MONITORING PROGRAM ANNUAL REPORT

JANUARY - DECEMBER 2000

ANCHORAGE WATER AND WASTEWATER UTILITY
POINT WORONZOF WASTEWATER TREATMENT FACILITY

APPENDICES

Prepared for:

ANCHORAGE WATER & WASTEWATER UTILITY
AWU
MUNICIPALITY OF ANCHORAGE

Prepared by:

KINNETIC LABORATORIES INCORPORATED

with contract administration and technical review by

CH2M HILL

February 2001

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APPENDIX A

Toxic Pollutant and Pesticide Monitoring, June Sampling

A1 AWWU

Metals, Oil & Grease, and Cyanide

MUNICIPALITY OF ANCHORAGE

LETTER OF TRANSMITTAL

FROM: **Mark Spano, Laboratory Supervisor**
Anchorage Water & Wastewater Utility
Laboratory Services Section
3000 Arctic Boulevard
Anchorage, Alaska 99503-3898
phone: (907) 266-5217

TO: **Kinnetic Laboratories, Inc.**
403 W. 8th Avenue
Anchorage, AK 99501

DATE August 7, 2000	JOB NO.
ATTENTION	
RE: Toxic Pollutant Sampling Results	
Point Woronzof Wastewater Treatment Facility	

WE ARE SENDING YOU [X] Attached [ ] Under separate cover via _____ the following items:

[ ] Shop Drawings [ ] Prints [ ] Plans [ ] Samples [ ] Specifications

[ ] Copy of Letter [ ] Change Order [ ] _____

COPIES	DATE	NO.	DESCRIPTION
1	8/7/00	2 pages	Metals, oil & grease, cyanide test results on influent, effluent, and sludge – samples collected 6/6-7/00.

THESE ARE TRANSMITTED as checked below:

[ ] For approval [ ] Approved as submitted [ ] Resubmit _____ copies for approval

[X] For your use [ ] Approved as noted [ ] Submit _____ copies for distribution

[ ] As requested [ ] Returned for corrections [ ] Return _____ corrected prints

[ ] For review and comment [ ] _____

[ ] FOR BIDS DUE _____ 19 _____ [ ] PRINTS RETURNED AFTER LOAN TO US

REMARKS _____

COPY TO _____

SIGNED: Mark Spano 8/7/00

If enclosures are not as noted, kindly notify us at once.

George P. Wuerch,
Mayor

ANCHORAGE WATER AND WASTEWATER UTILITY
LABORATORY SERVICES – PT. WORONZOF LAB

Owned by the
Municipality of Anchorage

TOXIC POLLUTANT ANALYTICAL RESULTS

Date of the Report: 08/07/00

Sample ID			AA22018	AA22019	
Sample Location			Point Woronzof WWTF Influent	Point Woronzof WWTF F.Effluent	
Collection Date			06/06/00	06/06/00	
Collection Time			08:00	08:00	
Sample Preservation			4C	4C	
Collection Type			24HC-T	24HC-T	
Project Code			Toxic Pollutants	Toxic Pollutants	
Analysis	**Method**	**MDL (mg/L)**	**Result**	**Result**	**Analyst**
Arsenic, Total	EPA 206.2	0.003	ND	ND	SRL
Beryllium, Total	EPA 200.9	0.0001	ND	ND	SRL
Cadmium, Total	SM 18 3111 B	0.005	ND	ND	SRL
Chromium, Total	SM 18 3111 B	0.01	ND	ND	SRL
Copper, Total	SM18 3111 B	0.005	0.075	0.054	SRL
Lead, Total	EPA 239.2	0.0005	0.0064	0.0048	SRL
Mercury	EPA 245.1	0.0001	0.0002	0.0001	BN
Nickel, Total	SM18 3111 B	0.02	ND	ND	SRL
Silver, Total	EPA 272.2	0.0002	0.0063	0.0053	SRL
Zinc, Total	SM18 3111 B	0.01	0.150	0.077	SRL

Sample ID			AA22020	AA22021	
Sample Location			Pt. Woronzof WWTF - Influent	Pt. Woronzof WWTF - F.Effluent	
Collection Date			06/06/00	06/06/00	
Collection Time			00:00	00:00	
Sample Preservation			NAOH	NAOH	
Collection Type			3 grabs/day	3 grabs/day	
Project Code			WW-PW	WW-PW	
Analysis	**Method**	**MDL (mg/L)**	**Result**	**Result**	**Analyst**
Cyanide, Total	4500CN C,E	0.01	ND	0.01	PWS

QA/QC data available upon request.
MDL = Method Detection Limit, PQL = Practical Quantitative Limit, ND = Not Detected
C = contract lab

Reported by: Mark Spano Date: 8/7/00
Mark Spano, Laboratory Supervisor

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George P. Wuerch,
Mayor

ANCHORAGE WATER AND WASTEWATER UTILITY
LABORATORY SERVICES – PT. WORONZOF LAB

Owned by the
Municipality of Anchorage

TOXIC POLLUTANT ANALYTICAL RESULTS

Date of the Report: 08/07/00

Sample ID				AA22022	
Sample Location				Pt. Woronzof Cake Sludge	
Collection Date				06/06/00	
Collection Time				08:00	
Sample Preservation				4C	
Collection Type				24hrly comp	
Project Code				WW-PW	
Analysis	**Method**	**MDL**	**Unit**	**Result**	**Analyst**
Arsenic, Total	EPA 7060	0.5	mg/kg	4.4	SRL
Beryllium, Total	EPA 7091	0.02	mg/kg	0.29	SRL
Cadmium, Total	EPA 7130	0.8	mg/kg	2.7	SRL
Chromium, Total	EPA 7190	2	mg/kg	22	SRL
Copper, Total	EPA 7210	1	mg/kg	174	SRL
Cyanide, Total	4500CN C,E	0.2	mg/kg	0.7	PWS
Lead, Total	EPA 7421	0.1	mg/kg	28	SRL
Mercury, Total	EPA 7470	0.1	mg/kg	0.7	BN
Nickel, Total	EPA 7520	3	mg/kg	21	SRL
Percent Total Solids	18SM 2540G	0.1	%	38.4	SRL
Silver, Total	EPA 7761	0.03	mg/kg	15.8	SRL
Zinc, Total	EPA 7950	2	mg/kg	337	SRL

Sample ID			AA22023	AA22024	
Sample Location			Pt. Woronzof WWTF - Influent	Pt. Woronzof WWTF - F.Effluent	
Collection Date			06/06/00	06/06/00	
Collection Time			14:20	14:05	
Sample Preservation			HCL/4C	HCL/4C	
Collection Type			grab	grab	
Project Code			WW-PW	WW-PW	
Analysis	**Method**	**MDL (mg/L)**	**Result**	**Result**	**Analyst**
Oil and Grease	EPA 1664	1.0	118	21.2	PWS

QA/QC data available upon request.
MDL = Method Detection Limit, PQL = Practical Quantitative Limit, ND = Not Detected
C = contract lab

Reported by: Mark Spano Date: 8/7/00
Mark Spano, Laboratory Supervisor

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APPENDIX A

Toxic Pollutant and Pesticide Monitoring, June Sampling

A2 Toxscan

Metals, Pesticides, Hydrocarbons

JUNE SAMPLING, METALS, PESTICIDES, HYDROCARBONS, TOXSCAN SAMPLE LIST

SAMPLE IDENTIFICATION NUMBER	SAMPLE LOCATION	SAMPLE TYPE
MOA00PES0001	INFLUENT	SAMPLE
MOA00PES0002	EFFLUENT-1	SAMPLE
MOA00PES0003	EFFLUENT-2	SAMPLE
MOA00PES0004	SLUDGE	SAMPLE
MOA00MET0001	INFLUENT	SAMPLE
MOA00MET0002	EFFLUENT	SAMPLE
MOA00MET0003	C-STATION	FIELD BLANK
MOA00MET0004	SLUDGE	SAMPLE
MOA00VOA0001	INFLUENT	SAMPLE
MOA00VOA0002	EFFLUENT-1	SAMPLE
MOA00VOA0003	EFFLUENT-2	DUPLICATE
MOA00VOA0004	C-STATION	FIELD BLANK
MOA00VOA0005	TRIP BLANK	TRIP BLANK
MOA00HEX0001	INFLUENT	SAMPLE
MOA00HEX0002	EFFLUENT-1	SAMPLE
MOA00HEX0003	EFFLUENT-2	DUPLICATE

ToxScan Inc.

42 Hangar Way • Watsonville, CA 95076-2404 • (831) 724-4522 • FAX (831) 724-3188

July 06, 2000

ToxScan Number: T-18567

Kinnetic Laboratories Incorporated
403 West Eighth Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Project Name:	None
Project Number:	514.01
Date Sampled:	June 06, 2000 - June 07, 2000
Date Received:	June 08, 2000
Matrix:	Sludge Water

Please find the enclosed test results for the parameters requested for analyses. The samples were analyzed within holding time using the following methods:

Aromatic Volatile Organics by EPA Method 602
Demeton, Guthion, Malathion, Parathion by EPA Method 614
Demeton, Guthion, Malathion, Parathion by EPA Method 8141A
Organochlorine Pesticides & PCBs plus Mirex by EPA Method 8081
Percent Solids by EPA Method 160.3
Pesticides & PCBs plus Mirex by EPA Method 608
Total Metals by ICP/MS (Sb,Mo,Tl) by EPA Method 200.8
Total Metals by ICP/MS (Sb,Mo,Tl) by EPA Method 6020
Total Petroleum Hydrocarbons by EPA Method 1664
Total Selenium by hydride AA by EPA Method 7741
Total Selenium by hydride AA, by EPA Method 270.3

The samples were received intact and were handled with the proper chain-of-custody procedures. Appropriate QA/QC guidelines were employed during the analyses on a minimum of a 5% basis. QC results were within limits and are reported with or following the data for each analysis.

If you have any questions or require any additional information, please feel free to call.

Sincerely,

Philip D. Carpenter

Philip D. Carpenter, Ph.D.
President

Enclosures

This cover letter is an integral part of the report.

EXPLANATION OF ACRONYMS FOR PROJECT # T-18567

The following is a glossary for acronyms that may be used in this report.

Abbreviation	Definition
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NA	Not Applicable
ND	None Detected
REP	Replicate
RPD	Relative Percent Difference
SRM	Standard Reference Material
TOC	Total Organic Carbon

Client:	Kinnetic Laboratories Incorporated	ToxScan Number: T-18567
Method:	EPA 602	
Date Analyzed:	June 13 and 14, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID:	MOA00VOAS0001	MOA00VOAS0001	
Site ID:	Influent	Influent	Reporting
Toxscan Lab ID:	18567-05-A	18567-05-B DUP	Limit
Analyte			
Benzene	ND	ND	0.50
Toluene	8.1	8.5	0.50
Chlorobenzene	ND	ND	0.50
Ethylbenzene	ND	ND	0.50
Xylenes	ND	ND	0.50
1,2 Dichlorobenzene	3.1	3.2	0.50
1,3 Dichlorobenzene	4.0	3.6	0.50
1,4 Dichlorobenzene	15	15	0.50

ND = None Detected

Quality Control Report:
Surrogate Recovery expressed as percentages

Surrogate	Surrogate % Rec	Surrogate % Rec	QC Limits % Rec
1,4-Difluorobenzene	107	106	65-142
1,1,1-Trifluorotoluene	104	100	77-143
1,4-Bromofluorobenzene	114	110	86-115

Client:	Kinnetic Laboratories Incorporated	ToxScan Number: T-18567
Method:	EPA 602	
Date Analyzed:	June 14 and 15, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID:	MOA00VOAS0002	MOA00VOAS0003	
Site ID:	Effluent-1	Effluent-2	Reporting
Toxscan Lab ID:	18567-06-A	18567-07-B	Limit
Analyte			
Benzene	ND	ND	0.50
Toluene	7.0	6.8	0.50
Chlorobenzene	ND	ND	0.50
Ethylbenzene	ND	ND	0.50
Xylenes	10	6.3	0.50
1,2 Dichlorobenzene	ND	11	0.50
1,3 Dichlorobenzene	10	11	0.50
1,4 Dichlorobenzene	15	24	0.50

ND = None Detected

Quality Control Report:
Surrogate Recovery expressed as percentages

Surrogate	Surrogate % Rec	Surrogate % Rec	QC Limits % Rec
1,4-Difluorobenzene	103	106	65-142
1,1,1-Trifluorotoluene	99	105	77-143
1,4-Bromofluorobenzene	114	111	86-115

Client:	Kinnetic Laboratories Incorporated	ToxScan Number: T-18567
Method:	EPA 602	
Date Analyzed:	June 14, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID:	MOA00VOAS0004	MOA00VOAS0005	
Site ID:	C-Station	Trip Blank	Reporting
Toxscan Lab ID:	18567-08-A	18567-09-A	Limit
Analyte			
Benzene	ND	ND	0.50
Toluene	ND	ND	0.50
Chlorobenzene	ND	ND	0.50
Ethylbenzene	ND	ND	0.50
Xylenes	ND	ND	0.50
1,2 Dichlorobenzene	ND	ND	0.50
1,3 Dichlorobenzene	ND	ND	0.50
1,4 Dichlorobenzene	ND	ND	0.50

ND = None Detected

Quality Control Report:
Surrogate Recovery expressed as percentages

Surrogate	Surrogate % Rec	Surrogate % Rec	QC Limits % Rec
1,4-Difluorobenzene	105	106	65-142
1,1,1-Trifluorotoluene	98	99	77-143
1,4-Bromofluorobenzene	98	98	86-115

Client:	Kinnetic Laboratories Incorporated	ToxScan Number: T-18567
Method:	EPA 602	
Date Analyzed:	June 13, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID: Site ID: Toxscan Lab ID: Analyte	Method Blank	Reporting Limit
Benzene	ND	0.50
Toluene	ND	0.50
Chlorobenzene	ND	0.50
Ethylbenzene	ND	0.50
Xylenes	ND	0.50
1,2 Dichlorobenzene	ND	0.50
1,3 Dichlorobenzene	ND	0.50
1,4 Dichlorobenzene	ND	0.50

ND = None Detected

Quality Control Report:
Surrogate Recovery expressed as percentages

Surrogate	Surrogate % Rec	QC Limits % Rec
1,4-Difluorobenzene	103	65-142
1,1,1-Trifluorotoluene	101	77-143
1,4-Bromofluorobenzene	93	86-115

Client:	Kinnetic Laboratories Incorporated	ToxScan Number: T-18567
Method:	EPA 602	
Date Analyzed:	June 13, 2000	
Matrix:	Water	

Quality Control Report:
Spike recoveries expressed as percentages

Spiked compound	LCS %Rec	QC Limits %Rec
Benzene	111	76-127
Toluene	106	76-125
Chlorobenzene	87	75-130

Quality Control Report :
Surrogate recovery expressed as percentages

Surrogate	Surrogate % Rec	QC Limits % Rec
1,4-Difluorobenzene	107	65-142
1,1,1-Trifluorotoluene	104	77-143
1,4-Bromofluorobenzene	96	86-115

LCS = Laboratory Control Sample

Client:	Kinnetic Laboratories Incorporated	ToxScan Number: T-18567
Method:	EPA 602	
Date Analyzed:	June 14, 2000	
Matrix:	Water	

Quality Control Report:
Spike recoveries expressed as percentages

Client Sample ID:	MOA00VOAS0004
Site ID:	C-Station
ToxScan Lab ID:	18567-08-B

Spiked compound	MS %Rec	QC Limits %Rec
Benzene	101	76-127
Toluene	110	76-125
Chlorobenzene	92	75-130

Quality Control Report :
Surrogate recovery expressed as percentages

Surrogate	Surrogate % Rec	QC Limits % Rec
1,4-Difluorobenzene	105	65-142
1,1,1-Trifluorotoluene	102	77-143
1,4-Bromofluorobenzene	103	86-115

MS = Matrix Spike

Client:	Kinnetic Laboratories, Inc	ToxScan Number: T-18567
Method:	EPA 614	
Date Extracted:	June 08, 2000	
Date Analyzed:	June 27, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID:	MOA00PES0001
Site ID:	Influent
ToxScan Lab ID:	18567-01

Analyte	Sample Value	Reporting Limit
Demeton	ND	0.2
Guthion	ND	15
Malathion	ND	0.2
Parathion	ND	0.2

ND = Not Detected

Client:	Kinnetic Laboratories, Inc	ToxScan Number: T-18567
Method:	EPA 614	
Date Extracted:	June 08, 2000	
Date Analyzed:	June 27, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID:	MOA00PES0002
Site ID:	Effluent-1
ToxScan Lab ID:	18567-02

Analyte	Sample Value	Reporting Limit
Demeton	ND	0.2
Guthion	ND	15
Malathion	ND	0.2
Parathion	ND	0.2

ND = Not Detected

Client:	Kinnetic Laboratories, Inc	ToxScan Number: T-18567
Method:	EPA 614	
Date Extracted:	June 08, 2000	
Date Analyzed:	June 27, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID:	MOA00PES0003
Site ID:	Effluent-2
ToxScan Lab ID:	18567-03

Analyte	Sample Value	Reporting Limit
Demeton	ND	0.2
Guthion	ND	15
Malathion	ND	0.2
Parathion	ND	0.2

ND = Not Detected

Client:	Kinnetic Laboratories, Inc	ToxScan Number: T-18567
Method:	EPA 614	
Date Extracted:	June 08, 2000	
Date Analyzed:	June 27, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID:	MOA00PES0003
Site ID:	Effluent-2
ToxScan Lab ID:	18567-03 DUP

Analyte	Sample Value	Reporting Limit
Demeton	ND	0.2
Guthion	ND	15
Malathion	ND	0.2
Parathion	ND	0.2

ND = Not Detected

Client:	Kinnetic Laboratories, Inc	ToxScan Number: T-18567
Method:	EPA 8141A	
Date Extracted:	June 09, 2000	
Date Analyzed:	June 28, 2000	
Matrix:	Sludge	
Units:	ug/Kg (ppb)	

Client Sample ID:	MOA00PES0004
Site ID:	Sludge
ToxScan Lab ID:	18567-04

Analyte	Wet Wt. Sample Value	Wet Wt. Reporting Limit	Dry Wt. Sample Value	Dry Wt. Reporting Limit
Demeton	ND	20	ND	53
Guthion	ND	1500	ND	3900
Malathion	ND	20	ND	53
Parathion	ND	20	ND	53

ND = Not Detected

Client:	Kinnetic Laboratories, Inc	ToxScan Number: T-18567
Method:	EPA 614	
Date Extracted:	June 08, 2000	
Date Analyzed:	June 27, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID: Method Blank
ToxScan Lab ID: MB060800

Analyte	Sample Value	Reporting Limit
Demeton	ND	0.2
Guthion	ND	15
Malathion	ND	0.2
Parathion	ND	0.2

ND = Not Detected

Client:	Kinnetic Laboratories, Inc	ToxScan Number: T-18567
Method:	EPA 8141A	
Date Extracted:	June 09, 2000	
Date Analyzed:	June 27, 2000	
Matrix:	Sludge	
Units:	ug/Kg (ppb)	

Client Sample ID: Method Blank
ToxScan Lab ID: MB060900

Analyte	Sample Value	Reporting Limit
Demeton	ND	20
Guthion	ND	1500
Malathion	ND	20
Parathion	ND	20

ND = Not Detected

Client:	Kinnetic Laboratories, Inc	ToxScan Number: T-18567
Method:	EPA 614	
Date Extracted:	June 08, 2000	
Date Analyzed:	June 27, 2000	
Matrix:	Water	

Quality Control Report

Surrogate recoveries expressed as percentages:

Sample ID	Triphenylphosphate	QC Limits
Method Blank	106	50-150
Lab Control Sample	88	50-150
MOA00PES0001	63	50-150
MOA00PES0002	63	50-150
MOA00PES0003	62	50-150
MOA00PES0003 (DUP)	66	50-150
		50-150

Client:	Kinnetic Laboratories, Inc	ToxScan Number: T-18567
Method:	EPA 8141A	
Date Extracted:	June 09, 2000	
Date Analyzed:	June 27 & 28, 2000	
Matrix:	Water	

Quality Control Report

Surrogate recoveries expressed as percentages:

Sample ID	Triphenylphosphate	QC Limits
Method Blank	77	50-150
Lab Control Sample	82	50-150
MOA00PES0004	101	50-150
MOA00PES0004(MS)	108	50-150
MOA00PES0004(MSD)	107	50-150

Client: Kinnetic Laboratories, Inc
Method: EPA 8141A
Date Extracted: June 09, 2000
Date Analyzed: June 28, 2000
Matrix: sludge

ToxScan Number: T-18567

Quality Control Report
QA/QC on sample MOA00PES0004
Spike recoveries expressed as percentages:

Spiked Compound	MS % REC	MSD %REC	% RPD	QC LIMITS % REC	QC LIMITS %RPD
Diazinon	71	67	6	50-150	50
Disulfoton	55	64	15	50-150	50
Parathion methyl	93	73	24	50-150	50
Malathion	71	69	3	50-150	50
Parathion ethyl	94	97	3	50-150	50
Ethion	62	60	3	50-150	50

MS = Matrix Spike

MSD = Matrix Spike Duplicate

RPD = Relative Percent Difference

Client: Kinnetic Laboratories, Inc.
Method: EPA 614
Date Extracted: June 08, 2000
Date Analyzed: June 27, 2000
Matrix: Water

ToxScan Number: T-18567

Quality Control Report
Spike recoveries expressed as percentages:

Spiked Compound	LCS % REC	QC LIMITS % REC
Diazinon	72	50-150
Disulfoton	66	50-150
Parathion methyl	80	50-150
Malathion	83	50-150
Parathion ethyl	73	50-150
Ethion	89	50-150

LCS = Laboratory Control Sample

Client: Kinnetic Laboratories, Inc.
Method: EPA 8141A
Date Extracted: June 09, 2000
Date Analyzed: June 27, 2000
Matrix: Sludge

ToxScan Number: T-18567

Quality Control Report
Spike recoveries expressed as percentages:

Spiked Compound	LCS % REC	QC LIMITS % REC
Diazinon	70	50-150
Disulfoton	59	50-150
Parathion methyl	75	50-150
Malathion	74	50-150
Parathion ethyl	73	50-150
Ethion	75	50-150

LCS = Laboratory Control Sample

Client:	Kinnetic Laboratories, Inc	ToxScan Number: T-18567
Method:	EPA 608	
Date Extracted:	June 08, 2000	
Date Analyzed:	June 20, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID:	MOA00PES0001
Site ID:	Influent
ToxScan Lab ID:	18567-01

Analyte	Sample Value	Reporting Limit
Aldrin	ND	0.050
alpha-BHC	ND	0.050
beta-BHC	ND	0.050
delta-BHC	ND	0.050
gamma-BHC	ND	0.050
alpha-Chlordane	ND	0.50
gamma-Chlordane	ND	0.50
4,4'-DDD	ND	0.020
4,4'-DDE	ND	0.020
4,4'-DDT	ND	0.020
Dieldrin	ND	0.10
Endosulfan I	ND	0.050
Endosulfan II	ND	0.10
Endosulfan Sulfate	ND	0.10
Endrin	ND	0.10
Endrin Aldehyde	ND	0.10
Endrin Ketone	ND	0.10
Heptachlor	ND	0.050
Heptachlor Epoxide	ND	0.050
Methoxychlor	ND	0.50
Toxaphene	ND	1.0
Aroclor-1016	ND	1.0
Aroclor-1221	ND	1.0
Aroclor-1232	ND	1.0
Aroclor-1242	ND	1.0
Aroclor-1248	ND	1.0
Aroclor-1254	ND	1.0
Aroclor-1260	ND	1.0
Total PCB'S	ND	1.0
Mirex	ND	0.2

ND = Not Detected

Client:	Kinnetic Laboratories, Inc	ToxScan Number: T-18567
Method:	EPA 608	
Date Extracted:	June 08, 2000	
Date Analyzed:	June 20, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID:	MOA00PES0002
Site ID:	Effluent-1
ToxScan Lab ID:	18567-02

Analyte	Sample Value	Reporting Limit
Aldrin	ND	0.050
alpha-BHC	ND	0.050
beta-BHC	ND	0.050
delta-BHC	ND	0.050
gamma-BHC	ND	0.050
alpha-Chlordane	ND	0.50
gamma-Chlordane	ND	0.50
4,4'-DDD	ND	0.020
4,4'-DDE	ND	0.020
4,4'-DDT	ND	0.020
Dieldrin	ND	0.10
Endosulfan I	ND	0.050
Endosulfan II	ND	0.10
Endosulfan Sulfate	ND	0.10
Endrin	ND	0.10
Endrin Aldehyde	ND	0.10
Endrin Ketone	ND	0.10
Heptachlor	ND	0.050
Heptachlor Epoxide	ND	0.050
Methoxychlor	ND	0.50
Toxaphene	ND	1.0
Aroclor-1016	ND	1.0
Aroclor-1221	ND	1.0
Aroclor-1232	ND	1.0
Aroclor-1242	ND	1.0
Aroclor-1248	ND	1.0
Aroclor-1254	ND	1.0
Aroclor-1260	ND	1.0
Total PCB'S	ND	1.0
Mirex	ND	0.2

ND = Not Detected

Client:	Kinnetic Laboratories, Inc	ToxScan Number: T-18567
Method:	EPA 608	
Date Extracted:	June 08, 2000	
Date Analyzed:	June 20, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID:	MOA00PES0003
Site ID:	Effluent-2
ToxScan Lab ID:	18567-03

Analyte	Sample Value	Reporting Limit
Aldrin	ND	0.050
alpha-BHC	ND	0.050
beta-BHC	ND	0.050
delta-BHC	ND	0.050
gamma-BHC	ND	0.050
alpha-Chlordane	ND	0.50
gamma-Chlordane	ND	0.50
4,4'-DDD	ND	0.020
4,4'-DDE	ND	0.020
4,4'-DDT	ND	0.020
Dieldrin	ND	0.10
Endosulfan I	ND	0.050
Endosulfan II	ND	0.10
Endosulfan Sulfate	ND	0.10
Endrin	ND	0.10
Endrin Aldehyde	ND	0.10
Endrin Ketone	ND	0.10
Heptachlor	ND	0.050
Heptachlor Epoxide	ND	0.050
Methoxychlor	ND	0.50
Toxaphene	ND	1.0
Aroclor-1016	ND	1.0
Aroclor-1221	ND	1.0
Aroclor-1232	ND	1.0
Aroclor-1242	ND	1.0
Aroclor-1248	ND	1.0
Aroclor-1254	ND	1.0
Aroclor-1260	ND	1.0
Total PCB'S	ND	1.0
Mirex	ND	0.2

ND = Not Detected

Client:	Kinnetic Laboratories, Inc	ToxScan Number: T-18567
Method:	EPA 608	
Date Extracted:	June 08, 2000	
Date Analyzed:	June 20, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID:	MOA00PES0003
Site ID:	Effluent-2
ToxScan Lab ID:	18567-03 DUP

Analyte	Sample Value	Reporting Limit
Aldrin	ND	0.050
alpha-BHC	ND	0.050
beta-BHC	ND	0.050
delta-BHC	ND	0.050
gamma-BHC	ND	0.050
alpha-Chlordane	ND	0.50
gamma-Chlordane	ND	0.50
4,4'-DDD	ND	0.020
4,4'-DDE	ND	0.020
4,4'-DDT	ND	0.020
Dieldrin	ND	0.10
Endosulfan I	ND	0.050
Endosulfan II	ND	0.10
Endosulfan Sulfate	ND	0.10
Endrin	ND	0.10
Endrin Aldehyde	ND	0.10
Endrin Ketone	ND	0.10
Heptachlor	ND	0.050
Heptachlor Epoxide	ND	0.050
Methoxychlor	ND	0.50
Toxaphene	ND	1.0
Aroclor-1016	ND	1.0
Aroclor-1221	ND	1.0
Aroclor-1232	ND	1.0
Aroclor-1242	ND	1.0
Aroclor-1248	ND	1.0
Aroclor-1254	ND	1.0
Aroclor-1260	ND	1.0
Total PCB'S	ND	1.0
Mirex	ND	0.2

ND = Not Detected

Client:	Kinnetic Laboratories, Inc.	ToxScan Number: T-18567
Method:	EPA 8081	
Date Extracted:	June 09, 2000	
Date Analyzed:	June 21, 2000	
Matrix:	Sludge	
Units:	ug/Kg (ppb)	

Client Sample ID:	MOA00PES0004
Site ID:	Sludge
ToxScan Lab ID:	18567-04

Analyte	Wet Wt. Sample Value	Wet Wt. Reporting Limit	Dry Wt. Sample Value	Dry Wt. Reporting Limit
Aldrin	ND	8.0	ND	21
alpha-BHC	ND	8.0	ND	21
beta-BHC	ND	8.0	ND	21
delta-BHC	ND	8.0	ND	21
gamma-BHC	ND	8.0	ND	21
alpha-Chlordane	19	8.0	50	21
gamma-Chlordane	16	8.0	42	21
4,4'-DDD	4.5	3.0	12	7.9
4,4'-DDE	ND	3.0	ND	7.9
4,4'-DDT	ND	3.0	ND	7.9
Dieldrin	ND	16	ND	42
Endosulfan I	ND	8.0	ND	21
Endosulfan II	ND	16	ND	42
Endosulfan Sulfate	ND	16	ND	42
Endrin	ND	16	ND	42
Endrin Aldehyde	ND	16	ND	42
Endrin Ketone	ND	16	ND	42
Heptachlor	ND	8.0	ND	21
Heptachlor Epoxide	ND	8.0	ND	21
Methoxychlor	ND	80	ND	210
Toxaphene	ND	160	ND	420
Aroclor-1016	ND	160	ND	420
Aroclor-1221	ND	160	ND	420
Aroclor-1232	ND	160	ND	420
Aroclor-1242	ND	160	ND	420
Aroclor-1248	ND	160	ND	420
Aroclor-1254	ND	160	ND	420
Aroclor-1260	ND	160	ND	420
Total PCB'S	ND	160	ND	420
Mirex	ND	20	ND	53

ND = Not Detected

Client: Kinnetic Laboratories Incorporated
Method: EPA Method(s) 160.3
Date Completed: 6/27/2000
Matrix: Sludge
Units: Percent

ToxScan Number: T-18567

Client Sample ID	Site ID	ToxScan Lab ID	Analyte	Wet Wt. Sample Value	Wet Reporting Limit
MOA00PES0004	Sludge	18567-04	Percent Solids	38	0.10
MOA00MET0004	Sludge	18567-16	Percent Solids	37	0.10

Client:	Kinnetic Laboratories, Inc	ToxScan Number: T-18567
Method:	EPA 608	
Date Extracted:	June 08, 2000	
Date Analyzed:	June 20, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID: Method Blank
ToxScan Lab ID: MB060800

Analyte	Sample Value	Reporting Limit
Aldrin	ND	0.050
alpha-BHC	ND	0.050
beta-BHC	ND	0.050
delta-BHC	ND	0.050
gamma-BHC	ND	0.050
alpha-Chlordane	ND	0.50
gamma-Chlordane	ND	0.50
4,4'-DDD	ND	0.020
4,4'-DDE	ND	0.020
4,4'-DDT	ND	0.020
Dieldrin	ND	0.10
Endosulfan I	ND	0.050
Endosulfan II	ND	0.10
Endosulfan Sulfate	ND	0.10
Endrin	ND	0.10
Endrin Aldehyde	ND	0.10
Endrin Ketone	ND	0.10
Heptachlor	ND	0.050
Heptachlor Epoxide	ND	0.050
Methoxychlor	ND	0.50
Toxaphene	ND	1.0
Aroclor-1016	ND	1.0
Aroclor-1221	ND	1.0
Aroclor-1232	ND	1.0
Aroclor-1242	ND	1.0
Aroclor-1248	ND	1.0
Aroclor-1254	ND	1.0
Aroclor-1260	ND	1.0
Total PCB'S	ND	1.0
Mirex	ND	0.2

ND = Not Detected

Client:	Kinnetic Laboratories, Inc.	ToxScan Number: T-18567
Method:	EPA 8081	
Date Extracted:	June 09, 2000	
Date Analyzed:	June 21, 2000	
Matrix:	Sludge	
Units:	ug/Kg (ppb)	

Client Sample ID: Method Blank
ToxScan Lab ID: MB060900

Analyte	Sample Value	Reporting Limit
Aldrin	ND	8.0
alpha-BHC	ND	8.0
beta-BHC	ND	8.0
delta-BHC	ND	8.0
gamma-BHC	ND	8.0
alpha-Chlordane	ND	8.0
gamma-Chlordane	ND	8.0
4,4'-DDD	ND	3.0
4,4'-DDE	ND	3.0
4,4'-DDT	ND	3.0
Dieldrin	ND	16
Endosulfan I	ND	8.0
Endosulfan II	ND	16
Endosulfan Sulfate	ND	16
Endrin	ND	16
Endrin Aldehyde	ND	16
Endrin Ketone	ND	16
Heptachlor	ND	8.0
Heptachlor Epoxide	ND	8.0
Methoxychlor	ND	80
Toxaphene	ND	160
Aroclor-1016	ND	160
Aroclor-1221	ND	160
Aroclor-1232	ND	160
Aroclor-1242	ND	160
Aroclor-1248	ND	160
Aroclor-1254	ND	160
Aroclor-1260	ND	160
Total PCB'S	ND	160
Mirex	ND	20

ND = Not Detected

Client:	Kinnetic Laboratories, Inc	ToxScan Number: T-18567
Method:	EPA 608	
Date Extracted:	June 08, 2000	
Date Analyzed:	June 20, 2000	
Matrix:	Water	

Quality Control Report

Surrogate recoveries expressed as percentages:

Sample ID	Tetrachloro-m-xylene	QC Limits
Lab Control Sample	135	50-150
Method Blank	78	50-150
MOA00PES001	64	50-150
MOA00PES002	56	50-150
MOA00PES003	81	50-150
MOA00PES003	81	50-150

Client:	Kinnetic Laboratories, Inc.	ToxScan Number: T-18567
Method:	EPA 8081	
Date Extracted:	June 09, 2000	
Date Analyzed:	June 21, 2000	
Matrix:	Sludge	

Quality Control Report

Surrogate recoveries expressed as percentages:

Sample ID	Tetrachloro-m-xylene	Decachlorobiphenyl	QC Limits
Lab Control Sample	87	96	50-150
Method Blank	95	93	50-150
MOA00PES0004	77	99	50-150
MOA00PES0004(MS)	74	99	50-150
MOA00PES0004(MSD)	70	112	50-150

Client: Kinnetic Laboratories, Inc. ToxScan Number: T-18567
Method: EPA 8081
Date Extracted: June 09, 2000
Date Analyzed: June 21, 2000
Matrix: Sludge

Quality Control Report
QA/QC on sample MOA00PES0004
Spike recoveries expressed as percentages:

Spiked Compound	MS % REC	MSD %REC	% RPD	QC LIMITS % REC	QC LIMITS %RPD
Lindane	60	65	8	46-127	50
Heptachlor	90	85	6	35-130	31
Aldrin	63	68	8	34-132	43
Dieldrin	110	120	9	31-134	38
Endrin	100	100	0	42-139	45
4,4'-DDT	96	100	4	23-134	50

MS = Matrix Spike

MSD = Matrix Spike Duplicate

RPD = Relative Percent Difference

Client:	Kinnetic Laboratories, Inc	ToxScan Number: T-18567
Method:	EPA 608	
Date Extracted:	June 08, 2000	
Date Analyzed:	June 20, 2000	
Matrix:	Water	

Quality Control Report
Spike recoveries expressed as percentages:

Spiked Compound	LCS % REC	QC LIMITS % REC
Lindane	73	56-123
Heptachlor	108	40-131
Aldrin	113	40-120
Dieldrin	110	52-126
Endrin	120	56-121
4,4'-DDT	98	38-127

LCS = Laboratory Control Sample

Client: Kinnetic Laboratories, Inc.
Method: EPA 8081
Date Extracted: June 09, 2000
Date Analyzed: June 21, 2000
Matrix: Sludge

ToxScan Number: T-18567

Quality Control Report
Spike recoveries expressed as percentages:

Spiked Compound	LCS % REC	QC LIMITS % REC
Lindane	70	46-127
Heptachlor	100	35-130
Aldrin	100	34-132
Dieldrin	110	31-134
Endrin	110	42-139
4,4-DDT	93	23-134

LCS = Laboratory Control Sample

Client: Kinnetic Laboratories Incorporated
Method: EPA Method(s) 1664
Date Completed: 06/29/2000
Matrix: Water
Units: mg/L

ToxScan Number: T-18567

Client Sample ID	Site ID	ToxScan Lab ID	Analyte	Sample Value	Reporting Limit
MOA00HEX0001	Influent	18567-10	TRPH-Gravimetric (SGT-HEM)	18	5.0
MOA00HEX0002	Effluent-1	18567-11	TRPH-Gravimetric (SGT-HEM)	ND	5.0
MOA00HEX0003	Effluent-2	18567-12	TRPH-Gravimetric (SGT-HEM)	ND	5.0

Client: Kinnetic Laboratories Incorporated
Method: EPA Method(s) 200.8 270.3
Date Completed: 06/09/2000 - 07/03/2000
Matrix: Water
Units: ug/L

ToxScan Number: T-18567

Total Metals

Client Sample ID	Site ID	ToxScan Lab ID	Analyte	Sample Value	Reporting Limit
MOA00MET0001	Influent	18567-13	Antimony	ND	10
			Molybdenum	ND	10
			Selenium	ND	10
			Thallium	ND	10
MOA00MET0002	Effluent-1	18567-14	Antimony	ND	10
			Molybdenum	ND	10
			Selenium	ND	10
			Thallium	ND	10
MOA00MET0003	C-Station	18567-15	Antimony	ND	10
			Molybdenum	ND	10
			Selenium	ND	10
			Thallium	ND	10

Client: Kinnetic Laboratories Incorporated

ToxScan Number: T-18567

Method: EPA Method(s) 6020 7741

Date Completed: 7/4/2000 - 7/5/2000

Matrix: Sludge

Units: mg/kg

Total Metals

Client Sample ID	Site ID	ToxScan Lab ID	Analyte	Dry Wt. Sample Value	Dry Reporting Limit
MOA00MET0004	Sludge	18567-16	Antimony	2.4	0.30
			Molybdenum	4.4	0.30
			Selenium	0.61	0.30
			Thallium	0.84	0.30

QC FOR PROJECT # T-18567

LABORATORY METHOD BLANK SUMMARY

Applicable Matrix: Water

Total Metals

Analyte	Amount	Reporting Limit ug/L	EPA Method Number
Antimony	ND	10	200.8
Molybdenum	ND	10	200.8
Selenium	ND	0.50	270.3
Thallium	ND	10	200.8

QC FOR PROJECT # T-18567

LABORATORY METHOD BLANK SUMMARY

Applicable Matrix: Sediment

Total Metals

Analyte	Amount	Reporting Limit mg/L	EPA Method Number
Antimony	ND	0.30	6020
Molybdenum	ND	0.30	6020
Thallium	ND	0.30	6020

QC FOR PROJECT # T-18567

LABORATORY METHOD BLANK SUMMARY

Applicable Matrix: Sludge

Total Metals

Analyte	Amount	Reporting Limit mg/Kg	EPA Method Number
Selenium	ND	1.0	7741

QC FOR PROJECT # 18567

Concentrations of the following are in ug/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE SUMMARY:

Matrix: Water

Total Metals

Analyte	Sample Amount	Amount of Spike	Matrix Spike	MS % Rec	Matrix Spike Dup	MSD % Rec	RPD
Antimony 18595-06	ND	25	25.8	103	25.0	100	3
Molybdenum 18595-06	11.8	5.0	16.8	99	16.7	97	2
Selenium 18533-01	ND	10	10.2	102	10.5	105	3
Thallium 18595-06	ND	25	26.1	104	25.0	100	4

QC FOR PROJECT # 18567

MATRIX SPIKE / MATRIX SPIKE DUPLICATE SUMMARY:
Matrix: Sludge

Analyte	Sample	Spike Amount ppm	MS % Rec	MSD % Rec	RPD
Antimony	18595-06	25	103	100	3
Molybdenum	18595-06	5.0	99	97	2
Selenium	18533-01	10	102	105	3
Thallium	18595-06	25	104	100	4

QC FOR PROJECT # T-18567

Concentrations of the following are in ug/L

SRM SUMMARY:

Matrix: Water

Total Metals

Analyte	Amount Found	Dilution	Corrected Value	SRM	Certified Value	% Recovery
Antimony	67.6	1	67.6	ERA 9970	64.7	104
Molybdenum	125	1	125	ERA 9970	129	97
Selenium	9.90	20	198	ERA 9977	200	99
Thallium	56.3	1	56.3	ERA 9970	64.7	87

ERA 9970 = Environmental Resource Associates, WasteWatR Lot No. 9970

ERA 9977 = Environmental Resource Associates, WasteWatR Lot No. 9977

QC FOR PROJECT # T-18567

SRM SUMMARY:

Matrix: Sediment

Total Metals

Analyte	SRM Value Found mg/Kg	Certified SRM Value mg/Kg	% Recovery	SRM
Antimony	0.839	1.02	82	MESS-3
Molybdenum	2.27	2.78	82	MESS-3
Selenium	0.564	0.720	78	MESS-3
Thallium	0.674	0.900	75	MESS-3

MESS-3 = National Research Council Canada, marine sediment.

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	FROM:
ToxScan, Inc. 42 Hangar Way Watsonville, CA 95076 Attn: Doug Clarke (408)724-4522 Location: Frig 11 Shelf 12	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178 Pg. 1 of 6 T-18567

REQUIRED COMPLETION DATE: 30 days	P.O. #: AK00-1006	KLI Proj. #: 514.01

ANALYSIS TYPE: Pesticides: EPA 608 plus Mirex and EPA 614 for Demeton, Guthion, Malathion, and Parathion only. Detection limits 0.05 - 1.0 µg/L (Guthion ~15 µg/L).

MATRIX: Water	**Preservative:** None, 4°C	**Type of Container:** 1-L amber glass

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER
MOA00PES0001	Influent	2	6-7-00	0810	Intact	T-18567-01-A,-B
MOA00PES0002	Effluent-1	~~2~~ 1 (SL)	↓	0830	↓	-02-A
MOA00PES0003	Effluent-2	2	↓	0830	↓	-03-A,-B
— PES0002 is only one 1 Liter container (as collected by AWWU) GS 6-7-00						

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC, INCLUDING METHOD BLANKS, MS/SDs, DUPLICATES, ETC.

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
Susan Lang	6-7-00 / 1130	KLI / HAND	G G LAWLEY	6/7/00 1130
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
A. Adams	6-7-00 1400	Fed Ex	Douglas Clark	08Jun00/~~1045~~ 0945 DC
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME

X SAMPLED BY (NAME/SIGNATURE): Susan Lang / Susan Lang

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	FROM:
ToxScan, Inc. 42 Hangar Way Watsonville, CA 95076 Location: Attn: Doug Clarke (408)724-4522 Frig 11 Shelf 12	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178

pg. 2 of 6
T-18567

REQUIRED COMPLETION DATE: 30 days	P.O. #: AK00-1006	KLI Proj. #: 514.01

ANALYSIS TYPE: Pesticides: EPA 608 plus Mirex and EPA 614 for Demeton, Guthion, Malathion, and Parathion only. Detection limits 0.05 - 1.0 µg/L (Guthion ~15 µg/L).

MATRIX: Sludge	Preservative: None, 4°C	Type of Container: 250-mL glass

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER
MOA00PES0004	Sludge	1	6-7-00	0920	Intact	T-18567-04-A

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC, INCLUDING METHOD BLANKS, MS/SDs, DUPLICATES, ETC.

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
Susan Lang	6-7-00/1130	KLI/HANA	GG LANKES	6/7/00 1130
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[illegible]	6-7-00 1400	Fed Ex	Douglas Clark	08Jun00/0945
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME

SAMPLED BY (NAME/SIGNATURE): See sample collection sheet for individual collectors

Susan Lang

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	FROM:
ToxScan, Inc. 42 Hangar Way Watsonville, CA 95076 Location: Frig 6 Attn: Doug Clarke (408)724-4522	Kinnetic Laboratories, Inc. pg 3 of 6 403 West 8th Avenue Anchorage, AK 99501 T-18567 Attn: Janet Savoie (907)276-6178

REQUIRED COMPLETION DATE: 30 days | **P.O. #:** AK00-1006 | **KLI Proj. #:** 514.01

ANALYSIS TYPE: EPA 602 with xylenes. Detection limit 0.5 µg/L.

MATRIX: Water | **Preservative:** HCl, 4°C | **Type of Container:** 40-mL glass

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER
MOA00VOA0001	Influent	3	6-6-00	1420	Intact	T-18567-05-A,-B,-C
MOA00VOA0002	Effluent-1	3	6-6-00	1405	↓	↓ -06-A,-B,-C
MOA00VOA0003	Effluent-2	3	6-6-00	1405	↓	↓ -07-A,-B,-C
MOA00VOA0004	C-Station	3	6-6-00	1355	↓	↓ -08-A,-B,-C
MOA00VOA0005	Trip Blank	3	*5-17-00		↓	↓ -09-A,-B,-C

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC, INCLUDING METHOD BLANKS, MS/SDs, DUPLICATES, ETC.

