December 5, 1992:

Customer Code: TRIAD Phone Number: (919)766-0810 (fax) 766-0810
LAB I.D. AA13590 Prism ID Number 1775A2 Prism Customer Number 6671
Collection Date: 12/03/92 Collection Time: 11:30
Submittal Date: 12/05/92 Submittal Time: 07:15
Customer Sample I.D#: SU-1

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
Multicomponent analysis: HALOGENATED VOLATILE ORGANICS			
VINYL CHLORIDE	ug/L	Not Det	50
TRICHLOROFLUORO-METHANE	ug/L	Not Det	5
1,1-DICHLOROETHENE	ug/L	Not Det	1
METHYLENE CHLORIDE	ug/L	Not Det	25
TRANS-1,2-DICHLOROETHENE	ug/L	Not Det	1
1,1-DICHLOROETHANE	ug/L	Not Det	1
CHLOROFORM	ug/L	Not Det	1
1,1,1-TRICHLOROETHANE	ug/L	Not Det	1
CARBON TETRACHLORIDE	ug/L	Not Det	1
1,2-DICHLOROETHANE	ug/L	Not Det	1
TRICHLOROETHENE	ug/L	Not Det	1
1,2-DICHLOROPROPANE	ug/L	Not Det	1
BROMODICHLOROMETHANE	ug/L	Not Det	1
2-CHLOROETHYLVINYL ETHER	ug/L	Not Det	1
TRANS-1,3-DICHLOROPROPENE	ug/L	Not Det	1
CIS-1,3-DICHLOROPROPENE	ug/L	Not Det	1
1,1,2-TRICHLOROETHANE	ug/L	Not Det	1
TETRACHLOROETHENE	ug/L	1	1
DIBROMOCHLOROMETHANE	ug/L	Not Det	1
EDB	ug/L	Not Det	1
CHLOROBENZENE	ug/L	Not Det	1
BROMOFORM	ug/L	Not Det	1
1,1,2,2-TETRACHLOROETHANE	ug/L	Not Det	1
1,3-DICHLOROBENZENE	ug/L	Not Det	1

PRISM LABORATORIES, INC.
Full Service Analytical & Environmental Solutions

Triad Environmental
Page: 2
December 23, 1992

HALOGENATED VOLATILE ORGANICS (continued):

1,4-DICHLOROBENZENE	ug/L	Not Det	1
1,2-DICHLOROBENZENE	ug/L	Not Det	1

Multicomponent analysis: AROMATIC VOLATILE ORGANICS

METHYL-TERT-BUTYL ETHER	ug/L	Not Det	1
ISOPROPYL ETHER	ug/L	Not Det	1
BENZENE	ug/L	Not Det	1
TOLUENE	ug/L	Not Det	1
ETHYLBENZENE	ug/L	Not Det	1
XYLENES	ug/L	Not Det	1
EPA METHOD 5030, GC FID		done	

Multicomponent analysis: ACID EXTRACTABLES BY GCMS

4-NITROPHENOL	ug/l	Not Det	10
PENTACHLOROPHENOL	ug/l	Not Det	10
4,6-DINITRO-O-CRESOL	ug/l	Not Det	10
2,4-DINITROPHENOL	ug/l	Not Det	10
4-CHLORO-3-METHYPHENOL	ug/l	Not Det	10
2,4,6-TRICHLOROPHENOL	ug/l	Not Det	10
2,4-DICHLOROPHENOL	ug/l	Not Det	10
2,4-DIMETHYLPHENOL	ug/l	Not Det	10
PHENOL	ug/l	Not Det	10
2-NITROPHENOL	ug/l	Not Det	10
2-CHLOROPHENOL	ug/l	Not Det	10