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
Susan Lang	6-7-00 1130	KLI / HANA	BG LAWLEY	6/7/00 1130
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
G. S. Lawley	6.7.00 1400	Fed Ex	Douglas Clark	08Jun00/0945
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME

SAMPLED BY (NAME/SIGNATURE): Susan Lang / Susan Lang

* Per telecon with Gary Lawley 08Jun00, report sampling date for this sample as 06Jun00 DC

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	FROM:
ToxScan, Inc. 42 Hangar Way Watsonville, CA 95076 Location: Attn: Doug Clarke (408)724-4522 Frig 11 Shelf 12	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178

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T-18567

REQUIRED COMPLETION DATE: 30 days | **P.O. #:** AK00-1006 | **KLI Proj. #:** 514.01

ANALYSIS TYPE: Total Petroleum Hydrocarbons (EPA 1664 SGT-HEM). Detection limit 0.2 mg/L.

MATRIX: Water | **Preservative:** H_2SO_4, 4°C | **Type of Container:** 1-L amber glass

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER
MOA00HEX0001	Influent	2	6-6-00	1420	Intact	T-18567-10-A, -B
MOA00HEX0002	Effluent-1	2	↓	1405	↓	↓ -11-A, -B
MOA00HEX0003	Effluent-2	2	↓	1405	↓	↓ -12-A, -B

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC, INCLUDING METHOD BLANKS, MS/SDs, DUPLICATES, ETC.

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
Susan Lang	6-7-00 / 1130	KLI	A A. Lang	6/7/00 1130
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
A A Lang	6-7-00 1400	Fed Ex	Douglas Clark	08Jun00 0945
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME

SAMPLED BY (NAME/SIGNATURE): Susan Lang / Susan Lang

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	FROM:
ToxScan, Inc. 42 Hangar Way Watsonville, CA 95076 Attn: Doug Clarke (408)724-4522 Location: Frig A Shelf 12	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178 pg. 5 of 6 T-18567

REQUIRED COMPLETION DATE: 30 days	P.O. #: AK00-1006	KLI Proj. #: 514.01

ANALYSIS TYPE: Metals: Antimony, molybdenum, thallium (EPA 200.8) and selenium (EPA 270.3). Detection limit 10 µg/L.

MATRIX: Water	Preservative: HNO3, 4°C	Type of Container: 1-L HDPE

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER
MOA00MET0001	Influent	1	6-7-00	0810	80 ML HEADSPACE Intact	T-18567-13-A
MOA00MET0002	Effluent	1	6-7-00	0830	80 ML HEAD SPACE Intact	-14-A
MOA00MET0003	C-Station	1	6-7-00	0750	80 ML HEADSPACE Intact	-15-A

Please preserve samples with HNO_3 at AWWU immediately after sampling.

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC, INCLUDING METHOD BLANKS, MS/SDs, DUPLICATES, ETC.

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
Susan Lang	6-7-00 1130	KLI/HAND	G G LAWLER	6/7/00 1130
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
A Adams	6-7-00 1400	Fed Ex	Douglas Clark	08 Jun 00/0945
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME

X SAMPLED BY (NAME/SIGNATURE): Susan Lang / Susan Lang

APPENDIX A

Toxic Pollutant and Pesticide Monitoring, June Sampling

A3 Severn Trent

Priority Pollutants

JUNE SAMPLING, PRIORITY POLLUTANTS, STL SAMPLE LIST

SAMPLE IDENTIFICATION NUMBER	SAMPLE LOCATION	SAMPLE TYPE
MOA00VOP0001 - 0008	INFLUENT	SAMPLE (COMPOSITE)
MOA00VOP0009 - 0016	EFFLUENT	SAMPLE (COMPOSITE)
MOA00VOP0017	C-STATION	FIELD BLANK
MOA00VOP0018	TRIP BLANK	TRIP BLANK
MOA00VOP0019	SLUDGE	SAMPLE
MOA00SVL0001	INFLUENT	SAMPLE
MOA00SVL0002	EFFLUENT	SAMPLE
MOA00SVL0003	SLUDGE	SAMPLE

SEVERN TRENT SERVICES

STL Anchorage
5761 Silverado Way, Suite N
Anchorage, AK 99518-1657

Tel: 907 563 4800
Fax: 907 563 4815
www.stl-inc.com

November 30, 2000 **AMENDMENT**

Gary Lawley
Kinnetic Laboratories, Inc.
403 West 8th Avenue
Anchorage, AK 99501

Project Name: MOA/Pt. Woronzof Facility
PO# AK00-1006

STL-Anchorage Lot Number: L0F070291

Dear Mr. Lawley:

Enclosed with this letter is the report containing the analytical results for the project specified above.

The Narrative section included in the following attachment provides a summary description of any anomalies or non conformances that occurred during sample processing, analysis, and data review as applicable to the samples and analytical methods requested.

The amendments made to this report are as follows:

- ***The sample IDs for the two composites are modified to reflect the original client IDs.***
- ***Sample L0F070291-021 was corrected to report only the 624 compound list. All compounds for this sample are ND (non-detect).***
- ***Tentatively Identified Compounds (TICs) were requested for four 624 samples: L0F070291-019, 020, 023 and 024. Due to a tape backup failure, all data prior to 6/13/00 was lost. Only sample 024 was analyzed past this time, and electronic data is available. This sample was reprocessed to include TICs, and these are added to this report. Visual inspection of the remaining three samples revealed TICs; however, without the spectra to reprocess, identification is impossible.***

SEVERN TRENT SERVICES

STL Anchorage

This report shall not be reproduced except in full, without the written approval of the laboratory. If you have any questions please feel free to contact me at 907-563-4800, extension 215.

Sincerely,

Emanuel Hignutt, Jr.
Laboratory Manager

EH/vlb

Enclosure
cc: Project File

KINNETIC LABORATORIES, INC.

514.01

PO# AK00-1006

STL LOT # L0F070291

SEVERN TRENT SERVICES

STL Anchorage

I. CONDITION UPON RECEIPT

- ***The sample cooler was received with custody seals intact.***
- ***The interior temperatures of the coolers were 5.4°C on receipt.***
- ***Samples were received in time to meet the method holding time specifications.***

II. VOLATILE ORGANIC ANALYSES

Volatile Organics by Method 624

Holding Times

All samples were prepared and analyzed within the method specified holding time requirements.

Method Blank

The method blank met method specified QC criteria.

MS/MSD/LCS/DCS and RPDs

All spike recovery and RPD data met method- and/or project- specific QC criteria.

Surrogate Recoveries

All surrogate spike recoveries in samples and in QC samples met method specific QC criteria.

Calibrations

All calibrations and calibration verifications met method specific QC criteria.

Sample Results

There were no anomalies associated with the sample analysis.

Volatile Organics by Method SW8260B

Holding Times

All samples were prepared and analyzed within the method specified holding time requirements.

Method Blank

The method blank met method specified QC criteria.

MS/MSD/LCS/DCS and RPDs

All spike recovery and RPD data met method- and/or project- specific QC criteria.

Surrogate Recoveries

All surrogate spike recoveries in samples and in QC samples met method specific QC criteria.

Calibrations

All calibrations and calibration verifications met method specific QC criteria.

Sample Results

There were no anomalies associated with the sample analysis.

III. SEMI-VOLATILE ORGANIC ANALYSES

Semi-volatile Organics by Method SW8270C

Holding Times

All samples were prepared and analyzed within the method specified holding time requirements.

Method Blank
The method blank met method specified QC criteria.

MS/MSD/LCS/DCS and RPDs
All spike recovery and RPD data met method- and/or project- specific QC criteria.

Surrogate Recoveries
- ***All surrogate recoveries for sample L0F070291-022 was below established limits due to matrix interference. A ten-fold dilution was required, and the sample had a 64% moisture content.***
- ***All surrogate spike recoveries in samples and in QC samples met method specific QC criteria.***

Calibrations
All calibrations and calibration verifications met method specific QC criteria.

Sample Results
There were no anomalies associated with the sample analysis.

Semi-volatile Organics by EPA Method 625

Holding Times
All samples were prepared and analyzed within the method specified holding time requirements.

Method Blank
The method blank met method specified QC criteria.

MS/MSD/LCS/DCS and RPDs
- ***Prep batch 0166251:***
  - ***Hexachlorobutadiene recovery in the LCS was above established limits.***
  - ***2-Chloronaphthalene recovery in the LCS was below established limits.***
  - ***2-Fluorophenol recovery in the LCS was above established limits.***

- ***Prep batch 0166251:***
  - ***Spike recoveries for various compounds in the MS/MSD was above established limits due to matrix interferences. These compounds are flagged "a".***
  - ***The RPD for various spike compounds in the MS/MSD was above established limits due to matrix interferences. These compounds are flagged "p".***
  - ***Surrogate recoveries for 2-Fluorophenol and Phenol-d5 in the MS/MSD were outside established limits due to matrix interferences.***
  - ***All other spike recovery and RPD data met method- and/or project- specific QC criteria.***

Surrogate Recoveries
- ***All surrogate spike recoveries in the samples met method specific QC criteria.***

Calibrations
All calibrations and calibration verifications met method specific QC criteria.

Sample Results
There were no anomalies associated with the sample analysis.

ANALYTICAL REPORT

REVISED

MOA Pt. Woronzof Facility

Lot #: L0F070291

Gary Lawley

Kinnetics Laboratories, Inc.
403 W. Eighth Street
Anchorage, AK 99501

SEVERN TRENT LABORATORIES, INC.

Emanuel Hignutt, Jr.
Project Manager

December 1, 2000

EXECUTIVE SUMMARY - Detection Highlights

L0F070291

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MOA00SVL0001 06/07/00 08:10 001				
Phenol	38	10	ug/L	CFR136A 625
MOA00VOP0019 06/07/00 09:20 021				
Percent Moisture	63.5	1.0	No Units	ASTM Moisture, %
MOA00SVL0003 06/07/00 09:20 022				
Percent Moisture	63.9	1.0	No Units	ASTM Moisture, %
Composite: MOA00VOP0001 through 0008 06/07/00 09:20 023				
Methylene chloride	5.8	1.0	ug/L	CFR136A 624
Chloroform	2.9	1.0	ug/L	CFR136A 624
Toluene	15	1.0	ug/L	CFR136A 624
Tetrachloroethene	1.5	1.0	ug/L	CFR136A 624
Ethylbenzene	1.4	1.0	ug/L	CFR136A 624
1,1,2,2-Tetrachloroethane	1.6	1.0	ug/L	CFR136A 624
1,3-Dichlorobenzene	2.6	1.0	ug/L	CFR136A 624
1,4-Dichlorobenzene	1.1	1.0	ug/L	CFR136A 624
Composite: MOA00VOP0009 through 0016 06/07/00 09:20 024				
Chloroform	3.8	1.0	ug/L	CFR136A 624
Methylene chloride	3.8	1.0	ug/L	CFR136A 624
Toluene	10	1.0	ug/L	CFR136A 624
Tetrachloroethene	1.3	1.0	ug/L	CFR136A 624
Ethylbenzene	1.0	1.0	ug/L	CFR136A 624
1,3-Dichlorobenzene	1.8	1.0	ug/L	CFR136A 624

ANALYTICAL METHODS SUMMARY

L0F070291

PARAMETER	ANALYTICAL METHOD
Base/Neutrals and Acids	CFR136A 625
Method D2216 Percent H2O Dry 105 Degrees C, Weigh	ASTM Moisture, % D2216
Purgeables	CFR136A 624
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Volatile Organics by GC/MS	SW846 8260B

References:

ASTM Annual Book Of ASTM Standards.

CFR136A "Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

L0F070291

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
DEC5G	001	MOA00SVL0001	06/07/00	08:10
DEC5H	002	MOA00SVL0002	06/07/00	08:30
DEC6F	019	MOA00VOP0017	06/06/00	14:55
DEC6M	020	MOA00VOP0018	06/06/00	14:55
DEC6P	021	MOA00VOP0019	06/07/00	09:20
DEC71	022	MOA00SVL0003	06/07/00	09:20
DEK4N	023	Composite: MOA00VOP0001 through 0008	06/07/00	09:20
DEK4P	024	Composite: MOA00VOP0009 through 0016	06/07/00	09:20

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

KINNETICS LABORATORIES, INC.

Client Sample ID: MOA00SVL0001

GC/MS Semivolatiles

Lot-Sample #...: L0F070291-001 **Work Order #...:** DEC5G101 **Matrix.....:** WATER
Date Sampled...: 06/07/00 **Date Received..:** 06/07/00
Prep Date.....: 06/13/00 **Analysis Date..:** 06/27/00
Prep Batch #...: 0166251
Dilution Factor: 1 **Method.....:** CFR136A 625

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Phenol	**38**	**10**	**ug/L**
bis(2-Chloroethyl)-ether	ND	10	ug/L
2-Chlorophenol	ND	10	ug/L
1,3-Dichlorobenzene	ND	10	ug/L
1,4-Dichlorobenzene	ND	10	ug/L
1,2-Dichlorobenzene	ND	10	ug/L
bis(2-Chloroisopropyl) ether	ND	10	ug/L
N-Nitrosodi-n-propyl-amine	ND	10	ug/L
Hexachloroethane	ND	10	ug/L
Nitrobenzene	ND	10	ug/L
Isophorone	ND	10	ug/L
2-Nitrophenol	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
bis(2-Chloroethoxy) methane	ND	10	ug/L
2,4-Dichlorophenol	ND	10	ug/L
1,2,4-Trichloro-benzene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Hexachlorobutadiene	ND	10	ug/L
4-Chloro-3-methylphenol	ND	10	ug/L
2,4,6-Trichloro-phenol	ND	10	ug/L
2-Chloronaphthalene	ND	10	ug/L
Dimethyl phthalate	ND	10	ug/L
2,6-Dinitrotoluene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acenaphthene	ND	10	ug/L
2,4-Dinitrophenol	ND	50	ug/L
4-Nitrophenol	ND	50	ug/L
2,4-Dinitrotoluene	ND	10	ug/L
Diethyl phthalate	ND	10	ug/L
4-Chlorophenyl phenyl ether	ND	10	ug/L
Fluorene	ND	10	ug/L
4,6-Dinitro-2-methylphenol	ND	50	ug/L

(Continued on next page)

KINNETICS LABORATORIES, INC.

Client Sample ID: MOA00SVL0001

GC/MS Semivolatiles

Lot-Sample #...: L0F070291-001 **Work Order #...:** DEC5G101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Bromophenyl phenyl ether	ND	10	ug/L
Hexachlorobenzene	ND	10	ug/L
Pentachlorophenol	ND	50	ug/L
Phenanthrene	ND	10	ug/L
Anthracene	ND	10	ug/L
Di-n-butyl phthalate	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Pyrene	ND	10	ug/L
Butyl benzyl phthalate	ND	10	ug/L
bis(2-Ethylhexyl) phthalate	ND	10	ug/L
3,3'-Dichlorobenzidine	ND	50	ug/L
Benzo(a)anthracene	ND	10	ug/L
Chrysene	ND	10	ug/L
Di-n-octyl phthalate	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Dibenz(a,h)anthracene	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	49	(17 - 67)
Phenol-d5	34	(16 - 47)
Nitrobenzene-d5	56	(34 - 110)
2-Fluorobiphenyl	52	(30 - 113)
2,4,6-Tribromophenol	95	(43 - 130)
Terphenyl-d14	55	(46 - 129)

KINNETICS LABORATORIES, INC.

MOA00SVL0001

GC/MS Semivolatiles

Lot-Sample #: L0F070291-001 **Work Order #:** DEC5G101 **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

KINNETICS LABORATORIES, INC.

Client Sample ID: MOA00SVL0002

GC/MS Semivolatiles

Lot-Sample #...: L0F070291-002 **Work Order #...:** DEC5H101 **Matrix.....:** WATER
Date Sampled...: 06/07/00 **Date Received..:** 06/07/00
Prep Date.....: 06/13/00 **Analysis Date..:** 06/27/00
Prep Batch #...: 0166251
Dilution Factor: 1 **Method.....:** CFR136A 625

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Phenol	ND	10	ug/L
bis(2-Chloroethyl)-ether	ND	10	ug/L
2-Chlorophenol	ND	10	ug/L
1,3-Dichlorobenzene	ND	10	ug/L
1,4-Dichlorobenzene	ND	10	ug/L
1,2-Dichlorobenzene	ND	10	ug/L
bis(2-Chloroisopropyl) ether	ND	10	ug/L
N-Nitrosodi-n-propyl-amine	ND	10	ug/L
Hexachloroethane	ND	10	ug/L
Nitrobenzene	ND	10	ug/L
Isophorone	ND	10	ug/L
2-Nitrophenol	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
bis(2-Chloroethoxy) methane	ND	10	ug/L
2,4-Dichlorophenol	ND	10	ug/L
1,2,4-Trichloro-benzene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Hexachlorobutadiene	ND	10	ug/L
4-Chloro-3-methylphenol	ND	10	ug/L
2,4,6-Trichloro-phenol	ND	10	ug/L
2-Chloronaphthalene	ND	10	ug/L
Dimethyl phthalate	ND	10	ug/L
2,6-Dinitrotoluene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acenaphthene	ND	10	ug/L
2,4-Dinitrophenol	ND	50	ug/L
4-Nitrophenol	ND	50	ug/L
2,4-Dinitrotoluene	ND	10	ug/L
Diethyl phthalate	ND	10	ug/L
4-Chlorophenyl phenyl ether	ND	10	ug/L
Fluorene	ND	10	ug/L
4,6-Dinitro-2-methylphenol	ND	50	ug/L

(Continued on next page)

KINNETICS LABORATORIES, INC.

Client Sample ID: MOA00SVL0002

GC/MS Semivolatiles

Lot-Sample #...: L0F070291-002 **Work Order #...:** DEC5H101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Bromophenyl phenyl ether	ND	10	ug/L
Hexachlorobenzene	ND	10	ug/L
Pentachlorophenol	ND	50	ug/L
Phenanthrene	ND	10	ug/L
Anthracene	ND	10	ug/L
Di-n-butyl phthalate	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Pyrene	ND	10	ug/L
Butyl benzyl phthalate	ND	10	ug/L
bis(2-Ethylhexyl) phthalate	ND	10	ug/L
3,3'-Dichlorobenzidine	ND	50	ug/L
Benzo(a)anthracene	ND	10	ug/L
Chrysene	ND	10	ug/L
Di-n-octyl phthalate	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Dibenz(a,h)anthracene	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	57	(17 - 67)
Phenol-d5	29	(16 - 47)
Nitrobenzene-d5	55	(34 - 110)
2-Fluorobiphenyl	40	(30 - 113)
2,4,6-Tribromophenol	108	(43 - 130)
Terphenyl-d14	54	(46 - 129)

KINNETICS LABORATORIES, INC.

MOA00SVL0002

GC/MS Semivolatiles

Lot-Sample #: L0F070291-002 **Work Order #:** DEC5H101 **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

KINNETICS LABORATORIES, INC.

Client Sample ID: MOA00SVL0003

GC/MS Semivolatiles

Lot-Sample #...: L0F070291-022 **Work Order #...:** DEC71101 **Matrix.....:** SOLID
Date Sampled...: 06/07/00 **Date Received..:** 06/07/00
Prep Date.....: 06/15/00 **Analysis Date..:** 06/26/00
Prep Batch #...: 0168234
Dilution Factor: 10
% Moisture.....: 64 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
N-Nitrosodimethylamine	ND	9100	ug/kg
Pyridine	ND	18000	ug/kg
Phenol	ND	9100	ug/kg
Aniline	ND	9100	ug/kg
bis(2-Chloroethyl)-ether	ND	9100	ug/kg
2-Chlorophenol	ND	9100	ug/kg
1,3-Dichlorobenzene	ND	9100	ug/kg
1,4-Dichlorobenzene	ND	9100	ug/kg
Benzyl alcohol	ND	9100	ug/kg
1,2-Dichlorobenzene	ND	9100	ug/kg
2-Methylphenol	ND	9100	ug/kg
bis(2-Chloroisopropyl) ether	ND	9100	ug/kg
3-Methylphenol & 4-Methylphenol	ND	9100	ug/kg
N-Nitrosodi-n-propyl-amine	ND	9100	ug/kg
Hexachloroethane	ND	9100	ug/kg
Nitrobenzene	ND	9100	ug/kg
Isophorone	ND	9100	ug/kg
2-Nitrophenol	ND	9100	ug/kg
2,4-Dimethylphenol	ND	9100	ug/kg
bis(2-Chloroethoxy) methane	ND	9100	ug/kg
Benzoic acid	ND	44000	ug/kg
2,4-Dichlorophenol	ND	9100	ug/kg
1,2,4-Trichloro-benzene	ND	9100	ug/kg
Naphthalene	ND	9100	ug/kg
4-Chloroaniline	ND	9100	ug/kg
2,6-Dichlorophenol	ND	9100	ug/kg
Hexachlorobutadiene	ND	9100	ug/kg
4-Chloro-3-methylphenol	ND	9100	ug/kg
2-Methylnaphthalene	ND	9100	ug/kg
Hexachlorocyclopenta-diene	ND	44000	ug/kg
2,4,6-Trichloro-phenol	ND	9100	ug/kg

(Continued on next page)

KINNETICS LABORATORIES, INC.

Client Sample ID: MOA00SVL0003

GC/MS Semivolatiles

Lot-Sample #...: L0F070291-022 **Work Order #...:** DEC71101 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4,5-Trichloro-phenol	ND	9100	ug/kg
2-Chloronaphthalene	ND	9100	ug/kg
1-Chloronaphthalene	ND	9100	ug/kg
2-Nitroaniline	ND	44000	ug/kg
Dimethyl phthalate	ND	9100	ug/kg
2,6-Dinitrotoluene	ND	9100	ug/kg
Acenaphthylene	ND	9100	ug/kg
3-Nitroaniline	ND	44000	ug/kg
4-Nitroaniline	ND	44000	ug/kg
Acenaphthene	ND	9100	ug/kg
2,4-Dinitrophenol	ND	44000	ug/kg
4-Nitrophenol	ND	44000	ug/kg
2,4-Dinitrotoluene	ND	9100	ug/kg
Dibenzofuran	ND	9100	ug/kg
Diethyl phthalate	ND	9100	ug/kg
4-Chlorophenyl phenyl ether	ND	9100	ug/kg
Fluorene	ND	9100	ug/kg
4,6-Dinitro-2-methylphenol	ND	44000	ug/kg
Azobenzene	ND	9100	ug/kg
N-Nitrosodiphenylamine	ND	9100	ug/kg
4-Bromophenyl phenyl ether	ND	9100	ug/kg
Hexachlorobenzene	ND	9100	ug/kg
Pentachlorophenol	ND	44000	ug/kg
Phenanthrene	ND	9100	ug/kg
Anthracene	ND	9100	ug/kg
Carbazole	ND	9100	ug/kg
Di-n-butyl phthalate	ND	9100	ug/kg
Fluoranthene	ND	9100	ug/kg
Benzidine	ND	91000	ug/kg
Pyrene	ND	9100	ug/kg
Butyl benzyl phthalate	ND	9100	ug/kg
bis(2-Ethylhexyl) phthalate	ND	9100	ug/kg
3,3'-Dichlorobenzidine	ND	44000	ug/kg
Benzo(a)anthracene	ND	9100	ug/kg
Chrysene	ND	9100	ug/kg
Di-n-octyl phthalate	ND	9100	ug/kg
Benzo(b)fluoranthene	ND	9100	ug/kg
Benzo(k)fluoranthene	ND	9100	ug/kg

(Continued on next page)

KINNETICS LABORATORIES, INC.

Client Sample ID: MOA00SVL0003

GC/MS Semivolatiles

Lot-Sample #...: L0F070291-022 **Work Order #...:** DEC71101 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzo(a)pyrene	ND	9100	ug/kg
Indeno(1,2,3-cd)pyrene	ND	9100	ug/kg
Dibenz(a,h)anthracene	ND	9100	ug/kg
Benzo(ghi)perylene	ND	9100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	0.0 NC,I	(25 - 132)
Phenol-d5	0.0 NC,I	(25 - 144)
Nitrobenzene-d5	0.0 NC,I	(25 - 159)
2-Fluorobiphenyl	0.0 NC,I	(25 - 158)
2,4,6-Tribromophenol	0.0 NC,I	(25 - 178)
Terphenyl-d14	0.0 NC,I	(25 - 166)

NOTE(S):

NC The recovery and/or RPD were not calculated.

I Matrix interference.

Results and reporting limits have been adjusted for dry weight.

KINNETICS LABORATORIES, INC.

MOA00SVL0003

GC/MS Semivolatiles

Lot-Sample #: L0F070291-022 **Work Order #:** DEC71101 **Matrix:** SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/kg

KINNETICS LABORATORIES, INC.

Client Sample ID: MOA00SVL0003

General Chemistry

Lot-Sample #...: L0F070291-022 **Work Order #...:** DEC71 **Matrix.....:** SOLID
Date Sampled...: 06/07/00 **Date Received..:** 06/07/00
% Moisture.....: 64

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**63.9**	**1.0**	**No Units**	**ASTM Moisture, %**	**07/12-07/18/00**	**0200462**

Dilution Factor: 1

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: L0F070291 **Work Order #...:** DEMFF101 **Matrix.....:** WATER
MB Lot-Sample #: L0F140000-251

Prep Date.....: 06/13/00
Analysis Date..: 06/26/00 **Prep Batch #...:** 0166251
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Phenol	ND	10	ug/L	CFR136A 625
bis(2-Chloroethyl)-ether	ND	10	ug/L	CFR136A 625
2-Chlorophenol	ND	10	ug/L	CFR136A 625
1,3-Dichlorobenzene	ND	10	ug/L	CFR136A 625
1,4-Dichlorobenzene	ND	10	ug/L	CFR136A 625
1,2-Dichlorobenzene	ND	10	ug/L	CFR136A 625
bis(2-Chloroisopropyl) ether	ND	10	ug/L	CFR136A 625
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	CFR136A 625
Hexachloroethane	ND	10	ug/L	CFR136A 625
Nitrobenzene	ND	10	ug/L	CFR136A 625
Isophorone	ND	10	ug/L	CFR136A 625
2-Nitrophenol	ND	10	ug/L	CFR136A 625
2,4-Dimethylphenol	ND	10	ug/L	CFR136A 625
bis(2-Chloroethoxy) methane	ND	10	ug/L	CFR136A 625
2,4-Dichlorophenol	ND	10	ug/L	CFR136A 625
1,2,4-Trichloro-benzene	ND	10	ug/L	CFR136A 625
Naphthalene	ND	10	ug/L	CFR136A 625
Hexachlorobutadiene	ND	10	ug/L	CFR136A 625
4-Chloro-3-methylphenol	ND	10	ug/L	CFR136A 625
2,4,6-Trichloro-phenol	ND	10	ug/L	CFR136A 625
2-Chloronaphthalene	ND	10	ug/L	CFR136A 625
Dimethyl phthalate	ND	10	ug/L	CFR136A 625
2,6-Dinitrotoluene	ND	10	ug/L	CFR136A 625
Acenaphthylene	ND	10	ug/L	CFR136A 625
Acenaphthene	ND	10	ug/L	CFR136A 625
2,4-Dinitrophenol	ND	50	ug/L	CFR136A 625
4-Nitrophenol	ND	50	ug/L	CFR136A 625
2,4-Dinitrotoluene	ND	10	ug/L	CFR136A 625
Diethyl phthalate	ND	10	ug/L	CFR136A 625
4-Chlorophenyl phenyl ether	ND	10	ug/L	CFR136A 625
Fluorene	ND	10	ug/L	CFR136A 625
4,6-Dinitro-2-methylphenol	ND	50	ug/L	CFR136A 625
4-Bromophenyl phenyl ether	ND	10	ug/L	CFR136A 625

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: L0F070291 **Work Order #...:** DEMFF101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Hexachlorobenzene	ND	10	ug/L	CFR136A 625
Pentachlorophenol	ND	50	ug/L	CFR136A 625
Phenanthrene	ND	10	ug/L	CFR136A 625
Anthracene	ND	10	ug/L	CFR136A 625
Di-n-butyl phthalate	ND	10	ug/L	CFR136A 625
Fluoranthene	ND	10	ug/L	CFR136A 625
Pyrene	ND	10	ug/L	CFR136A 625
Butyl benzyl phthalate	ND	10	ug/L	CFR136A 625
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	CFR136A 625
3,3'-Dichlorobenzidine	ND	50	ug/L	CFR136A 625
Benzo(a)anthracene	ND	10	ug/L	CFR136A 625
Chrysene	ND	10	ug/L	CFR136A 625
Di-n-octyl phthalate	ND	10	ug/L	CFR136A 625
Benzo(b)fluoranthene	ND	10	ug/L	CFR136A 625
Benzo(k)fluoranthene	ND	10	ug/L	CFR136A 625
Benzo(a)pyrene	ND	10	ug/L	CFR136A 625
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	CFR136A 625
Dibenz(a,h)anthracene	ND	10	ug/L	CFR136A 625
Benzo(ghi)perylene	ND	10	ug/L	CFR136A 625

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	47	(17 - 67)
Phenol-d5	22	(16 - 47)
Nitrobenzene-d5	49	(34 - 110)
2-Fluorobiphenyl	60	(30 - 113)
2,4,6-Tribromophenol	61	(43 - 130)
Terphenyl-d14	82	(46 - 129)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: L0F070291 **Work Order #...:** DET85101 **Matrix.....:** SOLID
MB Lot-Sample #: L0F160000-234

Prep Date.....: 06/15/00
Analysis Date..: 06/26/00 **Prep Batch #...:** 0168234
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
N-Nitrosodimethylamine	ND	330	ug/kg	SW846 8270C
Pyridine	ND	660	ug/kg	SW846 8270C
Phenol	ND	330	ug/kg	SW846 8270C
Aniline	ND	330	ug/kg	SW846 8270C
bis(2-Chloroethyl)-ether	ND	330	ug/kg	SW846 8270C
2-Chlorophenol	ND	330	ug/kg	SW846 8270C
1,3-Dichlorobenzene	ND	330	ug/kg	SW846 8270C
1,4-Dichlorobenzene	ND	330	ug/kg	SW846 8270C
Benzyl alcohol	ND	330	ug/kg	SW846 8270C
1,2-Dichlorobenzene	ND	330	ug/kg	SW846 8270C
2-Methylphenol	ND	330	ug/kg	SW846 8270C
bis(2-Chloroisopropyl) ether	ND	330	ug/kg	SW846 8270C
3-Methylphenol & 4-Methylphenol	ND	330	ug/kg	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	330	ug/kg	SW846 8270C
Hexachloroethane	ND	330	ug/kg	SW846 8270C
Nitrobenzene	ND	330	ug/kg	SW846 8270C
Isophorone	ND	330	ug/kg	SW846 8270C
2-Nitrophenol	ND	330	ug/kg	SW846 8270C
2,4-Dimethylphenol	ND	330	ug/kg	SW846 8270C
bis(2-Chloroethoxy) methane	ND	330	ug/kg	SW846 8270C
Benzoic acid	ND	1600	ug/kg	SW846 8270C
2,4-Dichlorophenol	ND	330	ug/kg	SW846 8270C
1,2,4-Trichloro-benzene	ND	330	ug/kg	SW846 8270C
Naphthalene	ND	330	ug/kg	SW846 8270C
4-Chloroaniline	ND	330	ug/kg	SW846 8270C
2,6-Dichlorophenol	ND	330	ug/kg	SW846 8270C
Hexachlorobutadiene	ND	330	ug/kg	SW846 8270C
4-Chloro-3-methylphenol	ND	330	ug/kg	SW846 8270C
2-Methylnaphthalene	ND	330	ug/kg	SW846 8270C
Hexachlorocyclopenta-diene	ND	1600	ug/kg	SW846 8270C
2,4,6-Trichloro-phenol	ND	330	ug/kg	SW846 8270C
2,4,5-Trichloro-phenol	ND	330	ug/kg	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: L0F070291 **Work Order #...:** DET85101 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2-Chloronaphthalene	ND	330	ug/kg	SW846 8270C
1-Chloronaphthalene	ND	330	ug/kg	SW846 8270C
2-Nitroaniline	ND	1600	ug/kg	SW846 8270C
Dimethyl phthalate	ND	330	ug/kg	SW846 8270C
2,6-Dinitrotoluene	ND	330	ug/kg	SW846 8270C
Acenaphthylene	ND	330	ug/kg	SW846 8270C
3-Nitroaniline	ND	1600	ug/kg	SW846 8270C
4-Nitroaniline	ND	1600	ug/kg	SW846 8270C
Acenaphthene	ND	330	ug/kg	SW846 8270C
2,4-Dinitrophenol	ND	1600	ug/kg	SW846 8270C
4-Nitrophenol	ND	1600	ug/kg	SW846 8270C
2,4-Dinitrotoluene	ND	330	ug/kg	SW846 8270C
Dibenzofuran	ND	330	ug/kg	SW846 8270C
Diethyl phthalate	ND	330	ug/kg	SW846 8270C
4-Chlorophenyl phenyl ether	ND	330	ug/kg	SW846 8270C
Fluorene	ND	330	ug/kg	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	1600	ug/kg	SW846 8270C
Azobenzene	ND	330	ug/kg	SW846 8270C
N-Nitrosodiphenylamine	ND	330	ug/kg	SW846 8270C
4-Bromophenyl phenyl ether	ND	330	ug/kg	SW846 8270C
Hexachlorobenzene	ND	330	ug/kg	SW846 8270C
Pentachlorophenol	ND	1600	ug/kg	SW846 8270C
Phenanthrene	ND	330	ug/kg	SW846 8270C
Anthracene	ND	330	ug/kg	SW846 8270C
Carbazole	ND	330	ug/kg	SW846 8270C
Di-n-butyl phthalate	ND	330	ug/kg	SW846 8270C
Fluoranthene	ND	330	ug/kg	SW846 8270C
Benzidine	ND	3300	ug/kg	SW846 8270C
Pyrene	ND	330	ug/kg	SW846 8270C
Butyl benzyl phthalate	ND	330	ug/kg	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	330	ug/kg	SW846 8270C
3,3'-Dichlorobenzidine	ND	1600	ug/kg	SW846 8270C
Benzo(a)anthracene	ND	330	ug/kg	SW846 8270C
Chrysene	ND	330	ug/kg	SW846 8270C
Di-n-octyl phthalate	ND	330	ug/kg	SW846 8270C
Benzo(b)fluoranthene	ND	330	ug/kg	SW846 8270C
Benzo(k)fluoranthene	ND	330	ug/kg	SW846 8270C
Benzo(a)pyrene	ND	330	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	330	ug/kg	SW846 8270C
Dibenz(a,h)anthracene	ND	330	ug/kg	SW846 8270C
Benzo(ghi)perylene	ND	330	ug/kg	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: L0F070291 **Work Order #...:** DET85101 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	78	(25 - 132)
Phenol-d5	84	(25 - 144)
Nitrobenzene-d5	73	(25 - 159)
2-Fluorobiphenyl	85	(25 - 158)
2,4,6-Tribromophenol	70	(25 - 178)
Terphenyl-d14	87	(25 - 166)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: L0F070291 Work Order #...: DEMFF102 Matrix.....: WATER
LCS Lot-Sample#: L0F140000-251
Prep Date.....: 06/13/00 Analysis Date..: 06/27/00
Prep Batch #...: 0166251
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Phenol	45	(5.0- 112)	CFR136A 625
bis(2-Chloroethyl)-ether	87	(12 - 158)	CFR136A 625
2-Chlorophenol	81	(23 - 134)	CFR136A 625
1,3-Dichlorobenzene	81	(1.0- 172)	CFR136A 625
1,4-Dichlorobenzene	81	(20 - 124)	CFR136A 625
1,2-Dichlorobenzene	81	(32 - 129)	CFR136A 625
bis(2-Chloroisopropyl) ether	42	(12 - 158)	CFR136A 625
N-Nitrosodi-n-propyl-amine	70	(1.0- 230)	CFR136A 625
Hexachloroethane	80	(40 - 113)	CFR136A 625
Nitrobenzene	77	(35 - 180)	CFR136A 625
Isophorone	72	(21 - 196)	CFR136A 625
2-Nitrophenol	82	(29 - 182)	CFR136A 625
2,4-Dimethylphenol	79	(32 - 119)	CFR136A 625
bis(2-Chloroethoxy) methane	58	(33 - 184)	CFR136A 625
2,4-Dichlorophenol	98	(39 - 135)	CFR136A 625
1,2,4-Trichloro-benzene	103	(44 - 142)	CFR136A 625
Naphthalene	80	(21 - 133)	CFR136A 625
Hexachlorobutadiene	131 a,i	(24 - 116)	CFR136A 625
4-Chloro-3-methylphenol	98	(22 - 147)	CFR136A 625
2,4,6-Trichloro-phenol	84	(37 - 144)	CFR136A 625
2-Chloronaphthalene	56 a,i	(60 - 118)	CFR136A 625
Dimethyl phthalate	89	(1.0- 112)	CFR136A 625
2,6-Dinitrotoluene	98	(50 - 158)	CFR136A 625
Acenaphthylene	78	(33 - 145)	CFR136A 625
Acenaphthene	75	(47 - 145)	CFR136A 625
2,4-Dinitrophenol	55	(1.0- 191)	CFR136A 625
4-Nitrophenol	37	(1.0- 132)	CFR136A 625
2,4-Dinitrotoluene	96	(1.0- 191)	CFR136A 625
Diethyl phthalate	93	(1.0- 114)	CFR136A 625

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: L0F070291 Work Order #...: DEMFF102 Matrix.....: WATER
LCS Lot-Sample#: L0F140000-251

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
4-Chlorophenyl phenyl ether	71	(25 - 158)	CFR136A 625
Fluorene	78	(59 - 121)	CFR136A 625
4,6-Dinitro-2-methylphenol	60	(1.0- 181)	CFR136A 625
4-Bromophenyl phenyl ether	73	(53 - 127)	CFR136A 625
Hexachlorobenzene	95	(1.0- 152)	CFR136A 625
Pentachlorophenol	60	(14 - 176)	CFR136A 625
Phenanthrene	79	(54 - 120)	CFR136A 625
Anthracene	76	(27 - 133)	CFR136A 625
Di-n-butyl phthalate	85	(1.0- 118)	CFR136A 625
Fluoranthene	89	(26 - 137)	CFR136A 625
Pyrene	89	(52 - 115)	CFR136A 625
Butyl benzyl phthalate	51	(1.0- 152)	CFR136A 625
bis(2-Ethylhexyl) phthalate	57	(8.0- 158)	CFR136A 625
3,3'-Dichlorobenzidine	39	(1.0- 262)	CFR136A 625
Benzo(a)anthracene	92	(33 - 143)	CFR136A 625
Chrysene	95	(17 - 168)	CFR136A 625
Di-n-octyl phthalate	48	(4.0- 146)	CFR136A 625
Benzo(b)fluoranthene	80	(24 - 159)	CFR136A 625
Benzo(k)fluoranthene	82	(11 - 162)	CFR136A 625
Benzo(a)pyrene	93	(17 - 163)	CFR136A 625
Indeno(1,2,3-cd)pyrene	94	(1.0- 171)	CFR136A 625
Dibenz(a,h)anthracene	92	(1.0- 227)	CFR136A 625
Benzo(ghi)perylene	91	(1.0- 219)	CFR136A 625

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	74 *,i	(17 - 67)
Phenol-d5	42	(16 - 47)
Nitrobenzene-d5	80	(34 - 110)
2-Fluorobiphenyl	76	(30 - 113)
2,4,6-Tribromophenol	107	(43 - 130)
Terphenyl-d14	83	(46 - 129)

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: L0F070291 **Work Order #...:** DEMFF102 **Matrix.....:** WATER
LCS Lot-Sample#: L0F140000-251

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

* Surrogate recovery is outside stated control limits.

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: L0F070291 **Work Order #...:** DET85102 **Matrix.....:** SOLID
LCS Lot-Sample#: L0F160000-234
Prep Date.....: 06/15/00 **Analysis Date..:** 06/26/00
Prep Batch #...: 0168234
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Phenol	**85**	**(10 - 133)**	**SW846 8270C**
2-Chlorophenol	**80**	**(10 - 135)**	**SW846 8270C**
1,4-Dichlorobenzene	**80**	**(10 - 138)**	**SW846 8270C**
1,2,4-Trichloro-benzene	**88**	**(10 - 128)**	**SW846 8270C**
4-Chloro-3-methylphenol	**94**	**(27 - 144)**	**SW846 8270C**
Acenaphthene	**81**	**(22 - 143)**	**SW846 8270C**
4-Nitrophenol	**56**	**(10 - 156)**	**SW846 8270C**
Pentachlorophenol	**55**	**(17 - 157)**	**SW846 8270C**
Pyrene	**97**	**(30 - 141)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	80	(25 - 132)
Phenol-d5	90	(25 - 144)
Nitrobenzene-d5	73	(25 - 159)
2-Fluorobiphenyl	78	(25 - 158)
2,4,6-Tribromophenol	102	(25 - 178)
Terphenyl-d14	83	(25 - 166)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: L0F070291 Work Order #...: DEC5G102-MS Matrix.....: WATER
MS Lot-Sample #: L0F070291-001 DEC5G103-MSD
Date Sampled...: 06/07/00 Date Received..: 06/07/00
Prep Date.....: 06/13/00 Analysis Date..: 06/27/00
Prep Batch #...: 0166251
Dilution Factor: 2.02

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Phenol	34	(5.0- 112)			CFR136A 625
	34	(5.0- 112)	0.10	(0-20)	CFR136A 625
bis(2-Chloroethyl)-ether	68	(12 - 158)			CFR136A 625
	128 p	(12 - 158)	61	(0-20)	CFR136A 625
2-Chlorophenol	62	(23 - 134)			CFR136A 625
	62	(23 - 134)	0.49	(0-20)	CFR136A 625
1,3-Dichlorobenzene	56	(1.0- 172)			CFR136A 625
	57	(1.0- 172)	0.96	(0-20)	CFR136A 625
1,4-Dichlorobenzene	56	(20 - 124)			CFR136A 625
	57	(20 - 124)	0.96	(0-20)	CFR136A 625
1,2-Dichlorobenzene	57	(32 - 129)			CFR136A 625
	56	(32 - 129)	1.7	(0-20)	CFR136A 625
bis(2-Chloroisopropyl) ether	29	(12 - 158)			CFR136A 625
	55 p	(12 - 158)	63	(0-20)	CFR136A 625
N-Nitrosodi-n-propyl-amine	54	(1.0- 230)			CFR136A 625
	95 p	(1.0- 230)	55	(0-20)	CFR136A 625
Hexachloroethane	52	(40 - 113)			CFR136A 625
	50	(40 - 113)	2.2	(0-20)	CFR136A 625
Nitrobenzene	62	(35 - 180)			CFR136A 625
	67	(35 - 180)	6.7	(0-20)	CFR136A 625
Isophorone	56	(21 - 196)			CFR136A 625
	57	(21 - 196)	1.9	(0-20)	CFR136A 625
2-Nitrophenol	58	(29 - 182)			CFR136A 625
	62	(29 - 182)	5.3	(0-20)	CFR136A 625
2,4-Dimethylphenol	58	(32 - 119)			CFR136A 625
	147 a,p	(32 - 119)	86	(0-20)	CFR136A 625
bis(2-Chloroethoxy) methane	73	(33 - 184)			CFR136A 625
	81	(33 - 184)	11	(0-20)	CFR136A 625
2,4-Dichlorophenol	89	(39 - 135)			CFR136A 625
	90	(39 - 135)	1.1	(0-20)	CFR136A 625
1,2,4-Trichloro-benzene	78	(44 - 142)			CFR136A 625
	84	(44 - 142)	7.1	(0-20)	CFR136A 625

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: L0F070291 Work Order #...: DEC5G102-MS Matrix.....: WATER
MS Lot-Sample #: L0F070291-001 DEC5G103-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Naphthalene	60	(21 - 133)			CFR136A 625
	62	(21 - 133)	1.9	(0-20)	CFR136A 625
Hexachlorobutadiene	110	(24 - 116)			CFR136A 625
	116	(24 - 116)	5.4	(0-20)	CFR136A 625
4-Chloro-3-methylphenol	102	(22 - 147)			CFR136A 625
	107	(22 - 147)	5.2	(0-20)	CFR136A 625
2,4,6-Trichloro-phenol	64	(37 - 144)			CFR136A 625
	69	(37 - 144)	7.3	(0-20)	CFR136A 625
2-Chloronaphthalene	45 a	(60 - 118)			CFR136A 625
	45 a	(60 - 118)	0.05	(0-20)	CFR136A 625
Dimethyl phthalate	79	(1.0- 112)			CFR136A 625
	82	(1.0- 112)	3.4	(0-20)	CFR136A 625
2,6-Dinitrotoluene	86	(50 - 158)			CFR136A 625
	89	(50 - 158)	4.5	(0-20)	CFR136A 625
Acenaphthylene	66	(33 - 145)			CFR136A 625
	69	(33 - 145)	4.2	(0-20)	CFR136A 625
Acenaphthene	68	(47 - 145)			CFR136A 625
	70	(47 - 145)	2.8	(0-20)	CFR136A 625
2,4-Dinitrophenol	50	(1.0- 191)			CFR136A 625
	23 p	(1.0- 191)	74	(0-20)	CFR136A 625
4-Nitrophenol	88	(1.0- 132)			CFR136A 625
	48 p	(1.0- 132)	59	(0-20)	CFR136A 625
2,4-Dinitrotoluene	93	(1.0- 191)			CFR136A 625
	101	(1.0- 191)	8.5	(0-20)	CFR136A 625
Diethyl phthalate	202 a	(1.0- 114)			CFR136A 625
	107 p	(1.0- 114)	62	(0-20)	CFR136A 625
4-Chlorophenyl phenyl ether	190 a	(25 - 158)			CFR136A 625
	104 p	(25 - 158)	58	(0-20)	CFR136A 625
Fluorene	80	(59 - 121)			CFR136A 625
	85	(59 - 121)	7.1	(0-20)	CFR136A 625
4,6-Dinitro-2-methylphenol	63	(1.0- 181)			CFR136A 625
	29 p	(1.0- 181)	74	(0-20)	CFR136A 625
4-Bromophenyl phenyl ether	177 a	(53 - 127)			CFR136A 625
	94 p	(53 - 127)	62	(0-20)	CFR136A 625
Hexachlorobenzene	100	(1.0- 152)			CFR136A 625
	95	(1.0- 152)	5.0	(0-20)	CFR136A 625

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: L0F070291 Work Order #...: DEC5G102-MS Matrix.....: WATER
MS Lot-Sample #: L0F070291-001 DEC5G103-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Pentachlorophenol	17	(14 - 176)			CFR136A 625
	16	(14 - 176)	9.4	(0-20)	CFR136A 625
Phenanthrene	76	(54 - 120)			CFR136A 625
	78	(54 - 120)	2.8	(0-20)	CFR136A 625
Anthracene	72	(27 - 133)			CFR136A 625
	76	(27 - 133)	4.8	(0-20)	CFR136A 625
Di-n-butyl phthalate	165 a	(1.0- 118)			CFR136A 625
	86 p	(1.0- 118)	63	(0-20)	CFR136A 625
Fluoranthene	102	(26 - 137)			CFR136A 625
	106	(26 - 137)	4.2	(0-20)	CFR136A 625
Pyrene	84	(52 - 115)			CFR136A 625
	89	(52 - 115)	5.7	(0-20)	CFR136A 625
Butyl benzyl phthalate	171 a	(1.0- 152)			CFR136A 625
	84 p	(1.0- 152)	68	(0-20)	CFR136A 625
bis(2-Ethylhexyl) phthalate	174 a	(8.0- 158)			CFR136A 625
	89 p	(8.0- 158)	64	(0-20)	CFR136A 625
3,3'-Dichlorobenzidine	57	(1.0- 262)			CFR136A 625
	62	(1.0- 262)	7.9	(0-20)	CFR136A 625
Benzo(a)anthracene	92	(33 - 143)			CFR136A 625
	93	(33 - 143)	0.02	(0-20)	CFR136A 625
Chrysene	76	(17 - 168)			CFR136A 625
	81	(17 - 168)	6.6	(0-20)	CFR136A 625
Di-n-octyl phthalate	179 a	(4.0- 146)			CFR136A 625
	90 p	(4.0- 146)	66	(0-20)	CFR136A 625
Benzo(b)fluoranthene	70	(24 - 159)			CFR136A 625
	87 p	(24 - 159)	22	(0-20)	CFR136A 625
Benzo(k)fluoranthene	82	(11 - 162)			CFR136A 625
	63 p	(11 - 162)	26	(0-20)	CFR136A 625
Benzo(a)pyrene	83	(17 - 163)			CFR136A 625
	86	(17 - 163)	3.4	(0-20)	CFR136A 625
Indeno(1,2,3-cd)pyrene	92	(1.0- 171)			CFR136A 625
	97	(1.0- 171)	4.9	(0-20)	CFR136A 625
Dibenz(a,h)anthracene	92	(1.0- 227)			CFR136A 625
	99	(1.0- 227)	7.0	(0-20)	CFR136A 625
Benzo(ghi)perylene	91	(1.0- 219)			CFR136A 625
	99	(1.0- 219)	8.1	(0-20)	CFR136A 625

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	79 *,i	(17 - 67)
	83 *	(17 - 67)

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: L0F070291 **Work Order #...:** DEC5G102-MS **Matrix.....:** WATER
MS Lot-Sample #: L0F070291-001 DEC5G103-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Phenol-d5	53 *,i	(16 - 47)
	51 *	(16 - 47)
Nitrobenzene-d5	69	(34 - 110)
	74	(34 - 110)
2-Fluorobiphenyl	67	(30 - 113)
	66	(30 - 113)
2,4,6-Tribromophenol	86	(43 - 130)
	95	(43 - 130)
Terphenyl-d14	82	(46 - 129)
	85	(46 - 129)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

* Surrogate recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

a Spiked analyte recovery is outside stated control limits.

KINNETICS LABORATORIES, INC.

Client Sample ID: Composite: MOA00VOP0001 through 0008

GC/MS Volatiles

Lot-Sample #...: L0F070291-023 **Work Order #...:** DEK4N101 **Matrix.....:** WATER
Date Sampled...: 06/07/00 **Date Received..:** 06/07/00
Prep Date.....: 06/12/00 **Analysis Date..:** 06/12/00
Prep Batch #...: 0165229
Dilution Factor: 1 **Method.....:** CFR136A 624

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1-Dichloroethene	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Bromomethane	ND	2.0	ug/L
Chloroethane	ND	2.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
Methylene chloride	**5.8**	**1.0**	**ug/L**
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
Chloroform	**2.9**	**1.0**	**ug/L**
1,2-Dichloroethane	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Benzene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
2-Chloroethyl vinyl ether	ND	5.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Toluene	**15**	**1.0**	**ug/L**
Dibromochloromethane	ND	1.0	ug/L
Tetrachloroethene	**1.5**	**1.0**	**ug/L**
Chlorobenzene	ND	1.0	ug/L
Ethylbenzene	**1.4**	**1.0**	**ug/L**
Bromoform	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	**1.6**	**1.0**	**ug/L**
1,3-Dichlorobenzene	**2.6**	**1.0**	**ug/L**
1,4-Dichlorobenzene	**1.1**	**1.0**	**ug/L**
1,2-Dichlorobenzene	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	107	(70 - 130)
Toluene-d8	118	(70 - 130)
Bromofluorobenzene	114	(70 - 130)

KINNETICS LABORATORIES, INC.

Client Sample ID: Composite: MOA00VOP0009 through 0016

GC/MS Volatiles

Lot-Sample #...: L0F070291-024 **Work Order #...:** DEK4P101 **Matrix.....:** WATER
Date Sampled...: 06/07/00 **Date Received..:** 06/07/00
Prep Date.....: 06/13/00 **Analysis Date..:** 06/13/00
Prep Batch #...: 0166310
Dilution Factor: 1 **Method.....:** CFR136A 624

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1-Dichloroethane	ND	1.0	ug/L
Chloroform	**3.8**	**1.0**	**ug/L**
1,2-Dichloroethane	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Bromomethane	ND	2.0	ug/L
Chloroethane	ND	2.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
Methylene chloride	**3.8**	**1.0**	**ug/L**
trans-1,2-Dichloroethene	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Benzene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
2-Chloroethyl vinyl ether	ND	5.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Toluene	**10**	**1.0**	**ug/L**
Dibromochloromethane	ND	1.0	ug/L
Tetrachloroethene	**1.3**	**1.0**	**ug/L**
Chlorobenzene	ND	1.0	ug/L
Ethylbenzene	**1.0**	**1.0**	**ug/L**
Bromoform	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
1,3-Dichlorobenzene	**1.8**	**1.0**	**ug/L**
1,4-Dichlorobenzene	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	106	(70 - 130)
Toluene-d8	116	(70 - 130)
Bromofluorobenzene	118	(70 - 130)

KINNETICS LABORATORIES, INC.

Composite: MOA00VOP0009 through 0016

GC/MS Volatiles

Lot-Sample #: L0F070291-024 **Work Order #:** DEK4P101 **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown		840 J	M	1.9825	ug/L
Unknown		88 J	M	2.4449	ug/L
Unknown		23 J	M	2.7598	ug/L
Unknown		7.5 J	M	12.707	ug/L
Unknown		4.0 J	M	13.031	ug/L
Unknown		4.1 J	M	13.267	ug/L
Unknown		2.6 J	M	13.533	ug/L
Unknown		18 J	M	13.602	ug/L
Unknown		3.9 J	M	13.808	ug/L
Unknown		15 J	M	13.927	ug/L
Unknown		3.1 J	M	14.064	ug/L
Unknown		7.4 J	M	14.281	ug/L
Unknown		2.6 J	M	14.487	ug/L
Unknown		1.8 J	M	14.802	ug/L
Unknown		2.3 J	M	14.92	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

KINNETICS LABORATORIES, INC.

Client Sample ID: MOA00VOP0017

GC/MS Volatiles

Lot-Sample #...: L0F070291-019 **Work Order #...:** DEC6F101 **Matrix.....:** WATER
Date Sampled...: 06/06/00 **Date Received..:** 06/07/00
Prep Date.....: 06/12/00 **Analysis Date..:** 06/12/00
Prep Batch #...: 0165229
Dilution Factor: 1 **Method.....:** CFR136A 624

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Chloromethane	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Bromomethane	ND	2.0	ug/L
Chloroethane	ND	2.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
Methylene chloride	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Benzene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
2-Chloroethyl vinyl ether	ND	5.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	94	(70 - 130)
Toluene-d8	119	(70 - 130)
Bromofluorobenzene	117	(70 - 130)

KINNETICS LABORATORIES, INC.

Client Sample ID: MOA00VOP0018

GC/MS Volatiles

Lot-Sample #...: L0F070291-020 **Work Order #...:** DEC6M101 **Matrix.....:** WATER
Date Sampled...: 06/06/00 **Date Received..:** 06/07/00
Prep Date.....: 06/12/00 **Analysis Date..:** 06/12/00
Prep Batch #...: 0165229
Dilution Factor: 1 **Method.....:** CFR136A 624

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Chloromethane	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Bromomethane	ND	2.0	ug/L
Chloroethane	ND	2.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
Methylene chloride	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Benzene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
2-Chloroethyl vinyl ether	ND	5.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	76	(70 - 130)
Toluene-d8	123	(70 - 130)
Bromofluorobenzene	104	(70 - 130)

KINNETICS LABORATORIES, INC.

Client Sample ID: MOA00VOP0019

GC/MS Volatiles

Lot-Sample #...: L0F070291-021 **Work Order #...:** DEC6P101 **Matrix.....:** SOLID
Date Sampled...: 06/07/00 **Date Received..:** 06/07/00
Prep Date.....: 06/09/00 **Analysis Date..:** 06/09/00
Prep Batch #...: 0164227
Dilution Factor: 1
% Moisture.....: 64 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	680	ug/kg
Bromodichloromethane	ND	680	ug/kg
Bromomethane	ND	1400	ug/kg
Bromoform	ND	680	ug/kg
Carbon tetrachloride	ND	680	ug/kg
Chlorobenzene	ND	680	ug/kg
2-Chloroethyl vinyl ether	ND	2700	ug/kg
Chloroethane	ND	1400	ug/kg
Chloroform	ND	680	ug/kg
Chloromethane	ND	1400	ug/kg
Dibromochloromethane	ND	680	ug/kg
1,2-Dichlorobenzene	ND	680	ug/kg
1,3-Dichlorobenzene	ND	680	ug/kg
1,4-Dichlorobenzene	ND	680	ug/kg
1,1-Dichloroethane	ND	680	ug/kg
1,2-Dichloroethane	ND	680	ug/kg
trans-1,2-Dichloroethene	ND	340	ug/kg
1,1-Dichloroethene	ND	680	ug/kg
1,2-Dichloropropane	ND	680	ug/kg
cis-1,3-Dichloropropene	ND	680	ug/kg
trans-1,3-Dichloropropene	ND	680	ug/kg
Ethylbenzene	ND	680	ug/kg
Methylene chloride	ND	680	ug/kg
1,1,2,2-Tetrachloroethane	ND	680	ug/kg
Tetrachloroethene	ND	680	ug/kg
Toluene	ND	680	ug/kg
1,1,1-Trichloroethane	ND	680	ug/kg
1,1,2-Trichloroethane	ND	680	ug/kg
Trichloroethene	ND	680	ug/kg
Vinyl chloride	ND	1400	ug/kg
Trichlorofluoromethane (Freon 11)	ND	140	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	115	(70 - 130)
1,2-Dichloroethane-d4	90	(70 - 130)
Toluene-d8	112	(70 - 130)
Dibromofluoromethane	100	(70 - 130)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

KINNETICS LABORATORIES, INC.

Client Sample ID: MOA00VOP0019

General Chemistry

Lot-Sample #...: L0F070291-021 **Work Order #...:** DEC6P **Matrix.....:** SOLID
Date Sampled...: 06/07/00 **Date Received..:** 06/07/00
% Moisture.....: 64

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**63.5**	**1.0**	**No Units**	**ASTM Moisture, %**	**07/12-07/18/00**	**0200462**

Dilution Factor: 1

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: L0F070291 **Work Order #...:** DEMRD101 **Matrix.....:** WATER
MB Lot-Sample #: L0F140000-310

Prep Date.....: 06/13/00
Analysis Date..: 06/13/00 **Prep Batch #...:** 0166310
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	1.0	ug/L	CFR136A 624
Bromodichloromethane	ND	1.0	ug/L	CFR136A 624
Bromoform	ND	1.0	ug/L	CFR136A 624
Bromomethane	ND	2.0	ug/L	CFR136A 624
Carbon tetrachloride	ND	1.0	ug/L	CFR136A 624
2-Chloroethyl vinyl ether	ND	5.0	ug/L	CFR136A 624
Chloroform	ND	1.0	ug/L	CFR136A 624
Chloromethane	ND	2.0	ug/L	CFR136A 624
1,4-Dichlorobenzene	ND	1.0	ug/L	CFR136A 624
1,1-Dichloroethane	ND	1.0	ug/L	CFR136A 624
1,2-Dichloroethane	ND	1.0	ug/L	CFR136A 624
Chlorobenzene	ND	1.0	ug/L	CFR136A 624
Dibromochloromethane	ND	1.0	ug/L	CFR136A 624
Chloroethane	ND	2.0	ug/L	CFR136A 624
1,2-Dichlorobenzene	ND	1.0	ug/L	CFR136A 624
1,3-Dichlorobenzene	ND	1.0	ug/L	CFR136A 624
1,1-Dichloroethene	ND	1.0	ug/L	CFR136A 624
trans-1,2-Dichloroethene	ND	1.0	ug/L	CFR136A 624
1,2-Dichloropropane	ND	1.0	ug/L	CFR136A 624
cis-1,3-Dichloropropene	ND	1.0	ug/L	CFR136A 624
trans-1,3-Dichloropropene	ND	1.0	ug/L	CFR136A 624
Ethylbenzene	ND	1.0	ug/L	CFR136A 624
Trichlorofluoromethane	ND	2.0	ug/L	CFR136A 624
Methylene chloride	ND	1.0	ug/L	CFR136A 624
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	CFR136A 624
Tetrachloroethene	ND	1.0	ug/L	CFR136A 624
Toluene	ND	1.0	ug/L	CFR136A 624
1,1,1-Trichloroethane	ND	1.0	ug/L	CFR136A 624
1,1,2-Trichloroethane	ND	1.0	ug/L	CFR136A 624
Trichloroethene	ND	1.0	ug/L	CFR136A 624
Vinyl chloride	ND	2.0	ug/L	CFR136A 624

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	92	(70 - 130)
Toluene-d8	117	(70 - 130)
Bromofluorobenzene	116	(70 - 130)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: L0F070291 **Work Order #...:** DEKRK101 **Matrix.....:** WATER
MB Lot-Sample #: L0F130000-229

Prep Date.....: 06/12/00
Analysis Date..: 06/12/00 **Prep Batch #...:** 0165229
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	2.0	ug/L	CFR136A 624
Vinyl chloride	ND	2.0	ug/L	CFR136A 624
Bromomethane	ND	2.0	ug/L	CFR136A 624
Chloroethane	ND	2.0	ug/L	CFR136A 624
Trichlorofluoromethane	ND	2.0	ug/L	CFR136A 624
Methylene chloride	ND	1.0	ug/L	CFR136A 624
trans-1,2-Dichloroethene	ND	1.0	ug/L	CFR136A 624
1,1-Dichloroethane	ND	1.0	ug/L	CFR136A 624
1,1-Dichloroethene	ND	1.0	ug/L	CFR136A 624
Chloroform	ND	1.0	ug/L	CFR136A 624
1,2-Dichloroethane	ND	1.0	ug/L	CFR136A 624
1,1,1-Trichloroethane	ND	1.0	ug/L	CFR136A 624
Carbon tetrachloride	ND	1.0	ug/L	CFR136A 624
Benzene	ND	1.0	ug/L	CFR136A 624
1,2-Dichloropropane	ND	1.0	ug/L	CFR136A 624
Trichloroethene	ND	1.0	ug/L	CFR136A 624
Bromodichloromethane	ND	1.0	ug/L	CFR136A 624
2-Chloroethyl vinyl ether	ND	5.0	ug/L	CFR136A 624
trans-1,3-Dichloropropene	ND	1.0	ug/L	CFR136A 624
cis-1,3-Dichloropropene	ND	1.0	ug/L	CFR136A 624
1,1,2-Trichloroethane	ND	1.0	ug/L	CFR136A 624
Toluene	ND	1.0	ug/L	CFR136A 624
Dibromochloromethane	ND	1.0	ug/L	CFR136A 624
Tetrachloroethene	ND	1.0	ug/L	CFR136A 624
Chlorobenzene	ND	1.0	ug/L	CFR136A 624
Ethylbenzene	ND	1.0	ug/L	CFR136A 624
Bromoform	ND	1.0	ug/L	CFR136A 624
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	CFR136A 624
1,3-Dichlorobenzene	ND	1.0	ug/L	CFR136A 624
1,4-Dichlorobenzene	ND	1.0	ug/L	CFR136A 624
1,2-Dichlorobenzene	ND	1.0	ug/L	CFR136A 624

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	86	(70 - 130)
Toluene-d8	117	(70 - 130)
Bromofluorobenzene	112	(70 - 130)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: L0F070291 **Work Order #...:** DEJAE101 **Matrix.....:** SOLID
MB Lot-Sample #: L0F120000-227

Prep Date.....: 06/09/00
Analysis Date..: 06/09/00 **Prep Batch #...:** 0164227
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	250	ug/kg	SW846 8260B
Bromodichloromethane	ND	250	ug/kg	SW846 8260B
Bromomethane	ND	500	ug/kg	SW846 8260B
Bromoform	ND	250	ug/kg	SW846 8260B
Carbon tetrachloride	ND	250	ug/kg	SW846 8260B
Chlorobenzene	ND	250	ug/kg	SW846 8260B
2-Chloroethyl vinyl ether	ND	1000	ug/kg	SW846 8260B
Chloroethane	ND	500	ug/kg	SW846 8260B
Chloroform	ND	250	ug/kg	SW846 8260B
Chloromethane	ND	500	ug/kg	SW846 8260B
Dibromochloromethane	ND	250	ug/kg	SW846 8260B
1,2-Dichlorobenzene	ND	250	ug/kg	SW846 8260B
1,3-Dichlorobenzene	ND	250	ug/kg	SW846 8260B
1,4-Dichlorobenzene	ND	250	ug/kg	SW846 8260B
1,1-Dichloroethane	ND	250	ug/kg	SW846 8260B
1,2-Dichloroethane	ND	250	ug/kg	SW846 8260B
trans-1,2-Dichloroethene	ND	120	ug/kg	SW846 8260B
1,1-Dichloroethene	ND	250	ug/kg	SW846 8260B
1,2-Dichloropropane	ND	250	ug/kg	SW846 8260B
cis-1,3-Dichloropropene	ND	250	ug/kg	SW846 8260B
trans-1,3-Dichloropropene	ND	250	ug/kg	SW846 8260B
Ethylbenzene	ND	250	ug/kg	SW846 8260B
Methylene chloride	ND	250	ug/kg	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	250	ug/kg	SW846 8260B
Tetrachloroethene	ND	250	ug/kg	SW846 8260B
Toluene	ND	250	ug/kg	SW846 8260B
1,1,1-Trichloroethane	ND	250	ug/kg	SW846 8260B
1,1,2-Trichloroethane	ND	250	ug/kg	SW846 8260B
Trichloroethene	ND	250	ug/kg	SW846 8260B
Vinyl chloride	ND	500	ug/kg	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	118	(70 - 130)
1,2-Dichloroethane-d4	91	(70 - 130)
Toluene-d8	115	(70 - 130)
Dibromofluoromethane	101	(70 - 130)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: L0F070291 Work Order #...: DEMRD102-LCS Matrix.....: WATER
LCS Lot-Sample#: L0F140000-310 DEMRD103-LCSD
Prep Date.....: 06/13/00 Analysis Date..: 06/13/00
Prep Batch #...: 0166310
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloromethane	101	(1.0- 273)			CFR136A 624
	95	(1.0- 273)	6.4	(0-20)	CFR136A 624
Vinyl chloride	98	(1.0- 251)			CFR136A 624
	91	(1.0- 251)	6.5	(0-20)	CFR136A 624
Bromomethane	86	(1.0- 242)			CFR136A 624
	86	(1.0- 242)	0.21	(0-20)	CFR136A 624
Chloroethane	100	(14 - 230)			CFR136A 624
	96	(14 - 230)	4.3	(0-20)	CFR136A 624
Trichlorofluoromethane	96	(17 - 181)			CFR136A 624
	95	(17 - 181)	0.83	(0-20)	CFR136A 624
1,1-Dichloroethene	97	(1.0- 234)			CFR136A 624
	94	(1.0- 234)	3.1	(0-20)	CFR136A 624
Methylene chloride	101	(1.0- 221)			CFR136A 624
	100	(1.0- 221)	1.2	(0-20)	CFR136A 624
trans-1,2-Dichloroethene	96	(54 - 156)			CFR136A 624
	94	(54 - 156)	1.8	(0-20)	CFR136A 624
1,1-Dichloroethane	120	(59 - 155)			CFR136A 624
	119	(59 - 155)	0.69	(0-20)	CFR136A 624
Chloroform	96	(51 - 138)			CFR136A 624
	96	(51 - 138)	0.72	(0-20)	CFR136A 624
1,2-Dichloroethane	99	(49 - 155)			CFR136A 624
	97	(49 - 155)	2.6	(0-20)	CFR136A 624
1,1,1-Trichloroethane	95	(52 - 162)			CFR136A 624
	94	(52 - 162)	0.87	(0-20)	CFR136A 624
Carbon tetrachloride	106	(70 - 140)			CFR136A 624
	104	(70 - 140)	1.7	(0-20)	CFR136A 624
Benzene	98	(37 - 151)			CFR136A 624
	97	(37 - 151)	0.91	(0-20)	CFR136A 624
1,2-Dichloropropane	102	(1.0- 210)			CFR136A 624
	101	(1.0- 210)	1.5	(0-20)	CFR136A 624
Trichloroethene	98	(71 - 157)			CFR136A 624
	100	(71 - 157)	1.9	(0-20)	CFR136A 624
Bromodichloromethane	97	(35 - 155)			CFR136A 624
	97	(35 - 155)	0.46	(0-20)	CFR136A 624
2-Chloroethyl vinyl ether	149	(1.0- 305)			CFR136A 624
	154	(1.0- 305)	3.4	(0-20)	CFR136A 624
trans-1,3-Dichloropropene	98	(17 - 183)			CFR136A 624
	93	(17 - 183)	4.9	(0-20)	CFR136A 624
cis-1,3-Dichloropropene	96	(1.0- 227)			CFR136A 624
	95	(1.0- 227)	0.74	(0-20)	CFR136A 624

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: L0F070291 **Work Order #...:** DEMRD102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: L0F140000-310 DEMRD103-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1,2-Trichloroethane	**102**	**(52 - 150)**			**CFR136A 624**
	100	**(52 - 150)**	**2.0**	**(0-20)**	**CFR136A 624**
Toluene	**101**	**(47 - 150)**			**CFR136A 624**
	98	**(47 - 150)**	**3.3**	**(0-20)**	**CFR136A 624**
Dibromochloromethane	**98**	**(53 - 149)**			**CFR136A 624**
	99	**(53 - 149)**	**1.1**	**(0-20)**	**CFR136A 624**
Tetrachloroethene	**103**	**(64 - 148)**			**CFR136A 624**
	104	**(64 - 148)**	**1.3**	**(0-20)**	**CFR136A 624**
Chlorobenzene	**101**	**(37 - 160)**			**CFR136A 624**
	100	**(37 - 160)**	**0.62**	**(0-20)**	**CFR136A 624**
Ethylbenzene	**104**	**(37 - 162)**			**CFR136A 624**
	98	**(37 - 162)**	**5.8**	**(0-20)**	**CFR136A 624**
Bromoform	**102**	**(45 - 169)**			**CFR136A 624**
	103	**(45 - 169)**	**0.55**	**(0-20)**	**CFR136A 624**
1,1,2,2-Tetrachloroethane	**95**	**(46 - 157)**			**CFR136A 624**
	93	**(46 - 157)**	**2.5**	**(0-20)**	**CFR136A 624**
1,3-Dichlorobenzene	**92**	**(59 - 156)**			**CFR136A 624**
	106	**(59 - 156)**	**14**	**(0-20)**	**CFR136A 624**
1,4-Dichlorobenzene	**99**	**(18 - 190)**			**CFR136A 624**
	101	**(18 - 190)**	**2.0**	**(0-20)**	**CFR136A 624**
1,2-Dichlorobenzene	**96**	**(18 - 190)**			**CFR136A 624**
	102	**(18 - 190)**	**5.9**	**(0-20)**	**CFR136A 624**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	114	(70 - 130)
	109	(70 - 130)
Toluene-d8	105	(70 - 130)
	107	(70 - 130)
Bromofluorobenzene	106	(70 - 130)
	106	(70 - 130)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: L0F070291 **Work Order #...:** DEJAE102 **Matrix.....:** SOLID
LCS Lot-Sample#: L0F120000-227
Prep Date.....: 06/09/00 **Analysis Date..:** 06/09/00
Prep Batch #...: 0164227
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Benzene	**98**	**(70 - 130)**	**SW846 8260B**
Chlorobenzene	**107**	**(70 - 130)**	**SW846 8260B**
1,1-Dichloroethene	**100**	**(70 - 130)**	**SW846 8260B**
Toluene	**107**	**(70 - 130)**	**SW846 8260B**
Trichloroethene	**101**	**(70 - 130)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	111	(70 - 130)
1,2-Dichloroethane-d4	95	(70 - 130)
Toluene-d8	116	(70 - 130)
Dibromofluoromethane	103	(70 - 130)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: L0F070291 Work Order #...: DEKRK102 Matrix.....: WATER
LCS Lot-Sample#: L0F130000-229
Prep Date.....: 06/12/00 Analysis Date..: 06/12/00
Prep Batch #...: 0165229
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,1-Dichloroethene	97	(1.0- 234)	CFR136A 624
Chloromethane	99	(1.0- 273)	CFR136A 624
Vinyl chloride	94	(1.0- 251)	CFR136A 624
Bromomethane	85	(1.0- 242)	CFR136A 624
Chloroethane	98	(14 - 230)	CFR136A 624
Trichlorofluoromethane	100	(17 - 181)	CFR136A 624
Methylene chloride	95	(1.0- 221)	CFR136A 624
trans-1,2-Dichloroethene	97	(54 - 156)	CFR136A 624
1,1-Dichloroethane	111	(59 - 155)	CFR136A 624
Chloroform	80	(51 - 138)	CFR136A 624
1,2-Dichloroethane	90	(49 - 155)	CFR136A 624
1,1,1-Trichloroethane	99	(52 - 162)	CFR136A 624
Carbon tetrachloride	103	(70 - 140)	CFR136A 624
Benzene	93	(37 - 151)	CFR136A 624
1,2-Dichloropropane	93	(1.0- 210)	CFR136A 624
Trichloroethene	97	(71 - 157)	CFR136A 624
Bromodichloromethane	91	(35 - 155)	CFR136A 624
2-Chloroethyl vinyl ether	138	(1.0- 305)	CFR136A 624
trans-1,3-Dichloropropene	90	(17 - 183)	CFR136A 624
cis-1,3-Dichloropropene	93	(1.0- 227)	CFR136A 624
1,1,2-Trichloroethane	97	(52 - 150)	CFR136A 624
Toluene	103	(47 - 150)	CFR136A 624
Dibromochloromethane	96	(53 - 149)	CFR136A 624
Tetrachloroethene	108	(64 - 148)	CFR136A 624
Chlorobenzene	98	(37 - 160)	CFR136A 624
Ethylbenzene	102	(37 - 162)	CFR136A 624
Bromoform	99	(45 - 169)	CFR136A 624
1,1,2,2-Tetrachloroethane	88	(46 - 157)	CFR136A 624
1,3-Dichlorobenzene	96	(59 - 156)	CFR136A 624
1,4-Dichlorobenzene	99	(18 - 190)	CFR136A 624
1,2-Dichlorobenzene	95	(18 - 190)	CFR136A 624

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	100	(70 - 130)

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: L0F070291 **Work Order #...:** DEKRK102 **Matrix.....:** WATER
LCS Lot-Sample#: L0F130000-229

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	111	(70 - 130)
Bromofluorobenzene	102	(70 - 130)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Lot-Sample #...: L0F070291 Work Order #...: DEC6F102 Matrix.....: WATER
MS Lot-Sample #: L0F070291-019
Date Sampled...: 06/06/00 Date Received..: 06/07/00
Prep Date.....: 06/12/00 Analysis Date..: 06/12/00
Prep Batch #...: 0165229
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,1-Dichloroethene	99	(1.0- 234)	CFR136A 624
Chloromethane	106	(1.0- 273)	CFR136A 624
Vinyl chloride	99	(1.0- 251)	CFR136A 624
Bromomethane	87	(1.0- 242)	CFR136A 624
Chloroethane	101	(14 - 230)	CFR136A 624
Trichlorofluoromethane	98	(17 - 181)	CFR136A 624
Methylene chloride	107	(1.0- 221)	CFR136A 624
trans-1,2-Dichloroethene	97	(54 - 156)	CFR136A 624
1,1-Dichloroethane	118	(59 - 155)	CFR136A 624
Chloroform	98	(51 - 138)	CFR136A 624
1,2-Dichloroethane	100	(49 - 155)	CFR136A 624
1,1,1-Trichloroethane	97	(52 - 162)	CFR136A 624
Carbon tetrachloride	105	(70 - 140)	CFR136A 624
Benzene	99	(37 - 151)	CFR136A 624
1,2-Dichloropropane	100	(1.0- 210)	CFR136A 624
Trichloroethene	100	(71 - 157)	CFR136A 624
Bromodichloromethane	98	(35 - 155)	CFR136A 624
2-Chloroethyl vinyl ether	0.0	(1.0- 305)	CFR136A 624
trans-1,3-Dichloropropene	97	(17 - 183)	CFR136A 624
cis-1,3-Dichloropropene	91	(1.0- 227)	CFR136A 624
1,1,2-Trichloroethane	107	(52 - 150)	CFR136A 624
Toluene	88	(47 - 150)	CFR136A 624
Dibromochloromethane	104	(53 - 149)	CFR136A 624
Tetrachloroethene	106	(64 - 148)	CFR136A 624
Chlorobenzene	103	(37 - 160)	CFR136A 624
Ethylbenzene	105	(37 - 162)	CFR136A 624
Bromoform	106	(45 - 169)	CFR136A 624
1,1,2,2-Tetrachloroethane	96	(46 - 157)	CFR136A 624
1,3-Dichlorobenzene	94	(59 - 156)	CFR136A 624
1,4-Dichlorobenzene	101	(18 - 190)	CFR136A 624
1,2-Dichlorobenzene	98	(18 - 190)	CFR136A 624

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	89	(70 - 130)
Toluene-d8	106	(70 - 130)
Bromofluorobenzene	108	(70 - 130)

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Lot-Sample #...: L0F070291 **Work Order #...:** DEC6F102 **Matrix.....:** WATER
MS Lot-Sample #: L0F070291-019

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

STL - *Anchorage* Sample Receipt Checklist

LOT NUMBER: L0F070891 37655 Date/Time Received: 06 07 06 15:35

Client Name: KINNETICS LAB. Project Name:

Cooler IDs (if applicable) and Temperatures: 5.4°C

Logged in by: DJH 06-07 1600
Date/Time

Yes	No	Does not Apply	
☒	☐	☐	1. Custody seals present and intact? Comment below if "No".
☒	☐	☐	2. Chain of Custody present?
☒	☐	☐	a. COC relinquished by client and filled out completely? Comment below if "No". 6 TOTAL
☒	☐	☐	b. COC signed as received by lab? Comment below if "No".
☒	☐	☐	3. Temperature blank included in coolers?
☒	☐	☐	4. Temperature of coolers in range? (4 ± 2 ° C)
☒	☒	☐	5. Sample containers labeled properly?
☒	☐	☐	6. Chain of Custody agrees with labels? Comment below if "No".
☒	☐	☐	7. Chain of Custody agrees with bottle count? Comment below if "No".
☐	☒	☐	8. Analyses with short holding times required?
☒	☐	☐	9. VOA containers received with zero headspace? Comment if "No".
☒	☐	☐	a. VOA containers indicate preservation?
☒	☐	☐	10. Sample containers are in good condition (not leaking, intact, not frozen?) Comment if "No".
☒	☐	☐	11. Samples received are homogeneous, single-phase? Comment if "No".
☐	☐	☒	12. Extra sample volume provided for MS/MSD?
			a. If site specific QC is indicated, note sample ID
☐	☐	☒	13. Aqueous samples labeled "filtered" are clean of sediment? Comment if "No".
☒	☐	☐	14. pH of appropriate samples checked and documented on the COC? Comment if "No".

COMMENTS (Include action taken to resolve discrepancies/problems:

2 samples were switched, But were fixed By Kinnetics

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	**FROM:**
Severen Trent Laboratories Incorporated 5761 Silverado Way, Suite N Anchorage, AK 99518 (907)563-4800 Attn: Emanuel Hignutt	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178

REQUIRED COMPLETION DATE: 30 days | **P.O. #:** AK00-1006 | **KLI Proj. #:** 514.01

ANALYSIS TYPE: EPA 625 & OPEN SCAN. (See attached Permit for details.) Detection limits as per method.

MATRIX: Water | **Preservative:** None, 4°C | **Type of Container:** 1-L amber glass

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER
MOA00SVL0001	Influent	2	6-7-00	0810		-1
MOA00SVL0002	Effluent	~~X~~ 3 (G2)	6-7-00	0830		-2
- MOA00SVL0002	Consists of	only 3	1 Liter containers	(as	collected by AWWU)	G2 6.7.00

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC, INCLUDING METHOD BLANKS, MS/SDs, DUPLICATES, ETC.

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
Susan Lang	6-7-00/1130	KLI HAND	G G LAWLEY	6/7/00 1130
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[illegible]	6/7/00/1500	~~[illegible]~~ x Hand	[illegible]	6-7-00 1535
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME

SAMPLED BY (NAME/SIGNATURE): Susan Lang / Susan Lang

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	**FROM:**
Severen Trent Laboratories Incorporated 5761 Silverado Way, Suite N Anchorage, AK 99518 (907)563-4800 Attn: Emanuel Hignutt	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178

REQUIRED COMPLETION DATE: 30 days	**P.O. #:** AK00-1006	**KLI Proj. #:** 514.01

ANALYSIS TYPE: EPA 8270. **Report using EPA 625 analyte list.** Detection limits as per method. Please report in dry weight.

MATRIX: Sludge	**Preservative:** None, 4°C	**Type of Container:** 250-mL glass

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER
MOA00SVL0003	Sludge	1	6-7-00	0920		22

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC, INCLUDING METHOD BLANKS, MS/SDs, DUPLICATES, ETC.

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
Susan Long	6-7-00/1130	KLI/HAND	G.LAWLEY	6/7/00 1130
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
A Alvarez	6/7/00 1500	GL ~~Fed Ex~~ Hand	[illegible]	06-07-00 1533
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME

SAMPLED BY (NAME/SIGNATURE): See Sample collectors sheet for individual collectors

Susan Long

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	**FROM:**
Severen Trent Laboratories Incorporated 5761 Silverado Way, Suite N Anchorage, AK 99518 (907)563-4800 Attn: Emanuel Hignutt	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178

REQUIRED COMPLETION DATE: 30 days | **P.O. #:** AK00-1006 | **KLI Proj. #:** 514.01

ANALYSIS TYPE: EPA 624 with open scan (TICs with estimated concentrations; see attached for details.) Detection limits as per method.

MATRIX: Water | **Preservative:** HCl, 4°C | **Type of Container:** 40-mL glass

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER
MOA00VOP0001	INF CMP #1	2	6-6-00	0810		
MOA00VOP0002	INF CMP #2	2	↓	1100		
MOA00VOP0003	INF CMP #3	2	↓	1358		
MOA00VOP0004	INF CMP #4	2	↓	1710		
MOA00VOP0005	INF CMP #5	2	↓	2010		
MOA00VOP0006	INF CMP #6	2	↓	2306		
MOA00VOP0007	INF CMP #7	2	6-7-00	0208		
MOA00VOP0008	INF CMP #8	2	↓	0508		

SAMPLES LISTED ON THIS COC SHOULD BE COMPOSITED IN AN EIGHT-PART COMPOSITE IN A VAPOR-TYPE SYRINGE PRIOR TO ANALYSIS.

DATA REPORTS MUST INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC, INCLUDING METHOD BLANKS, MS/SDs, DUPLICATES, ETC.

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
Susan Long	6-7-00 1130	KLI / HAND	G G LAWLEY	6/7/00 1130
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
A. J. Lawley	6/7/00 1530	~~Fed Ex~~ HAND	[illegible]	06-07-00 1530
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME

SAMPLED BY (NAME/SIGNATURE): See sampling sheet for individual collectors

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	**FROM:**
Severen Trent Laboratories Incorporated 5761 Silverado Way, Suite N Anchorage, AK 99518 (907)563-4800 Attn: Emanuel Hignutt	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178

REQUIRED COMPLETION DATE: 30 days | **P.O. #:** AK00-1006 | **KLI Proj. #:** 514.01

ANALYSIS TYPE: EPA 624 with open scan (TICs with estimated concentrations; see attached for details.) Detection limits as per method.

MATRIX: Water | **Preservative:** HCl, 4°C | **Type of Container:** 40-mL glass

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER
MOA00VOP0009	EFF CMP #1	2	6-6-00	0805		
MOA00VOP0010	EFF CMP #2	2	6-6-00	1108		
MOA00VOP0011	EFF CMP #3	2	6-6-00	~~1700~~ (1412)		
MOA00VOP0012	EFF CMP #4	2	6-6-00	1701		
MOA00VOP0013	EFF CMP #5	2	6-6-00	2000		
MOA00VOP0014	EFF CMP #6	2	6-6-00	2300		
MOA00VOP0015	EFF CMP #7	2	6-7-00	0200		
MOA00VOP0016	EFF CMP #8	2	6-7-00	0500		

SAMPLES LISTED ON THIS COC SHOULD BE COMPOSITED IN AN EIGHT-PART COMPOSITE IN A VAPOR-TYPE SYRINGE PRIOR TO ANALYSIS.

DATA REPORTS MUST INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC, INCLUDING METHOD BLANKS, MS/SDs, DUPLICATES, ETC.

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	6-7-00 1130	KLI/HAND	GG LAWLEY	6/7/00 1130
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	6-7-00 1500	~~Fed Ex~~ HAND	[signature]	06/07/00 1530
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME

SAMPLED BY (NAME/SIGNATURE): see sampling sheet for individual samplers

5.4

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	**FROM:**
Severen Trent Laboratories Incorporated 5761 Siverado Way, Suite N Anchorage, AK 99518 (907)563-4800 Attn: Emanuel Hignutt	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178

REQUIRED COMPLETION DATE: 30 Days | **P.O. #:** AK00-1006 | **KLI Proj. #:** 514.01

ANALYSIS TYPE: EPA 624 with open scan (TICs with estimated concentrations; see attached for details.) Detection limits as per method.

MATRIX: Water | **Preservative:** HCl, 4° C | Type of Container: 40-mL glass

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER
MOA00VOP0017	C-Station	2	6/6/00	~~0800~~ 0755 JL		-19
MOA00VOP0018	Trip Blank	2	5/25/00			-20

DATA REPORTS MUST INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
Susan Lang	6-7-00 / 1130	KLI / HANA	G G LAWLEY	6/7/00 1130
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[illegible]	6-7-00 1500	~~[illegible]~~ HANA GL	[illegible]	06-07 1535
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME

SAMPLED BY (NAME/SIGNATURE): Susan Lang / Susan Lang

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	**FROM:**
Severen Trent Laboratories Incorporated 5761 Siverado Way, Suite N Anchorage, AK 99518 (907)563-2343 Attn: Emanuel Hignutt	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178

REQUIRED COMPLETION DATE: 30 Days	**P.O. #:** AK00-1006	**KLI Proj. #:** 514.01

ANALYSIS TYPE: EPA 8260. **Report using EPA 624 analyte list.** Detection limits as per method. Please report in dry weight.

MATRIX: Sludge	**Preservative:** 4° C	Type of Container: 120-mL glass

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER
MOA00VOP0019	Sludge	1	6-7-00	0920		21

DATA REPORTS MUST INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
Susan Long	6-7-00 / 1130	KLI / HAND	G6 LAWLEY	6/7/00 1130
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[illegible]	6/7/00 1530	Hand CR	[illegible]	06-07 1535
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME

SAMPLED BY (NAME/SIGNATURE): See sample collection sheet for individual collectors

Susan Long

APPENDIX A

Toxic Pollutant and Pesticide Monitoring, June Sampling

A4 SES

Asbestos Data

JUNE SAMPLING, ASBESTOS, SES SAMPLE LIST

SAMPLE IDENTIFICATION NUMBER	SAMPLE LOCATION	SAMPLE TYPE
MOA00ASB0001	INFLUENT	SAMPLE
MOA00ASB0002	EFFLUENT	SAMPLE
MOA00ASB0003	SLUDGE	SAMPLE

MACS Lab, Inc.
2070A Walsh Avenue
Santa Clara, CA 95050-2542

(408) 727-9727

Asbestos in Water by TEM
EPA 600/R-94/134
aka Method 100.2
Report

Solar Environmental Services
1131 E. 76th Avenue, Ste. 102

Anchorage AK 99518

Person to contact: Grace Torrijos

Contact phone: 907-349-7705

FAX phone: 907-349-7944

Corresponding invoice number: 90662

Purchase Order Number: Vv/c

Job:

Note: This sample may or may not be a drinking water sample. Please see the chain of custody from the party that sampled the water. The detection limit may not meet the requirements of drinking water if the sample contains large amounts of particulates. Therefore if the Detection limit is >0.2 mf/l this analysis is NOT valid for drinking water.

Job Description: MOA - Kinnetic - 514.01 - Anchorage

Sample:

MACS Lab Sample Number: H90662-1 **Client Sample Number:** MOA00ASB0001

Client Sample Description: Water

Filter type and size: MCE 0.2µm pore size
Filter Diameter = 25 mm Filter lot no.: H9NM62982
Filter Manufacturer: Millipore
Received OK: Yes Accepted for analysis: Yes

Date and time sampled (from client): June 7, 2000 at 08:10
Sample received: June 23, 2000 at 09:00
Sample ozonated: June 24, 2000 at 19:00
Sample filtered on: June 25, 2000 at 01:20
Analyzed on: June 29, 2000 at 15:08

Analysis Results:

Type of Asbestos:	million fibers/liter
Total asbestos	< 1.9772

Detection limit, mf/l 1.977

TEM magnification:	10,000 X
Grid area analyzed:	0.228 mm^2
Grids counted:	20
Sonication time:	10 min
Filter area:	225 mm^2
Total fibers counted:	0
Volume filtered:	0.5 ml

Approximate volume of sample received: 1000 milliliters

Fiber Concentration in Water in Million Fibers per Liter $= \frac{\text{fibers/mm}^2 \times \text{filter area (mm}^2)}{\text{sample volume filtered in L}} \times 0.000001$

fibers/mm^2 = total fibers / grid area analyzed

Blank Vol. filtered:	100.0 ml
Blank concentration:	< 0.033 mf/l

95% confidence interval: 0.0 to 7.29 mf/l

Microscopist: _____ (signature) Laboratory manager: _____

This report may not be reproduced except in full (nothing omitted or overwritten) and with the permission of MACS Lab, Inc. This report relates only to the item(s) tested. No portion of samples may be saved. Samples are filtered through a MCE filter. Asbestos fibers are identified by Selected Area Electron Diffraction and/or Energy Dispersive X-ray analysis. 10µm or larger asbestos fibers are counted unless otherwise stated in the remarks section of this report. MACS Lab, Inc is an accredited laboratory for asbestos in drinking water by the California Department of Health ELAP (laboratory #2027). Call 1-510-540-3445 for verification. Note mf/l = Million fibers per liter of water. N/A = not available. Ozonation is not required on samples filtered within 48 hours of receipt by the lab therefore date and time will be marked N/A.