Multicomponent analysis: BASE-NEUTRALS BY GCMS

N-NITROSODIMETHYLAMINE	ug/L	Not Det	10
BIS(2-CHLOROETHYL)ETHER	ug/L	Not Det	10
N-NITROSO-DI-N-PROPYLAMINE	ug/L	Not Det	10
NITROBENZENE	ug/L	Not Det	10
HEXACHLOROBUTADIENE	ug/L	Not Det	10
1,2,4-TRICHLOROBENZENE	ug/L	Not Det	10
ISOPHORONE	ug/L	Not Det	10
NAPHTHALENE	ug/L	Not Det	10
BIS(2-CHLOROETHOXY)METHANE	ug/L	Not Det	10
HEXACHLOROCYCLOPENTADIENE	ug/L	Not Det	10
2-CHLORONAPHTHALENE	ug/L	Not Det	10
ACENAPHTHYLENE	ug/L	Not Det	10
ACENAPHTHENE	ug/L	Not Det	10
DIMETHYL PHTHALATE	ug/L	Not Det	10
2,6-DINITROTOLUENE	ug/L	Not Det	10
FLUORENE	ug/L	Not Det	10
4-CHLOROPHENYL PHENYL ETHER	ug/L	Not Det	10
2,4-DINITROTOLUENE	ug/L	Not Det	10
DIETHYL PHTHALATE	ug/L	Not Det	10
N-NITROSODIPHENYLAMINE	ug/L	Not Det	10
1,2-DIPHENYL HYDRAZINE	ug/L	Not Det	10

Lab Report

PRISM LABORATORIES, INC.

Full Service Analytical & Environmental Solutions

Triad Environmental
Page: 3
December 23, 1992

BASE-NEUTRALS BY GCMS (continued):			
HEXACHLOROBENZENE	ug/L	Not Det	10
4-BROMOPHENYL PHENYL ETHER	ug/L	Not Det	10
PHENANTHRENE	ug/L	Not Det	10
ANTHRACENE	ug/L	Not Det	10
DI-N-BUTYL-PHTHALATE	ug/L	Not Det	10
FLUORANTHENE	ug/L	Not Det	10
PYRENE	ug/L	Not Det	10
BENZIDINE	ug/L	Not Det	10
BUTYL BENZYL PHTHALATE	ug/L	Not Det	10
BIS(2-ETHYLHEXYL) PHTHALATE	ug/L	Not Det	10
BENZO (a) ANTHRACENE	ug/L	Not Det	10
CHRYSENE	ug/L	Not Det	10
3,3'-DICHLOROBENZIDINE	ug/L	Not Det	10
DI-N-OCTAL PHTHALATE	ug/L	Not Det	10
BENZO (b) FLUORANTHENE	ug/L	Not Det	10
BENZO (k) FLUORANTHENE	ug/L	Not Det	10
BENZO (a) PYRENE	ug/L	Not Det	10
INDENO (1,2,3-cd) PYRENE	ug/L	Not Det	10
DIBENZ (a,h) ANTHRACENE	ug/L	Not Det	10
BENZO (g,h,i) PERYLENE	ug/L	Not Det	10
2-METHYLNAPHTHALENE	ug/L	Not Det	10
BIS(2-CHLOROISOPROPYL) ETHER	ug/L	Not Det	10
4-CHLOROPHENYL PHENYL ETHER	ug/L	Not Det	10
HEXACHLOROETHANE	ug/L	Not Det	10
EPA METHOD 8270, GCMS		done	
CADMIUM, TOTAL	mg/L	< 0.002	0.002
CHROMIUM, TOTAL	mg/L	< .026	.026
COPPER, TOTAL	mg/L	0.010	.020
LEAD, TOTAL	mg/L	< 0.025	0.025
NICKEL, TOTAL	mg/L	< .0200	.0200
ZINC, TOTAL	mg/L	< 0.020	0.020
TOTAL NON-FILTERABLE RESIDUE	mg/L	< 1.0	1.0
TOTAL DISSOLVED RESIDUE	mg/L	136.0	10.0

Comments:
Project Name: Draper Corporation
Samples: SU-1, SD-1

Customer Code: TRIAD Phone Number: (919)766-0810 (fax) 766-0810
LAB I.D. AA13591 Prism ID Number 1775A2 Prism Customer Number 6671
Collection Date: 12/03/92 Collection Time: 12:10
Submittal Date: 12/05/92 Submittal Time: 07:15
Customer Sample I.D#: SD-1

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT

Lab Report

PRISM LABORATORIES, INC.