MACS Lab, Inc.
2070A Walsh Avenue
Santa Clara, CA 95050-2542

(408) 727-9727

Asbestos in Water by TEM
EPA 600/R-94/134
aka Method 100.2
Report

Job:

Note: This sample may or may not be a drinking water sample. Please see the chain of custody from the party that sampled the water. The detection limit may not meet the requirements of drinking water if the sample contains large amounts of particulates. Therefore if the Detection limit is >0.2 mf/l this analysis is NOT valid for drinking water.

Job Description: MOA - Kinnetic - 514.01 - Anchorage

Sample:

MACS Lab Sample Number: H90662-2 **Client Sample Number:** MOA00ASB0002

Client Sample Description: Water

Filter type and size: MCE 0.2µm pore size
Filter Diameter = 25 mm Filter lot no.: H9NM62982
Filter Manufacturer: Millipore
Received OK: Yes Accepted for analysis: Yes

Date and time sampled (from client): June 7, 2000 at 08:30
Sample received: June 23, 2000 at 09:00
Sample ozonated: June 24, 2000 at 19:00
Sample filtered on: June 25, 2000 at 01:20
Analyzed on: June 29, 2000 at 15:08

Analysis Results:

Type of Asbestos:	million fibers/liter
Total asbestos	< 1.9772

Detection limit, mf/l 1.977

TEM magnification:	10,000 X
Grid area analyzed:	0.228 mm^2
Grids counted:	20
Sonication time:	10 min
Filter area:	225 mm^2
Total fibers counted:	0
Volume filtered:	0.5 ml

Approximate volume of sample received: 1000 milliliters

Fiber Concentration in Water in Million Fibers per Liter $= \frac{\text{fibers/mm}^2 \times \text{filter area (mm}^2)}{\text{sample volume filtered in L}} \times 0.000001$

fibers/mm^2 = total fibers / grid area analyzed

Blank Vol. filtered:	100.0 ml
Blank concentration:	< 0.033 mf/l

95% confidence interval: 0.0 to 7.29 mf/l

End of report.

Microscopist: _____ (signature) Laboratory manager: _____

This report may not be reproduced except in full (nothing omitted or overwritten) and with the permission of MACS Lab, Inc. This report relates only to the item(s) tested. No portion of samples may be saved. Samples are filtered through a MCE filter. Asbestos fibers are identified by Selected Area Electron Diffraction and/or Energy Dispersive X-ray analysis. 10µm or larger asbestos fibers are counted unless otherwise stated in the remarks section of this report. MACS Lab, Inc is an accredited laboratory for asbestos in drinking water by the California Department of Health ELAP (laboratory #2027). Call 1-510-540-3445 for verification. Note mf/l = Million fibers per liter of water. N/A = not available. Ozonation is not required on samples filtered within 48 hours of receipt by the lab therefore date and time will be marked N/A.

Solar Environmental Services, Inc.

1131 E. 76th Avenue, Suite 102
Anchorage, AK 99518
Home Page: www.alaska.net/~sesenvir/

Phone: (907) 349-7705
Fax: (907) 349-7944
E-mail: sesenvir@alaska.net

CERTIFICATE OF ANALYSIS

CLIENT: Kinnetic Laboratories, Inc.
ATTN: Janet Savoie
403 W. Eight Avenue
Anchorage, Alaska 99501

CLIENT ORDER #: 194019
PROJECT NAME: MOA
PROJECT #: 514.01
REPORT #: B2000-136
REPORT DATE: July 10, 2000
COLLECTED BY: Client
DATE SAMPLED: June 7, 2000
DATE RECEIVED: June 7, 2000
DATE ANALYZED: July 10, 2000
ANALYZED BY: J. Torrijos

ASBESTOS QUALITATIVE DUST ANALYSIS SUMMARY

POLARIZED LIGHT MICROSCOPY (PLM) WITH DISPERSION STAINING

Lab #	Client #	Location/ Description (color)	Asbestos Present	Other Materials Present
2000531B0692	MOA00ASB0003	Sludge (Dark Brown/Gray)	None Detected	Fibrous Glass Cellulose

End of Report

Test report relates only to the items tested and must not be used by client to claim product endorsement by NVLAP or any Agency of the U.S. Government. Test Report must not be reproduced except in full without the approval of SES and subject to SES general terms and conditions. Small fibers may be missed by PLM Method due to resolution limitations of the optical microscope. Therefore, None Detected results cannot be guaranteed. Electron Microscopy is recommended for confirmation. This is not covered by NVLAP.

REVIEWED AND APPROVED BY: _____ Date: 10/05/00
Gracita O. Torrijos, Chemist – I.H.

FORM# SES 1031-REVISED 08/07/96

NVLAP Accredited Laboratory

AIHA – AAR – PAT Certified

APPENDIX B

Toxic Pollutant and Pesticide Monitoring, August Sampling

B1 AWWU

Metals, Oil & Grease, and Cyanide

George P. Wuerch,
Mayor

ANCHORAGE WATER AND WASTEWATER UTILITY
LABORATORY SERVICES SECTION

ANALYTICAL RESULTS
Date of the Report: 11/09/00

Owned by the
Municipality of Anchorage

Sample ID				AA23288	AA23289	AA23293	AA23294	AA23295	AA23296
Sample Location				Point Woronzof WWTF Influent	Point Woronzof WWTF F.Eff.	Point Woronzof WWTF Influent	Point Woronzof WWTF F.Eff.	Point Woronzof WWTF Influent	Point Woronzof WWTF F.Eff.
Collection Date				08/14-15/00	08/14-15/00	08/15-16/00	08/15-16/00	08/16-17/00	08/16-17/00
Analysis	**Method**	**MDL**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Antimony, Diss.	---	---	mg/L	PENDING - C	PENDING - C	---	---	---	---
Antimony, Total	---	---	mg/L	PENDING - C	PENDING - C	---	---	---	---
Arsenic, Diss.	EPA 206.2	0.003	mg/L	0.003	0.003	ND	0.003	0.003	0.003
Arsenic, Total	EPA 206.2	0.003	mg/L	0.003	0.003	0.003	0.003	0.004	0.003
Beryllium, Diss.	EPA 210.2	0.0001	mg/L	ND	ND	ND	ND	0.0001	ND
Beryllium, Total	EPA 210.2	0.0001	mg/L	ND	ND	ND	ND	ND	ND
Cadmium, Diss.	SM 18 3111 B	0.005	mg/L	0.005	0.006	0.005	0.005	0.005	0.006
Cadmium, Total	SM 18 3111 B	0.005	mg/L	ND	ND	ND	ND	ND	ND
Chromium, Diss.	SM18 3111 B	0.01	mg/L	ND	ND	ND	ND	ND	ND
Chromium, Total	SM 18 3111 B	0.01	mg/L	0.01	0.01	0.01	0.01	0.01	ND
Copper, Diss.	SM18 3111 B	0.005	mg/L	0.022	0.039	0.019	0.035	0.024	0.038
Copper, Total	SM18 3111 B	0.005	mg/L	0.084	0.053	0.088	0.051	0.083	0.056
Lead, Diss.	EPA 239.2	0.001	mg/L	0.003	0.007	0.001	0.001	0.002	0.002
Lead, Total	EPA 239.2	0.001	mg/L	0.015	0.008	0.007	0.003	0.008	0.003
Mercury, Diss.	EPA 245.1	0.0001	mg/L	ND	ND	ND	ND	ND	0.0001
Mercury, Total	EPA 245.1	0.0001	mg/L	0.0003	ND	0.0002	ND	0.0004	0.0001
Nickel, Diss.	SM18 3111 B	0.02	mg/L	ND	0.02	ND	ND	ND	ND
Nickel, Total	SM18 3111 B	0.02	mg/L	ND	ND	ND	ND	ND	ND
Selenium, Diss.	---	---	mg/L	PENDING - C	PENDING - C	---	---	---	---
Selenium, Total	---	---	mg/L	PENDING - C	PENDING - C	---	---	---	---
Silver, Diss.	EPA 272.2	0.0002	mg/L	0.0015	0.0004	0.0018	0.0006	0.0022	0.0006
Silver, Total	EPA 272.2	0.0002	mg/L	0.0093	0.0053	0.0090	0.0053	0.0094	0.0080
Thallium, Diss.	---	---	mg/L	PENDING - C	PENDING - C	---	---	---	---
Thallium, Total	---	---	mg/L	PENDING - C	PENDING - C	---	---	---	---
Zinc, Diss.	SM18 3111 B	0.01	mg/L	0.03	0.05	0.02	0.03	0.02	0.04
Zinc, Total	SM18 3111 B	0.01	mg/L	0.13	0.08	0.16	0.08	0.15	0.07
Cyanide, Total	4500CN C,E	0.01	mg/L	ND	0.0108	ND	ND	ND	ND

QA/QC data available upon request. MDL = Method Detection Limit, PQL = Practical Quantitative Limit, ND = Not Detected . C = contract lab. --- = test not ordered

Reported by: Mark Spano Date: 11/14/00

Mark Spano, Laboratory Supervisor

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George P. Wuerch,
Mayor

ANCHORAGE WATER AND WASTEWATER UTILITY
LABORATORY SERVICES SECTION

Owned by the
Municipality of Anchorage

ANALYTICAL RESULTS

Date of the Report: 11/09/00

Sample ID				AA23292
Sample Location				Pt. Woronzof Cake Sludge
Collection Date				08/14-08/15/00
Project Code				WW-PW
Analysis	**Method**	**MDL**	**Unit**	**Result**
Arsenic, Total	EPA 7060	0.5	mg/kg	4.2
Beryllium, Total	EPA 7091	0.02	mg/kg	0.15
Cadmium, Total	EPA 7130	0.8	mg/kg	2.9
Chromium, Total	EPA 7190	2	mg/kg	23
Copper, Total	EPA 7210	1	mg/kg	307
Lead, Total	EPA 7421	0.2	mg/kg	53.4
Mercury, Total	EPA 7470	0.1	mg/kg	2.3
Nickel, Total	EPA 7520	3	mg/kg	25
Silver, Total	EPA 7761	0.03	mg/kg	27.5
Zinc, Total	EPA 7950	2	mg/kg	633
Percent Total Solids	18SM 2540G	0.1	%	32.4
Cyanide, Total	4500CN C,E	0.2	mg/kg	0.9

QA/QC data available upon request.
MDL = Method Detection Limit, PQL = Practical Quantitative Limit, ND = Not Detected
C = contract lab

Reported by: M Spano Date: 11/14/00
Mark Spano, Laboratory Supervisor

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George P. Wuerch,
Mayor

ANCHORAGE WATER AND WASTEWATER UTILITY
LABORATORY SERVICES SECTION

ANALYTICAL RESULTS
Date of the Report: 11/09/00

Owned by the
Municipality of Anchorage

Sample ID				AA23290	AA23291
Sample Location				Point Woronzof WWTF Influent	Point Woronzof WWTF F.Effluent
Collection Date				08/14/00	08/14/00
Project Code				WW-PW	WW-PW
Analysis	**Method**	**MDL**	**Unit**	**Result**	**Result**
Oil and Grease	EPA 1664	1.0	mg/L	45.3	20.3

QA/QC data available upon request.
MDL = Method Detection Limit, PQL = Practical Quantitative Limit, ND = Not Detected
C = contract lab

Reported by: MSpano
Mark Spano, Laboratory Supervisor

Date: 11/14/00

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APPENDIX B

Toxic Pollutant and Pesticide Monitoring, August Sampling

B2 Toxscan

Metals, Pesticides, Hydrocarbons

AUGUST SAMPLING, METALS, PESTICIDES, HYDROCARBONS, TOXSCAN SAMPLE LIST

SAMPLE IDENTIFICATION NUMBER	SAMPLE LOCATION	SAMPLE TYPE
MOA00PES0005	INFLUENT	SAMPLE
MOA00PES0006	EFFLUENT-1	SAMPLE
MOA00PES0007	SLUDGE	SAMPLE
MOA00MET0005	INFLUENT-1	SAMPLE
MOA00MET0006	INFLUENT-2	DUPLICATE
MOA00MET0007	EFFLUENT	SAMPLE
MOA00MET0008	C-STATION	FIELD BLANK
MOA00MET0009	SLUDGE	SAMPLE
MOA00VOA0006	INFLUENT	SAMPLE
MOA00VOA0007	EFFLUENT-1	SAMPLE
MOA00VOA0008	EFFLUENT-2	DUPLICATE
MOA00VOA0009	C-STATION	FIELD BLANK
MOA00VOA0010	TRIP BLANK	TRIP BLANK
MOA00HEX0004	INFLUENT	SAMPLE
MOA00HEX0005	EFFLUENT	SAMPLE

ToxScan Inc.

42 Hangar Way • Watsonville, CA 95076-2404 • (831) 724-4522 • FAX (831) 724-3188

October 16, 2000

ToxScan Number: T-18755

Kinnetic Laboratories Incorporated
403 West Eighth Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Project Name:	None
Project Number:	514.01
Date Sampled:	August 14, 2000 - August 15, 2000
Date Received:	August 16, 2000
Matrix:	Sludge Water

Please find the enclosed test results for the parameters requested for analyses. The samples were analyzed within holding time using the following methods:

Aromatic Volatile Organics by EPA Method 602
Organochlorine Pesticides & PCBs plus Mirex by EPA Method 8081
Organophosphate Pesticides by EPA Method 614
Organophosphorous Pesticides by EPA Method 8141A
Percent Solids by EPA Method 160.3
Pesticides & PCBs plus Mirex by EPA Method 608
Total Metals by ICP/MS (Sb,Tl) by EPA Method 200.8
Total Metals by ICP/MS (Sb,Tl) by EPA Method 6020
Total Petroleum Hydrocarbons by EPA Method 1664
Total Selenium by hydride AA by EPA Method 7741
Total Selenium by hydride AA, by EPA Method 270.3

The samples were received intact and were handled with the proper chain-of-custody procedures. Appropriate QA/QC guidelines were employed during the analyses on a minimum of a 5% basis. QC results were within limits and are reported with or following the data for each analysis.

If you have any questions or require any additional information, please feel free to call.

Sincerely,

Philip D. Carpenter

Philip D. Carpenter, Ph.D.
President

Enclosures

This cover letter is an integral part of the report.

EXPLANATION OF ACRONYMS FOR PROJECT # T-18755

The following is a glossary for acronyms that may be used in this report.

Abbreviation	Definition
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NA	Not Applicable
ND	None Detected
REP	Replicate
RPD	Relative Percent Difference
SRM	Standard Reference Material
TOC	Total Organic Carbon

Client:	Kinnetic Laboratories, Inc.	ToxScan Number: T-18755
Method:	EPA 608	
Date Extracted:	August 17, 2000	
Date Analyzed:	September 05, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID:	MOA00PES0005
Site ID:	Influent
ToxScan Lab ID:	18755-06

Analyte	Sample Value	Reporting Limit
Aldrin	ND	0.050
alpha-BHC	ND	0.050
beta-BHC	ND	0.050
delta-BHC	ND	0.050
gamma-BHC	ND	0.050
alpha-Chlordane	ND	0.50
gamma-Chlordane	ND	0.50
4,4'-DDD	0.022	0.020
4,4'-DDE	ND	0.020
4,4'-DDT	ND	0.020
Dieldrin	ND	0.10
Endosulfan I	ND	0.050
Endosulfan II	ND	0.10
Endosulfan Sulfate	ND	0.10
Endrin	ND	0.10
Endrin Aldehyde	ND	0.10
Endrin Ketone	ND	0.10
Heptachlor	ND	0.050
Heptachlor Epoxide	ND	0.050
Methoxychlor	ND	0.50
Toxaphene	ND	1.0
Aroclor-1016	ND	1.0
Aroclor-1221	ND	1.0
Aroclor-1232	ND	1.0
Aroclor-1242	ND	1.0
Aroclor-1248	ND	1.0
Aroclor-1254	ND	1.0
Aroclor-1260	ND	1.0
Total PCB'S	ND	1.0
Mirex	ND	0.20

ND = Not Detected

Client:	Kinnetic Laboratories, Inc.	ToxScan Number: T-18755
Method:	EPA 608	
Date Extracted:	August 17, 2000	
Date Analyzed:	September 05, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID:	MOA00PES0006
Site ID:	Effluent
ToxScan Lab ID:	18755-07

Analyte	Sample Value	Reporting Limit
Aldrin	ND	0.050
alpha-BHC	ND	0.050
beta-BHC	ND	0.050
delta-BHC	ND	0.050
gamma-BHC	ND	0.050
alpha-Chlordane	ND	0.50
gamma-Chlordane	ND	0.50
4,4'-DDD	ND	0.020
4,4'-DDE	0.020	0.020
4,4'-DDT	ND	0.020
Dieldrin	ND	0.10
Endosulfan I	ND	0.050
Endosulfan II	ND	0.10
Endosulfan Sulfate	ND	0.10
Endrin	ND	0.10
Endrin Aldehyde	ND	0.10
Endrin Ketone	ND	0.10
Heptachlor	ND	0.050
Heptachlor Epoxide	ND	0.050
Methoxychlor	ND	0.50
Toxaphene	ND	1.0
Aroclor-1016	ND	1.0
Aroclor-1221	ND	1.0
Aroclor-1232	ND	1.0
Aroclor-1242	ND	1.0
Aroclor-1248	ND	1.0
Aroclor-1254	ND	1.0
Aroclor-1260	ND	1.0
Total PCB'S	ND	1.0
Mirex	ND	0.20

ND = Not Detected

Client:	Kinnetic Laboratories, Inc.	ToxScan Number: T-18755
Method:	EPA 608	
Date Extracted:	August 17, 2000	
Date Analyzed:	September 05, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID:	MOA00PES0006
Site ID:	Effluent
ToxScan Lab ID:	18755-07 Dup

Analyte	Sample Value	Reporting Limit
Aldrin	ND	0.050
alpha-BHC	ND	0.050
beta-BHC	ND	0.050
delta-BHC	ND	0.050
gamma-BHC	ND	0.050
alpha-Chlordane	ND	0.50
gamma-Chlordane	ND	0.50
4,4'-DDD	ND	0.020
4,4'-DDE	ND	0.020
4,4'-DDT	ND	0.020
Dieldrin	ND	0.10
Endosulfan I	ND	0.050
Endosulfan II	ND	0.10
Endosulfan Sulfate	ND	0.10
Endrin	ND	0.10
Endrin Aldehyde	ND	0.10
Endrin Ketone	ND	0.10
Heptachlor	ND	0.050
Heptachlor Epoxide	ND	0.050
Methoxychlor	ND	0.50
Toxaphene	ND	1.0
Aroclor-1016	ND	1.0
Aroclor-1221	ND	1.0
Aroclor-1232	ND	1.0
Aroclor-1242	ND	1.0
Aroclor-1248	ND	1.0
Aroclor-1254	ND	1.0
Aroclor-1260	ND	1.0
Total PCB'S	ND	1.0
Mirex	ND	0.20

ND = Not Detected

Client:	Kinnetic Laboratories, Inc.	ToxScan Number: T-18755
Method:	EPA 608	
Date Extracted:	August 17, 2000	
Date Analyzed:	September 05, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID: Method Blank
ToxScan Lab ID: MB081700

Analyte	Sample Value	Reporting Limit
Aldrin	ND	0.050
alpha-BHC	ND	0.050
beta-BHC	ND	0.050
delta-BHC	ND	0.050
gamma-BHC	ND	0.050
alpha-Chlordane	ND	0.50
gamma-Chlordane	ND	0.50
4,4'-DDD	ND	0.020
4,4'-DDE	ND	0.020
4,4'-DDT	ND	0.020
Dieldrin	ND	0.10
Endosulfan I	ND	0.050
Endosulfan II	ND	0.10
Endosulfan Sulfate	ND	0.10
Endrin	ND	0.10
Endrin Aldehyde	ND	0.10
Endrin Ketone	ND	0.10
Heptachlor	ND	0.050
Heptachlor Epoxide	ND	0.050
Methoxychlor	ND	0.50
Toxaphene	ND	1.0
Aroclor-1016	ND	1.0
Aroclor-1221	ND	1.0
Aroclor-1232	ND	1.0
Aroclor-1242	ND	1.0
Aroclor-1248	ND	1.0
Aroclor-1254	ND	1.0
Aroclor-1260	ND	1.0
Total PCB'S	ND	1.0
Mirex	ND	0.20

ND = Not Detected

Client:	Kinnetic Laboratories, Inc.	ToxScan Number: T-18755
Method:	EPA 608	
Date Extracted:	August 17, 2000	
Date Analyzed:	September 05, 2000	
Matrix:	Water	

Quality Control Report

Surrogate recoveries expressed as percentages:

Sample ID	Tetrachloro-m-xylene	QC Limits
Lab Control Sample	107	50-150
Method Blank	77	50-150
MOA00PES0005	113	50-150
MOA00PES0006	105	50-150
MOA00PES0006 (Dup)	114	50-150

Client: Kinnetic Laboratories, Inc.
Method: EPA 608
Date Extracted: August 17, 2000
Date Analyzed: September 05, 2000
Matrix: Water

ToxScan Number: T-18755

Quality Control Report
Spike recoveries expressed as percentages:

Spiked Compound	LCS % REC	QC LIMITS % REC
Lindane	123	56-123
Heptachlor	105	40-131
Aldrin	95	40-120
Dieldrin	100	52-126
Endrin	120	56-121
4,4'-DDT	100	38-127

LCS = Laboratory Control Sample

Client:	Kinnetic Laboratories, Inc.	ToxScan Number: T-18755
Method:	EPA 8081	
Date Extracted:	August 28, 2000	
Date Analyzed:	September 05, 2000	
Matrix:	Sludge	
Units:	ug/Kg (ppb)	

Client Sample ID:	MOA00PES0007
Site ID:	Sludge
ToxScan Lab ID:	18755-08

Analyte	Wet Wt. Sample Value	Wet Wt. Reporting Limit	Dry Wt. Sample Value	Dry Wt. Reporting Limit
Aldrin	ND	8.0	ND	24
alpha-BHC	ND	8.0	ND	24
beta-BHC	ND	8.0	ND	24
delta-BHC	ND	8.0	ND	24
gamma-BHC	ND	8.0	ND	24
alpha-Chlordane	ND	8.0	ND	24
gamma-Chlordane	10	8.0	30	24
4,4'-DDD	82	3.0	250	9.1
4,4'-DDE	ND	3.0	ND	9.1
4,4'-DDT	5.1	3.0	16	9.1
Dieldrin	ND	16	ND	49
Endosulfan I	ND	8.0	ND	24
Endosulfan II	ND	16	ND	49
Endosulfan Sulfate	ND	16	ND	49
Endrin	ND	16	ND	49
Endrin Aldehyde	ND	16	ND	49
Endrin Ketone	ND	16	ND	49
Heptachlor	ND	8.0	ND	24
Heptachlor Epoxide	ND	8.0	ND	24
Methoxychlor	ND	80	ND	240
Toxaphene	ND	160	ND	490
Aroclor-1016	ND	160	ND	490
Aroclor-1221	ND	160	ND	490
Aroclor-1232	ND	160	ND	490
Aroclor-1242	ND	160	ND	490
Aroclor-1248	ND	160	ND	490
Aroclor-1254	ND	160	ND	490
Aroclor-1260	ND	160	ND	490
Total PCB'S	ND	160	ND	490
Mirex	ND	0.2	ND	0.6

ND = Not Detected

Client:	Kinnetic Laboratories, Inc.	ToxScan Number: T-18755
Method:	EPA 8081	
Date Extracted:	August 28, 2000	
Date Analyzed:	September 05, 2000	
Matrix:	Sludge	
Units:	ug/Kg (ppb)	

Client Sample ID: Method Blank
ToxScan Lab ID: MB082800

Analyte	Sample Value	Reporting Limit
Aldrin	ND	8.0
alpha-BHC	ND	8.0
beta-BHC	ND	8.0
delta-BHC	ND	8.0
gamma-BHC	ND	8.0
alpha-Chlordane	ND	8.0
gamma-Chlordane	ND	8.0
4,4'-DDD	ND	3.0
4,4'-DDE	ND	3.0
4,4'-DDT	ND	3.0
Dieldrin	ND	16
Endosulfan I	ND	8.0
Endosulfan II	ND	16
Endosulfan Sulfate	ND	16
Endrin	ND	16
Endrin Aldehyde	ND	16
Endrin Ketone	ND	16
Heptachlor	ND	8.0
Heptachlor Epoxide	ND	8.0
Methoxychlor	ND	80
Toxaphene	ND	160
Aroclor-1016	ND	160
Aroclor-1221	ND	160
Aroclor-1232	ND	160
Aroclor-1242	ND	160
Aroclor-1248	ND	160
Aroclor-1254	ND	160
Aroclor-1260	ND	160
Total PCB'S	ND	160
Mirex	ND	0.2

ND = Not Detected

Client:	Kinnetic Laboratories, Inc.	ToxScan Number: T-18755
Method:	EPA 8081	
Date Extracted:	August 28, 2000	
Date Analyzed:	September 05, 2000	
Matrix:	Sediment	

Quality Control Report

Surrogate recoveries expressed as percentages:

Sample ID	Tetrachloro-m-xylene	Decachlorobiphenyl	QC Limits
Lab Control Sample	71	78	50-150
Method Blank	76	77	50-150
MOA00PES0007	103	133	50-150
MOA00PES0007(MS)	128	126	50-150
MOA00PES0007(MSD)	125	128	50-150

Client: Kinnetic Laboratories, Inc. ToxScan Number: T-18755
Method: EPA 8081
Date Extracted: August 28, 2000
Date Analyzed: September 05, 2000
Matrix: Sludge

Quality Control Report
QA/QC on sample MOA00PES0007
Spike recoveries expressed as percentages:

Spiked Compound	MS % REC	MSD %REC	% RPD	QC LIMITS % REC	%RPD
Lindane	115	98	16	46-127	50
Heptachlor	93	85	8	35-130	31
Aldrin	95	78	20	34-132	43
Dieldrin	98	88	11	31-134	38
Endrin	86	89	3	42-139	45
4,4'-DDT	88	80	10	23-134	50

MS = Matrix Spike

MSD = Matrix Spike Duplicate

RPD = Relative Percent Difference

Client:	Kinnetic Laboratories, Inc.	ToxScan Number: T-18755
Method:	EPA 8081	
Date Extracted:	August 28, 2000	
Date Analyzed:	September 05, 2000	
Matrix:	Sludge	

Quality Control Report
Spike recoveries expressed as percentages:

Spiked Compound	LCS % REC	QC LIMITS % REC
Lindane	80	46-127
Heptachlor	80	35-130
Aldrin	80	34-132
Dieldrin	83	31-134
Endrin	89	42-139
4,4'-DDT	77	23-134

LCS = Laboratory Control Sample

Client:	Kinnetic Laboratories, Inc	ToxScan Number: T-18755
Method:	EPA 614	
Date Extracted:	August 17, 2000	
Date Analyzed:	September 02, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID:	MOA00PES0005
Site ID:	Influent
ToxScan Lab ID:	18755-06

Analyte	Sample Value	Reporting Limit
Demeton	ND	0.20
Guthion	ND	1.5
Malathion	ND	0.20
Parathion	ND	0.20

ND = Not Detected

Client:	Kinnetic Laboratories, Inc	ToxScan Number: T-18755
Method:	EPA 614	
Date Extracted:	August 17, 2000	
Date Analyzed:	September 02, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID:	MOA00PES0006
Site ID:	Effluent
ToxScan Lab ID:	18755-07

Analyte	Sample Value	Reporting Limit
Demeton	ND	0.20
Guthion	ND	1.5
Malathion	ND	0.20
Parathion	ND	0.20

ND = Not Detected

Client:	Kinnetic Laboratories, Inc	ToxScan Number: T-18755
Method:	EPA 614	
Date Extracted:	August 17, 2000	
Date Analyzed:	September 02, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID:	MOA00PES0006
Site ID:	Effluent
ToxScan Lab ID:	18755-07Dup

Analyte	Sample Value	Reporting Limit
Demeton	ND	0.20
Guthion	ND	1.5
Malathion	ND	0.20
Parathion	ND	0.20

ND = Not Detected

Client:	Kinnetic Laboratories, Inc	ToxScan Number: T-18755
Method:	EPA 8141A	
Date Extracted:	August 28, 2000	
Date Analyzed:	September 02, 2000	
Matrix:	Sludge	
Units:	ug/Kg (ppb)	

Client Sample ID:	MOA00PES0007
Site ID:	Sludge
ToxScan Lab ID:	18775-08

Analyte	Wet Wt. Sample Value	Wet Wt. Reporting Limit	Dry Wt. Sample Value	Dry Wt. Reporting Limit
Demeton	ND	20	ND	61
Guthion	ND	1500	ND	4600
Malathion	ND	20	ND	61
Parathion	ND	20	ND	61

ND = Not Detected

Client:	Kinnetic Laboratories, Inc	ToxScan Number: T-18755
Method:	EPA 614	
Date Extracted:	August 17, 2000	
Date Analyzed:	September 02, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID: Method Blank
ToxScan Lab ID: MB081700

Analyte	Sample Value	Reporting Limit
Demeton	ND	0.20
Guthion	ND	1.5
Malathion	ND	0.20
Parathion	ND	0.20

ND = Not Detected

Client:	Kinnetic Laboratories, Inc	ToxScan Number: T-18755
Method:	EPA 8141A	
Date Extracted:	August 28, 2000	
Date Analyzed:	September 02, 2000	
Matrix:	Sludge	
Units:	ug/Kg (ppb)	

Client Sample ID: Method Blank
ToxScan Lab ID: MB081700

Analyte	Sample Value	Reporting Limit
Demeton	ND	20
Guthion	ND	1500
Malathion	ND	20
Parathion	ND	20

ND = Not Detected

Client:	Kinnetic Laboratories, Inc	ToxScan Number: T-18755
Method:	EPA 614	
Date Extracted:	August 17, 2000	
Date Analyzed:	September 02, 2000	
Matrix:	Water	

Quality Control Report

Surrogate recoveries expressed as percentages:

Sample ID	Triphenylphosphate	QC Limits
Method Blank	82	50-150
Lab Control Sample	122	50-150
MOA00PES0005	77	50-150
MOA00PES0006	80	50-150
MOA00PES0006(Dup)	95	50-150

Client:	Kinnetic Laboratories, Inc	ToxScan Number: T-18755
Method:	EPA 8141A	
Date Extracted:	August 28, 2000	
Date Analyzed:	September 02, 2000	
Matrix:	Sludge	

Quality Control Report

Surrogate recoveries expressed as percentages:

Sample ID	Triphenylphosphate	QC Limits
Method Blank	56	50-150
Lab Control Sample	70	50-150
MOA00PES0007	94	50-150
MOA00PES0007 (MS)	97	50-150
MOA00PES0007 (MSD)	98	50-150

MS = Matrix Spike
MSD = Matrix Spike Duplicate

Client: Kinnetic Laboratories, Inc.
Method: EPA 614
Date Extracted: August 17, 2000
Date Analyzed: September 02, 2000
Matrix: Water

ToxScan Number: T-18755

Quality Control Report
Spike recoveries expressed as percentages:

Spiked Compound	LCS % REC	QC LIMITS % REC
Diazinon	65	50-150
Disulfoton	59	50-150
Parathion methyl	48*	50-150
Malathion	71	50-150
Parathion ethyl	51	50-150

LCS = Laboratory Control Sample

*Outside of QC limits

Client: Kinnetic Laboratories, Inc.
Method: EPA 8141A
Date Extracted: August 28, 2000
Date Analyzed: September 02, 2000
Matrix: Sludge

ToxScan Number: T-18755

Quality Control Report
Spike recoveries expressed as percentages:

Spiked Compound	LCS % REC	QC LIMITS % REC
Diazinon	67	50-150
Disulfoton	65	50-150
Parathion methyl	62	50-150
Malathion	66	50-150
Parathion ethyl	65	50-150
Ethion	74	50-150

LCS = Laboratory Control Sample

Client: Kinnetic Laboratories, Inc
Method: EPA 8141A
Date Extracted: August 28, 2000
Date Analyzed: September 02, 2000
Matrix: Sludge

ToxScan Number: T-18755

Quality Control Report
QA/QC on sample MOA00PES0007
Spike recoveries expressed as percentages:

Spiked Compound	MS % REC	MSD %REC	% RPD	QC LIMITS % REC	QC LIMITS %RPD
Diazinon	86	74	15	50-150	50
Disulfoton	69	67	3	50-150	50
Parathion methyl	78	75	4	50-150	50
Malathion	69	64	8	50-150	50
Parathion ethyl	69	65	6	50-150	50
Ethion	79	74	7	50-150	50

MS = Matrix Spike

MSD = Matrix Spike Duplicate

RPD = Relative Percent Difference

Client: Kinnetic Laboratories, Inc.
Method: EPA 614
Date Extracted: August 17, 2000
Date Analyzed: September 02, 2000
Matrix: Water

ToxScan Number: T-18755

Quality Control Report
Spike recoveries expressed as percentages:

Spiked Compound	LCS % REC	QC LIMITS % REC
Diazinon	65	50-150
Disulfoton	59	50-150
Parathion methyl	48*	50-150
Malathion	71	50-150
Parathion ethyl	51	50-150

LCS = Laboratory Control Sample

*Outside of QC limits

Client:	Kinnetic Laboratories Incorporated	ToxScan Number: T-18755
Method:	EPA 602	
Date Analyzed:	August 18, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID:	MOA00VOA0006	MOA00VOA0007	
Site ID:	Influent	Effluent-1	Reporting
Toxscan Lab ID:	18755-01-A	18755-02-B	Limit
Analyte			
Benzene	1.1	5.3	0.50
Toluene	11	23	0.50
Chlorobenzene	ND	ND	0.50
Ethylbenzene	9.8	6.5	0.50
Xylenes	42	37	0.50
1,2 Dichlorobenzene	3.4	9.5	0.50
1,3 Dichlorobenzene	ND	ND	0.50
1,4 Dichlorobenzene	1.3	7.1	0.50

ND = None Detected

Quality Control Report:
Surrogate Recovery expressed as percentages

Surrogate	Surrogate % Rec	Surrogate % Rec	QC Limits % Rec
1,4-Difluorobenzene	101	105	65-142
1,1,1-Trifluorotoluene	102	103	77-143
1,4-Bromofluorobenzene	96	107	86-115

Client:	Kinnetic Laboratories Incorporated	ToxScan Number: T-18755
Method:	EPA 602	
Date Analyzed:	August 18, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID:	MOA00VOA0008	MOA00VOA0009	
Site ID:	Effluent-2	C-Station	Reporting
Toxscan Lab ID:	18755-03-A	18755-04-A	Limit
Analyte			
Benzene	5.3	ND	0.50
Toluene	23	ND	0.50
Chlorobenzene	ND	ND	0.50
Ethylbenzene	6.3	ND	0.50
Xylenes	37	ND	0.50
1,2 Dichlorobenzene	8.0	ND	0.50
1,3 Dichlorobenzene	ND	ND	0.50
1,4 Dichlorobenzene	6.3	ND	0.50

ND = None Detected

Quality Control Report:
Surrogate Recovery expressed as percentages

Surrogate	Surrogate % Rec	Surrogate % Rec	QC Limits % Rec
1,4-Difluorobenzene	102	95	65-142
1,1,1-Trifluorotoluene	100	95	77-143
1,4-Bromofluorobenzene	104	102	86-115

Client:	Kinnetic Laboratories Incorporated	ToxScan Number: T-18755
Method:	EPA 602	
Date Analyzed:	August 18, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID:	MOA00VOA0010		
Site ID:	Trip Blank	Method	Reporting
Toxscan Lab ID:	18755-05-A	Blank	Limit
Analyte			
Benzene	ND	ND	0.50
Toluene	ND	ND	0.50
Chlorobenzene	ND	ND	0.50
Ethylbenzene	ND	ND	0.50
Xylenes	ND	ND	0.50
1,2 Dichlorobenzene	ND	ND	0.50
1,3 Dichlorobenzene	ND	ND	0.50
1,4 Dichlorobenzene	ND	ND	0.50

ND = None Detected

Quality Control Report:
Surrogate Recovery expressed as percentages

Surrogate	Surrogate % Rec	Surrogate % Rec	QC Limits % Rec
1,4-Difluorobenzene	94	99	65-142
1,1,1-Trifluorotoluene	94	100	77-143
1,4-Bromofluorobenzene	97	102	86-115

Client: Kinnetic Laboratories Incorporated
Method: EPA 602
Date Analyzed: August 18, 2000
Matrix: Water

ToxScan Number: T-18755

Quality Control Report:
Spike recoveries expressed as percentages

Client Sample ID: MOA00VOA0006
Site ID: Influent
ToxScan Lab ID: 18755-01-B,C

Spiked compound	MS %Rec	MSD %Rec	%RPD	QC Limits %Rec	QC Limits %RPD
Benzene	100	99	1	76-127	21
Toluene	78	76	2	76-125	21
Chlorobenzene	101	100	1	75-130	21

Quality Control Report :
Surrogate recovery expressed as percentages

Surrogate	Surrogate % Rec	Surrogate % Rec	QC Limits % Rec
1,4-Difluorobenzene	103	102	65-142
1,1,1-Trifluorotoluene	101	100	77-143
1,4-Bromofluorobenzene	95	95	86-115

MS = Matrix Spike
MSD=Matrix Spike Duplicate
RPD=Releative Percent Difference

Client:	Kinnetic Laboratories Incorporated	ToxScan Number: T-18755
Method:	EPA 602	
Date Analyzed:	August 18, 2000	
Matrix:	Water	

Quality Control Report:
Spike recoveries expressed as percentages

Spiked compound	LCS %Rec	QC Limits %Rec
Benzene	99	76-127
Toluene	100	76-125
Chlorobenzene	100	75-130

Quality Control Report :
Surrogate recovery expressed as percentages

Surrogate	Surrogate % Rec	QC Limits % Rec
1,4-Difluorobenzene	108	65-142
1,1,1-Trifluorotoluene	108	77-143
1,4-Bromofluorobenzene	114	86-115

LCS = Laboratory Control Sample

Client: Kinnetic Laboratories Incorporated
Method: EPA Method(s) 1664
Date Completed: 08/24/2000
Matrix: Water
Units: mg/L

ToxScan Number: T-18755

Client Sample ID	Site ID	ToxScan Lab ID	Analyte	Sample Value	Reporting Limit
MOA00HEX0004	Influent	18755-14	TRPH-Gravimetric (SGT-HEM)	ND	5.0
MOA00HEX0005	Effluent	18755-15	TRPH-Gravimetric (SGT-HEM)	ND	5.0

QC FOR PROJECT # T-18755

LABORATORY METHOD BLANK SUMMARY

Applicable Matrix: Water

Analyte	Amount	Reporting Limit	Units	EPA Method Number
TRPH-Gravimetric (SGT-HEM)	ND	5.0	mg/L	1664

QC FOR PROJECT # T-18755

LABORATORY PRECISION SUMMARY:

Matrix: Water

Analyte	REP 1	REP 2	Units	RPD
TRPH-Gravimetric (SGT-HEM)				
18755-14	ND	ND	mg/L	NA

Client: Kinnetic Laboratories Incorporated
Method: EPA Method(s) 200.8 270.3
Date Completed: 10/9/00 - 12/28/00
Matrix: Water
Units: ug/L

ToxScan Number: T-18755

Total Metals

Client Sample ID	ToxScan Lab ID	Analyte	Sample Value	Reporting Limit
MOA00MET0005	18755-09	Antimony	ND	10
		Selenium	ND	10
		Thallium	ND	10
MOA00MET0006	18755-10	Antimony	ND	10
		Selenium	ND	10
		Thallium	ND	10
MOA00MET0007	18755-11	Antimony	ND	10
		Selenium	ND	10
		Thallium	ND	10
MOA00MET0008	18755-12	Antimony	ND	10
		Selenium	ND	10
		Thallium	ND	10

Client: Kinnetic Laboratories Incorporated

ToxScan Number: T-18755

Method: EPA Method(s) 6020 7741

Date Completed: 10/12/00 - 1/25/01

Matrix: Sludge

Units: mg/kg

Total Metals

Client Sample ID	ToxScan Lab ID	Analyte	Dry Wt. Sample Value	Dry Reporting Limit
MOA00MET0009	18755-13	Antimony	2.2	0.30
		Selenium	1.5	0.30
		Thallium	ND	0.30

QC FOR PROJECT # T-18755

LABORATORY METHOD BLANK SUMMARY

Applicable Matrix: Water

Total Metals

Analyte	Amount	Reporting Limit ug/L	EPA Method Number
Antimony	ND	10	200.8
Selenium	ND	0.50	270.3
Thallium	ND	10	200.8

QC FOR PROJECT # 18755

Concentrations of the following are in ug/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE SUMMARY:

Matrix: Water

Total Metals

Analyte	Sample Amount	Amount of Spike	Matrix Spike	MS % Rec	Matrix Spike Dup	MSD % Rec	RPD
Antimony							
18818-07	ND	25	27.1	108	27.5	110	2
Selenium							
18781-01	0.0800	10	9.48	95	9.96	96	1
Thallium							
18818-07	ND	25	25.3	101	24.9	100	1

QC FOR PROJECT # T-18755

SRM SUMMARY:

Matrix: Water

Total Metals

Analyte	Amount Found	Dilution	Corrected Value	SRM	Certified Value	Units	% Recovery
Antimony	243	1	243	ERA 9991	226	ug/L	108
Selenium	9.60	20	192	ERA 9977	200	ug/L	96
Thallium	443	1	443	ERA 9991	459	ug/L	97

ERA 9977 = Environmental Resource Associates, WasteWatR Lot No. 9977

QC FOR PROJECT # T-18755

SRM SUMMARY:

Matrix: Water

Total Metals

Analyte	Amount Found	Dilution	Corrected Value	SRM	Certified Value	Units	% Recovery
Antimony	13.8	5	69.2	ERA 9970	64.7	ug/L	107
Selenium	10.8	20	216	ERA 9977	200	ug/L	108
Thallium	14.1	5	70.3	ERA 9970	64.7	ug/L	109

ERA 9970 = Environmental Resource Associates, WasteWatR Lot No. 9970

ERA 9977 = Environmental Resource Associates, WasteWatR Lot No. 9977

QC FOR PROJECT # T-18755

LABORATORY METHOD BLANK SUMMARY

Applicable Matrix: Sludge

Total Metals

Analyte	Amount	Reporting Limit mg/L	EPA Method Number
Antimony	ND	0.30	6020
Selenium	ND	0.10	7741
Thallium	ND	0.30	6020

QC FOR PROJECT # 18755

MATRIX SPIKE / MATRIX SPIKE DUPLICATE SUMMARY:

Matrix: Sludge

Analyte	Sample	Spike Amount ppm	MS % Rec	MSD % Rec	RPD
Selenium	18856-02	0.14	103	104	1

QC FOR PROJECT # T-18755

SRM SUMMARY:

Matrix: Sediment

Total Metals

Analyte	SRM Value Found mg/Kg	Certified SRM Value mg/Kg	% Recovery	SRM
Selenium	0.682	0.720	95	MESS-3

MESS-3 = National Research Council Canada, marine sediment.

Client: Kinnetic Laboratories Incorporated
Method: EPA Method(s) 160.3
Date Completed: 8/23/2000
Matrix: Sludge
Units: Percent

ToxScan Number: T-18755

Client Sample ID	Site ID	ToxScan Lab ID	Analyte	Sample Value	Reporting Limit
MOA00PES0007	Sludge	18755-08	Percent Solids	33	0.10
MOA00MET0009	Sludge	18755-13	Percent Solids	33	0.10

QC FOR PROJECT # T-18755

LABORATORY PRECISION SUMMARY:

Matrix: Water

Analyte	REP 1	REP 2	Units	RPD
Percent Solids				
18755-13	32.9	32.3	Percent	2

T-18755 Pg 1 of 9 6 JP

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	FROM:
ToxScan, Inc. 42 Hangar Way Watsonville, CA 95076 Attn: Doug Clarke (408)724-4522 location: Prig 6	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178

REQUIRED COMPLETION DATE: 30 days | **P.O. #:** AK00-1011 | **KLI Proj. #:** 514.01

ANALYSIS TYPE: EPA 602 with xylenes. Detection limit 0.5 µg/L.

MATRIX: Water | **Preservative:** HCl, 4°C | **Type of Container:** 40-mL glass

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER
MOA00VOA0006	Influent	7	8/14/00	1420	small bubble in #7 JMS	T-18755-01-A,-B,-C,-D,-E,-F,
MOA00VOA0007	Effluent-1	3	8/14/00	1400	small bubble in #1 JMS	-02-A,-B,-C
MOA00VOA0008	Effluent-2	3	8/14/00	1400	bubble in #3 JMS	-03-A,-B,-C
MOA00VOA0009	C-Station	3	8/14/00	1400	no bubbles JMS	-04-A,-B,-C
MOA00VOA0010	Trip Blank	3	8/14/00	—	all w/ bubbles	-05-A,-B,-C

each sample received intact. JP

JMS

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC, INCLUDING METHOD BLANKS, MS/SDs, DUPLICATES, ETC.

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	8/15/00 1135	hand	G. LAWLEY	8/15 1135
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
Janet M. Savoie	8/15/00 1300	FED EX	Glenna Pollock	16 Aug 00/0930
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME

SAMPLED BY (NAME/SIGNATURE): _____

T-18755

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

2 of 6 JP

LABORATORY:	FROM:
ToxScan, Inc. 42 Hangar Way Watsonville, CA 95076 Attn: Doug Clarke (408)724-4522 location: frig 11 shelf 17	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178

REQUIRED COMPLETION DATE: 30 days | **P.O. #:** AK00-1011 | **KLI Proj. #:** 514.01

ANALYSIS TYPE: Pesticides: EPA 608 plus Mirex and EPA 614 for Demeton, Guthion, Malathion, and Parathion only. Detection limits 0.05 - 1.0 µg/L (Guthion ~15 µg/L).

MATRIX: Water | **Preservative:** None, 4°C | **Type of Container:** 1-L amber glass

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER
MOA00PES0005	Influent	2	8/15/00	0810	#2 - 1/2 full JPS	T-18755-06-A, -B
MOA00PES0006	Effluent	3	8/15/00	0805	1+2 partial #3 1/2 full JPS	↓-07-A, -B, -C

SJMS

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC, INCLUDING METHOD BLANKS, MS/SDs, DUPLICATES, ETC.

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	8/15/00 1135	hand	G. Lawley	8/15 1135
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
Janet M. Savoie	8/15/00 1300	FED EX	Jenea Pollock	16 Aug 00/0930
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME

SAMPLED BY (NAME/SIGNATURE): _____

each sample received intact. JP

1:18755 Pg 3 of 9 6

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	FROM:
ToxScan, Inc. 42 Hangar Way Watsonville, CA 95076 Attn: Doug Clarke (408)724-4522 location: frig 11 shelf 17	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178

REQUIRED COMPLETION DATE: 30 days | **P.O. #:** AK00-1011 | **KLI Proj. #:** 514.01

ANALYSIS TYPE: Pesticides: EPA 8080 plus Mirex, and EPA 8140 for Demeton, Guthion, Malathion, and Parathion only. Detection limits 0.01 - 0.06 µg/g (dry weight; Guthion ~5 µg/g). Please report in dry weight.

MATRIX: Sludge | **Preservative:** None, 4°C | **Type of Container:** 125-mL glass

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER
MOA00PES0007	Sludge	1	8/15/00	0600		T-18755-08-A

DMLS

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC, INCLUDING METHOD BLANKS, MS/SDs, DUPLICATES, ETC.

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	8/15/00 1135	hand	G. LAWLEY	8/15 1135
RELINQUISHED BY:	**DATE AND TIME**	**TRANSPORTED BY:**	**RECEIVED BY:**	**DATE AND TIME**
Janet M. Savoie	8/15/00 1300	FED EX	Jenca Pollock	16Aug00/0930
RELINQUISHED BY:	**DATE AND TIME**	**TRANSPORTED BY:**	**RECEIVED BY:**	**DATE AND TIME**

SAMPLED BY (NAME/SIGNATURE): _____

each sample received intact.
JP

T-18755 Pg 4 of 9 JP

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	FROM:
ToxScan, Inc. 42 Hangar Way Watsonville, CA 95076 Attn: Doug Clarke (408)724-4522 location: frig 11 Shelf 17	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178

REQUIRED COMPLETION DATE: 30 days | **P.O. #:** AK00-1011 | **KLI Proj. #:** 514.01

ANALYSIS TYPE: Metals: Antimony, ~~molybdenum~~, thallium (EPA 200.8) and selenium (EPA 270.3). Detection limit 10 µg/L.

MATRIX: Water | **Preservative:** HNO3, 4°C | **Type of Container:** 1-L HDPE

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER
MOA00MET0005	Influent-1	1	8/15/00	0810		T-18755-09-A
MOA00MET0006	Influent-2	1	8/15/00	0810		-10-A
MOA00MET0007	Effluent	1	8/15/00	0805		-11-A
MOA00MET0008	C-Station	1	8/15/00	0810		-12-A
						JMS

Please preserve samples with HNO_3 at AWWU immediately after sampling.

JMS

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC, INCLUDING METHOD BLANKS, MS/SDs, DUPLICATES, ETC.

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	8/15/00 1135	hand	G. LAWLEY	8/15 1135
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
Janet M. Savoie	8/15/00 1300	FED EX	Jenoa Pollock	16Aug00/0930
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME

SAMPLED BY (NAME/SIGNATURE): _____

each sample received intact.
JP

T-18755 Pg 5 of 9 JP

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	FROM:
ToxScan, Inc. 42 Hangar Way Watsonville, CA 95076 Attn: Doug Clarke (408)724-4522 location: frig 11 Shelf 17	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178

REQUIRED COMPLETION DATE: 30 days | **P.O. #:** AK00-1011 | **KLI Proj. #:** 514.01

ANALYSIS TYPE: Metals: Antimony, ~~molybdenum~~, thallium (EPA 6020) and selenium (EPA 7741). Detection limit 0.3 µg/g (dry weight). Please report in dry weight.

MATRIX: Sludge | **Preservative:** None, 4°C | **Type of Container:** 125-mL glass

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER
MOA00MET0009	Sludge	1	8/15/00	0600		T-18755-13-A

DMS

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC, INCLUDING METHOD BLANKS, MS/SDs, DUPLICATES, ETC.

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	8/15/00 1135	hand	G. CAMLEY	8/15 1135
RELINQUISHED BY:	**DATE AND TIME**	**TRANSPORTED BY:**	**RECEIVED BY:**	**DATE AND TIME**
Janet M. Savoie	8/15/00 1300	FED EX	Jenea Pollock	16Aug00/0930
RELINQUISHED BY:	**DATE AND TIME**	**TRANSPORTED BY:**	**RECEIVED BY:**	**DATE AND TIME**

SAMPLED BY (NAME/SIGNATURE): _____

Sample received intact.
JP

T-18755

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

Pg 6 of 6 JP

LABORATORY:	FROM:
ToxScan, Inc. 42 Hangar Way Watsonville, CA 95076 Attn: Doug Clarke (408)724-4522 location: frig 11 Shelf 17	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178

REQUIRED COMPLETION DATE: 30 days | **P.O. #:** AK00-1011 | **KLI Proj. #:** 514.01

ANALYSIS TYPE: Total Petroleum Hydrocarbons (EPA 1664 SGT-HEM). Detection limit 0.2 mg/L.

MATRIX: Water | **Preservative:** H_2SO_4, 4°C | **Type of Container:** 1-L amber glass

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER
MOA00HEX0004	Influent	2 ✓✓	8/14/00	1420		T-18755-~~13-A, B~~ -14-A, -B JD
MOA00HEX0005	Effluent	2 ✓✓	8/14/00	1400		↓ -15-A -B ~~-14-A, B~~ JP

JMS

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC, INCLUDING METHOD BLANKS, MS/SDs, DUPLICATES, ETC.

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	8/15/00 1135	hand	G. LAWLEY	8/15 1135
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
Janet M. Savoie	8/15/00 1300	FED EX	Jenea Pollock	16Aug00/0930
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME

SAMPLED BY (NAME/SIGNATURE): _____

each sample received intact. JP

ToxScan Inc.

42 Hangar Way • Watsonville, CA 95076-2404 • (831) 724-4522 • FAX (831) 724-3188

October 16, 2000

ToxScan Number: T-18803

Kinnetic Laboratories Incorporated
403 West Eighth Avenue
Anchorage, AK 99501

Attn: Mark Savoie

Project Name:	None
Project Number:	514.01
Date Sampled:	August 15, 2000
Date Received:	September 01, 2000
Matrix:	Water

Please find the enclosed test results for the parameters requested for analyses. The samples were analyzed within holding time using the following methods:

Dissolved Metals by ICP/MS (Sb,Mo,Tl) by EPA Method 200.8
Dissolved Selenium by hydride AA by EPA Method 270.3

The samples were received intact and were handled with the proper chain-of-custody procedures. Appropriate QA/QC guidelines were employed during the analyses on a minimum of a 5% basis. QC results were within limits and are reported with or following the data for each analysis.

If you have any questions or require any additional information, please feel free to call.

Sincerely,

Philip D. Carpenter

Philip D. Carpenter, Ph.D.
President

Enclosures

This cover letter is an integral part of the report.

EXPLANATION OF ACRONYMS FOR PROJECT # T-18803

The following is a glossary for acronyms that may be used in this report.

Abbreviation	Definition
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NA	Not Applicable
ND	None Detected
REP	Replicate
RPD	Relative Percent Difference
SRM	Standard Reference Material
TOC	Total Organic Carbon

Client: Kinnetic Laboratories Incorporated

ToxScan Number: T-18803

Method: EPA Method(s) 200.8 270.3

Date Completed: 10/09/2000 - 10/12/2000

Matrix: Water

Units: ug/L

Dissolved Metals

Client Sample ID	Site ID	ToxScan Lab ID	Analyte	Sample Value	Reporting Limit
MOA00DMT0001	Influent	18803-01	Antimony	ND	10
			Molybdenum	ND	10
			Selenium	ND	10
			Thallium	ND	10
MOA00DMT0002	Effluent	18803-02	Antimony	ND	10
			Molybdenum	ND	10
			Selenium	ND	10
			Thallium	ND	10

QC FOR PROJECT # T-18803

LABORATORY METHOD BLANK SUMMARY

Applicable Matrix: Water

Total Metals

Analyte	Amount	Reporting Limit ug/L	EPA Method Number
Antimony	ND	10	200.8
Molybdenum	ND	10	200.8
Selenium	ND	0.50	270.3
Thallium	ND	10	200.8

QC FOR PROJECT # T-18803

LABORATORY FILTER BLANK SUMMARY

Applicable Matrix: Water

Dissolved Metals

Analyte	Amount	Reporting Limit ug/L	EPA Method Number
Antimony	ND	10	200.8
Molybdenum	ND	10	200.8
Selenium	ND	0.50	270.3
Thallium	ND	10	200.8

QC FOR PROJECT # 18803

Concentrations of the following are in ug/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE SUMMARY:

Matrix: Water

Total Metals

Analyte	Sample Amount	Amount of Spike	Matrix Spike	MS % Rec	Matrix Spike Dup	MSD % Rec	RPD
Antimony							
18818-07	ND	25	27.1	108	27.5	110	2
Molybdenum							
18818-07	3.52	5.0	8.85	107	8.28	95	12
Selenium							
18781-01	0.0800	10	9.48	95	9.96	96	1
Thallium							
18818-07	ND	25	25.3	101	24.9	100	1

QC FOR PROJECT # T-18803

Concentrations of the following are in ug/L

SRM SUMMARY:

Matrix: Water

Total Metals

Analyte	Amount Found	Dilution	Corrected Value	SRM	Certified Value	% Recovery
Antimony	13.8	5	69.2	ERA 9970	64.7	107
Molybdenum	27.6	5	138	ERA 9970	129	107
Selenium	10.8	20	216	ERA 9977	200	108
Thallium	14.1	5	70.3	ERA 9970	64.7	109

ERA 9970 = Environmental Resource Associates, WasteWatR Lot No. 9970

ERA 9977 = Environmental Resource Associates, WasteWatR Lot No. 9977

HRG. 8 SHELF 1 T-18803

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	FROM:
ToxScan, Inc. 42 Hangar Way Watsonville, CA 95076 Attn: Doug Clarke (408)724-4522	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178

REQUIRED COMPLETION DATE: 30 days | **P.O. #:** AK00-1011 add on | **KLI Proj. #:** 514.01

ANALYSIS TYPE: Metals: Antimony, molybdenum, thallium (EPA 200.8) and selenium (EPA 270.3). Detection limit 10 µg/L.

MATRIX: Water | **Preservative:** HNO3, 4°C | **Type of Container:** 60 mL HDPE

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER
MOA00DMT0001	Influent	1	8/15/00	0810	INTACT	T-18803-01-A
MOA00DMT0002	Effluent	1	8/15/00	0805	↓	↓ -02-A
EACH SAMPLE REC'D IN 1-50ml HDPE.KL						JMS
Each contains exactly 50 ml.						
						JMS

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC, INCLUDING METHOD BLANKS, MS/SDs, DUPLICATES, ETC.

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	8/31/00 0940	BY HAND	JM Savoie	8/31/00 0940
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
Janet M. Savoie	8/31/00/1030	FED EX	Kati King	01 SEP 00/1000
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME

SAMPLED BY (NAME/SIGNATURE): _____

APPENDIX B

Toxic Pollutant and Pesticide Monitoring, August Sampling

B3 Severn Trent

Priority Pollutants

AUGUST SAMPLING, PRIORITY POLLUTANTS, STL SAMPLE LIST

SAMPLE IDENTIFICATION NUMBER	SAMPLE LOCATION	SAMPLE TYPE
MOA00VOP0020 - 0027	INFLUENT	SAMPLE (COMPOSITE)
MOA00VOP0028 - 35	EFFLUENT	SAMPLE (COMPOSITE)
MOA00VOP0036	C-STATION	FIELD BLANK
MOA00VOP0037	TRIP BLANK	TRIP BLANK
MOA00VOP0038	SLUDGE	SAMPLE
MOA00SVL0004	INFLUENT	SAMPLE
MOA00SVL0005	EFFLUENT	SAMPLE
MOA00SVL0006	SLUDGE	SAMPLE

SEVERN TRENT SERVICES

STL Anchorage
5761 Silverado Way, Suite N
Anchorage, AK 99518-1657

Tel: 907 563 4800
Fax: 907 563 4815
www.stl-inc.com

November 30, 2000 **AMENDMENT**

Gary Lawley
Kinnetic Laboratories, Inc.
403 West 8th Avenue
Anchorage, AK 99501

Project Name: MOA/Pt. Woronzof Facility
PO# AK00-1012

STL-Anchorage Lot Number: L0H160301

Dear Mr. Lawley:

Enclosed with this letter is the report containing the analytical results for the project specified above.

The Narrative section included in the following attachment provides a summary description of any anomalies or non conformances that occurred during sample processing, analysis, and data review as applicable to the samples and analytical methods requested.

The amendments made to this report are as follows:

- ***The sample IDs for the two composites are modified to reflect the original client IDs.***
- ***The sample IDs for samples L0H160301-020 through 022 were corrected to match the COC.***
- ***The data flags B and J on the compound Diethylphthalate for samples L0H160301-020, 021 and the associated method blank have been removed. The results were verified as being below the reporting limit for this compound.***
- ***The case narrative has been modified to include comments regarding the four hits in the trip blank (added to 624 section).***
- ***2-Methylphenol and 3,4-Methylphenol results for samples L0H160301-020 and 021 are included as additional data at the bottom of the result pages. These compounds are not normally on a 625 compound list; however, the data was available to reprocess against the 8270C compound list, and data was available.***

SEVERN TRENT SERVICES

STL Anchorage

This report shall not be reproduced except in full, without the written approval of the laboratory. If you have any questions please feel free to contact me at 907-563-4800, extension 215.

Sincerely,

Emanuel Hignutt, Jr.
Laboratory Manager

EH/vlb

Enclosure
cc: Project File

KINNETIC LABORATORIES, INC.

MOA/Pt. WORONZOF FACILITY

PO# AK00-1012

STL LOT # L0H160301

SEVERN TRENT SERVICES

STL Anchorage

I. CONDITION UPON RECEIPT

- *The sample cooler was received with custody seals intact.*
- *The interior temperatures of the coolers were 5°C on receipt.*
- *Samples were received in time to meet the method holding time specifications.*

II. VOLATILE ORGANIC ANALYSES

Volatile Organics by Method 624

Holding Times

All samples were prepared and analyzed within the method specified holding time requirements.

Method Blank

The method blank met method specified QC criteria.

MS/MSD/LCS/LCSD and RPDs

- *MS L0H160301-17:*
  - *2-Chloroethyl vinyl ether was not recovered.*
- *All other spike recovery and RPD data met method- and/or project- specific QC criteria.*

Surrogate Recoveries

All surrogate spike recoveries in samples and in QC samples met method specific QC criteria.

Calibrations

All calibrations and calibration verifications met method specific QC criteria.

Sample Results

The Trip Blank (MOA00VOP0037) contained the following compounds above the reporting limits:

- *Methylene chloride (10 ug/L)*
- *Chloroform (17 ug/L)*
- *1,2-Dichloroethane (1.6 ug/L)*
- *Bromodichloromethane (3.4 ug/L)*

Since the method blanks analyzed with these samples were ND (non-detect) for these compounds, it can be concluded that these contaminants were in the Trip Blank and not introduced by the lab.

Volatile Organics by Method SW8260B

Holding Times

All samples were prepared and analyzed within the method specified holding time requirements.

Method Blank

The method blank met method specified QC criteria.

MS/MSD/LCS/LCSD and RPDs

- *LCS L0H260000-174:*
  - *Chloromethane: above limits at 144%.*
  - *1,2-Dichloroethane: below limits at 63%.*
  - *Vinyl Chloride: above limits at 138%.*
  - *2-Butanone (MEK): above limits at 140%.*
- *All other spike recovery and RPD data met method- and/or project- specific QC criteria.*

Surrogate Recoveries

All surrogate spike recoveries in samples and in QC samples met method specific QC criteria.

Calibrations
All calibrations and calibration verifications met method specific QC criteria.

Sample Results
There were no anomalies associated with the sample analysis.

III. SEMI-VOLATILE ORGANIC ANALYSES

Semi-volatile Organics by Method SW8270C

Holding Times
All samples were prepared and analyzed within the method specified holding time requirements.

Method Blank
The method blank met method specified QC criteria.

MS/MSD/LCS/LCSD and RPDs
- ***LCS L0I050000-498:***
  - ***N-Nitrosodimethylamine: above limits at 78%.***
  - ***Pyridine: above limits at 63%.***
- ***All other spike recovery and RPD data met method- and/or project- specific QC criteria.***

Surrogate Recoveries
- ***Sample L0H160301-22: All surrogates diluted out. 50 x dilution required.***
- ***All other surrogate spike recoveries in samples and in QC samples met method specific QC criteria.***

Calibrations
All calibrations and calibration verifications met method specific QC criteria.

Sample Results
There were no anomalies associated with the sample analysis.

Semi-volatile Organics by EPA Method 625

Holding Times
All samples were prepared and analyzed within the method specified holding time requirements.

Method Blank
The method blank met method specified QC criteria.

MS/MSD/LCS/LCSD and RPDs
- ***LCS L0I150000-315:***
  - ***2-Fluorophenol recovery above limits at 69%.***
- ***All other spike recovery and RPD data met method- and/or project- specific QC criteria.***

Surrogate Recoveries
- ***All surrogate spike recoveries in the samples met method specific QC criteria.***

Calibrations
All calibrations and calibration verifications met method specific QC criteria.

Sample Results
There were no anomalies associated with the sample analysis.

ANALYTICAL REPORT

REVISED

MOA Pt. Woronzof Facility

Lot #: L0H160301

Gary Lawley

Kinnetics Laboratories, Inc.
403 W. Eighth Street
Anchorage, AK 99501

SEVERN TRENT LABORATORIES, INC.

Emanuel Hignutt, Jr.
Project Manager

November 30, 2000

EXECUTIVE SUMMARY - Detection Highlights

L0H160301

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MOA00VOP0037 08/14/00 07:50 018				
Methylene chloride	10	1.0	ug/L	CFR136A 624
Chloroform	17	1.0	ug/L	CFR136A 624
1,2-Dichloroethane	1.6	1.0	ug/L	CFR136A 624
Bromodichloromethane	3.4	1.0	ug/L	CFR136A 624
MOA00VOP0038 08/15/00 06:00 019				
Bromomethane	7100	1600	ug/kg	SW846 8260B
Ethylbenzene	6400	780	ug/kg	SW846 8260B
Toluene	3400	780	ug/kg	SW846 8260B
Percent Moisture	68.0	1.0	No Units	ASTM Moisture, %
MOA00SVL0004 08/15/00 08:10 020				
bis(2-Ethylhexyl) phthalate	16	10	ug/L	CFR136A 625
MOA00SVL0005 08/15/00 08:05 021				
bis(2-Ethylhexyl) phthalate	10	10	ug/L	CFR136A 625
MOA00SVL0006 08/15/00 06:00 022				
2-Methylphenol	140000	52000	ug/kg	SW846 8270C
3-Methylphenol & 4-Methylphenol	130000	52000	ug/kg	SW846 8270C
Percent Moisture	68.0	1.0	No Units	ASTM Moisture, %
Composite: MOA00VOP0020 through 0027 08/14/00 08:00 023				
Methylene chloride	1.1	1.0	ug/L	CFR136A 624
Chloroform	2.6	1.0	ug/L	CFR136A 624
Trichloroethene	1.1	1.0	ug/L	CFR136A 624
Toluene	13	1.0	ug/L	CFR136A 624
Tetrachloroethene	1.4	1.0	ug/L	CFR136A 624
Ethylbenzene	2.7	1.0	ug/L	CFR136A 624
Composite: MOA00VOP0028 through 0035 08/14/00 08:00 024				
Chloromethane	6.2	2.0	ug/L	CFR136A 624
Methylene chloride	1.8	1.0	ug/L	CFR136A 624
Chloroform	3.3	1.0	ug/L	CFR136A 624

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

L0H160301

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Composite: MOA00VOP0028 through 0035 08/14/00 08:00 024				
Benzene	4.3	1.0	ug/L	CFR136A 624
Toluene	27	1.0	ug/L	CFR136A 624
Tetrachloroethene	1.4	1.0	ug/L	CFR136A 624
Ethylbenzene	4.1	1.0	ug/L	CFR136A 624

ANALYTICAL METHODS SUMMARY

L0H160301

PARAMETER	ANALYTICAL METHOD
Base/Neutrals and Acids	CFR136A 625
Method D2216 Percent H2O Dry 105 Degrees C, Weigh	ASTM Moisture, % D2216
Purgeables	CFR136A 624
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Volatile Organics by GC/MS	SW846 8260B

References:

ASTM Annual Book Of ASTM Standards.

CFR136A "Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

L0H160301

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
DJ0AN	017	MOA00VOP0036	08/14/00	07:50
DJ0AP	018	MOA00VOP0037	08/14/00	07:50
DJ0AR	019	MOA00VOP0038	08/15/00	06:00
DJ0AW	020	MOA00SVL0004	08/15/00	08:10
DJ0C5	021	MOA00SVL0005	08/15/00	08:05
DJ0CK	022	MOA00SVL0006	08/15/00	06:00
DJTGE	023	Composite: MOA00VOP0020 through 0027	08/14/00	08:00
DJTGL	024	Composite: MOA00VOP0028 through 0035	08/14/00	08:00

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

KINNETICS LABORATORIES, INC.

Client Sample ID: MOA00SVL0004

GC/MS Semivolatiles

Lot-Sample #...:	L0H160301-020	**Work Order #...:**	DJ0AW101	**Matrix.....:**	WATER
Date Sampled...:	08/15/00	**Date Received..:**	08/15/00		
Prep Date.....:	08/22/00	**Analysis Date..:**	09/07/00		
Prep Batch #...:	0259315				
Dilution Factor:	1	**Method.....:**	CFR136A 625		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Phenol	ND	10	ug/L
bis(2-Chloroethyl)-ether	ND	10	ug/L
2-Chlorophenol	ND	10	ug/L
1,3-Dichlorobenzene	ND	10	ug/L
1,4-Dichlorobenzene	ND	10	ug/L
1,2-Dichlorobenzene	ND	10	ug/L
bis(2-Chloroisopropyl) ether	ND	10	ug/L
N-Nitrosodi-n-propyl-amine	ND	10	ug/L
Hexachloroethane	ND	10	ug/L
Nitrobenzene	ND	10	ug/L
Isophorone	ND	10	ug/L
2-Nitrophenol	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
bis(2-Chloroethoxy) methane	ND	10	ug/L
2,4-Dichlorophenol	ND	10	ug/L
1,2,4-Trichloro-benzene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Hexachlorobutadiene	ND	10	ug/L
4-Chloro-3-methylphenol	ND	10	ug/L
2,4,6-Trichloro-phenol	ND	10	ug/L
2-Chloronaphthalene	ND	10	ug/L
Dimethyl phthalate	ND	10	ug/L
2,6-Dinitrotoluene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acenaphthene	ND	10	ug/L
2,4-Dinitrophenol	ND	50	ug/L
4-Nitrophenol	ND	50	ug/L
2,4-Dinitrotoluene	ND	10	ug/L
Diethyl phthalate	ND	10	ug/L
4-Chlorophenyl phenyl ether	ND	10	ug/L
Fluorene	ND	10	ug/L
4,6-Dinitro-2-methylphenol	ND	50	ug/L

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KINNETICS LABORATORIES, INC.

Client Sample ID: MOA00SVL0004

GC/MS Semivolatiles

Lot-Sample #...: L0H160301-020 Work Order #...: DJ0AW101 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Bromophenyl phenyl ether	ND	10	ug/L
Hexachlorobenzene	ND	10	ug/L
Pentachlorophenol	ND	50	ug/L
Phenanthrene	ND	10	ug/L
Anthracene	ND	10	ug/L
Di-n-butyl phthalate	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Pyrene	ND	10	ug/L
Butyl benzyl phthalate	ND	10	ug/L
bis(2-Ethylhexyl) phthalate	**16**	**10**	**ug/L**
3,3'-Dichlorobenzidine	ND	50	ug/L
Benzo(a)anthracene	ND	10	ug/L
Chrysene	ND	10	ug/L
Di-n-octyl phthalate	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Dibenz(a,h)anthracene	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	46	(17 - 67)
Phenol-d5	39	(16 - 47)
Nitrobenzene-d5	66	(34 - 110)
2-Fluorobiphenyl	57	(30 - 113)
2,4,6-Tribromophenol	79	(43 - 130)
Terphenyl-d14	69	(46 - 129)

KINNETICS LABORATORIES, INC.

MOA00SVL0004

GC/MS Semivolatiles

Lot-Sample #: L0H160301-020 **Work Order #:** DJ0AW101 **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown		25 J	M	5.0843	ug/L
Unknown		37 J	M	6.0152	ug/L
3-Cyclohexene-1-methanol, .alp	10482-56-1	7.9 J	M	7.9906	ug/L
1-Dodecanol	112-53-8	33 J	M	10.323	ug/L
Dodecanamide, n,n-bis(2-hydrox	120-40-1	27 J	M	11.041	ug/L
1-Tetradecene	1120-36-1	47 J	M	11.901	ug/L
Hexadecanol	29354-98-1	36 J	M	12.639	ug/L
Hexadecanoic acid	57-10-3	120 J	M	13.897	ug/L
14-Pentadecenoic acid	17351-34-7	120 J	M	14.862	ug/L
Octadecanoic acid	57-11-4	47 J	M	14.955	ug/L
Cholestanol	80-97-7	270 J	M	18.412	ug/L
Cholesterol	57-88-5	220 J	M	18.568	ug/L
9-Octadecenoic acid (z)-, octa	17673-49-3	52 J	M	19.193	ug/L
Cholestane, 3-ethoxy-, (3.beta	2089-02-3	81 J	M	19.224	ug/L
Unknown		65 J	M	19.417	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

KINNETICS LABORATORIES, INC.

Client Sample ID: MOA00SVL0005

GC/MS Semivolatiles

Lot-Sample #...: L0H160301-021 **Work Order #...:** DJ0C5101 **Matrix.....:** WATER
Date Sampled...: 08/15/00 **Date Received..:** 08/15/00
Prep Date.....: 08/22/00 **Analysis Date..:** 09/07/00
Prep Batch #...: 0259315
Dilution Factor: 1 **Method.....:** CFR136A 625

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Phenol	ND	10	ug/L
bis(2-Chloroethyl)-ether	ND	10	ug/L
2-Chlorophenol	ND	10	ug/L
1,3-Dichlorobenzene	ND	10	ug/L
1,4-Dichlorobenzene	ND	10	ug/L
1,2-Dichlorobenzene	ND	10	ug/L
bis(2-Chloroisopropyl) ether	ND	10	ug/L
N-Nitrosodi-n-propyl-amine	ND	10	ug/L
Hexachloroethane	ND	10	ug/L
Nitrobenzene	ND	10	ug/L
Isophorone	ND	10	ug/L
2-Nitrophenol	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
bis(2-Chloroethoxy) methane	ND	10	ug/L
2,4-Dichlorophenol	ND	10	ug/L
1,2,4-Trichloro-benzene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Hexachlorobutadiene	ND	10	ug/L
4-Chloro-3-methylphenol	ND	10	ug/L
2,4,6-Trichloro-phenol	ND	10	ug/L
2-Chloronaphthalene	ND	10	ug/L
Dimethyl phthalate	ND	10	ug/L
2,6-Dinitrotoluene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acenaphthene	ND	10	ug/L
2,4-Dinitrophenol	ND	50	ug/L
4-Nitrophenol	ND	50	ug/L
2,4-Dinitrotoluene	ND	10	ug/L
Diethyl phthalate	ND	10	ug/L
4-Chlorophenyl phenyl ether	ND	10	ug/L
Fluorene	ND	10	ug/L
4,6-Dinitro-2-methylphenol	ND	50	ug/L

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KINNETICS LABORATORIES, INC.

Client Sample ID: MOA00SVL0005

GC/MS Semivolatiles

Lot-Sample #...: L0H160301-021 **Work Order #...:** DJ0C5101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Bromophenyl phenyl ether	ND	10	ug/L
Hexachlorobenzene	ND	10	ug/L
Pentachlorophenol	ND	50	ug/L
Phenanthrene	ND	10	ug/L
Anthracene	ND	10	ug/L
Di-n-butyl phthalate	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Pyrene	ND	10	ug/L
Butyl benzyl phthalate	ND	10	ug/L
bis(2-Ethylhexyl) phthalate	**10**	**10**	**ug/L**
3,3'-Dichlorobenzidine	ND	50	ug/L
Benzo(a)anthracene	ND	10	ug/L
Chrysene	ND	10	ug/L
Di-n-octyl phthalate	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Dibenz(a,h)anthracene	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	51	(17 - 67)
Phenol-d5	37	(16 - 47)
Nitrobenzene-d5	69	(34 - 110)
2-Fluorobiphenyl	57	(30 - 113)
2,4,6-Tribromophenol	82	(43 - 130)
Terphenyl-d14	60	(46 - 129)

KINNETICS LABORATORIES, INC.

MOA00SVL0005

GC/MS Semivolatiles

Lot-Sample #: L0H160301-021 **Work Order #:** DJ0C5101 **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Ethanol, 2-butoxy-	111-76-2	89 J	M	5.1009	ug/L
Unknown		80 J	M	6.0205	ug/L
Hexanoic acid, 2-methyl-	4536-23-6	33 J	M	6.6705	ug/L
Unknown		7.6 J	M	7.5617	ug/L
Ethanol, 2-(2-butoxyethoxy)-	112-34-5	15 J	M	7.9505	ug/L
3-Cyclohexene-1-methanol, .alp	98-55-5	7.1 J	M	7.9959	ug/L
Ethanol, 2-(2-butoxyethoxy)-,	124-17-4	53 J	M	9.4179	ug/L
Cyclopentadecane	295-48-7	32 J	M	12.636	ug/L
Caffeine	58-08-2	30 J	M	13.258	ug/L
Unknown		32 J	M	14.257	ug/L
Oleic acid	112-80-1	44 J	M	14.841	ug/L
Cholestanol	80-97-7	140 J	M	18.406	ug/L
Cholesterol	57-88-5	140 J	M	18.562	ug/L
Unknown		39 J	M	19.221	ug/L
.Gamma.-sitosterol	83-47-6	37 J	M	19.417	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

KINNETICS LABORATORIES, INC.

Client Sample ID: MOA00SVL0006

GC/MS Semivolatiles

Lot-Sample #...:	L0H160301-022	**Work Order #...:**	DJ0CK101	**Matrix.....:**	SOLID
Date Sampled...:	08/15/00	**Date Received..:**	08/15/00		
Prep Date.....:	08/29/00	**Analysis Date..:**	09/08/00		
Prep Batch #...:	0249498				
Dilution Factor:	50				
% Moisture.....:	68	**Method.....:**	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Phenol	ND	52000	ug/kg
bis(2-Chloroethyl)-ether	ND	52000	ug/kg
2-Chlorophenol	ND	52000	ug/kg
1,3-Dichlorobenzene	ND	52000	ug/kg
1,4-Dichlorobenzene	ND	52000	ug/kg
1,2-Dichlorobenzene	ND	52000	ug/kg
bis(2-Chloroisopropyl) ether	ND	52000	ug/kg
N-Nitrosodi-n-propyl-amine	ND	52000	ug/kg
Hexachloroethane	ND	52000	ug/kg
Nitrobenzene	ND	52000	ug/kg
Isophorone	ND	52000	ug/kg
2-Nitrophenol	ND	52000	ug/kg
2,4-Dimethylphenol	ND	52000	ug/kg
bis(2-Chloroethoxy) methane	ND	52000	ug/kg
2,4-Dichlorophenol	ND	52000	ug/kg
1,2,4-Trichloro-benzene	ND	52000	ug/kg
Naphthalene	ND	52000	ug/kg
Hexachlorobutadiene	ND	52000	ug/kg
4-Chloro-3-methylphenol	ND	52000	ug/kg
2,4,6-Trichloro-phenol	ND	52000	ug/kg
2-Chloronaphthalene	ND	52000	ug/kg
Dimethyl phthalate	ND	52000	ug/kg
2,6-Dinitrotoluene	ND	52000	ug/kg
Acenaphthylene	ND	52000	ug/kg
Acenaphthene	ND	52000	ug/kg
2,4-Dinitrophenol	ND	250000	ug/kg
4-Nitrophenol	ND	250000	ug/kg
2,4-Dinitrotoluene	ND	52000	ug/kg
Diethyl phthalate	ND	52000	ug/kg
4-Chlorophenyl phenyl ether	ND	52000	ug/kg
Fluorene	ND	52000	ug/kg

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KINNETICS LABORATORIES, INC.

Client Sample ID: MOA00SVL0006

GC/MS Semivolatiles

Lot-Sample #...: L0H160301-022 **Work Order #...:** DJ0CK101 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4,6-Dinitro-2-methylphenol	ND	250000	ug/kg
4-Bromophenyl phenyl ether	ND	52000	ug/kg
Hexachlorobenzene	ND	52000	ug/kg
Pentachlorophenol	ND	250000	ug/kg
Phenanthrene	ND	52000	ug/kg
Anthracene	ND	52000	ug/kg
Di-n-butyl phthalate	ND	52000	ug/kg
Fluoranthene	ND	52000	ug/kg
Pyrene	ND	52000	ug/kg
Butyl benzyl phthalate	ND	52000	ug/kg
bis(2-Ethylhexyl) phthalate	ND	52000	ug/kg
3,3'-Dichlorobenzidine	ND	250000	ug/kg
Benzo(a)anthracene	ND	52000	ug/kg
Chrysene	ND	52000	ug/kg
Di-n-octyl phthalate	ND	52000	ug/kg
Benzo(b)fluoranthene	ND	52000	ug/kg
Benzo(k)fluoranthene	ND	52000	ug/kg
Benzo(a)pyrene	ND	52000	ug/kg
Indeno(1,2,3-cd)pyrene	ND	52000	ug/kg
Dibenz(a,h)anthracene	ND	52000	ug/kg
Benzo(ghi)perylene	ND	52000	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	0.0 NC,I	(25 - 132)
Phenol-d5	0.0 NC,I	(25 - 144)
Nitrobenzene-d5	0.0 NC,I	(25 - 159)
2-Fluorobiphenyl	0.0 NC,I	(25 - 158)
2,4,6-Tribromophenol	0.0 NC,I	(25 - 178)
Terphenyl-d14	0.0 NC,I	(25 - 166)

NOTE(S):

NC The recovery and/or RPD were not calculated.

I Matrix interference.

Results and reporting limits have been adjusted for dry weight.

KINNETICS LABORATORIES, INC.

MOA00SVL0006

GC/MS Semivolatiles

Lot-Sample #: L0H160301-022 **Work Order #:** DJ0CK101 **Matrix:** SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
Tetradecanoic acid	544-63-8	620000 J M	12.548	ug/kg
Unknown		220000 J M	13.772	ug/kg
Hexadecanoic acid	57-10-3	2700000 J M	13.976	ug/kg
Oleic acid	112-80-1	2500000 J M	14.924	ug/kg
Oleic acid	112-80-1	1400000 J M	14.932	ug/kg
Squalene	7683-64-9	170000 J M	17.39	ug/kg
Unknown		460000 J M	18.401	ug/kg
Cholesterol	57-88-5	360000 J M	18.557	ug/kg

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

KINNETICS LABORATORIES, INC.

Client Sample ID: MOA00SVL0006

General Chemistry

Lot-Sample #...: L0H160301-022 **Work Order #...:** DJ0CK **Matrix.....:** SOLID
Date Sampled...: 08/15/00 **Date Received..:** 08/15/00
% Moisture.....: 68

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**68.0**	**1.0**	**No Units**	**ASTM Moisture, %**	**09/14-09/15/00**	**0259266**

Dilution Factor: 1

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: L0H160301 **Work Order #...:** DKFG4101 **Matrix.....:** WATER
MB Lot-Sample #: L0I150000-315

Prep Date.....: 08/22/00
Analysis Date..: 09/07/00 **Prep Batch #...:** 0259315
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Phenol	ND	10	ug/L	CFR136A 625
bis(2-Chloroethyl)-ether	ND	10	ug/L	CFR136A 625
2-Chlorophenol	ND	10	ug/L	CFR136A 625
1,3-Dichlorobenzene	ND	10	ug/L	CFR136A 625
1,4-Dichlorobenzene	ND	10	ug/L	CFR136A 625
1,2-Dichlorobenzene	ND	10	ug/L	CFR136A 625
bis(2-Chloroisopropyl) ether	ND	10	ug/L	CFR136A 625
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	CFR136A 625
Hexachloroethane	ND	10	ug/L	CFR136A 625
Nitrobenzene	ND	10	ug/L	CFR136A 625
Isophorone	ND	10	ug/L	CFR136A 625
2-Nitrophenol	ND	10	ug/L	CFR136A 625
2,4-Dimethylphenol	ND	10	ug/L	CFR136A 625
bis(2-Chloroethoxy) methane	ND	10	ug/L	CFR136A 625
2,4-Dichlorophenol	ND	10	ug/L	CFR136A 625
1,2,4-Trichloro-benzene	ND	10	ug/L	CFR136A 625
Naphthalene	ND	10	ug/L	CFR136A 625
Hexachlorobutadiene	ND	10	ug/L	CFR136A 625
4-Chloro-3-methylphenol	ND	10	ug/L	CFR136A 625
2,4,6-Trichloro-phenol	ND	10	ug/L	CFR136A 625
2-Chloronaphthalene	ND	10	ug/L	CFR136A 625
Dimethyl phthalate	ND	10	ug/L	CFR136A 625
2,6-Dinitrotoluene	ND	10	ug/L	CFR136A 625
Acenaphthylene	ND	10	ug/L	CFR136A 625
Acenaphthene	ND	10	ug/L	CFR136A 625
2,4-Dinitrophenol	ND	50	ug/L	CFR136A 625
4-Nitrophenol	ND	50	ug/L	CFR136A 625
2,4-Dinitrotoluene	ND	10	ug/L	CFR136A 625
Diethyl phthalate	ND	10	ug/L	CFR136A 625
4-Chlorophenyl phenyl ether	ND	10	ug/L	CFR136A 625
Fluorene	ND	10	ug/L	CFR136A 625
4,6-Dinitro-2-methylphenol	ND	50	ug/L	CFR136A 625
4-Bromophenyl phenyl ether	ND	10	ug/L	CFR136A 625

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: L0H160301 **Work Order #...:** DKFG4101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Hexachlorobenzene	ND	10	ug/L	CFR136A 625
Pentachlorophenol	ND	50	ug/L	CFR136A 625
Phenanthrene	ND	10	ug/L	CFR136A 625
Anthracene	ND	10	ug/L	CFR136A 625
Di-n-butyl phthalate	ND	10	ug/L	CFR136A 625
Fluoranthene	ND	10	ug/L	CFR136A 625
Pyrene	ND	10	ug/L	CFR136A 625
Butyl benzyl phthalate	ND	10	ug/L	CFR136A 625
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	CFR136A 625
3,3'-Dichlorobenzidine	ND	50	ug/L	CFR136A 625
Benzo(a)anthracene	ND	10	ug/L	CFR136A 625
Chrysene	ND	10	ug/L	CFR136A 625
Di-n-octyl phthalate	ND	10	ug/L	CFR136A 625
Benzo(b)fluoranthene	ND	10	ug/L	CFR136A 625
Benzo(k)fluoranthene	ND	10	ug/L	CFR136A 625
Benzo(a)pyrene	ND	10	ug/L	CFR136A 625
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	CFR136A 625
Dibenz(a,h)anthracene	ND	10	ug/L	CFR136A 625
Benzo(ghi)perylene	ND	10	ug/L	CFR136A 625

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	60	(17 - 67)
Phenol-d5	38	(16 - 47)
Nitrobenzene-d5	75	(34 - 110)
2-Fluorobiphenyl	76	(30 - 113)
2,4,6-Tribromophenol	94	(43 - 130)
Terphenyl-d14	79	(46 - 129)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: L0H160301 **Work Order #...:** DJWWG101 **Matrix.....:** SOLID
MB Lot-Sample #: L0I050000-498