Full Service Analytical & Environmental Solutions

Triad Environmental
Page: 4
December 23, 1992

Multicomponent analysis: HALOGENATED VOLATILE ORGANICS

VINYL CHLORIDE	ug/L	Not Det	50
TRICHLOROFLUORO-METHANE	ug/L	Not Det	5
1,1-DICHLOROETHENE	ug/L	Not Det	1
METHYLENE CHLORIDE	ug/L	Not Det	25
TRANS-1,2-DICHLOROETHENE	ug/L	Not Det	1
1,1-DICHLOROETHANE	ug/L	Not Det	1
CHLOROFORM	ug/L	Not Det	1
1,1,1-TRICHLOROETHANE	ug/L	Not Det	1
CARBON TETRACHLORIDE	ug/L	Not Det	1
1,2-DICHLOROETHANE	ug/L	Not Det	1
TRICHLOROETHENE	ug/L	Not Det	1
1,2-DICHLOROPROPANE	ug/L	Not Det	1
BROMODICHLOROMETHANE	ug/L	Not Det	1
2-CHLOROETHYLVINYL ETHER	ug/L	Not Det	1
TRANS-1,3-DICHLOROPROPENE	ug/L	Not Det	1
CIS-1,3-DICHLOROPROPENE	ug/L	Not Det	1
1,1,2-TRICHLOROETHANE	ug/L	Not Det	1
TETRACHLOROETHENE	ug/L	Not Det	1
DIBROMOCHLOROMETHANE	ug/L	Not Det	1
EDB	ug/L	Not Det	1
CHLOROBENZENE	ug/L	Not Det	1
BROMOFORM	ug/L	Not Det	1
1,1,2,2-TETRACHLOROETHANE	ug/L	Not Det	1
1,3-DICHLOROBENZENE	ug/L	Not Det	1
1,4-DICHLOROBENZENE	ug/L	Not Det	1
1,2-DICHLOROBENZENE	ug/L	Not Det	1

Multicomponent analysis: AROMATIC VOLATILE ORGANICS

METHYL-TERT-BUTYL ETHER	ug/L	Not Det	1
ISOPROPYL ETHER	ug/L	Not Det	1
BENZENE	ug/L	Not Det	1
TOLUENE	ug/L	Not Det	1
ETHYLBENZENE	ug/L	Not Det	1
XYLENES	ug/L	Not Det	1
EPA METHOD 5030, GC FID		done	

Multicomponent analysis: ACID EXTRACTABLES BY GCMS

4-NITROPHENOL	ug/l	Not Det	10
PENTACHLOROPHENOL	ug/l	Not Det	10
4,6-DINITRO-O-CRESOL	ug/l	Not Det	10
2,4-DINITROPHENOL	ug/l	Not Det	10
4-CHLORO-3-METHYPHENOL	ug/l	Not Det	10
2,4,6-TRICHLOROPHENOL	ug/l	Not Det	10
2,4-DICHLOROPHENOL	ug/l	Not Det	10
2,4-DIMETHYLPHENOL	ug/l	Not Det	10
PHENOL	ug/l	Not Det	10

PRISM LABORATORIES, INC.
Full Service Analytical & Environmental Solutions

Triad Environmental
Page: 5
December 23, 1992

ACID EXTRACTABLES BY GCMS (continued):