Prep Date.....: 08/29/00
Analysis Date..: 09/06/00 **Prep Batch #...:** 0249498
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
N-Nitrosodimethylamine	ND	330	ug/kg	SW846 8270C
Pyridine	ND	660	ug/kg	SW846 8270C
Phenol	ND	330	ug/kg	SW846 8270C
Aniline	ND	330	ug/kg	SW846 8270C
bis(2-Chloroethyl)-ether	ND	330	ug/kg	SW846 8270C
2-Chlorophenol	ND	330	ug/kg	SW846 8270C
1,3-Dichlorobenzene	ND	330	ug/kg	SW846 8270C
1,4-Dichlorobenzene	ND	330	ug/kg	SW846 8270C
Benzyl alcohol	ND	330	ug/kg	SW846 8270C
1,2-Dichlorobenzene	ND	330	ug/kg	SW846 8270C
2-Methylphenol	ND	330	ug/kg	SW846 8270C
bis(2-Chloroisopropyl) ether	ND	330	ug/kg	SW846 8270C
3-Methylphenol & 4-Methylphenol	ND	330	ug/kg	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	330	ug/kg	SW846 8270C
Hexachloroethane	ND	330	ug/kg	SW846 8270C
Nitrobenzene	ND	330	ug/kg	SW846 8270C
Isophorone	ND	330	ug/kg	SW846 8270C
2-Nitrophenol	ND	330	ug/kg	SW846 8270C
2,4-Dimethylphenol	ND	330	ug/kg	SW846 8270C
bis(2-Chloroethoxy) methane	ND	330	ug/kg	SW846 8270C
Benzoic acid	ND	1600	ug/kg	SW846 8270C
2,4-Dichlorophenol	ND	330	ug/kg	SW846 8270C
1,2,4-Trichloro-benzene	ND	330	ug/kg	SW846 8270C
Naphthalene	ND	330	ug/kg	SW846 8270C
4-Chloroaniline	ND	330	ug/kg	SW846 8270C
Hexachlorobutadiene	ND	330	ug/kg	SW846 8270C
4-Chloro-3-methylphenol	ND	330	ug/kg	SW846 8270C
2-Methylnaphthalene	ND	330	ug/kg	SW846 8270C
Hexachlorocyclopenta-diene	ND	1600	ug/kg	SW846 8270C
2,4,6-Trichloro-phenol	ND	330	ug/kg	SW846 8270C
2,4,5-Trichloro-phenol	ND	330	ug/kg	SW846 8270C
2-Chloronaphthalene	ND	330	ug/kg	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: L0H160301 **Work Order #...:** DJWWG101 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2-Nitroaniline	ND	1600	ug/kg	SW846 8270C
Dimethyl phthalate	ND	330	ug/kg	SW846 8270C
2,6-Dinitrotoluene	ND	330	ug/kg	SW846 8270C
Acenaphthylene	ND	330	ug/kg	SW846 8270C
3-Nitroaniline	ND	1600	ug/kg	SW846 8270C
4-Nitroaniline	ND	1600	ug/kg	SW846 8270C
Acenaphthene	ND	330	ug/kg	SW846 8270C
2,4-Dinitrophenol	ND	1600	ug/kg	SW846 8270C
4-Nitrophenol	ND	1600	ug/kg	SW846 8270C
2,4-Dinitrotoluene	ND	330	ug/kg	SW846 8270C
Dibenzofuran	ND	330	ug/kg	SW846 8270C
Diethyl phthalate	ND BJ	330	ug/kg	SW846 8270C
4-Chlorophenyl phenyl ether	ND	330	ug/kg	SW846 8270C
Fluorene	ND	330	ug/kg	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	1600	ug/kg	SW846 8270C
Azobenzene	ND	330	ug/kg	SW846 8270C
N-Nitrosodiphenylamine	ND	330	ug/kg	SW846 8270C
4-Bromophenyl phenyl ether	ND	330	ug/kg	SW846 8270C
Hexachlorobenzene	ND	330	ug/kg	SW846 8270C
Pentachlorophenol	ND	1600	ug/kg	SW846 8270C
Phenanthrene	ND	330	ug/kg	SW846 8270C
Anthracene	ND	330	ug/kg	SW846 8270C
Carbazole	ND	330	ug/kg	SW846 8270C
Di-n-butyl phthalate	ND	330	ug/kg	SW846 8270C
Fluoranthene	ND	330	ug/kg	SW846 8270C
Benzidine	ND	3300	ug/kg	SW846 8270C
Pyrene	ND	330	ug/kg	SW846 8270C
Butyl benzyl phthalate	ND	330	ug/kg	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	330	ug/kg	SW846 8270C
3,3'-Dichlorobenzidine	ND	1600	ug/kg	SW846 8270C
Benzo(a)anthracene	ND	330	ug/kg	SW846 8270C
Chrysene	ND	330	ug/kg	SW846 8270C
Di-n-octyl phthalate	ND	330	ug/kg	SW846 8270C
Benzo(b)fluoranthene	ND	330	ug/kg	SW846 8270C
Benzo(k)fluoranthene	ND	330	ug/kg	SW846 8270C
Benzo(a)pyrene	ND	330	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	330	ug/kg	SW846 8270C
Dibenz(a,h)anthracene	ND	330	ug/kg	SW846 8270C
Benzo(ghi)perylene	ND	330	ug/kg	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: L0H160301 **Work Order #...:** DJWWG101 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	60	(25 - 132)
Phenol-d5	66	(25 - 144)
Nitrobenzene-d5	68	(25 - 159)
2-Fluorobiphenyl	68	(25 - 158)
2,4,6-Tribromophenol	79	(25 - 178)
Terphenyl-d14	76	(25 - 166)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: L0H160301 Work Order #...: DKFG4102-LCS Matrix.....: WATER
LCS Lot-Sample#: L0I150000-315 DKFG4103-LCSD
Prep Date.....: 08/22/00 Analysis Date..: 09/07/00
Prep Batch #...: 0259315
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Phenol	44	(5.0- 112)			CFR136A 625
	40	(5.0- 112)	9.9	(0-20)	CFR136A 625
bis(2-Chloroethyl)-ether	64	(12 - 158)			CFR136A 625
	55	(12 - 158)	14	(0-20)	CFR136A 625
2-Chlorophenol	86	(23 - 134)			CFR136A 625
	76	(23 - 134)	12	(0-20)	CFR136A 625
1,3-Dichlorobenzene	61	(1.0- 172)			CFR136A 625
	56	(1.0- 172)	8.8	(0-20)	CFR136A 625
1,4-Dichlorobenzene	62	(20 - 124)			CFR136A 625
	53	(20 - 124)	14	(0-20)	CFR136A 625
1,2-Dichlorobenzene	74	(32 - 129)			CFR136A 625
	63	(32 - 129)	16	(0-20)	CFR136A 625
bis(2-Chloroisopropyl) ether	71	(12 - 158)			CFR136A 625
	62	(12 - 158)	14	(0-20)	CFR136A 625
N-Nitrosodi-n-propyl-amine	75	(1.0- 230)			CFR136A 625
	68	(1.0- 230)	11	(0-20)	CFR136A 625
Hexachloroethane	66	(40 - 113)			CFR136A 625
	57	(40 - 113)	14	(0-20)	CFR136A 625
Nitrobenzene	84	(35 - 180)			CFR136A 625
	74	(35 - 180)	12	(0-20)	CFR136A 625
Isophorone	92	(21 - 196)			CFR136A 625
	83	(21 - 196)	9.8	(0-20)	CFR136A 625
2-Nitrophenol	94	(29 - 182)			CFR136A 625
	85	(29 - 182)	9.7	(0-20)	CFR136A 625
2,4-Dimethylphenol	90	(32 - 119)			CFR136A 625
	83	(32 - 119)	7.0	(0-20)	CFR136A 625
bis(2-Chloroethoxy) methane	89	(33 - 184)			CFR136A 625
	79	(33 - 184)	12	(0-20)	CFR136A 625
2,4-Dichlorophenol	98	(39 - 135)			CFR136A 625
	89	(39 - 135)	10	(0-20)	CFR136A 625
1,2,4-Trichloro-benzene	84	(44 - 142)			CFR136A 625
	72	(44 - 142)	15	(0-20)	CFR136A 625

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: L0H160301 Work Order #...: DKFG4102-LCS Matrix.....: WATER
LCS Lot-Sample#: L0I150000-315 DKFG4103-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Naphthalene	84	(21 - 133)			CFR136A 625
	73	(21 - 133)	14	(0-20)	CFR136A 625
Hexachlorobutadiene	82	(24 - 116)			CFR136A 625
	70	(24 - 116)	15	(0-20)	CFR136A 625
4-Chloro-3-methylphenol	99	(22 - 147)			CFR136A 625
	94	(22 - 147)	5.7	(0-20)	CFR136A 625
2,4,6-Trichloro-phenol	106	(37 - 144)			CFR136A 625
	100	(37 - 144)	5.8	(0-20)	CFR136A 625
2-Chloronaphthalene	92	(60 - 118)			CFR136A 625
	81	(60 - 118)	12	(0-20)	CFR136A 625
Dimethyl phthalate	65	(1.0- 112)			CFR136A 625
	67	(1.0- 112)	2.6	(0-20)	CFR136A 625
2,6-Dinitrotoluene	83	(50 - 158)			CFR136A 625
	84	(50 - 158)	0.48	(0-20)	CFR136A 625
Acenaphthylene	96	(33 - 145)			CFR136A 625
	86	(33 - 145)	10	(0-20)	CFR136A 625
Acenaphthene	93	(47 - 145)			CFR136A 625
	84	(47 - 145)	10	(0-20)	CFR136A 625
2,4-Dinitrophenol	70	(1.0- 191)			CFR136A 625
	74	(1.0- 191)	5.3	(0-20)	CFR136A 625
4-Nitrophenol	47	(1.0- 132)			CFR136A 625
	49	(1.0- 132)	4.1	(0-20)	CFR136A 625
2,4-Dinitrotoluene	89	(1.0- 191)			CFR136A 625
	89	(1.0- 191)	0.22	(0-20)	CFR136A 625
Diethyl phthalate	65	(1.0- 114)			CFR136A 625
	65	(1.0- 114)	0.0	(0-20)	CFR136A 625
4-Chlorophenyl phenyl ether	85	(25 - 158)			CFR136A 625
	86	(25 - 158)	0.82	(0-20)	CFR136A 625
Fluorene	76	(59 - 121)			CFR136A 625
	88	(59 - 121)	14	(0-20)	CFR136A 625
4,6-Dinitro-2-methylphenol	96	(1.0- 181)			CFR136A 625
	98	(1.0- 181)	1.3	(0-20)	CFR136A 625
4-Bromophenyl phenyl ether	87	(53 - 127)			CFR136A 625
	83	(53 - 127)	5.0	(0-20)	CFR136A 625
Hexachlorobenzene	88	(1.0- 152)			CFR136A 625
	94	(1.0- 152)	6.6	(0-20)	CFR136A 625

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: L0H160301 Work Order #...: DKFG4102-LCS Matrix.....: WATER
LCS Lot-Sample#: L0I150000-315 DKFG4103-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Pentachlorophenol	107	(14 - 176)			CFR136A 625
	103	(14 - 176)	3.8	(0-20)	CFR136A 625
Phenanthrene	95	(54 - 120)			CFR136A 625
	90	(54 - 120)	5.9	(0-20)	CFR136A 625
Anthracene	95	(27 - 133)			CFR136A 625
	89	(27 - 133)	6.0	(0-20)	CFR136A 625
Di-n-butyl phthalate	95	(1.0- 118)			CFR136A 625
	91	(1.0- 118)	3.8	(0-20)	CFR136A 625
Fluoranthene	97	(26 - 137)			CFR136A 625
	92	(26 - 137)	5.9	(0-20)	CFR136A 625
Pyrene	98	(52 - 115)			CFR136A 625
	90	(52 - 115)	7.9	(0-20)	CFR136A 625
Butyl benzyl phthalate	95	(1.0- 152)			CFR136A 625
	91	(1.0- 152)	4.4	(0-20)	CFR136A 625
bis(2-Ethylhexyl) phthalate	95	(8.0- 158)			CFR136A 625
	91	(8.0- 158)	4.3	(0-20)	CFR136A 625
3,3'-Dichlorobenzidine	112	(1.0- 262)			CFR136A 625
	109	(1.0- 262)	2.7	(0-20)	CFR136A 625
Benzo(a)anthracene	90	(33 - 143)			CFR136A 625
	87	(33 - 143)	3.2	(0-20)	CFR136A 625
Chrysene	94	(17 - 168)			CFR136A 625
	91	(17 - 168)	3.1	(0-20)	CFR136A 625
Di-n-octyl phthalate	100	(4.0- 146)			CFR136A 625
	91	(4.0- 146)	9.0	(0-20)	CFR136A 625
Benzo(b)fluoranthene	94	(24 - 159)			CFR136A 625
	90	(24 - 159)	5.0	(0-20)	CFR136A 625
Benzo(k)fluoranthene	87	(11 - 162)			CFR136A 625
	83	(11 - 162)	4.0	(0-20)	CFR136A 625
Benzo(a)pyrene	95	(17 - 163)			CFR136A 625
	90	(17 - 163)	5.2	(0-20)	CFR136A 625
Indeno(1,2,3-cd)pyrene	96	(1.0- 171)			CFR136A 625
	93	(1.0- 171)	3.7	(0-20)	CFR136A 625
Dibenz(a,h)anthracene	95	(1.0- 227)			CFR136A 625
	90	(1.0- 227)	5.2	(0-20)	CFR136A 625
Benzo(ghi)perylene	100	(1.0- 219)			CFR136A 625
	95	(1.0- 219)	5.1	(0-20)	CFR136A 625

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: L0H160301 **Work Order #...:** DKFG4102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: L0I150000-315 DKFG4103-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	69 *	(17 - 67)
	61	(17 - 67)
Phenol-d5	42	(16 - 47)
	38	(16 - 47)
Nitrobenzene-d5	86	(34 - 110)
	75	(34 - 110)
2-Fluorobiphenyl	92	(30 - 113)
	80	(30 - 113)
2,4,6-Tribromophenol	95	(43 - 130)
	91	(43 - 130)
Terphenyl-d14	88	(46 - 129)
	82	(46 - 129)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

* Surrogate recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: L0H160301 Work Order #...: DJWWG102 Matrix.....: SOLID
LCS Lot-Sample#: L0I050000-498
Prep Date.....: 08/29/00 Analysis Date..: 09/06/00
Prep Batch #...: 0249498
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
N-Nitrosodimethylamine	78 a	(35 - 77)	SW846 8270C
Pyridine	63 a	(22 - 59)	SW846 8270C
Phenol	68	(10 - 133)	SW846 8270C
Aniline	32	(10 - 104)	SW846 8270C
bis(2-Chloroethyl)-ether	55	(10 - 133)	SW846 8270C
2-Chlorophenol	71	(10 - 135)	SW846 8270C
1,3-Dichlorobenzene	78	(18 - 108)	SW846 8270C
1,4-Dichlorobenzene	56	(10 - 138)	SW846 8270C
Benzyl alcohol	61	(28 - 123)	SW846 8270C
1,2-Dichlorobenzene	65	(21 - 105)	SW846 8270C
2-Methylphenol	67	(27 - 110)	SW846 8270C
bis(2-Chloroisopropyl) ether	62	(12 - 87)	SW846 8270C
3-Methylphenol & 4-Methylphenol	63	(20 - 148)	SW846 8270C
N-Nitrosodi-n-propyl-amine	75	(22 - 126)	SW846 8270C
Hexachloroethane	60	(16 - 103)	SW846 8270C
Nitrobenzene	74	(20 - 125)	SW846 8270C
Isophorone	76	(32 - 127)	SW846 8270C
2-Nitrophenol	74	(10 - 134)	SW846 8270C
2,4-Dimethylphenol	63	(26 - 124)	SW846 8270C
bis(2-Chloroethoxy) methane	74	(28 - 119)	SW846 8270C
Benzoic acid	57	(10 - 115)	SW846 8270C
2,4-Dichlorophenol	77	(16 - 138)	SW846 8270C
1,2,4-Trichloro-benzene	72	(10 - 128)	SW846 8270C
Naphthalene	72	(11 - 132)	SW846 8270C
4-Chloroaniline	53	(10 - 148)	SW846 8270C
Hexachlorobutadiene	71	(15 - 123)	SW846 8270C
4-Chloro-3-methylphenol	80	(27 - 144)	SW846 8270C
2-Methylnaphthalene	74	(10 - 149)	SW846 8270C
Hexachlorocyclopenta-diene	68	(12 - 118)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: L0H160301 Work Order #...: DJWWG102 Matrix.....: SOLID
LCS Lot-Sample#: L0I050000-498

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
2,4,6-Trichloro-phenol	82	(21 - 149)	SW846 8270C
2,4,5-Trichloro-phenol	76	(24 - 153)	SW846 8270C
2-Chloronaphthalene	76	(21 - 111)	SW846 8270C
2-Nitroaniline	80	(43 - 149)	SW846 8270C
Dimethyl phthalate	64	(36 - 146)	SW846 8270C
2,6-Dinitrotoluene	74	(32 - 156)	SW846 8270C
Acenaphthylene	79	(13 - 153)	SW846 8270C
3-Nitroaniline	57	(29 - 153)	SW846 8270C
4-Nitroaniline	86	(31 - 153)	SW846 8270C
Acenaphthene	76	(22 - 143)	SW846 8270C
2,4-Dinitrophenol	70	(10 - 150)	SW846 8270C
4-Nitrophenol	70	(10 - 156)	SW846 8270C
2,4-Dinitrotoluene	76	(22 - 152)	SW846 8270C
Dibenzofuran	76	(35 - 139)	SW846 8270C
Diethyl phthalate	60	(42 - 143)	SW846 8270C
4-Chlorophenyl phenyl ether	77	(30 - 147)	SW846 8270C
Fluorene	79	(33 - 145)	SW846 8270C
4,6-Dinitro-2-methylphenol	86	(32 - 129)	SW846 8270C
Azobenzene	75	(26 - 183)	SW846 8270C
N-Nitrosodiphenylamine	79	(36 - 150)	SW846 8270C
4-Bromophenyl phenyl ether	78	(40 - 142)	SW846 8270C
Hexachlorobenzene	86	(42 - 140)	SW846 8270C
Pentachlorophenol	88	(17 - 157)	SW846 8270C
Phenanthrene	81	(40 - 140)	SW846 8270C
Anthracene	80	(40 - 147)	SW846 8270C
Carbazole	80	(10 - 256)	SW846 8270C
Di-n-butyl phthalate	79	(36 - 150)	SW846 8270C
Fluoranthene	80	(36 - 153)	SW846 8270C
Pyrene	82	(30 - 141)	SW846 8270C
Butyl benzyl phthalate	79	(41 - 136)	SW846 8270C
bis(2-Ethylhexyl) phthalate	79	(36 - 141)	SW846 8270C
3,3'-Dichlorobenzidine	75	(23 - 128)	SW846 8270C

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: L0H160301 **Work Order #...:** DJWWG102 **Matrix.....:** SOLID
LCS Lot-Sample#: L0I050000-498

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Benzo(a)anthracene	**76**	**(32 - 149)**	**SW846 8270C**
Chrysene	**77**	**(41 - 140)**	**SW846 8270C**
Di-n-octyl phthalate	**80**	**(23 - 158)**	**SW846 8270C**
Benzo(b)fluoranthene	**75**	**(30 - 157)**	**SW846 8270C**
Benzo(k)fluoranthene	**73**	**(34 - 151)**	**SW846 8270C**
Benzo(a)pyrene	**77**	**(13 - 166)**	**SW846 8270C**
Indeno(1,2,3-cd)pyrene	**80**	**(30 - 158)**	**SW846 8270C**
Dibenz(a,h)anthracene	**79**	**(23 - 166)**	**SW846 8270C**
Benzo(ghi)perylene	**82**	**(41 - 149)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	79	(25 - 132)
Phenol-d5	70	(25 - 144)
Nitrobenzene-d5	74	(25 - 159)
2-Fluorobiphenyl	78	(25 - 158)
2,4,6-Tribromophenol	81	(25 - 178)
Terphenyl-d14	74	(25 - 166)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

KINNETICS LABORATORIES, INC.

Client Sample ID: Composite: MOA00VOP0020 through 0027

GC/MS Volatiles

Lot-Sample #...: L0H160301-023 **Work Order #...:** DJTGE101 **Matrix.....:** WATER
Date Sampled...: 08/14/00 **Date Received..:** 08/15/00
Prep Date.....: 08/26/00 **Analysis Date..:** 08/26/00
Prep Batch #...: 0246123
Dilution Factor: 1 **Method.....:** CFR136A 624

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Chloromethane	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Bromomethane	ND	2.0	ug/L
Chloroethane	ND	2.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
Methylene chloride	**1.1**	**1.0**	**ug/L**
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
Chloroform	**2.6**	**1.0**	**ug/L**
1,2-Dichloroethane	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Benzene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
Trichloroethene	**1.1**	**1.0**	**ug/L**
Bromodichloromethane	ND	1.0	ug/L
2-Chloroethyl vinyl ether	ND	5.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Toluene	**13**	**1.0**	**ug/L**
Dibromochloromethane	ND	1.0	ug/L
Tetrachloroethene	**1.4**	**1.0**	**ug/L**
Chlorobenzene	ND	1.0	ug/L
Ethylbenzene	**2.7**	**1.0**	**ug/L**
Bromoform	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	87	(70 - 130)
Toluene-d8	117	(70 - 130)
Bromofluorobenzene	112	(70 - 130)

KINNETICS LABORATORIES, INC.

Composite: MOA00VOP0020 through 0027

GC/MS Volatiles

Lot-Sample #: L0H160301-023 **Work Order #:** DJTGE101 **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

KINNETICS LABORATORIES, INC.

Client Sample ID: Composite: MOA00VOP0028 through 0035

GC/MS Volatiles

Lot-Sample #...: L0H160301-024 **Work Order #...:** DJTGL101 **Matrix.....:** WATER
Date Sampled...: 08/14/00 **Date Received..:** 08/15/00
Prep Date.....: 08/26/00 **Analysis Date..:** 08/26/00
Prep Batch #...: 0246123
Dilution Factor: 1 **Method.....:** CFR136A 624

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Chloromethane	**6.2**	**2.0**	**ug/L**
Vinyl chloride	ND	2.0	ug/L
Bromomethane	ND	2.0	ug/L
Chloroethane	ND	2.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
Methylene chloride	**1.8**	**1.0**	**ug/L**
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
Chloroform	**3.3**	**1.0**	**ug/L**
1,2-Dichloroethane	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Benzene	**4.3**	**1.0**	**ug/L**
1,2-Dichloropropane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
2-Chloroethyl vinyl ether	ND	5.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Toluene	**27**	**1.0**	**ug/L**
Dibromochloromethane	ND	1.0	ug/L
Tetrachloroethene	**1.4**	**1.0**	**ug/L**
Chlorobenzene	ND	1.0	ug/L
Ethylbenzene	**4.1**	**1.0**	**ug/L**
Bromoform	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	90	(70 - 130)
Toluene-d8	112	(70 - 130)
Bromofluorobenzene	108	(70 - 130)

KINNETICS LABORATORIES, INC.

Composite: MOA00VOP0028 through 0035

GC/MS Volatiles

Lot-Sample #: L0H160301-024 **Work Order #:** DJTGL101 **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Benzene, 1,3-dimethyl-	108-38-3	20 J	M	15.173	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

KINNETICS LABORATORIES, INC.

Client Sample ID: MOA00VOP0036

GC/MS Volatiles

Lot-Sample #...: L0H160301-017 **Work Order #...:** DJ0AN101 **Matrix.....:** WATER
Date Sampled...: 08/14/00 **Date Received..:** 08/15/00
Prep Date.....: 08/26/00 **Analysis Date..:** 08/26/00
Prep Batch #...: 0246123
Dilution Factor: 1 **Method.....:** CFR136A 624

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Chloromethane	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Bromomethane	ND	2.0	ug/L
Chloroethane	ND	2.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
Methylene chloride	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Benzene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
2-Chloroethyl vinyl ether	ND	5.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	93	(70 - 130)
Toluene-d8	120	(70 - 130)
Bromofluorobenzene	110	(70 - 130)

KINNETICS LABORATORIES, INC.

MOA00VOP0036

GC/MS Volatiles

Lot-Sample #: L0H160301-017 **Work Order #:** DJ0AN101 **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

KINNETICS LABORATORIES, INC.

Client Sample ID: MOA00VOP0037

GC/MS Volatiles

Lot-Sample #...: L0H160301-018 **Work Order #...:** DJ0AP101 **Matrix.....:** WATER
Date Sampled...: 08/14/00 **Date Received..:** 08/15/00
Prep Date.....: 08/26/00 **Analysis Date..:** 08/26/00
Prep Batch #...: 0246123
Dilution Factor: 1 **Method.....:** CFR136A 624

PARAMETER	RESULT	REPORTING LIMIT	UNITS
trans-1,3-Dichloropropene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Bromomethane	ND	2.0	ug/L
Chloroethane	ND	2.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
Methylene chloride	**10**	**1.0**	**ug/L**
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
Chloroform	**17**	**1.0**	**ug/L**
1,2-Dichloroethane	**1.6**	**1.0**	**ug/L**
1,1,1-Trichloroethane	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Benzene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Bromodichloromethane	**3.4**	**1.0**	**ug/L**
2-Chloroethyl vinyl ether	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	92	(70 - 130)
Toluene-d8	116	(70 - 130)
Bromofluorobenzene	105	(70 - 130)

KINNETICS LABORATORIES, INC.

MOA00VOP0037

GC/MS Volatiles

Lot-Sample #: L0H160301-018 **Work Order #:** DJ0AP101 **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

KINNETICS LABORATORIES, INC.

Client Sample ID: MOA00VOP0038

GC/MS Volatiles

Lot-Sample #...:	L0H160301-019	**Work Order #...:**	DJ0AR101	**Matrix.....:**	SOLID
Date Sampled...:	08/15/00	**Date Received..:**	08/15/00		
Prep Date.....:	08/25/00	**Analysis Date..:**	08/26/00		
Prep Batch #...:	0239174				
Dilution Factor:	1				
% Moisture.....:	68	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Trichlorofluoromethane (Freon 11)	ND	1600	ug/kg
Benzene	ND	780	ug/kg
Bromodichloromethane	ND	780	ug/kg
Bromomethane	**7100**	**1600**	**ug/kg**
Bromoform	ND	780	ug/kg
Carbon tetrachloride	ND	780	ug/kg
Chlorobenzene	ND	780	ug/kg
2-Chloroethyl vinyl ether	ND	3100	ug/kg
Chloroethane	ND	1600	ug/kg
Chloroform	ND	780	ug/kg
1,3-Dichlorobenzene	ND	780	ug/kg
1,4-Dichlorobenzene	ND	780	ug/kg
Chloromethane	ND	1600	ug/kg
Dibromochloromethane	ND	780	ug/kg
1,2-Dichlorobenzene	ND	780	ug/kg
1,1-Dichloroethane	ND	780	ug/kg
1,2-Dichloroethane	ND	780	ug/kg
trans-1,2-Dichloroethene	ND	390	ug/kg
1,1-Dichloroethene	ND	780	ug/kg
1,2-Dichloropropane	ND	780	ug/kg
cis-1,3-Dichloropropene	ND	780	ug/kg
trans-1,3-Dichloropropene	ND	780	ug/kg
Ethylbenzene	**6400**	**780**	**ug/kg**
Methylene chloride	ND	780	ug/kg
1,1,2,2-Tetrachloroethane	ND	780	ug/kg
Tetrachloroethene	ND	780	ug/kg
Toluene	**3400**	**780**	**ug/kg**
1,1,1-Trichloroethane	ND	780	ug/kg
1,1,2-Trichloroethane	ND	780	ug/kg
Trichloroethene	ND	780	ug/kg
Vinyl chloride	ND	1600	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	104	(70 - 130)
1,2-Dichloroethane-d4	123	(70 - 130)
Toluene-d8	107	(70 - 130)
Dibromofluoromethane	101	(70 - 130)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

KINNETICS LABORATORIES, INC.

MOA00VOP0038

GC/MS Volatiles

Lot-Sample #: L0H160301-019 **Work Order #:** DJ0AR101 **Matrix:** SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/kg

KINNETICS LABORATORIES, INC.

Client Sample ID: MOA00VOP0038

General Chemistry

Lot-Sample #...: L0H160301-019 **Work Order #...:** DJ0AR **Matrix.....:** SOLID
Date Sampled...: 08/15/00 **Date Received..:** 08/15/00
% Moisture.....: 68

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**68.0**	**1.0**	**No Units**	**ASTM Moisture, %**	**09/14-09/15/00**	**0259266**

Dilution Factor: 1

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: L0H160301 **Work Order #...:** DJGKK101 **Matrix.....:** SOLID
MB Lot-Sample #: L0H260000-174

Prep Date.....: 08/25/00
Analysis Date..: 08/25/00 **Prep Batch #...:** 0239174
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	250	ug/kg	SW846 8260B
Bromodichloromethane	ND	250	ug/kg	SW846 8260B
Bromoform	ND	250	ug/kg	SW846 8260B
Bromomethane	ND	500	ug/kg	SW846 8260B
Carbon tetrachloride	ND	250	ug/kg	SW846 8260B
Chlorobenzene	ND	250	ug/kg	SW846 8260B
Dibromochloromethane	ND	250	ug/kg	SW846 8260B
Chloroethane	ND	500	ug/kg	SW846 8260B
2-Chloroethyl vinyl ether	ND	1000	ug/kg	SW846 8260B
Chloroform	ND	250	ug/kg	SW846 8260B
Chloromethane	ND	500	ug/kg	SW846 8260B
1,2-Dichlorobenzene	ND	250	ug/kg	SW846 8260B
1,3-Dichlorobenzene	ND	250	ug/kg	SW846 8260B
1,4-Dichlorobenzene	ND	250	ug/kg	SW846 8260B
1,1-Dichloroethane	ND	250	ug/kg	SW846 8260B
1,2-Dichloroethane	ND	250	ug/kg	SW846 8260B
1,1-Dichloroethene	ND	250	ug/kg	SW846 8260B
trans-1,2-Dichloroethene	ND	120	ug/kg	SW846 8260B
1,2-Dichloropropane	ND	250	ug/kg	SW846 8260B
cis-1,3-Dichloropropene	ND	250	ug/kg	SW846 8260B
trans-1,3-Dichloropropene	ND	250	ug/kg	SW846 8260B
Ethylbenzene	ND	250	ug/kg	SW846 8260B
Methylene chloride	ND	250	ug/kg	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	250	ug/kg	SW846 8260B
Tetrachloroethene	ND	250	ug/kg	SW846 8260B
Toluene	ND	250	ug/kg	SW846 8260B
1,1,1-Trichloroethane	ND	250	ug/kg	SW846 8260B
1,1,2-Trichloroethane	ND	250	ug/kg	SW846 8260B
Trichloroethene	ND	250	ug/kg	SW846 8260B
Vinyl chloride	ND	500	ug/kg	SW846 8260B
Trichlorofluoromethane (Freon 11)	ND	500	ug/kg	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	99	(70 - 130)
1,2-Dichloroethane-d4	116	(70 - 130)
Toluene-d8	111	(70 - 130)
Dibromofluoromethane	90	(70 - 130)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: L0H160301 **Work Order #...:** DJV92101 **Matrix.....:** WATER
MB Lot-Sample #: L0I020000-123

Prep Date.....: 08/26/00
Analysis Date..: 08/26/00 **Prep Batch #...:** 0246123
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	1.0	ug/L	CFR136A 624
Bromodichloromethane	ND	1.0	ug/L	CFR136A 624
Bromoform	ND	1.0	ug/L	CFR136A 624
Bromomethane	ND	2.0	ug/L	CFR136A 624
Carbon tetrachloride	ND	1.0	ug/L	CFR136A 624
Chlorobenzene	ND	1.0	ug/L	CFR136A 624
Dibromochloromethane	ND	1.0	ug/L	CFR136A 624
Chloroethane	ND	2.0	ug/L	CFR136A 624
2-Chloroethyl vinyl ether	ND	5.0	ug/L	CFR136A 624
Chloroform	ND	1.0	ug/L	CFR136A 624
Chloromethane	ND	2.0	ug/L	CFR136A 624
1,2-Dichlorobenzene	ND	1.0	ug/L	CFR136A 624
1,3-Dichlorobenzene	ND	1.0	ug/L	CFR136A 624
1,4-Dichlorobenzene	ND	1.0	ug/L	CFR136A 624
1,1-Dichloroethane	ND	1.0	ug/L	CFR136A 624
1,2-Dichloroethane	ND	1.0	ug/L	CFR136A 624
1,1-Dichloroethene	ND	1.0	ug/L	CFR136A 624
trans-1,2-Dichloroethene	ND	1.0	ug/L	CFR136A 624
1,2-Dichloropropane	ND	1.0	ug/L	CFR136A 624
cis-1,3-Dichloropropene	ND	1.0	ug/L	CFR136A 624
trans-1,3-Dichloropropene	ND	1.0	ug/L	CFR136A 624
Ethylbenzene	ND	1.0	ug/L	CFR136A 624
Trichlorofluoromethane	ND	2.0	ug/L	CFR136A 624
Methylene chloride	ND	1.0	ug/L	CFR136A 624
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	CFR136A 624
Tetrachloroethene	ND	1.0	ug/L	CFR136A 624
Toluene	ND	1.0	ug/L	CFR136A 624
1,1,1-Trichloroethane	ND	1.0	ug/L	CFR136A 624
1,1,2-Trichloroethane	ND	1.0	ug/L	CFR136A 624
Trichloroethene	ND	1.0	ug/L	CFR136A 624
Vinyl chloride	ND	2.0	ug/L	CFR136A 624

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	89	(70 - 130)
Toluene-d8	117	(70 - 130)
Bromofluorobenzene	106	(70 - 130)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: L0H160301 Work Order #...: DJV92102 Matrix.....: WATER
LCS Lot-Sample#: L0I020000-123
Prep Date.....: 08/26/00 Analysis Date..: 08/26/00
Prep Batch #...: 0246123
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Chloromethane	100	(1.0- 273)	CFR136A 624
Vinyl chloride	95	(1.0- 251)	CFR136A 624
Bromomethane	100	(1.0- 242)	CFR136A 624
Chloroethane	94	(14 - 230)	CFR136A 624
Trichlorofluoromethane	97	(17 - 181)	CFR136A 624
1,1-Dichloroethene	99	(1.0- 234)	CFR136A 624
Methylene chloride	96	(1.0- 221)	CFR136A 624
trans-1,2-Dichloroethene	101	(54 - 156)	CFR136A 624
1,1-Dichloroethane	99	(59 - 155)	CFR136A 624
Chloroform	81	(51 - 138)	CFR136A 624
1,2-Dichloroethane	97	(49 - 155)	CFR136A 624
1,1,1-Trichloroethane	95	(52 - 162)	CFR136A 624
Carbon tetrachloride	96	(70 - 140)	CFR136A 624
Benzene	98	(37 - 151)	CFR136A 624
1,2-Dichloropropane	100	(1.0- 210)	CFR136A 624
Trichloroethene	101	(71 - 157)	CFR136A 624
Bromodichloromethane	98	(35 - 155)	CFR136A 624
2-Chloroethyl vinyl ether	170	(1.0- 305)	CFR136A 624
trans-1,3-Dichloropropene	98	(17 - 183)	CFR136A 624
cis-1,3-Dichloropropene	94	(1.0- 227)	CFR136A 624
1,1,2-Trichloroethane	100	(52 - 150)	CFR136A 624
Toluene	105	(47 - 150)	CFR136A 624
Dibromochloromethane	94	(53 - 149)	CFR136A 624
Tetrachloroethene	101	(64 - 148)	CFR136A 624
Chlorobenzene	99	(37 - 160)	CFR136A 624
Ethylbenzene	101	(37 - 162)	CFR136A 624
Bromoform	92	(45 - 169)	CFR136A 624
1,1,2,2-Tetrachloroethane	93	(46 - 157)	CFR136A 624
1,3-Dichlorobenzene	102	(59 - 156)	CFR136A 624
1,4-Dichlorobenzene	97	(18 - 190)	CFR136A 624
1,2-Dichlorobenzene	101	(18 - 190)	CFR136A 624

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	91	(70 - 130)

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: L0H160301 **Work Order #...:** DJV92102 **Matrix.....:** WATER
LCS Lot-Sample#: L0I020000-123

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	110	(70 - 130)
Bromofluorobenzene	104	(70 - 130)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: L0H160301 Work Order #...: DJGKK102 Matrix.....: SOLID
LCS Lot-Sample#: L0H260000-174
Prep Date.....: 08/25/00 Analysis Date..: 08/25/00
Prep Batch #...: 0239174
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Benzene	95	(70 - 130)	SW846 8260B
Bromodichloromethane	107	(70 - 130)	SW846 8260B
Bromoform	93	(70 - 130)	SW846 8260B
Bromomethane	92	(70 - 130)	SW846 8260B
Carbon tetrachloride	110	(70 - 130)	SW846 8260B
Chlorobenzene	98	(70 - 130)	SW846 8260B
Dibromochloromethane	91	(70 - 130)	SW846 8260B
Chloroethane	130	(70 - 130)	SW846 8260B
2-Chloroethyl vinyl ether	95	(70 - 130)	SW846 8260B
Chloroform	110	(70 - 130)	SW846 8260B
Chloromethane	144 a	(70 - 130)	SW846 8260B
1,2-Dichlorobenzene	89	(70 - 130)	SW846 8260B
1,3-Dichlorobenzene	91	(70 - 130)	SW846 8260B
1,4-Dichlorobenzene	88	(70 - 130)	SW846 8260B
1,1-Dichloroethane	118	(70 - 130)	SW846 8260B
1,2-Dichloroethane	63 a	(70 - 130)	SW846 8260B
trans-1,2-Dichloroethene	113	(70 - 130)	SW846 8260B
1,1-Dichloroethene	106	(70 - 130)	SW846 8260B
1,2-Dichloropropane	102	(70 - 130)	SW846 8260B
cis-1,3-Dichloropropene	101	(70 - 130)	SW846 8260B
trans-1,3-Dichloropropene	107	(70 - 130)	SW846 8260B
Ethylbenzene	95	(70 - 130)	SW846 8260B
Methylene chloride	100	(70 - 130)	SW846 8260B
1,1,2,2-Tetrachloroethane	84	(70 - 130)	SW846 8260B
Tetrachloroethene	84	(70 - 130)	SW846 8260B
Toluene	99	(70 - 130)	SW846 8260B
1,1,1-Trichloroethane	115	(70 - 130)	SW846 8260B
1,1,2-Trichloroethane	95	(70 - 130)	SW846 8260B
Trichloroethene	102	(70 - 130)	SW846 8260B
Trichlorofluoromethane (Freon 11)	108	(70 - 130)	SW846 8260B
Vinyl chloride	138 a	(70 - 130)	SW846 8260B
Acetone	112	(70 - 130)	SW846 8260B
Bromobenzene	102	(70 - 130)	SW846 8260B
Bromochloromethane	100	(70 - 130)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: L0H160301 Work Order #...: DJGKK102 Matrix.....: SOLID
LCS Lot-Sample#: L0H260000-174

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
2-Butanone (MEK)	140 a	(70 - 130)	SW846 8260B
n-Butylbenzene	101	(70 - 130)	SW846 8260B
sec-Butylbenzene	100	(70 - 130)	SW846 8260B
tert-Butylbenzene	97	(70 - 130)	SW846 8260B
Carbon disulfide	105	(70 - 130)	SW846 8260B
1-Chlorohexane	89	(70 - 130)	SW846 8260B
2-Chlorotoluene	103	(70 - 130)	SW846 8260B
4-Chlorotoluene	99	(70 - 130)	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	93	(70 - 130)	SW846 8260B
1,2-Dibromoethane (EDB)	89	(70 - 130)	SW846 8260B
Dibromomethane	101	(70 - 130)	SW846 8260B
Dichlorodifluoromethane (Freon 12)	124	(70 - 130)	SW846 8260B
cis-1,2-Dichloroethene	105	(70 - 130)	SW846 8260B
1,3-Dichloropropane	90	(70 - 130)	SW846 8260B
2,2-Dichloropropane	109	(70 - 130)	SW846 8260B
1,1-Dichloropropene	103	(70 - 130)	SW846 8260B
Hexachlorobutadiene	96	(70 - 130)	SW846 8260B
2-Hexanone	100	(70 - 130)	SW846 8260B
Isopropylbenzene	93	(70 - 130)	SW846 8260B
p-Isopropyltoluene	97	(70 - 130)	SW846 8260B
4-Methyl-2-pentanone (MIBK)	116	(70 - 130)	SW846 8260B
Naphthalene	95	(70 - 130)	SW846 8260B
n-Propylbenzene	104	(70 - 130)	SW846 8260B
Styrene	94	(70 - 130)	SW846 8260B
1,1,1,2-Tetrachloroethane	95	(70 - 130)	SW846 8260B
1,2,3-Trichlorobenzene	85	(70 - 130)	SW846 8260B
1,2,4-Trichlorobenzene	86	(70 - 130)	SW846 8260B
1,2,3-Trichloropropane	96	(70 - 130)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	113	(70 - 130)	SW846 8260B
1,2,4-Trimethylbenzene	102	(70 - 130)	SW846 8260B
1,3,5-Trimethylbenzene	98	(70 - 130)	SW846 8260B
Vinyl acetate	94	(70 - 130)	SW846 8260B
m-Xylene & p-Xylene	75	(70 - 130)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: L0H160301 **Work Order #...:** DJGKK102 **Matrix.....:** SOLID
LCS Lot-Sample#: L0H260000-174

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
o-Xylene	**96**	**(70 - 130)**	**SW846 8260B**
Xylenes (total)	**82**	**(70 - 130)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	98	(70 - 130)
1,2-Dichloroethane-d4	127	(70 - 130)
Toluene-d8	102	(70 - 130)
Dibromofluoromethane	98	(70 - 130)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Lot-Sample #...: L0H160301 Work Order #...: DJ0AN102 Matrix.....: WATER
MS Lot-Sample #: L0H160301-017
Date Sampled...: 08/14/00 Date Received..: 08/15/00
Prep Date.....: 08/26/00 Analysis Date..: 08/26/00
Prep Batch #...: 0246123
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Chloromethane	96	(1.0- 273)	CFR136A 624
Vinyl chloride	91	(1.0- 251)	CFR136A 624
Bromomethane	87	(1.0- 242)	CFR136A 624
Chloroethane	94	(14 - 230)	CFR136A 624
Trichlorofluoromethane	102	(17 - 181)	CFR136A 624
1,1-Dichloroethene	100	(1.0- 234)	CFR136A 624
Methylene chloride	94	(1.0- 221)	CFR136A 624
trans-1,2-Dichloroethene	101	(54 - 156)	CFR136A 624
1,1-Dichloroethane	104	(59 - 155)	CFR136A 624
Chloroform	103	(51 - 138)	CFR136A 624
1,2-Dichloroethane	101	(49 - 155)	CFR136A 624
1,1,1-Trichloroethane	104	(52 - 162)	CFR136A 624
Carbon tetrachloride	104	(70 - 140)	CFR136A 624
Benzene	103	(37 - 151)	CFR136A 624
1,2-Dichloropropane	108	(1.0- 210)	CFR136A 624
Trichloroethene	107	(71 - 157)	CFR136A 624
Bromodichloromethane	106	(35 - 155)	CFR136A 624
2-Chloroethyl vinyl ether	0.0	(1.0- 305)	CFR136A 624
trans-1,3-Dichloropropene	98	(17 - 183)	CFR136A 624
cis-1,3-Dichloropropene	78	(1.0- 227)	CFR136A 624
1,1,2-Trichloroethane	104	(52 - 150)	CFR136A 624
Toluene	112	(47 - 150)	CFR136A 624
Dibromochloromethane	103	(53 - 149)	CFR136A 624
Tetrachloroethene	111	(64 - 148)	CFR136A 624
Chlorobenzene	104	(37 - 160)	CFR136A 624
Ethylbenzene	108	(37 - 162)	CFR136A 624
Bromoform	99	(45 - 169)	CFR136A 624
1,1,2,2-Tetrachloroethane	97	(46 - 157)	CFR136A 624
1,3-Dichlorobenzene	107	(59 - 156)	CFR136A 624
1,4-Dichlorobenzene	102	(18 - 190)	CFR136A 624
1,2-Dichlorobenzene	105	(18 - 190)	CFR136A 624

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	93	(70 - 130)
Toluene-d8	108	(70 - 130)
Bromofluorobenzene	105	(70 - 130)

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Lot-Sample #...: L0H160301 **Work Order #...:** DJ0AN102 **Matrix.....:** WATER
MS Lot-Sample #: L0H160301-017

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	**FROM:**	
Severen Trent Laboratories Incorporated 5761 Silverado Way, Suite N Anchorage, AK 99518 (907)563-4800 Attn: Emanuel Hignutt	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178	
REQUIRED COMPLETION DATE: 30 days	**P.O. #:** AK00-1012	**KLI Proj. #:** 514.01

ANALYSIS TYPE: EPA 625 & OPEN SCAN. (See attached Permit for details.) Detection limits as per method.

MATRIX: Water	**Preservative:** None, 4°C	**Type of Container:** 1-L amber glass

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER
MOA00SVL0004	Influent	3 ✓✓✓	8/15/00	0810	#1+2- less than full #3-1/3 full jars	20
MOA00SVL0005	Effluent	3 ✓✓✓	8/15/00	0805	#1+2-less than full #3-1/2 full jars	21

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC, INCLUDING METHOD BLANKS, MS/SDs, DUPLICATES, ETC.

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[illegible]	8/15/00 1135	hand	G. Lawley	8/15 1135
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
A. Lowy	8/15 1400	hand	[illegible]	08-25-00 1405
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME

SAMPLED BY (NAME/SIGNATURE): _____

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	FROM:	
Severen Trent Laboratories Incorporated 5761 Silverado Way, Suite N Anchorage, AK 99518 (907)563-4800 Attn: Emanuel Hignutt	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178	
REQUIRED COMPLETION DATE: 30 days	**P.O. #:** AK00-1012	**KLI Proj. #:** 514.01

ANALYSIS TYPE: EPA 8270. **Report using EPA 625 analyte list.** Detection limits as per method. Please report in dry weight.

MATRIX: Sludge	**Preservative:** None, 4°C	**Type of Container:** 125-mL glass

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER
MOA00SVL0006	Sludge	2 ✓	8/15/00	0600		22

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC, INCLUDING METHOD BLANKS, MS/SDs, DUPLICATES, ETC.

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	8/15/00 1135	hand	G. LAWLEY	8/15 1135
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
A Lowry	8/15 1400	hand	[signature]	08-15-00 1400
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME

SAMPLED BY (NAME/SIGNATURE): _____

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	FROM: L0H160301	
Severen Trent Laboratories Incorporated 5761 Silverado Way, Suite N Anchorage, AK 99518 (907)563-4800	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178	
REQUIRED COMPLETION DATE: 30 days	**P.O. #:** AK00-1012	**KLI Proj. #:** 514.01

ANALYSIS TYPE: EPA 624 with open scan (TICs with estimated concentrations; see attached for details.) Detection limits as per method.

MATRIX: Water | **Preservative:** HCl, 4°C | **Type of Container:** 40-mL glass

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER
MOA00VOP0020	INF CMP #1	2	8/14/00	0800		-23
MOA00VOP0021	INF CMP #2	2	8/14/00	1115	#2 w/bubble JHS	
MOA00VOP0022	INF CMP #3	2	8/14/00	1400		
MOA00VOP0023	INF CMP #4	2	8/14/00	1650		
MOA00VOP0024	INF CMP #5	2	8/14/00	2000		
MOA00VOP0025	INF CMP #6	2	8/14/00	2300		
MOA00VOP0026	INF CMP #7	2	8/15/00	0200		
MOA00VOP0027	INF CMP #8	2	8/15/00	0500		
						JMS

SAMPLES LISTED ON THIS COC SHOULD BE COMPOSITED IN AN EIGHT-PART COMPOSITE IN A VAPOR-TYPE SYRINGE PRIOR TO ANALYSIS.

JMS

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC, INCLUDING METHOD BLANKS, MS/SDs, DUPLICATES, ETC.

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	8/15/00 1135	hand	G. Lawley	8/15 1135
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	8/15 1400		[signature]	8-15-00 1405
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME

SAMPLED BY (NAME/SIGNATURE): _____ Rec@ 5°C #36765

2

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	FROM:	
Severen Trent Laboratories Incorporated 5761 Silverado Way, Suite N Anchorage, AK 99518 (907)563-4800	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178	
REQUIRED COMPLETION DATE: 30 days	**P.O. #:** AK00-1012	**KLI Proj. #:** 514.01

ANALYSIS TYPE: EPA 624 with open scan (TICs with estimated concentrations; see attached for details.) Detection limits as per method.

MATRIX: Water | **Preservative:** HCl, 4°C | **Type of Container:** 40-mL glass

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER
MOA00VOP0028	EFF CMP #1	2	8/14/00	0800		-24
MOA00VOP0029	EFF CMP #2	2	8/14/00	1100	#2 w/ bubble JMS	
MOA00VOP0030	EFF CMP #3	2	8/14/00	1400		
MOA00VOP0031	EFF CMP #4	2	8/14/00	1705		
MOA00VOP0032	EFF CMP #5	2	8/14/00	2000		
MOA00VOP0033	EFF CMP #6	2	8/14/00	2300		
MOA00VOP0034	EFF CMP #7	2	8/15/00	0200		
MOA00VOP0035	EFF CMP #8	2	8/15/00	0500		
						JMS

SAMPLES LISTED ON THIS COC SHOULD BE COMPOSITED IN AN EIGHT-PART COMPOSITE IN A VAPOR-TYPE SYRINGE PRIOR TO ANALYSIS.

JMS

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC, INCLUDING METHOD BLANKS, MS/SDs, DUPLICATES, ETC.

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	8/15/00 1135	hand	G. LAWLEY	8/15 1135
RELINQUISHED BY:	**DATE AND TIME**	**TRANSPORTED BY:**	**RECEIVED BY:**	**DATE AND TIME**
[signature]	8/15 1400	hand	[signature]	08/15/00 1405
RELINQUISHED BY:	**DATE AND TIME**	**TRANSPORTED BY:**	**RECEIVED BY:**	**DATE AND TIME**

SAMPLED BY (NAME/SIGNATURE): _____

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	**FROM:**	
Severen Trent Laboratories Incorporated 5761 Siverado Way, Suite N Anchorage, AK 99518 (907)563-4800	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178	
REQUIRED COMPLETION DATE: 30 Days	**P.O. #:** AK00-1012	**KLI Proj. #:** 514.01

ANALYSIS TYPE: EPA 624 with open scan (TICs with estimated concentrations; see attached for details.) Detection limits as per method.

MATRIX: Water | **Preservative:** HCl, 4° C | Type of Container: 40-mL glass

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER
MOA00VOP0036	C-Station	2	8/14/00	0750	no bubbles JMS	-17
MOA00VOP0037	Trip Blank	2	8/14/00	—	#1 w/ bubbles JMS	-18

JMS

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	8/15/00 1135	hand	G. LAWLEY	8/15 1135
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	8/15 1400	hand	[signature]	08-15-00 1405
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME

SAMPLED BY (NAME/SIGNATURE): _____

4

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	**FROM:**	
Severen Trent Laboratories Incorporated 5761 Siverado Way, Suite N Anchorage, AK 99518 (907)563-2343	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178	
REQUIRED COMPLETION DATE: 30 Days	**P.O. #:** AK00-1012	**KLI Proj. #:** 514.01

ANALYSIS TYPE: EPA 8260. **Report using EPA 624 analyte list.** Detection limits as per method. Please report in dry weight.

MATRIX: Sludge	**Preservative:** None, 4° C	Type of Container: 250-mL glass

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER
MOA00VOP0038	Sludge	2	8/15/00	0600		-19

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[illegible]	8/15/00 1135	hand	G. Lawler	8/15 1135
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
G. Lawler	8/15 1400	hand	[illegible]	08-15-00 1405
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME

SAMPLED BY (NAME/SIGNATURE): _____

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	FROM:
ToxScan, Inc. 42 Hangar Way Watsonville, CA 95076 Attn: Doug Clarke (408)724-4522 Location: Frig 11 Shelf 12	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178 Pg. 6 of 6 T-18567

REQUIRED COMPLETION DATE: 30 days | **P.O. #:** AK00-1006 | **KLI Proj. #:** 514.01

ANALYSIS TYPE: Metals: Antimony, molybdenum, thallium (EPA 6020) and selenium (EPA 7741). Detection limit 0.3 µg/g (dry weight). Please report in dry weight.

MATRIX: Sludge | **Preservative:** None, 4°C | **Type of Container:** 120-mL glass

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER
MOA00MET0004	Sludge	1	6-7-00	0920	FILLED Intact	T-18567-16-A

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC, INCLUDING METHOD BLANKS, MS/SDs, DUPLICATES, ETC.

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
Susan Long	6-7-00 / 1130	KLI/HAND	GG LAWLEY	6/7/00 1130
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
A Glanty	6-7-00 1400	Fed Ex	Douglas Clark	08Jun00/0945
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME

SAMPLED BY (NAME/SIGNATURE): see sample collection sheet for individual collectors

Susan Long

APPENDIX B

Toxic Pollutant and Pesticide Monitoring, August Sampling

B4 SES

Asbestos Data

AUGUST SAMPLING, ASBESTOS, SES SAMPLE LIST

SAMPLE IDENTIFICATION NUMBER	SAMPLE LOCATION	SAMPLE TYPE
MOA00ASB0004	INFLUENT	SAMPLE
MOA00ASB0005	EFFLUENT	SAMPLE
MOA00ASB0006	SLUDGE	SAMPLE

Hygeia Laboratories Inc.
82 W. Sierra Madre Blvd
Sierra Madre, California
91024-2434
626-355-4711
FAX: 626-355-4497

California ELAP Certificate No. 1269

TEM Sample Analysis Report

Non-Potable Water EPA/600-4-83-043 (100.1)

September 11, 2000
Ms. Grace Torrijos
Solar Environmental
1131 E. 76th Avenue Ste. 102
Anchorage, AK 99518

Hygeia Ref. No.: *92077 00 0160*
Date Received: *September 5, 2000*
Date Analyzed: *September 7, 2000*
No. Samples: *2*

Client Project: *Kinnetic - 514.01 Moa Anchorage*

Microscopist *Kyeong Corbin*

Client Sample ID: ***MOA00ASB0004***
Hygeia Sample ID: *623638*
Sample Location: *n/a*
Sample Description: *n/a*
Volume Filtered (ml): *1*

Area Analyzed (mm2): *.198*
Analytical Sens.(MFL): *6.6*
Effective Filter Area (mm2): *1297*
SAED Neg No.: *3232*
EDXA File No.: *149*

		UCL*	LCL*
Total Structures:	*24*		
Million Fibers/Liter (MFL):	***160***	*280*	*99*
MFL > 10 µm in length:	***30***		

	No. str.< 10µm in length	No. str. > 10 µm in length
Chrysotile:	*19*	*5*
Amphiboles:	*0*	*0*

Client Sample ID: ***MOA00ASB0005***
Hygeia Sample ID: *623639*
Sample Location: *n/a*
Sample Description: *n/a*
Volume Filtered (ml): *1*

Area Analyzed (mm2): *.198*
Analytical Sens.(MFL): *6.6*
Effective Filter Area (mm2): *1297*
SAED Neg No.: *n/a*
EDXA File No.: *149*

		UCL*	LCL*
Total Structures:	*7*		
Million Fibers/Liter (MFL):	***46***	*97*	*19*
MFL > 10 µm in length:	***7***		

	No. str.< 10µm in length	No. str. > 10 µm in length
Chrysotile:	*6*	*1*
Amphiboles:	*0*	*0*

Microscopist

Laboratory Supervisor

**UCL: upper 95% confidence limit LCL: lower 95% confidence limit*

Hygeia Laboratories Inc.

NIST / NVLAP Lab Code No. 102116-0
California ELAP Certificate No. 1269
New York ELAP Certificate No. 11017

TEM Sample Analysis Summary

Non-Potable Water EPA/600-4-83-043 (100.1)

Date: *September 11, 2000*
Hygeia Ref. No.: *92077 00 0160*

Microscopist: *Kyeong Corbin*

HygeiaSampleID	ClientSampleID	MFL	MFL > 10
623638	*MOA00ASB0004*	*160*	*30*
623639	*MOA00ASB0005*	*46*	*7*

< - Less than Analytical Sensitivity

Microscopist

Laboratory Supervisor

Solar Environmental Services, Inc.

1131 E. 76th Avenue, Suite 102
Anchorage, AK 99518
Home Page: www.alaska.net/~sesenvir/

Phone: (907) 349-7705
Fax: (907) 349-7944
E-mail: sesenvir@alaska.net

CERTIFICATE OF ANALYSIS

CLIENT:	Kinnetic Laboratories, Inc.	**CLIENT ORDER #:**	194019
ATTN:	Janet Kennedy 403 West 8th Ave. Anchorage, Alaska 99501	**PROJECT NAME:**	514.01 (MOA)
		PROJECT #:	514.01
		REPORT #:	B2000-172
		REPORT DATE:	September 8, 2000
		COLLECTED BY:	Client
		DATE SAMPLED:	August 15, 2000
		DATE RECEIVED:	August 15, 2000
		DATE ANALYZED:	September 8, 2000
		ANALYZED BY:	T. Odsigue– SES
PAGE:	1 of 1		

ASBESTOS QUALITATIVE DUST ANALYSIS SUMMARY

POLARIZED LIGHT MICROSCOPY (PLM) WITH DISPERSION STAINING

LAB#	CLIENT#	DESCRIPTION/ LOCATION (color)	ASBESTOS PRESENT	OTHER MATERIALS PRESENT
2000531BO1022	MOA00ASB0006	Sludge (Black)	None Detected	Cellulose & Others

Test report relates only to the items tested and must not be used by client to claim product endorsement by NVLAP or any Agency of the U.S. Government. Test Report must not be reproduced except in full without the approval of SES and subject to SES general terms and conditions. Small fibers may be missed by PLM Method due to resolution limitations of the optical microscope. Therefore, None Detected results cannot be guaranteed. Electron Microscopy is recommended for confirmation. This is not covered by NVLAP

REVIEWED AND APPROVED BY: Gracita O. Torrijos, Chemist – I.H.

Date: 9/14/00

FORM# SES 1031-REVISED 08/07/96

NVLAP Accredited Laboratory

AIHA – AAR – PAT Certified

APPENDIX C

Whole Effluent Toxicity Testing

C1 Toxscan

Third Quarter Test

ToxScan Inc.

42 Hangar Way • Watsonville, CA 95076-2404 • (831) 724-4522 • FAX (831) 724-3188

October 11, 2000

Mr. Mark Savoie
KINNETIC LABORATORIES INC.
403 West Eighth Avenue
Anchorage, AK 99501

Introduction

Samples of effluent from the Municipality of Anchorage's Point Woronzof sewage treatment plant were collected by Kinnetic Laboratories personnel and shipped via overnight air courier to ToxScan's laboratory in Watsonville, CA for toxicity testing. The samples were assigned the ToxScan laboratory number T-18883.

Three short-term chronic toxicity tests were requested; a fertilization test using the purple sea urchin (*Strongylocentrotus purpuratus*), a bivalve larvae survival and development test using the blue mussel (*Mytilus galloprovincialis*) and a larval survival and growth test using the topsmelt (*Atherinops affinis*). The first two tests are of short duration and require only a single effluent sample. The topsmelt test lasts seven days and requires three effluent samples for daily renewal of test solutions; this latter test requires three effluent samples, collected two days apart. The first sample (collected on 24-25 September) was used for the sea urchin and mussel bioassays and to initiate the topsmelt test. The second and third samples (collected on 26-27 and 28-29 September) were used to complete the topsmelt bioassay.

Five concentrations of effluent were tested. Following permit directions, the five concentrations were 0.175%, 0.35%, 0.7%, 1.4% and 2.8%. Dilutions of the effluent were made with natural seawater from our laboratory system, resulting in test solutions whose salinity was high enough to be compatible with the requirements of the test organisms.

Methods

All test methods followed those described in Short-Term Methods for Measuring ther Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms. (EPA/600/R-95/136. August, 1995). These are briefly described below:

Sea Urchin Fertilization Test.
Eggs and sperm were obtained from gravid adult sea urchins by injection with 0.5M potassium chloride. Urchin broodstock was supplied by the Granite Canyon laboratory of UC Santa Cruz. Care was taken to avoid contact of eggs with sperm prior to test initiation. Sperm and eggs were diluted to appropriate concentrations with seawater, and aliquots of sperm were precisely pipetted into test chambers (test tubes) containing

diluted effluent. After sperm had been in contact with the effluent for precisely 20 minutes, aliquots of unfertilized eggs were added to the test chambers and fertilization was allowed to proceed for a second 20-minute period. At the end of the 20-minute fertilization period, glutaraldehyde was added to each test chamber to stop all biological activity. Test chambers were then examined microscopically to score the numbers of fertilized and unfertilized eggs. Four replicate test chambers were used for control (seawater only) exposures and for each dilution of test effluent. Test temperature was 12±1°C. The test met acceptability criteria; seawater controls achieved greater than 70% egg fertilization, there was no fertilization in egg controls, %MSD was <25% relative to controls and final sperm stock density was <33,600,000 per ml.

Mussel Larvae Survival and Development Test.

Gravid mussels, supplied by Carlsbad Aquafarms, Carlsbad, CA, were induced to spawn by thermal stimulation. Eggs and sperm were collected in separate beakers filled with 0.45 µm-filtered seawater. After inspection, gametes from multiple individuals were screened and pooled. Egg density was determined by microscopically counting several 1-ml aliquots taken from the well-mixed egg beaker. Fertilization was accomplished by addition of an appropriate amount of sperm suspension. Tests were initiated when at least 90% fertilization was observed.

Larvae were tested at 16°C in 100 mm borosilicate glass test tubes containing 5 ml of test solution. After adequate fertilization was confirmed, an aliquot of embryos was pipetted into each test tube. Five extra test tubes were prepared in addition to those required for test and control replicates. These "extra" test containers were not incubated, but rather they were evaluated immediately after inoculation to provide the "initial recovery" data used to establish the mean number of embryos added to each test container.

At the end of the 48 hour exposure period the contents of each test tube were prepared for microscopic evaluation. Each tube was inverted at least five times to promote uniform mixing of contents, and then rapidly subsampled with a 1 ml Eppendorf pipette. The 1 ml subsample was placed onto a Sedgwick-Rafter counting slide and the total number of normal and abnormal larvae was determined. Larvae were scored for evidence of internal tissue inside a complete larval shell. Larvae which had a complete larval shell containing tissue were counted as normal, whereas empty shells and larvae with incomplete shells were scored as abnormal. On the assumption that abnormal larvae would not survive, abnormals were counted as mortalities. Data were reported as percent of initial embryos which survived, and percent of survivors which showed normal development

Topsmelt Larval Survival and Growth Test.

Test organisms were 10-day old larvae, obtained from ABS, Ft. Collins, CO. Five larvae were used in each test container and there were five replicate containers per concentration. Laboratory control water was seawater from our laboratory system. The sample dilutions were prepared daily using laboratory sea water. Each larval container was fed

twice daily with approximately 200 newly-hatched *Artemia* nauplii. Test temperature was 20±1 °C, and photoperiod was 16:8 L:D. Daily renewal of approximately 75% of the test volume coincided with daily environmental monitoring and assessment of survival. After seven days of exposure, the test was terminated. Surviving larvae were dried and weighed.

Results

The results of the sea urchin fertilization bioassay are summarized in Table 1. Statistical analysis of these data show that no effluent tested concentration produced a significant decrease in egg fertilization when compared with the seawater-only controls. The NOEC for fertilization was >2.8%, the LOEC was >2.8% and the chronic toxicity units were <35.7%. Table 2 presents the results of the concurrent reference toxicant test in which copper was the toxicant to which the sperm were exposed. The EC_{50} for fertilization and copper was 23.5 ppb, which is within our laboratory control chart limits for this organism-toxicant combination and indicates that the test population was typically sensitive. All test validity criteria were met in both the effluent bioassay and the reference toxicant bioassay.

Table 3 presents the results of the mussel larvae bioassay. Statistical analysis of these data show that the highest effluent concentration tested produced significantly reduced survival and normal development of the test organisms. The NOEC for both survival and normal development was 1.4% effluent and the LOEC for both endpoints was 2.8%. Chronic toxicity units were 71.4 TUc. Table 4 summarizes the results of the concurrent reference toxicant bioassay using copper as the toxicant. The LC_{50} (for survival) was 11.63 ppb and the EC_{50} (for normal development) was 11.45 ppb. These are well within our laboratory control chart limits and indicate typical sensitivity of the test population. All test validity criteria were met in both the effluent and reference toxicant bioassays.

The data for the topsmelt bioassay are summarized in Attachment 1, a printout generated by TOXIS, a statistical software program. The statistical analysis shows that no concentration of effluent tested produced significant mortality or significantly decreased growth of topsmelt larvae when compared with seawater-only controls. The NOEC for both endpoints was >2.8%, the LOEC was >2.8% and the chronic toxicity units were <35.7 TUc. In the concurrent reference toxicant test using copper as the toxicant, the LC_{50} for survival was 209.2 ppb and the IC_{50} for growth was 231.6 ppb. These are within our laboratory control chart limits, and indicate typical sensitivity of the test population. All test validity criteria were met in both bioassays.

In summary, no chronic toxicity to either sea urchin sperm or topsmelt larvae was produced by the tested concentrations of Point Woronzof effluent. Significantly reduced survival and normal development of developing mussel embryos were produced by the highest concentration (2.8%) of effluent tested. *Mytilus galloprovincialis* was clearly the most sensitive of the three species to this effluent.

Table 1. *Strongylocentrotus purpuratus* Fertilization Test.

Effluent Concentration	Rep	# Fertilized	# Unfertilized	% Fertilized	Mean fertilized ± S.D.
0% (control)	1	108	3	96	
	2	96	4	96	97.0
	3	112	2	98	±
	4	109	2	98	1.2
0.175%	1	98	3	97	
	2	99	1	99	96.8
	3	101	9	92	±
	4	100	1	99	3.3
0.35%	1	99	3	97	
	2	104	1	99	98.8
	3	103	0	100	±
	4	100	1	99	1.3
0.7%	1	99	1	99	
	2	97	3	97	97.0
	3	118	7	94	±
	4	109	2	98	2.2
1.4%	1	98	5	95	
	2	101	1	99	96.7
	3	101	6	94	±
	4	100	3	97	2.5
2.8%	1	101	3	97	
	2	100	6	94	97.0
	3	100	0	100	±
	4	102	3	97	2.5

EC50 = 2.8%
LOEC = >2.8%
NOEC = >2.8%
TUc = <35.7%

Table 2. *Strongylocentrotus purpuratus* Reference Toxicant Test

Concentration Cu (ppb)	Rep	# Fertilized	# Unfertilized	% Fertilized	Mean fertilized ± S.D.
0% (Control)	1	112	5	96	
	2	97	3	97	97.0
	3	101	2	98	±
	4	101	3	97	0.82
9 ppb	1	105	3	97	
	2	102	5	95	96.3
	3	94	5	95	±
	4	98	2	98	1.5
18 ppb	1	97	21	82	
	2	89	12	88	86.3
	3	101	13	89	±
	4	100	16	86	3.1
36 ppb	1	0	105	0	
	2	0	101	0	2.0
	3	5	99	5	±
	4	3	97	3	2.5
72 ppb	1	0	100	0	
	2	0	100	0	0
	3	0	107	0	±
	4	0	102	0	0
144 ppb	1	0	107	0	
	2	0	102	0	0
	3	0	126	0	±
	4	0	101	0	0

EC50 = 23.48 ppb
95% Confidence Limits = 23.08 - 23.89 ppb

Table 3. *Mytilus galloprovincialis* Survival and Development Test.

T-18883 CLIENT: KLI - Alaska

AVG: 210.0

Sample ID	Rep	Number Normal	Number Abnormal	Total Recovered per 1 mL	esuspend Volume	Total # Normal Larvae Recovered	% Survival	Mean % Survival + S.D.	% Normal Develop-ment	Mean % Normal evelopme + S.D.	Survival Abbotts Corrected Value	Survival Mean Corrected Value	Normal Development Abbotts Corrected Value	Normal Development Mean Corrected Value
	1	35	1	36	5	175	83.3		97.2					
LAB SW	2	40	3	43	5	200	95.2	98.2	93.0	91.5				
CONTRO	3	44	3	47	5	220	104.8	+	93.6	+				
	4	46	10	56	5	230	109.5	11.6	82.1	6.5				
	1	27	3	30	5	135	64.3		90.0		65.5		98.4	
0.175	2	41	1	42	5	205	97.6	88.7	97.6	92.2	99.4	90.3	106.7	100.8
	3	46	2	48	5	230	109.5	+	95.8	+	111.5	+	104.7	+
	4	35	6	41	5	175	83.3	19.5	85.4	5.6	84.8	19.8	93.3	6.1
	1	36	2	38	5	180	85.7		94.7		87.3		103.5	
0.35	2	41	1	42	5	205	97.6	106.0	97.6	93.2	99.4	107.9	106.7	101.9
	3	50	7	57	5	250	119.0	+	87.7	+	121.2	+	95.9	+
	4	51	4	55	5	255	121.4	17.2	92.7	4.2	123.6	17.5	101.3	4.6
	1	37	4	41	5	185	88.1		90.2		89.7		98.6	
0.7	2	50	4	54	5	250	119.0	96.4	92.6	93.6	121.2	98.2	101.2	102.3
	3	42	0	42	5	210	100.0	+	100.0	+	101.8	+	109.3	+
	4	33	3	36	5	165	78.6	17.4	91.7	4.4	80.0	17.8	100.2	4.8
	1	45	10	55	5	225	107.1		81.8		109.1		89.4	
1.4	2	40	12	52	5	200	95.2	101.2	76.9	85.0	97.0	103.0	84.1	92.9
	3	51	2	53	5	255	121.4	+	96.2	+	123.6	+	105.2	+
	4	34	6	40	5	170	81.0	17.2	85.0	8.2	82.4	17.5	92.9	9.0
	1	9	34	43	5	45	21.4		20.9		21.8		22.9	
2.8	2	6	26	32	5	30	14.3	11.3	18.8	11.9	14.5	11.5	20.5	13.0
	3	2	43	45	5	10	4.8	+	4.4	+	4.8	+	4.9	+
	4	2	57	59	5	10	4.8	8.1	3.4	9.2	4.8	8.3	3.7	10.1

LOEC = 2.8%
NOEC = 1.4%
TUc = 71.4

Table 4. *Mytilus galloprovincialis* Reference Toxicant Test.

INITIAL RECOVERY	VOL.	FERT.	TOTAL
REP 1	31	106	3286
REP 2	34	98	3332
REP 3	29	122	3538
REP 4	31	132	4092
REP 5	30	119	3570

Bivalve Larvae Worksheet Client KLI - Alaska Copper Reference Toxicant- Mytilus galloprovincialis

RECOVE AVG: 3563.6

Sample ID	Rep	Number Normal	Number Abnormal	Total Recovered per 1 mL	esuspend Volume	Total # Normal Larvae Recovered	% Survival	Mean % Survival + S.D.	% Normal Develop-ment	Mean % Normal evelopme + S.D.	Survival Abbotts Corrected Value	Normal Development Mean Corrected Value	Abbotts Corrected Value	Mean Corrected Value
	1	101	7	108	32	3232	90.7	100.3	93.5	94.3				
Control	2	114	7	121	32	3648	102.4	+	94.2	+				
	3	120	6	126	32	3840	107.8	8.7	95.2	0.9				
	1	113	15	128	31.5	3560	99.9	112.9	88.3	92.0	99.6	112.6	93.6	97.5
2 ppb	2	125	5	130	33	4125	115.8	+	96.2	+	115.4	+	101.9	+
	3	129	12	141	34	4386	123.1	11.9	91.5	4.0	122.7	11.8	97.0	4.2
	1	115	5	120	31	3565	100.0	103.4	95.8	94.1	99.8	103.1	101.6	99.8
4 ppb	2	117	5	122	32	3744	105.1	+	95.9	+	104.8	+	101.7	+
	3	117	12	129	32	3744	105.1	2.9	90.7	3.0	104.8	2.9	96.2	3.2
	1	136	10	146	32.5	4420	124.0	113.1	93.2	90.7	123.7	112.8	98.8	96.2
8 ppb	2	109	15	124	34	3706	104.0	+	87.9	+	103.7	+	93.2	+
	3	122	12	134	32.5	3965	111.3	10.1	91.0	2.6	111.0	10.1	96.5	2.8
	1	9	72	81	32.5	293	8.2	4.0	11.1	5.2	8.2	4.0	11.8	5.5
16 ppb	2	4	88	92	33	132	3.7	+	4.3	+	3.7	+	4.6	+
	3	0	98	98	32	0	0.0	4.1	0.0	5.6	0.0	4.1	0.0	5.9
	1	0	1	1	31.5	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32 ppb	2	0	1	1	33	0	0.0	+	0.0	+	0.0	+	0.0	+
	3	0	3	3	33	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

LC50 = 11.63 ppb
EC50 = 11.45 ppb

Attachment 1

Topsmelt bioassay TOXIS Reports

ToxScan, Inc.

SAMPLE DATE	TEST DATE	TEST NUMBER
24-Sep-00	26-Sep-00	18883AA-A

SPECIES: Atherinops affinis

TEST MATERIAL: Effluent - POTW (%)

SOURCE: CA0000000 Generic NPDES permit

PROTOCOL: Horning and Weber, EPA, 1989

TEST TYPE: ( ) hr acute (X) chronic

REFERENCE TOXICANT TEST: 18883AA-R

Jim Crowley — Bioassay Lab Manager

Analyst (print name) — Title

Jim Crowley (AR) — 10/12/00

Signature — Date

Ray Markel — Bioassay Director

Supervisor (print name) — Title

Ray Markel — 11 October, 2000

Signature — Date

ToxScan, Inc.

FISH TEST DATA

Test Number: 18883AA-A (x) Chronic ( ) Acute hours

Test Date: 26-Sep-00

Source: CA0000000 Test Material: EFF1 (%)

Conc		Rep	Cont. No.	Start	Daily Survival 1	2	3	4	5	6	End	Prop Alive	Weight /Fish
0.00	D	1		5	5	5	5	5	5	5	5	1.00	.98400
0.00	D	2		5	5	5	5	5	5	5	5	1.00	.88000
0.00	D	3		5	5	5	5	5	5	5	5	1.00	.94600
0.00	D	4		5	4	4	4	4	4	4	4	.80	.64800
0.00	D	5		5	5	5	5	5	5	5	5	1.00	1.04000
.18	D	1		5	5	5	5	5	5	5	5	1.00	.92400
.18	D	2		5	5	5	5	5	5	5	5	1.00	.98000
.18	D	3		5	5	5	5	5	5	5	5	1.00	1.03600
.18	D	4		5	5	5	5	5	5	5	5	1.00	.90400
.18	D	5		5	5	5	5	5	5	5	5	1.00	.97800
.35	D	1		5	5	5	5	5	5	5	5	1.00	.99600
.35	D	2		5	5	5	5	5	5	5	5	1.00	1.09200
.35	D	3		5	5	5	5	5	5	5	5	1.00	1.11200
.35	D	4		5	5	5	5	5	5	5	5	1.00	.98600
.35	D	5		5	5	5	5	5	5	5	5	1.00	.91400
.70	D	1		5	5	5	5	5	5	5	5	1.00	.83200
.70	D	2		5	5	5	5	5	4	4	4	.80	.71800
.70	D	3		5	5	5	5	5	5	5	5	1.00	.91000
.70	D	4		5	5	5	5	5	5	5	5	1.00	.84000
.70	D	5		5	5	5	5	5	5	5	5	1.00	.90600
1.40	D	1		5	5	5	5	5	5	5	5	1.00	1.01200
1.40	D	2		5	5	5	5	5	5	5	5	1.00	1.11800
1.40	D	3		5	5	5	5	5	5	5	5	1.00	1.16000
1.40	D	4		5	5	5	5	5	5	5	5	1.00	1.02400
1.40	D	5		5	5	5	5	5	5	5	5	1.00	1.11000
2.80	D	1		5	5	5	5	5	5	5	5	1.00	.86800
2.80	D	2		5	5	5	5	5	5	5	5	1.00	1.03400
2.80	D	3		5	5	5	5	5	5	5	5	1.00	.96600
2.80	D	4		5	5	5	5	5	5	5	5	1.00	.89600
2.80	D	5		5	5	5	5	5	5	5	5	1.00	.83400

ToxScan, Inc.

Test Date: 9/26/00
Sample Date: 9/24/00
Species: Atherinops affinis
Test Type: Chronic

Test Number: 18883AA-A
Test Material: Effluent - POTW %
Source: CA0000000
Generic NPDES permit

SUMMARY

End Point	Day	Transformation		Conc		#Reps	Mean	StDev	% Surv
Proportion Alive	7	Arc sine sqrt w/ adj.							
			X	0.000	D	5	1.30	.106	
			X	.175	D	5	1.35	0.000	
			X	.350	D	5	1.35	0.000	
			X	.700	D	5	1.30	.106	
			X	1.400	D	5	1.35	0.000	
			X	2.800	D	5	1.35	0.000	
Proportion Alive	7	No transformation							
				0.000	D	5	.96	.089	
				.175	D	5	1.00	0.000	
				.350	D	5	1.00	0.000	
				.700	D	5	.96	.089	
				1.400	D	5	1.00	0.000	
				2.800	D	5	1.00	0.000	
Weight		No transformation							
			X	0.000	D	5	.90	.152	
			X	.175	D	5	.96	.052	
			X	.350	D	5	1.02	.082	
			X	.700	D	5	.84	.078	
			X	1.400	D	5	1.08	.064	
			X	2.800	D	5	.92	.080	

X = indicates concentrations used in calculations

- HYPOTHESIS TEST -

End Point	Day	Transformation/Analysis	NOEC	LOEC	TU	MSE	MSD
Proportion Alive	7	Arc sine sqrt w/ adj.					
		Steel many-one rank test	> 2.800	> 2.800	< 35.71	.004	
Weight		No transformation					
		Dunnett	> 2.800	> 2.800	< 35.71	.008	

ToxScan, Inc.

WATER QUALITY

Test Number: 18883AA-A Test Date: 26-Sep-2000 Source: CA0000000

		pH	DO	Salin	Temp	Cond	Hard	Alk	NH3	Chlor	SO3	TS
Test												
	Minimum	7.90	6.1	29.60	19.5							
	Maximum	8.00	6.9	30.90	22.2							

		pH	DO	Salin	Temp	Cond	Hard	Alk	NH3	Chlor	SO3	TS
Day: 0												
	Minimum	8.00	6.6	29.60	20.6							
	Maximum	8.00	6.7	30.30	20.7							
Day: 1												
	Minimum	7.90	6.6		20.1							
	Maximum	7.90	6.7		20.3							
Day: 2												
	Minimum	7.90	6.6		19.5							
	Maximum	7.90	6.7		19.7							
Day: 3												
	Minimum	7.90	6.1		21.6							
	Maximum	7.90	6.2		21.8							
Day: 4												
	Minimum	7.90	6.8		20.8							
	Maximum	8.00	6.9		20.9							
Day: 5												
	Minimum	7.90	6.3		22.1							
	Maximum	7.90	6.5		22.2							
Day: 6												
	Minimum	7.90	6.3		22.1							
	Maximum	7.90	6.5		22.2							
Day: 7												
	Minimum	7.90	6.8	30.40	19.6							
	Maximum	7.90	6.9	30.90	19.8							

ToxScan, Inc.

SAMPLE DATE	TEST DATE	TEST NUMBER
24-Sep-00	26-Sep-00	18883AA-R

SPECIES: Atherinops affinis

TEST MATERIAL: Copper sulfate (ug/l)

SOURCE: REF Reference Toxicant

PROTOCOL: EPA Chronic Freshwater, 3rd Ed, 1994

TEST TYPE: ( ) hr acute (X) chronic

Jim Crowley
Analyst (print name)

Jim Crowley (AR)
Signature

Bioassay Lab Manager
Title

10/12/00
Date

Ray Markel
Supervisor (print name)

Ray Markel
Signature

Bioassay Director
Title

11 October, 2000
Date

ToxScan, Inc.

FISH TEST DATA

Test Number: 18883AA-R (x) Chronic ( ) Acute hours

Test Date: 26-Sep-00

Source: REF Test Material: CUSO (ug/l)

Conc		Rep	Cont. No.	Start	Daily Survival 1	2	3	4	5	6	End	Prop Alive	Weight /Fish
0.00	D	1		5	5	5	5	5	5	5	5	1.00	.84600
0.00	D	2		5	5	5	5	5	5	5	5	1.00	.90200
0.00	D	3		5	4	4	4	4	5	5	4	.80	.80400
0.00	D	4		5	5	5	5	5	5	5	5	1.00	.89400
0.00	D	5		5	5	5	5	5	5	5	5	1.00	.90800
56.00	D	1		5	5	5	5	5	5	5	5	1.00	.92400
56.00	D	2		5	5	5	5	5	5	5	5	1.00	.81400
56.00	D	3		5	5	5	5	5	5	5	5	1.00	.82600
56.00	D	4		5	5	5	5	5	5	5	5	1.00	.99200
56.00	D	5		5	5	5	5	5	5	5	5	1.00	-.82400
100.00	D	1		5	5	5	5	5	5	5	5	1.00	.87200
100.00	D	2		5	5	4	4	4	4	4	4	.80	.78200
100.00	D	3		5	5	5	5	5	5	5	5	1.00	.74800
100.00	D	4		5	4	4	4	4	4	4	4	.80	.71600
100.00	D	5		5	4	4	4	4	4	4	4	.80	.87400
180.00	D	1		5	5	5	5	5	5	5	5	1.00	.91200
180.00	D	2		5	4	4	4	4	4	4	4	.80	.72200
180.00	D	3		5	5	4	4	4	4	4	4	.80	.74800
180.00	D	4		5	3	3	3	3	3	3	3	.60	.63400
180.00	D	5		5	5	5	5	4	4	4	4	.80	.60200
320.00	D	1		5	0	0	0	0	0	0	0	0.00	0.00000
320.00	D	2		5	0	0	0	0	0	0	0	0.00	0.00000
320.00	D	3		5	0	0	0	0	0	0	0	0.00	0.00000
320.00	D	4		5	0	0	0	0	0	0	0	0.00	0.00000
320.00	D	5		5									

ToxScan, Inc.

Test Date: 9/26/00
Sample Date: 9/24/00
Species: Atherinops affinis
Test Type: Chronic

Test Number: 18883AA-R
Test Material: Copper sulfate ug/l
Source: REF
Reference Toxicant

SUMMARY

End Point	Day	Transformation		Conc		#Reps	Mean	StDev	% Surv
Proportion Alive	7	Arc sine sqrt w/ adj.							
			X	0.000	D	5	1.30	.106	
			X	56.000	D	5	1.35	0.000	
			X	100.000	D	5	1.20	.130	
			X	180.000	D	5	1.11	.162	
				320.000	D	4	.23	0.000	
Proportion Alive	7	No transformation							
				0.000	D	5	.96	.089	
				56.000	D	5	1.00	0.000	
				100.000	D	5	.88	.110	
				180.000	D	5	.80	.141	
				320.000	D	4	0.00	0.000	
Weight		No transformation							
			X	0.000	D	5	.87	.045	
			X	56.000	D	5	.55	.770	
			X	100.000	D	5	.80	.072	
			X	180.000	D	5	.72	.121	
				320.000	D	4	0.00	0.000	

X = indicates concentrations used in calculations

- HYPOTHESIS TEST -

End Point	Day	Transformation/Analysis	NOEC	LOEC	TU	MSE	MSD
Proportion Alive	7	Arc sine sqrt w/ adj.					
		Wilcoxon test with Bonfe	180.000	320.000		.012	
Weight		No transformation					
		Steel many-one rank test	>180.000	>180.000 <		.154	

- PROPORTION POINT ESTIMATE -

End Point	Day	Method	P	Conc	95% CI	TU
Proportion Alive	7	Spearman-Karber				
			EC 50	209.163	188.23 - 232.42	

- GROWTH POINT ESTIMATE -

End Point	P	IC	95% CI
Weight			
	IC 10	26.892	4.27 - 261.40
	IC 25	187.385	0.00 - 209.93
	IC 50	231.590	0.00 - 246.62

ToxScan, Inc.

WATER QUALITY

Test Number: 18883AA-R Test Date: 26-Sep-2000 Source: REF

		pH	DO	Salin	Temp	Cond	Hard	Alk	NH3	Chlor	SO3	TS
Test												
	Minimum	7.90	6.1	33.20	19.4							
	Maximum	8.10	7.1	34.20	22.2							

		pH	DO	Salin	Temp	Cond	Hard	Alk	NH3	Chlor	SO3	TS
Day: 0												
	Minimum	8.10	7.1	33.20	21.9							
	Maximum	8.10	7.1	33.40	22.2							
Day: 1												
	Minimum	7.90	6.5	33.50	20.0							
	Maximum	7.90	6.5	33.50	20.2							
Day: 2												
	Minimum	7.90	6.5		19.4							
	Maximum	7.90	6.6		19.7							
Day: 3												
	Minimum	7.90	6.1		21.7							
	Maximum	7.90	6.1		22.0							
Day: 4												
	Minimum	7.90	6.7		20.7							
	Maximum	8.00	6.7		20.8							
Day: 5												
	Minimum	7.90	6.3		21.9							
	Maximum	7.90	6.4		22.0							
Day: 6												
	Minimum	7.90	6.4		22.0							
	Maximum	7.90	6.4		22.1							
Day: 7												
	Minimum	7.90	6.7	34.00	19.5							
	Maximum	7.90	6.8	34.20	19.5							

APPENDIX C

Whole Effluent Toxicity Testing

C2 Toxscan

Fourth Quarter Test

ToxScan Inc.

42 Hangar Way • Watsonville, CA 95076-2404 • (831) 724-4522 • FAX (831) 724-3188

December 6, 2000

Mr. Mark Savoie
KINNETIC LABORATORIES INC.
403 West Eighth Avenue
Anchorage, AK 99501

Introduction

Two sets of effluent samples from the Municipality of Anchorage's Point Woronzof sewage treatment plant were collected by Kinnetic Laboratories personnel and shipped via overnight air courier to ToxScan's laboratory in Watsonville, CA for toxicity testing. The samples were assigned the ToxScan laboratory numbers T-18945 and T-18994. Normally, only a single sample set is needed for these tests. In this case, however, a combination of animal supply, sample shipping and laboratory quality control problems required repeating two of the tests on the second sample set. The sea urchin fertilization bioassay was performed on the T-18945 sample (collected on 15-16 October 2000), while the mussel and topsmelt bioassays were completed on the T-18994 samples (collected between 29 October and 3 November, 2000).

Three short-term chronic toxicity tests were requested; a fertilization test using the purple sea urchin (*Strongylocentrotus purpuratus*), a bivalve larvae survival and development test using the blue mussel (*Mytilus galloprovincialis*) and a larval survival and growth test using the topsmelt (*Atherinops affinis*). The first two tests are of short duration and require only a single effluent sample. The topsmelt test lasts seven days and requires three effluent samples for daily renewal of test solutions; this latter test requires three effluent samples, collected two days apart.

Five concentrations of effluent were tested. Following permit directions, the five concentrations were 0.175%, 0.35%, 0.7%, 1.4% and 2.8%. Dilutions of the effluent were made with natural seawater from our laboratory system, resulting in test solutions whose salinity was high enough to be compatible with the requirements of the test organisms.

Methods

All test methods followed those described in Short-Term Methods for Measuring the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms. (EPA/600/R-95/136. August, 1995). These are briefly described below:

Sea Urchin Fertilization Test.
Eggs and sperm were obtained from gravid adult sea urchins by injection with 0.5M potassium chloride. Urchin broodstock was supplied by the Granite Canyon laboratory of UC Santa Cruz. Care was taken to avoid contact of eggs with sperm prior to test

initiation. Sperm and eggs were diluted to appropriate concentrations with seawater, and aliquots of sperm were precisely pipetted into test chambers (test tubes) containing diluted effluent. After sperm had been in contact with the effluent for precisely 20 minutes, aliquots of unfertilized eggs were added to the test chambers and fertilization was allowed to proceed for a second 20-minute period. At the end of the 20-minute fertilization period, glutaraldehyde was added to each test chamber to stop all biological activity. Test chambers were then examined microscopically to score the numbers of fertilized and unfertilized eggs. Four replicate test chambers were used for control (seawater only) exposures and for each dilution of test effluent. Test temperature was 12±1°C. The test met acceptability criteria; seawater controls achieved greater than 70% egg fertilization, there was no fertilization in egg controls, %MSD was <25% relative to controls and final sperm stock density was <33,600,000 per ml.

Mussel Larvae Survival and Development Test.

Gravid mussels, supplied by Carlsbad Aquafarms, Carlsbad, CA, were induced to spawn by thermal stimulation. Eggs and sperm were collected in separate beakers filled with 0.45 µm-filtered seawater. After inspection, gametes from multiple individuals were screened and pooled. Egg density was determined by microscopically counting several 1-ml aliquots taken from the well-mixed egg beaker. Fertilization was accomplished by addition of an appropriate amount of sperm suspension. Tests were initiated when at least 90% fertilization was observed.

Larvae were tested at 16°C in 100 mm borosilicate glass test tubes containing 5 ml of test solution. After adequate fertilization was confirmed, an aliquot of embryos was pipetted into each test tube. Five extra test tubes were prepared in addition to those required for test and control replicates. These "extra" test containers were not incubated, but rather they were evaluated immediately after inoculation to provide the "initial recovery" data used to establish the mean number of embryos added to each test container.

At the end of the 48 hour exposure period the contents of each test tube were prepared for microscopic evaluation. Each tube was inverted at least five times to promote uniform mixing of contents, and then rapidly subsampled with a 1 ml Eppendorf pipette. The 1 ml subsample was placed onto a Sedgwick-Rafter counting slide and the total number of normal and abnormal larvae was determined. Larvae were scored for evidence of internal tissue inside a complete larval shell. Larvae which had a complete larval shell containing tissue were counted as normal, whereas empty shells and larvae with incomplete shells were scored as abnormal. On the assumption that abnormal larvae would not survive, abnormals were counted as mortalities. Data were reported as percent of initial embryos which survived, and percent of survivors which showed normal development.

Topsmelt Larval Survival and Growth Test.

Test organisms were 10-day old larvae, obtained from ABS, Ft. Collins, CO. Five larvae were used in each test container and there were five replicate containers per concentra-

tion. Laboratory control water was seawater from our laboratory system. The sample dilutions were prepared daily using laboratory sea water. Each larval container was fed twice daily with approximately 200 newly-hatched *Artemia* nauplii. Test temperature was 20±1 °C, and photoperiod was 16:8 L:D. Daily renewal of approximately 75% of the test volume coincided with daily environmental monitoring and assessment of survival. After seven days of exposure, the test was terminated. Surviving larvae were dried and weighed.

Results

The results of the sea urchin fertilization bioassay are summarized in Attachment 1, a printout generated by TOXIS, a statistical software program. Statistical analysis of these data show that no effluent tested concentration produced a significant decrease in egg fertilization when compared with the seawater-only controls. The NOEC for fertilization was >2.8%, the LOEC was >2.8% and the chronic toxicity units were <35.7%. Attachment 1 also presents the results of the concurrent reference toxicant test in which copper was the toxicant to which the sperm were exposed. The EC_{50} for fertilization and copper was 12.6 ppb, which is within our laboratory control chart limits for this organism-toxicant combination and indicates that the test population was typically sensitive. All test validity criteria were met in both the effluent bioassay and the reference toxicant bioassay.

Table1 presents the results of the mussel larvae bioassay. Statistical analysis of these data show that the highest effluent concentration tested produced significantly reduced survival and normal development of the test organisms. The NOEC for both survival and normal development was 1.4% effluent and the LOEC for both endpoints was 2.8%. Chronic toxicity units were 71.4 TUc. Table 2 summarizes the results of the concurrent reference toxicant bioassay using copper as the toxicant. Tables 3 and 4 present the water quality monitoring data collected during the effluent and reference toxicant bioassays, respectively. The LC_{50} (for survival) was 11.37 ppb and the EC_{50} (for normal development) was 10.93 ppb. These are well within our laboratory control chart limits and indicate typical sensitivity of the test population. All test validity criteria were met in both the effluent and reference toxicant bioassays.

The data for the topsmelt bioassay are summarized in Attachment 2, , another TOXIS printout. The statistical analysis shows that no concentration of effluent tested produced significant mortality or significantly decreased growth of topsmelt larvae when compared with seawater-only controls. The NOEC for both endpoints was >2.8%, the LOEC was >2.8% and the chronic toxicity units were <35.7 TUc. In the concurrent reference toxicant test using copper as the toxicant, the LC_{50} for survival was 157.2 ppb and the IC_{50} for growth was 174.6 ppb. These are within our laboratory control chart limits, and indicate typical sensitivity of the test population. All test validity criteria were met in both bioassays.

In summary, no chronic toxicity to either sea urchin sperm or topsmelt larvae was produced by the tested concentrations of Point Woronzof effluent. Significantly reduced survival and normal development of developing mussel embryos were produced by the highest concentration (2.8%) of effluent tested. *Mytilus galloprovincialis* was clearly the most sensitive of the three species to this effluent.

Table 1. Summary of bivalve larvae (*M. edulis*) suspended particulate phase bioassays for Kinnetic Laboratories - Alaska, (Mean initial recovery = 4076).