2-NITROPHENOL	ug/l	Not Det	10
2-CHLOROPHENOL	ug/l	Not Det	10

Multicomponent analysis: BASE-NEUTRALS BY GCMS

N-NITROSODIMETHYLAMINE	ug/L	Not Det	10
BIS(2-CHLOROETHYL)ETHER	ug/L	Not Det	10
N-NITROSO-DI-N-PROPYLAMINE	ug/L	Not Det	10
NITROBENZENE	ug/L	Not Det	10
HEXACHLOROBUTADIENE	ug/L	Not Det	10
1,2,4-TRICHLOROBENZENE	ug/L	Not Det	10
ISOPHORONE	ug/L	Not Det	10
NAPHTHALENE	ug/L	Not Det	10
BIS(2-CHLOROETHOXY)METHANE	ug/L	Not Det	10
HEXACHLOROCYCLOPENTADIENE	ug/L	Not Det	10
2-CHLORONAPHTHALENE	ug/L	Not Det	10
ACENAPHTHYLENE	ug/L	Not Det	10
ACENAPHTHENE	ug/L	Not Det	10
DIMETHYL PHTHALATE	ug/L	Not Det	10
2,6-DINITROTOLUENE	ug/L	Not Det	10
FLUORENE	ug/L	Not Det	10
4-CHLOROPHENYL PHENYL ETHER	ug/L	Not Det	10
2,4-DINITROTOLUENE	ug/L	Not Det	10
DIETHYL PHTHALATE	ug/L	Not Det	10
N-NITROSODIPHENYLAMINE	ug/L	Not Det	10
1,2-DIPHENYL HYDRAZINE	ug/L	Not Det	10
HEXACHLOROBENZENE	ug/L	Not Det	10
4-BROMOPHENYL PHENYL ETHER	ug/L	Not Det	10
PHENANTHRENE	ug/L	Not Det	10
ANTHRACENE	ug/L	Not Det	10
DI-N-BUTYL-PHTHALATE	ug/L	Not Det	10
FLUORANTHENE	ug/L	Not Det	10
PYRENE	ug/L	Not Det	10
BENZIDINE	ug/L	Not Det	10
BUTYL BENZYL PHTHALATE	ug/L	Not Det	10
BIS(2-ETHYLHEXYL) PHTHALATE	ug/L	Not Det	10
BENZO (a) ANTHRACENE	ug/L	Not Det	10
CHRYSENE	ug/L	Not Det	10
3,3'-DICHLOROBENZIDINE	ug/L	Not Det	10
DI-N-OCTAL PHTHALATE	ug/L	Not Det	10
BENZO (b) FLUORANTHENE	ug/L	Not Det	10
BENZO (k) FLUORANTHENE	ug/L	Not Det	10
BENZO (a) PYRENE	ug/L	Not Det	10
INDENO (1,2,3-cd) PYRENE	ug/L	Not Det	10
DIBENZ (a,h) ANTHRACENE	ug/L	Not Det	10
BENZO (g,h,i) PERYLENE	ug/L	Not Det	10
2-METHYLNAPHTHALENE	ug/L	Not Det	10
BIS(2-CHLOROISOPROPYL) ETHER	ug/L	Not Det	10

Lab Report

PRISM LABORATORIES, INC.

Full Service Analytical & Environmental Solutions

Triad Environmental
Page: 6
December 23, 1992

BASE-NEUTRALS BY GCMS (continued):			
4-CHLOROPHENYL PHENYL ETHER	ug/L	Not Det	10
HEXACHLOROETHANE	ug/L	Not Det	10
EPA METHOD 8270, GCMS		done	
CADMIUM, TOTAL	mg/L	< 0.002	0.002
CHROMIUM, TOTAL	mg/L	< .026	.026
COPPER, TOTAL	mg/L	0.010	.020
LEAD, TOTAL	mg/L	< 0.025	0.025
NICKEL, TOTAL	mg/L	< .0200	.0200
ZINC, TOTAL	mg/L	< 0.020	0.020
TOTAL NON-FILTERABLE RESIDUE	mg/L	< 1.0	1.0
TOTAL DISSOLVED RESIDUE	mg/L	126.0	10.0

Comments:
Project Name: Draper Corporation
Samples: SU-1, SD-1

Please advise should you have questions concerning these data.

Respectfully submitted,

Angela D. Overcash
Laboratory Manager

Main Office: 449 Springbrook Road P.O. Box 240543 Charlotte, NC 28224-0543 Phone: (704) 529-6364 Fax:(704) 525-0409
South Carolina Laboratory: 10471 Asheville Highway, P.O. Box 137, Inman, SC 29349 Phone: (803) 472-9046 Fax: (803) 472-5172
All Correspondences and Remittances to the Charlotte Office

Chain of Custody Record

TRIAD ENVIRONMENTAL CONSULTANTS, INC. AND ASSOCIATES

3519 Clemmons Road
Clemmons, NC 27012
Telephone & FAX
(919) 766-0810

Page 1 of 1

PROJECT: Draper Corporation

SITE: Draper Plant and Office, Hornaday Road, Greensboro, NC

COLLECTED BY (Signature): M. Alex McGhany

FIELD SAMPLE I.D.	SAMPLE MATRIX	DATE/TIME	NO. OF CONTAINERS	Total Toxic Organics (Method 625 & 625 GC/MS)	Wastewater metals (see below)	Total Suspended Solids	Total Dissolved Solids					REMARKS	SAM ID NO. (for lab use only)
SU-1	WATER	12-3-92/1130hrs	8	x	x	x	x						13590
SD-1	↓	12-3-92/1210hrs	7	x	x	x	x		*				13591

REMARKS: * Wastewater metals to include Cd, Chr, Cu, Pb, Ni, Zn
Samples preserved as noted on label

RELINQUISHED BY:	DATE	TIME
M. Alex McGhany	12/4/92	0800 hrs

RECEIVED BY:	DATE	TIME	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME	RELINQUISHED BY:	DATE	TIME
[signature]	12/4/92	0800 hrs.	[signature]	12/4/92	0810 hrs	[signature]	12/4/92	870	[signature]	12/4/92	1005

LAB USE ONLY

RECEIVED FOR LABORATORY BY:	DATE	TIME	AIRBILL NO.	OPENED BY:	DATE	TIME	TEMP °C	SEAL #	CONDITION
Heidy Scott	12/4	2:00		Heidy Scott	12/4		2		Good

REMARKS:

RESEARCH & ANALYTICAL LABORATORIES, INC.

Analytical/Process Consultations

NC CERT #94

TRIAD ENVIRONMENTAL CONSULTANTS INC
3519 CLEMMONS ROAD
CLEMMONS, NC 27012
Attn:

Date Sample Collected : 12/03/92
Date Sample Received : 12/03/92
Date Sample Analyzed : 12/04/92
Date of Report : 12/14/92
Analyses Performed by : DW -LM

Job Number : 00430 K

	Lab Sample Number	
	153458	153459

Parameter	Storet #	Results	Results
BOD-5	(00310)	<2.0 MG/L	<2.0 MG/L
COD-HIGH	(00340)	11 MG/L	14 MG/L
TKN	(00625)	1.12 MG/L	1.96 MG/L

Clients Sample	Source :	DRAPER CORP	DRAPER CORP
	Number :	SU-1	SD-1
	Time Collected :	11:30	12:10

P. O. Box 473 • 106 Short Street • Kernersville, North Carolina 27284 • 919/996-2841

RESEARCH & ANALYTICAL LABORATORIES, INC.
Analytical/Process Consultations
Phone (919) 996-2841

CHAIN OF CUSTODY RECORD

JOB NO.

PROJECT NAME
DRAPER CORP.
HORNADAY RD. PLANT AND OFFICES
GREENSBORO, NC

SAMPLERS (SIGNATURE)
M. Alex McSharry

SAMPLE NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	WATER/WASTEWATER: 2L G (BNA, Herb./Pest.)	2 40ml Vials (VOA)	250ml G (TOX)	250ml P (TOC)	1L P,G (BOD, TSS, Unpreserved, etc.)	1L G (Phenol, Oil & Grease)	1L P,G (COD, N,P)	1L P,G (Metals, Hardness)	Sterile P,G (CYANIDE)	BOD	COD / TKN (Pres. H_2SO_4)	MISC.				REQUESTED ANALYSIS
SU-1	12-3-92	1130 hrs		X	Surface water upstream	2										X	X					
SD-1	12-3-92	1210 hrs		X	Surface water downstream	2										X	X					

RELINQUISHED BY	DATE/TIME	RECEIVED BY
M. Alex McSharry	12/3/92 1400 hrs	[illegible]
RELINQUISHED BY	DATE/TIME	RECEIVED BY

REMARKS: Please mail results to:
Alex McSharry
Triad Env. Consultants, Inc
3519 Clemmons Rd.
Clemmons, NC 27012 (919) 766-0810