Sample ID	Rep	Number Normal	Number Abnormal	Total Recovered per 1 mL	Resuspended Volume	Total # Normal Larvae Recovered	% Survival	Mean % Survival ± S.D.	% Normal Develop-ment	Mean % Normal Development ± S.D.	Survival Abbotts Corrected Value	Survival Mean Corrected Value	Normal Development Abbotts Corrected Value	Normal Development Mean Corrected Value
	1	102	5	107	34.5	3519	86.3		95.3					
LAB SW	2	107	1	108	37	3959	97.1	94.8	99.1	98.4				
CONTROL	3	111	0	111	35.5	3941	96.7	+	100.0	+				
	4	112	1	113	36	4032	98.9	5.7	99.1	2.1				
	1	122	2	124	34.2	4172	102.4		98.4		108.0		100.0	
0.175%	2	95	0	95	37	3515	86.2	96.6	100.0	99.2	91.0	101.9	101.6	100.8
	3	104	0	104	36	3744	91.9	+	100.0	+	96.9	+	101.6	+
	4	120	2	122	36	4320	106.0	9.2	98.4	0.9	111.8	9.7	100.0	1.0
	1	115	3	118	36	4140	101.57		97.46		107.18		99.06	
0.35%	2	120	3	123	35.5	4260	104.51	104.7	97.56	97.5	110.29	110.5	99.17	99.1
	3	115	3	118	36	4140	101.57	+	97.46	+	107.18	+	99.06	+
	4	124	3	127	36.5	4526	111.04	4.5	97.64	0.1	117.17	4.7	99.25	0.1
	1	106	6	112	37	3922	96.22		94.64		101.54		96.20	
0.7%	2	114	4	118	36	4104	100.69	98.4	96.61	97.6	106.25	103.8	98.20	99.2
	3	105	1	106	35	3675	90.16	+	99.06	+	95.14	+	100.69	+
	4	119	0	119	36.5	4344	106.56	6.9	100.00	2.4	112.45	7.3	101.65	2.5
	1	108	2	110	35.5	3834	94.1		98.2		99.3		99.8	
1.4%	2	88	4	92	37	3256	79.9	95.4	95.7	98.5	84.3	100.7	97.2	100.1
	3	121	0	121	35	4235	103.9	+	100.0	+	109.6	+	101.6	+
	4	121	0	121	35	4235	103.9	11.4	100.0	2.1	109.6	12.0	101.6	2.1
	1	39	38	77	37	1443	35.40		50.65		37.36		51.48	
2.8%	2	62	38	100	36.5	2263	55.52	44.3	62.00	54.1	58.59	46.7	63.02	55.0
	3	69	36	105	35.5	2450	60.10	+	65.71	+	63.42	+	66.80	+
	4	30	49	79	35.5	1065	26.13	16.2	37.97	12.5	27.57	17.1	38.60	12.7

LC_{50} = 2.68% effluent
EC_{50} = >2.8% effluent

Table 2. Summary of bivalve larvae (*M. edulis*) and **Copper** suspended particulate phase Reference Toxicant bioassay for Kinnetic Laboratories - Alaska (Mean initial recovery = 4076).

Sample ID	Rep	Number Normal	Number Abnormal	Total Recovered per 1 mL	Resuspended Volume	Total # Normal Larvae Recovered	% Survival	Mean % Survival ± S.D.	% Normal Develop-ment	Mean % Normal Development ± S.D.	Survival Abbotts Corrected Value	Survival Mean Corrected Value	Normal Development Abbotts Corrected Value	Normal Development Mean Corrected Value
	1	100	0	100	37.2	3720	91.3	89.3	100.0	98.4				
	2	103	2	105	36	3708	91.0	+	98.1	+				
CONTROL	3	97	3	100	36	3492	85.7	3.1	97.0	1.5				
	1	98	4	102	36	3528	86.6	93.2	96.1	97.5	96.9	104.4	97.7	99.1
2 ppb	2	106	3	109	36	3816	93.6	+	97.2	+	104.8	+	98.9	+
	3	111	1	112	36.5	4051.5	99.4	6.4	99.1	1.5	111.3	7.2	100.8	1.6
	1	127	1	128	36	4572	112.2	107.9	99.2	98.1	125.6	120.8	100.9	99.7
4 ppb	2	125	2	127	35.5	4437.5	108.9	+	98.4	+	121.9	+	100.1	+
	3	113	4	117	37	4181	102.6	4.9	96.6	1.4	114.9	5.5	98.2	1.4
	1	107	7	114	39	4173	102.4	104.2	93.9	92.9	114.6	116.7	95.4	94.4
8 ppb	2	132	7	139	36	4752	116.6	+	95.0	+	130.5	+	96.5	+
	3	106	12	118	36	3816	93.6	11.6	89.8	2.7	104.8	13.0	91.3	2.7
	1	2	78	80	37	74	1.8	0.6	2.5	0.8	2.0	0.7	2.5	0.8
16 ppb	2	0	75	75	36.2	0	0.0	+	0.0	+	0.0	+	0.0	+
	3	0	82	82	36.5	0	0.0	1.0	0.0	1.4	0.0	1.2	0.0	1.5
	1	0	1	1	36.5	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32 ppb	2	0	1	1	35	0	0.0	+	0.0	+	0.0	+	0.0	+
	3	0	4	4	36	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

LC_{50} = 11.37 ppb (Upper & Lower Confidence Limits: 11.33 - 11.41 ppb)
EC_{50} = 10.93 ppb (Upper & Lower Confidence Limits: 10.82 - 11.05 ppb)

Table 3. Summary of Bivalve Larvae Bioassay Environmental Monitoring Data

Sample ID	Parameter	Mean	Std. Dev	Max	Min
Control	pH value (units)	8.1	0.00	8.1	8.1
	Temperature (°C)	15.7	0.10	15.8	15.6
	D.O. (mg/L)	7.6	0.07	7.6	7.5
	Salinity (‰)	30.2	0.07	30.2	30.1
0.175%	pH value (units)	8.1	0.00	8.1	8.1
	Temperature (°C)	15.7	0.12	15.8	15.6
	D.O. (mg/L)	7.5	0.14	7.6	7.4
	Salinity (‰)	30.0	0.28	30.2	29.8
0.35%	pH value (units)	8.1	0.00	8.1	8.1
	Temperature (°C)	15.5	0.10	15.6	15.4
	D.O. (mg/L)	7.6	0.07	7.6	7.5
	Salinity (‰)	30.1	0.14	30.2	30.0
0.7%	pH value (units)	8.1	0.00	8.1	8.1
	Temperature (°C)	15.6	0.15	15.8	15.5
	D.O. (mg/L)	7.5	0.07	7.5	7.4
	Salinity (‰)	30.1	0.14	30.2	30.0
1.4%	pH value (units)	8.1	0.00	8.1	8.1
	Temperature (°C)	15.5	0.06	15.5	15.4
	D.O. (mg/L)	7.6	0.00	7.6	7.6
	Salinity (‰)	30.2	0.07	30.2	30.1
2.8%	pH value (units)	8.1	0.06	8.1	8.0
	Temperature (°C)	15.7	0.12	15.8	15.6
	D.O. (mg/L)	7.3	0.28	7.5	7.1
	Salinity (‰)	29.5	0.14	29.6	29.4

Table 4. Summary of Bivalve Larvae Reference Toxicant (Copper) Environmental Monitoring Data.

Sample ID	Parameter	Mean	Std. Dev.	Max	Min
Control	pH value (units)	8.1	0.06	8.2	8.1
	Temperature (°C)	15.7	0.17	15.9	15.6
	D.O. (mg/L)	7.4	0.07	7.4	7.3
	Salinity (‰)	33.8	0.07	33.8	33.7
2 ppb	pH value (units)	8.1	0.06	8.2	8.1
	Temperature (°C)	15.5	0.15	15.7	15.4
	D.O. (mg/L)	7.4	0.14	0.1	4.2
	Salinity (‰)	33.9	0.07	33.9	33.8
4 ppb	pH value (units)	8.1	0.06	8.2	8.1
	Temperature (°C)	15.5	0.17	15.7	15.4
	D.O. (mg/L)	7.4	0.14	7.5	7.3
	Salinity (‰)	33.9	0.07	33.9	33.8
8 ppb	pH value (units)	8.2	0.06	8.2	8.1
	Temperature (°C)	15.5	0.12	15.6	15.4
	D.O. (mg/L)	7.5	0.21	7.6	7.3
	Salinity (‰)	33.8	0.00	33.8	33.8
16 ppb	pH value (units)	8.2	0.06	8.2	8.1
	Temperature (°C)	15.5	0.21	15.7	15.3
	D.O. (mg/L)	7.5	0.21	7.6	7.3
	Salinity (‰)	33.9	0.14	34.0	33.8
32 ppb	pH value (units)	8.2	0.06	8.2	8.1
	Temperature (°C)	15.5	0.12	15.6	15.4
	D.O. (mg/L)	7.5	0.21	7.6	7.3
	Salinity (‰)	33.9	0.07	33.9	33.8

Attachment 1

Sea Urchin Fertilization Bioassay Results

ToxScan, Inc.

SAMPLE DATE	TEST DATE	TEST NUMBER
15-Oct-00	18-Oct-00	18945SP-A

SPECIES: Strongylocentrotus purpuratus

TEST MATERIAL: Effluent - POTW (%)

SOURCE: CA0000000 Generic NPDES permit

PROTOCOL: Urchin Fertilization: Final Draft USEPA

TEST TYPE: ( ) hr acute (X) chronic

REFERENCE TOXICANT TEST: 18945SP-R

Jim Crowley — Bioassay Lab Manager

Analyst (print name) — Title

Signature — Date

Ray Markel — Bioassay Director

Supervisor (print name) — Title

Signature — 26 Oct 2000

Date

ToxScan, Inc.

ECHINODERM TEST DATA

Test Number: 18945SP-A (x) Chronic ( ) Acute hours

Test Date: 18-Oct-00

Source: CA0000000 Test Material: EFF1 (%)

Conc	Rep	Cont. No.	Fert.	Un-Fert.	Prop Fertilized
0.00 B	1		100	0	1.00
0.00 B	2		99	1	.99
0.00 B	3		100	0	1.00
0.00 B	4		100	0	1.00
.18 B	1		100	0	1.00
.18 B	2		101	0	1.00
.18 B	3		103	0	1.00
.18 B	4		112	0	1.00
.35 B	1		102	0	1.00
.35 B	2		101	0	1.00
.35 B	3		154	2	.99
.35 B	4		122	0	1.00
.70 B	1		99	1	.99
.70 B	2		100	0	1.00
.70 B	3		100	0	1.00
.70 B	4		120	2	.98
1.40 B	1		100	0	1.00
1.40 B	2		100	0	1.00
1.40 B	3		101	3	.97
1.40 B	4		117	0	1.00
2.80 B	1		100	0	1.00
2.80 B	2		98	2	.98
2.80 B	3		106	0	1.00
2.80 B	4		107	0	1.00

ToxScan, Inc.

Test Date: 10/18/00
Sample Date: 10/15/00
Species: Strongylocentrotus purpuratus
Test Type: Chronic

Test Number: 18945SP-A
Test Material: Effluent - POTW %
Source: CA0000000
Generic NPDES permit

SUMMARY

End Point	Day	Transformation		Conc		#Reps	Mean	StDev	% Surv
Proportion Fertilized		Arc sine sqrt w/out adj.							
			X	0.000	B	4	1.55	.050	
			X	.175	B	4	1.57	0.000	
			X	.350	B	4	1.54	.057	
			X	.700	B	4	1.51	.067	
			X	1.400	B	4	1.53	.085	
			X	2.800	B	4	1.54	.071	
Proportion Fertilized		No transformation							
				0.000	B	4	1.00	.005	
				.175	B	4	1.00	0.000	
				.350	B	4	1.00	.006	
				.700	B	4	.99	.008	
				1.400	B	4	.99	.014	
				2.800	B	4	1.00	.010	

X = indicates concentrations used in calculations

- HYPOTHESIS TEST -

End Point	Day	Transformation/Analysis	NOEC	LOEC	TU	MSE	MSD
Proportion Fertilized		Arc sine sqrt w/out adj.					
		Steel many-one rank test	> 2.800	> 2.800	< 35.71	.004	

ToxScan, Inc.

WATER QUALITY

Test Number: 18945SP-A Test Date: 18-Oct-1900 Source: CA0000000

		pH	DO	Salin	Temp	Cond	Hard	Alk	NH3	Chlor	SO3	TS
Test												
	Minimum	8.10	7.3	32.50	12.0							
	Maximum	8.10	7.5	33.40	12.0							

		pH	DO	Salin	Temp	Cond	Hard	Alk	NH3	Chlor	SO3	TS
Day: 0												
	Minimum	8.10	7.3	32.50	12.0							
	Maximum	8.10	7.5	33.40	12.0							

ToxScan, Inc.

SAMPLE DATE	TEST DATE	TEST NUMBER
15-Oct-00	18-Oct-00	18945SP-R

SPECIES: Strongylocentrotus purpuratus

TEST MATERIAL: Copper sulfate (ug/l)

SOURCE: REF Reference Toxicant

PROTOCOL: Urchin Fertilization: Final Draft USEPA

TEST TYPE: ( ) hr acute (X) chronic

Jim Crowley	Bioassay Lab Manager
Analyst (print name)	Title
Signature	Date
Ray Markel	Bioassay Director
Supervisor (print name)	Title
Ray Markel	26 Dec 2000
Signature	Date

ToxScan, Inc.

ECHINODERM TEST DATA

Test Number: 18945SP-R (x) Chronic ( ) Acute hours

Test Date: 18-Oct-00

Source: REF Test Material: CUSO (ug/l)

Conc	Rep	Cont. No.	Fert.	Un-Fert.	Prop Fertilized
0.00 D	1		100	1	.99
0.00 D	2		110	0	1.00
0.00 D	3		101	0	1.00
0.00 D	4		103	1	.99
9.00 D	1		78	27	.74
9.00 D	2		4	99	.04
9.00 D	3		100	20	.83
9.00 D	4		101	11	.90
18.00 D	1		42	77	.35
18.00 D	2		41	62	.40
18.00 D	3		38	80	.32
18.00 D	4		30	71	.30
36.00 D	1		1	99	.01
36.00 D	2		1	107	.01
36.00 D	3		3	106	.03
36.00 D	4		1	99	.01
72.00 D	1		0	100	0.00
72.00 D	2		0	100	0.00
72.00 D	3		0	109	0.00
72.00 D	4		0	101	0.00
144.00 D	1		0	100	0.00
144.00 D	2		0	115	0.00
144.00 D	3		0	115	0.00
144.00 D	4		0	101	0.00

ToxScan, Inc.

Test Date: 10/18/00
Sample Date: 10/15/00
Species: Strongylocentrotus purpuratus
Test Type: Chronic

Test Number: 18945SP-R
Test Material: Copper sulfate ug/l
Source: REF
Reference Toxicant

SUMMARY

End Point	Day	Transformation		Conc		#Reps	Mean	StDev	% Surv
Proportion Fertilized		Arc sine sqrt w/out adj.							
			X	0.000	D	4	1.52	.057	
			X	9.000	D	4	.91	.482	
			X	18.000	D	4	.62	.046	
			X	36.000	D	4	.12	.034	
				72.000	D	4	0.00	0.000	
				144.000	D	4	0.00	0.000	
Proportion Fertilized		No transformation							
				0.000	D	4	1.00	.006	
				9.000	D	4	.63	.399	
				18.000	D	4	.34	.044	
				36.000	D	4	.01	.009	
				72.000	D	4	0.00	0.000	
				144.000	D	4	0.00	0.000	

X = indicates concentrations used in calculations

- HYPOTHESIS TEST -

End Point	Day	Transformation/Analysis	NOEC	LOEC	TU	MSE	MSD
Proportion Fertilized		Arc sine sqrt w/out adj.					
		Steel many-one rank test	< 9.000	9.000 >		.040	

- PROPORTION POINT ESTIMATE -

End Point	Day	Method	P	Conc	95% CI	TU
Proportion Fertilized						
			EC 50	12.588	11.69 - 13.55	

ToxScan, Inc.

WATER QUALITY

Test Number: 18945SP-R Test Date: 18-Oct-2000 Source: REF

		pH	DO	Salin	Temp	Cond	Hard	Alk	NH3	Chlor	SO3	TS
Test												
	Minimum	8.10	7.5	33.40	12.0							
	Maximum	8.10	7.5	33.40	12.0							

		pH	DO	Salin	Temp	Cond	Hard	Alk	NH3	Chlor	SO3	TS
Day: 0												
	Minimum	8.10	7.5	33.40	12.0							
	Maximum	8.10	7.5	33.40	12.0							

Attachment 2

Topsmelt Bioassay Results

ToxScan, Inc.

SAMPLE DATE	TEST DATE	TEST NUMBER
29-Oct-00	31-Oct-00	18994AA-A

SPECIES: Atherinops affinis

TEST MATERIAL: Effluent - POTW (%)

SOURCE: CA0000000 Generic NPDES permit

PROTOCOL: Horning and Weber, EPA, 1989

TEST TYPE: ( ) hr acute (X) chronic

REFERENCE TOXICANT TEST: 18994AA-R

Jim Crowley — Bioassay Lab Manager

Analyst (print name) — Title

Signature — Date

Ray Markel — Bioassay Director

Supervisor (print name) — Title

Signature — 26 Dec 2000

Date

ToxScan, Inc.

FISH TEST DATA

Test Number: 18994AA-A (x) Chronic ( ) Acute hours

Test Date: 31-Oct-00

Source: CA0000000 Test Material: EPF1 (%)

Conc		Rep	Cont. No.	Start	Daily Survival 1	2	3	4	5	6	End	Prop Alive	Weight /Fish
0.00	D	1		5	5	5	5	5	5	5	5	1.00	1.40400
0.00	D	2		5	5	5	5	5	5	5	5	1.00	1.43400
0.00	D	3		5	5	5	5	5	5	5	5	1.00	1.24200
0.00	D	4		5	5	5	5	5	5	5	5	1.00	1.47000
0.00	D	5		5	5	5	5	5	5	5	5	1.00	1.47400
.18	D	1		5	5	5	5	5	5	5	5	1.00	1.49800
.18	D	2		5	5	5	5	5	5	5	5	1.00	1.58800
.18	D	3		5	5	5	5	5	5	5	5	1.00	1.35800
.18	D	4		5	5	5	5	5	5	5	5	1.00	1.47600
.18	D	5		5	5	5	5	5	5	5	5	1.00	********
.35	D	1		5	5	5	5	5	5	5	5	1.00	1.52000
.35	D	2		5	5	5	5	5	5	5	5	1.00	1.46600
.35	D	3		5	5	5	5	5	5	5	5	1.00	1.37000
.35	D	4		5	5	5	5	5	5	5	5	1.00	1.50800
.35	D	5		5	5	5	5	5	5	5	5	1.00	1.69400
.70	D	1		5	5	5	5	5	5	5	5	1.00	1.46200
.70	D	2		5	5	5	5	5	5	5	5	1.00	1.57000
.70	D	3		5	5	5	5	5	5	5	5	1.00	1.64000
.70	D	4		5	5	5	5	5	5	5	5	1.00	1.50800
.70	D	5		5	5	5	5	5	5	5	5	1.00	1.72800
1.40	D	1		5	5	5	5	5	5	5	5	1.00	1.57400
1.40	D	2		5	5	5	5	5	5	5	5	1.00	1.55400
1.40	D	3		5	5	5	5	5	5	5	5	1.00	1.37400
1.40	D	4		5	5	5	5	5	5	5	5	1.00	1.58200
1.40	D	5		5	5	5	5	5	5	5	5	1.00	1.51800
2.80	D	1		5	4	4	4	4	4	4	4	.80	1.25600
2.80	D	2		5	5	5	5	5	5	5	5	1.00	1.50400
2.80	D	3		5	5	5	5	5	5	5	5	1.00	1.40800
2.80	D	4		5	5	5	5	5	5	5	5	1.00	1.45600
2.80	D	5		5	5	5	5	5	5	5	5	1.00	1.62400

ToxScan, Inc.

Test Date: 10/31/00
Sample Date: 10/29/00
Species: Atherinops affinis
Test Type: Chronic

Test Number: 18994AA-A
Test Material: Effluent - POTW %
Source: CA0000000
Generic NPDES permit

SUMMARY

End Point	Day	Transformation		Conc		#Reps	Mean	StDev	% Surv
Proportion Alive	7	Arc sine sqrt w/ adj.							
			X	0.000	D	5	1.35	0.000	
			X	.175	D	5	1.35	0.000	
			X	.350	D	5	1.35	0.000	
			X	.700	D	5	1.35	0.000	
			X	1.400	D	5	1.35	0.000	
			X	2.800	D	5	1.30	.106	
Proportion Alive	7	No transformation							
				0.000	D	5	1.00	0.000	
				.175	D	5	1.00	0.000	
				.350	D	5	1.00	0.000	
				.700	D	5	1.00	0.000	
				1.400	D	5	1.00	0.000	
				2.800	D	5	.96	.089	
Weight		No transformation							
			X	0.000	D	5	1.40	.095	
			X	.175	D	5	21.45	44.645	
			X	.350	D	5	1.51	.118	
			X	.700	D	5	1.58	.106	
			X	1.400	D	5	1.52	.085	
			X	2.800	D	5	1.45	.135	

X = indicates concentrations used in calculations

- HYPOTHESIS TEST -

End Point	Day	Transformation/Analysis	NOEC	LOEC	TU	MSE	MSD
Proportion Alive	7	Arc sine sqrt w/ adj.					
		Steel many-one rank test	> 2.800	> 2.800	< 35.71	.002	
Weight		No transformation					
		Steel many-one rank test	> 2.800	> 2.800	< 35.71	332.212	

- GROWTH POINT ESTIMATE -

End Point	P	IC	95% CI
Weight			
	IC 10	.195	.19 - 3.82
	IC 25	.226	.22 - .23
	IC 50	.276	.26 - .28

ToxScan, Inc.

WATER QUALITY

Test Number: 18994AA-A Test Date: 31-Oct-2000 Source: CA0000000

		pH	DO	Salin	Temp	Cond	Hard	Alk	NH3	Chlor	SO3	TS
Test												
	Minimum	7.80	5.5	28.80	18.7							
	Maximum	8.20	7.3	30.00	21.3							

		pH	DO	Salin	Temp	Cond	Hard	Alk	NH3	Chlor	SO3	TS
Day: 0												
	Minimum	8.20	7.3	28.80	19.5							
	Maximum	8.20	7.3	30.00	19.8							
Day: 1												
	Minimum	8.00	5.8		18.7							
	Maximum	8.10	6.2		19.0							
Day: 2												
	Minimum	7.90	6.2		19.4							
	Maximum	7.90	6.6		19.8							
Day: 3												
	Minimum	7.90	6.8		19.5							
	Maximum	8.00	6.8		20.1							
Day: 4												
	Minimum	7.80	6.5		20.7							
	Maximum	7.80	6.5		20.8							
Day: 5												
	Minimum	7.80	5.5		21.0							
	Maximum	7.90	6.0		21.3							
Day: 6												
	Minimum	7.90	6.0		20.2							
	Maximum	7.90	6.5		20.6							
Day: 7												
	Minimum	7.90	6.2		19.4							
	Maximum	7.90	6.3		19.8							

ToxScan, Inc.

SAMPLE DATE	TEST DATE	TEST NUMBER
29-Oct-00	31-Oct-00	18994AA-R

SPECIES: Atherinops affinis

TEST MATERIAL: Copper sulfate (ug/l)

SOURCE: REF Reference Toxicant

PROTOCOL: EPA Chronic Freshwater, 3rd Ed, 1994

TEST TYPE: ( ) hr acute (X) chronic

Jim Crowley — Bioassay Lab Manager

Analyst (print name) — Title

Signature — Date

Ray Markel — Bioassay Director

Supervisor (print name) — Title

Signature — 26 Dec 2000

Date

ToxScan, Inc.

FISH TEST DATA

Test Number: 18994AA-R (x) Chronic ( ) Acute hours

Test Date: 31-Oct-00

Source: REF Test Material: CUSO (ug/l)

Conc		Rep	Cont. No.	Start	Daily Survival 1	2	3	4	5	6	End	Prop Alive	Weight /Fish
0.00	D	1		5	5	5	5	5	5	5	5	1.00	1.61200
0.00	D	2		5	5	5	5	5	5	5	5	1.00	1.37400
0.00	D	3		5	5	5	5	5	5	5	5	1.00	1.54000
0.00	D	4		5	5	4	4	4	4	4	4	.80	1.45600
0.00	D	5		5	3	3	3	3	3	3	3	.60	1.07800
56.00	D	1		5	5	5	5	5	5	5	5	1.00	1.73600
56.00	D	2		5	4	4	4	4	4	4	4	.80	1.02400
56.00	D	3		5	5	5	5	5	5	5	5	1.00	1.63200
56.00	D	4		5	5	5	5	5	5	5	5	1.00	1.78800
56.00	D	5		5	5	5	5	5	5	5	5	1.00	1.58600
100.00	D	1		5	4	4	4	4	4	4	4	.80	1.38800
100.00	D	2		5	4	4	4	4	4	4	4	.80	1.37200
100.00	D	3		5	5	5	5	5	5	5	5	1.00	1.49400
100.00	D	4		5	4	4	4	4	4	4	4	.80	1.32000
100.00	D	5		5	5	5	5	5	5	5	5	1.00	1.35800
180.00	D	1		5	5	4	3	2	2	1	1	.20	.27600
180.00	D	2		5	4	3	3	0	0	0	0	0.00	0.00000
180.00	D	3		5	5	5	2	2	2	2	2	.40	.57600
180.00	D	4		5	3	3	1	1	1	1	1	.20	.33800
180.00	D	5		5	4	4	3	2	2	2	2	.40	.71600
320.00	D	1		5	1	1	1	0	0	0	0	0.00	0.00000
320.00	D	2		5	0	0	0	0	0	0	0	0.00	0.00000
320.00	D	3		5	1	1	1	0	0	0	0	0.00	0.00000
320.00	D	4		5	2	1	1	1	0	0	0	0.00	0.00000
320.00	D	5		5	2	2	1	1	0	0	0	0.00	0.00000

ToxScan, Inc.

Test Date: 10/31/00
Sample Date: 10/29/00
Species: Atherinops affinis
Test Type: Chronic

Test Number: 18994AA-R
Test Material: Copper sulfate ug/l
Source: REF
Reference Toxicant

SUMMARY

End Point	Day	Transformation		Conc		#Reps	Mean	StDev	% Surv
Proportion Alive	7	Arc sine sqrt w/ adj.							
			X	0.000	D	5	1.21	.206	
			X	56.000	D	5	1.30	.106	
			X	100.000	D	5	1.20	.130	
			X	180.000	D	5	.50	.191	
				320.000	D	5	.23	0.000	
Proportion Alive	7	No transformation							
				0.000	D	5	.88	.179	
				56.000	D	5	.96	.089	
				100.000	D	5	.88	.110	
				180.000	D	5	.24	.167	
				320.000	D	5	0.00	0.000	
Weight		No transformation							
			X	0.000	D	5	1.41	.207	
			X	56.000	D	5	1.55	.307	
			X	100.000	D	5	1.39	.065	
				180.000	D	5	.38	.278	
				320.000	D	5	0.00	0.000	

X = indicates concentrations used in calculations

- HYPOTHESIS TEST -

End Point	Day	Transformation/Analysis	NOEC	LOEC	TU	MSE	MSD
Proportion Alive	7	Arc sine sqrt w/ adj.					
		Steel many-one rank test	100.000	180.000		.021	
Weight		No transformation					
		Dunnett	>100.000	>100.000 <		.047	

- PROPORTION POINT ESTIMATE -

End Point	Day	Method	P	Conc	95% CI	TU
Proportion Alive	7	Spearman-Karber				
			EC 50	157.225	141.75 - 174.39	

- GROWTH POINT ESTIMATE -

End Point	P	IC	95% CI
Weight			
	IC 10	104.143	28.81 - 117.91
	IC 25	121.842	108.99 - 136.27
	IC 50	151.341	136.61 - 174.58

ToxScan, Inc.

WATER QUALITY

Test Number: 18994AA-R Test Date: 31-Oct-2000 Source: REF

		pH	DO	Salin	Temp	Cond	Hard	Alk	NH3	Chlor	SO3	TS
Test												
	Minimum	7.70	5.8	30.00	18.2							
	Maximum	8.20	7.4	30.10	20.8							

		pH	DO	Salin	Temp	Cond	Hard	Alk	NH3	Chlor	SO3	TS
Day: 0												
	Minimum	8.20	7.4	30.00	19.7							
	Maximum	8.20	7.4	30.10	19.7							
Day: 1												
	Minimum	7.90	6.0		18.2							
	Maximum	8.00	6.2		18.5							
Day: 2												
	Minimum	7.80	6.5		18.9							
	Maximum	7.90	6.8		19.2							
Day: 3												
	Minimum	7.90	6.6		19.2							
	Maximum	7.90	7.0		19.4							
Day: 4												
	Minimum	7.80	6.5		20.2							
	Maximum	7.90	6.5		20.3							
Day: 5												
	Minimum	7.70	5.8		20.6							
	Maximum	7.90	6.2		20.8							
Day: 6												
	Minimum	7.70	6.1		19.9							
	Maximum	7.90	6.7		20.1							
Day: 7												
	Minimum	7.80	6.2		19.0							
	Maximum	8.00	6.5		19.3							

RECEIVING WATER, HYDROCARBONS, TOXSCAN SAMPLE LIST

SAMPLE IDENTIFICATION NUMBER	SAMPLE LOCATION	SAMPLE TYPE
MOA00HYD0001	1C1-1SR	SAMPLE
MOA00HYD0002	1C1-2SR	SAMPLE
MOA00HYD0003	1C1-3SR	SAMPLE
MOA00HYD0004	1F1-1SW	SAMPLE
MOA00HYD0005	1F1-2SB	SAMPLE
MOA00HYD0006	1F1-3SN	SAMPLE
MOA00HYD0007	EFFLUENT	SAMPLE
MOA00VOA0011	1C1-1SR	SAMPLE
MOA00VOA0012	1C1-2SR	SAMPLE
MOA00VOA0013	1C1-3SR	SAMPLE
MOA00VOA0014	1F1-1SW	SAMPLE
MOA00VOA0015	1F1-2SB	SAMPLE
MOA00VOA0016	1F1-3SN	SAMPLE
MOA00VOA0017	EFFLUENT	SAMPLE
MOA00VOA0018	C-STATION	FIELD BLANK
MOA00VOA0019	1F1-2SB	DUPLICATE
MOA00VOA0020	TRIP BLANK	TRIP BLANK

ToxScan Inc.

42 Hangar Way • Watsonville, CA 95076-2404 • (831) 724-4522 • FAX (831) 724-3188

September 05, 2000

ToxScan Number: T-18769

Kinnetic Laboratories Incorporated
403 West Eighth Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Project Name:	None
Project Number:	514.02
Date Sampled:	August 14, 2000 - August 16, 2000
Date Received:	August 18, 2000
Matrix:	Water

Please find the enclosed test results for the parameters requested for analyses. The samples were analyzed within holding time using the following methods:

Aromatic Volatile Organics by EPA Method 602
Cyanide by EPA Method 335.2
Total Suspended Solids (TSS) by EPA Method 160.2

The samples were received intact and were handled with the proper chain-of-custody procedures. Appropriate QA/QC guidelines were employed during the analyses on a minimum of a 5% basis. QC results were within limits and are reported with or following the data for each analysis.

If you have any questions or require any additional information, please feel free to call.

Sincerely,

Philip D. Carpenter

Philip D. Carpenter, Ph.D.
President

Enclosures

This cover letter is an integral part of the report.

Client:	Kinnetic Laboratories Incorporated	ToxScan Number: T-18769
Method:	EPA 602	
Date Analyzed:	August 21, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID:	MOA00VOA011	MOA00VOA012	
Site ID:	F1-1S	F1-2S	Reporting
Toxscan Lab ID:	18769-01-A	18769-02-A	Limit
Analyte			
Benzene	ND	ND	0.50
Toluene	ND	ND	0.50
Chlorobenzene	ND	ND	0.50
Ethylbenzene	ND	ND	0.50
Xylenes	ND	ND	0.50
1,2 Dichlorobenzene	0.71	ND	0.50
1,3 Dichlorobenzene	ND	ND	0.50
1,4 Dichlorobenzene	ND	ND	0.50

ND = None Detected

Quality Control Report:
Surrogate Recovery expressed as percentages

Surrogate	Surrogate % Rec	Surrogate % Rec	QC Limits % Rec
1,4-Difluorobenzene	100	97	65-142
1,1,1-Trifluorotoluene	98	96	77-143
1,4-Bromofluorobenzene	97	102	86-115

Client:	Kinnetic Laboratories Incorporated	ToxScan Number: T-18769
Method:	EPA 602	
Date Analyzed:	August 21, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID:	MOA00VOA013	MOA00VOA014	
Site ID:	F1-2S	F1-3S	Reporting
Toxscan Lab ID:	18769-03-A	18769-04-A	Limit
Analyte			
Benzene	ND	ND	0.50
Toluene	ND	ND	0.50
Chlorobenzene	ND	ND	0.50
Ethylbenzene	ND	ND	0.50
Xylenes	ND	ND	0.50
1,2 Dichlorobenzene	ND	ND	0.50
1,3 Dichlorobenzene	ND	ND	0.50
1,4 Dichlorobenzene	ND	ND	0.50

ND = None Detected

Quality Control Report:
Surrogate Recovery expressed as percentages

Surrogate	Surrogate % Rec	Surrogate % Rec	QC Limits % Rec
1,4-Difluorobenzene	96	95	65-142
1,1,1-Trifluorotoluene	95	95	77-143
1,4-Bromofluorobenzene	101	99	86-115

Client:	Kinnetic Laboratories Incorporated	ToxScan Number: T-18769
Method:	EPA 602	
Date Analyzed:	August 21 and 23, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID:	MOA00VOA015	MOA00VOA016	
Site ID:	C1-1S	C1-2S	Reporting
Toxscan Lab ID:	18769-05-A	18769-06-A	Limit
Analyte			
Benzene	ND	ND	0.50
Toluene	ND	ND	0.50
Chlorobenzene	ND	ND	0.50
Ethylbenzene	ND	ND	0.50
Xylenes	ND	ND	0.50
1,2 Dichlorobenzene	ND	ND	0.50
1,3 Dichlorobenzene	ND	ND	0.50
1,4 Dichlorobenzene	ND	ND	0.50

ND = None Detected

Quality Control Report:
Surrogate Recovery expressed as percentages

Surrogate	Surrogate % Rec	Surrogate % Rec	QC Limits % Rec
1,4-Difluorobenzene	95	101	65-142
1,1,1-Trifluorotoluene	94	103	77-143
1,4-Bromofluorobenzene	97	102	86-115

Client:	Kinnetic Laboratories Incorporated	ToxScan Number: T-18769
Method:	EPA 602	
Date Analyzed:	August 23, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID:	MOA00VOA017	MOA00VOA018	
Site ID:	C1-3S	EFFLUENT	Reporting
Toxscan Lab ID:	18769-07-A	18769-08-A	Limit
Analyte			
Benzene	ND	0.54	0.50
Toluene	ND	8.6	0.50
Chlorobenzene	ND	ND	0.50
Ethylbenzene	ND	0.89	0.50
Xylenes	ND	8.2	0.50
1,2 Dichlorobenzene	ND	15	0.50
1,3 Dichlorobenzene	ND	ND	0.50
1,4 Dichlorobenzene	ND	3.3	0.50

ND = None Detected

Quality Control Report:
Surrogate Recovery expressed as percentages

Surrogate	Surrogate % Rec	Surrogate % Rec	QC Limits % Rec
1,4-Difluorobenzene	100	104	65-142
1,1,1-Trifluorotoluene	102	105	77-143
1,4-Bromofluorobenzene	102	98	86-115

Client:	Kinnetic Laboratories Incorporated	ToxScan Number: T-18769
Method:	EPA 602	
Date Analyzed:	August 23, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID:	MOA00VOA019	MOA00VOA020	
Site ID:	C-STATION	TRIP BLANK	Reporting
Toxscan Lab ID:	18769-09-A	18769-10-A	Limit
Analyte			
Benzene	ND	ND	0.50
Toluene	ND	ND	0.50
Chlorobenzene	ND	ND	0.50
Ethylbenzene	ND	ND	0.50
Xylenes	ND	ND	0.50
1,2 Dichlorobenzene	ND	ND	0.50
1,3 Dichlorobenzene	ND	ND	0.50
1,4 Dichlorobenzene	ND	ND	0.50

ND = None Detected

Quality Control Report:
Surrogate Recovery expressed as percentages

Surrogate	Surrogate % Rec	Surrogate % Rec	QC Limits % Rec
1,4-Difluorobenzene	98	96	65-142
1,1,1-Trifluorotoluene	99	98	77-143
1,4-Bromofluorobenzene	98	96	86-115

Client:	Kinnetic Laboratories Incorporated	ToxScan Number: T-18769
Method:	EPA 602	
Date Analyzed:	August 21, 2000	
Matrix:	Water	
Units:	ug/L (ppb)	

Client Sample ID:	MOA00VOA013		
Site ID:	F1-2S	Method	Reporting
Toxscan Lab ID:	18769-03-B DUP	Blank	Limit
Analyte			
Benzene	ND	ND	0.50
Toluene	ND	ND	0.50
Chlorobenzene	ND	ND	0.50
Ethylbenzene	ND	ND	0.50
Xylenes	ND	ND	0.50
1,2 Dichlorobenzene	ND	ND	0.50
1,3 Dichlorobenzene	ND	ND	0.50
1,4 Dichlorobenzene	ND	ND	0.50

ND = None Detected

Quality Control Report:
Surrogate Recovery expressed as percentages

Surrogate	Surrogate % Rec	Surrogate % Rec	QC Limits % Rec
1,4-Difluorobenzene	93	96	65-142
1,1,1-Trifluorotoluene	92	96	77-143
1,4-Bromofluorobenzene	97	107	86-115

Client:	Kinnetic Laboratories Incorporated	ToxScan Number: T-18769
Method:	EPA 602	
Date Analyzed:	August 21, 2000	
Matrix:	Water	

Quality Control Report:
Spike recoveries expressed as percentages

Spiked compound	LCS %Rec	QC Limits %Rec
Benzene	106	76-127
Toluene	107	76-125
Chlorobenzene	103	75-130

Quality Control Report :
Surrogate recovery expressed as percentages

Surrogate	Surrogate % Rec	QC Limits % Rec
1,4-Difluorobenzene	110	65-142
1,1,1-Trifluorotoluene	107	77-143
1,4-Bromofluorobenzene	95	86-115

LCS = Laboratory Control Sample

Client:	Kinnetic Laboratories Incorporated	ToxScan Number: T-18769
Method:	EPA 602	
Date Analyzed:	August 23, 2000	
Matrix:	Water	

Quality Control Report:
Spike recoveries expressed as percentages

Client Sample ID:	MOA00VOA013
ToxScan Lab ID:	18769-08-B

Spiked compound	MS %Rec	QC Limits %Rec
Benzene	104	76-127
Toluene	88	76-125
Chlorobenzene	105	75-130

Quality Control Report :
Surrogate recovery expressed as percentages

Surrogate	Surrogate % Rec	QC Limits % Rec
1,4-Difluorobenzene	106	65-142
1,1,1-Trifluorotoluene	106	77-143
1,4-Bromofluorobenzene	97	86-115

MS = Matrix Spike

Client: Kinnetic Laboratories Incorporated
Method: EPA Method(s) 335.2
Date Completed: 08/25/1900
Matrix: Water
Units: ug/L

ToxScan Number: T-18769

Client Sample ID	Site ID	ToxScan Lab ID	Analyte	Sample Value	Reporting Limit
MOA00TCN001	F1-1S	18769-19	Cyanide	ND	2.0
MOA00TCN002	F1-2S	18769-20	Cyanide	ND	2.0
MOA00TCN003	F1-3S	18769-21	Cyanide	ND	2.0
MOA00TCN004	C1-1S	18769-22	Cyanide	ND	2.0
MOA00TCN005	C1-2S	18769-23	Cyanide	ND	2.0
MOA00TCN006	C1-2S	18769-24	Cyanide	ND	2.0
MOA00TCN007	C1-3S	18769-25	Cyanide	ND	2.0
MOA00TCN008	EFFLUENT	18769-26	Cyanide	29	2.0

Client: Kinnetic Laboratories Incorporated
Method: EPA Method(s) 160.2
Date Completed: 08/22/1900
Matrix: Water
Units: mg/L

ToxScan Number: T-18769

Client Sample ID	Site ID	ToxScan Lab ID	Analyte	Sample Value	Reporting Limit
MOA00TSS001	F1-1S	18769-11	Total Suspended Solids	130	1.0
MOA00TSS002	F1-2S	18769-12	Total Suspended Solids	260	1.0
MOA00TSS003	F1-3S	18769-13	Total Suspended Solids	490	1.0
MOA00TSS004	C1-1S	18769-14	Total Suspended Solids	150	1.0
MOA00TSS005	C1-2S	18769-15	Total Suspended Solids	1100	1.0
MOA00TSS006	C1-2S	18769-16	Total Suspended Solids	1100	1.0
MOA00TSS007	C1-3S	18769-17	Total Suspended Solids	750	1.0
MOA00TSS008	EFFLUENT	18769-18	Total Suspended Solids	750	1.0

EXPLANATION OF ACRONYMS FOR PROJECT # T-18769

The following is a glossary for acronyms that may be used in this report.

Abbreviation	Definition
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NA	Not Applicable
ND	None Detected
REP	Replicate
RPD	Relative Percent Difference
SRM	Standard Reference Material
TOC	Total Organic Carbon

QC FOR PROJECT # T-18769

LABORATORY METHOD BLANK SUMMARY

Applicable Matrix: Water

Analyte	Amount	Reporting Limit	Units	EPA Method Number
Cyanide	ND	5.0	ug/L	335.2
Total Suspended Solids	ND	1.0	mg/L	160.2

QC FOR PROJECT # T-18769

SRM SUMMARY:

Matrix: Water

Analyte	Amount Found	Dilution	Corrected Value	SRM	Certified Value	Units	% Recovery
Cyanide	499	1	499	ERA 9984	484	ug/L	103
Total Suspended Solids	80.0	1	80.0	ERA 9989	91.0	mg/L	88

ERA 9984 = Environmental Resource Associates, WasteWatR Lot No. 9984

QC FOR PROJECT # 18769

Concentrations of the following are in ug/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE SUMMARY:

Matrix: Water

Analyte	Sample Amount	Amount of Spike	Matrix Spike	MS % Rec	Matrix Spike Dup	MSD % Rec	RPD
Cyanide							
18758-32	7.56	10	20.1	120	19.8	117	3

APPENDIX D

Receiving Water Quality Monitoring

D2 Battelle

Trace Metals

RECEIVING WATER, TRACE METALS, BATTELLE SAMPLE LIST

SAMPLE IDENTIFICATION NUMBER	SAMPLE LOCATION	SAMPLE TYPE
MOA00MTL0001	1C1-1SR	SAMPLE
MOA00MTL0002	1C1-2SR	SAMPLE
MOA00MTL0003	1C1-3SR	SAMPLE
MOA00MTL0004	1F1-1SW	SAMPLE
MOA00MTL0005	1F1-2SB	SAMPLE
MOA00MTL0006	1F1-3SN	SAMPLE
MOA00MTL0007	EFFLUENT	SAMPLE

Battelle
Pacific Northwest Division

Marine Sciences Laboratory
1529 West Sequim Bay Road
Sequim, Washington 98382-9099
Telephone (206) 683-4151
Facsimile (206) 681-3699

September 14, 2000

Ms. Janet Savoie
Kinnetic Laboratories, Inc.
Oceanographic and Environmental Consulting
Alaska Regional Office
403 West 8th Avenue
Anchorage, AK 99501-3515

Dear Janet:

Enclosed are the results for trace metals in seawater and effluent samples received from Kinnetics between August 16 and August 18, 2000. Chromium, Ni, Cu, Zn, Cd and Pb were determined in the seawater samples by pre-concentration prior to analysis by inductively coupled plasma mass spectroscopy. Beryllium, Cr, Ni, Cu, Zn, Se, Cd, Sb, Tl, Pb, and Hg were determined in seawater and effluent samples by total recoverable and dissolved methods as appropriate for ICP/MS and cold vapor atomic flourescence. Arsenic was determined in all samples by flame ionization atomic spectroscopy. Silver was determined by graphite furnace atomic absorption.

All metals were detected in the preconcentration blank, Sb was detected in the dissolved blank, and Pb was detected in the TRM blank. All other metals were not detected in the TRM or dissolved blanks. The SRM and duplicate results were within Battelle's default criteria of ±20%, except Ni and Cd for CASS-4, our seawater SRM. Please note that the SRM results for CASS-4 were blank corrected as it seemed appropriate since the blanks had detectable metals and results were notably improved. Sample results have not been blank corrected. Matrix spikes and duplicate results were within our default criteria of ±25% and ±20%, respectively. I have enclosed a disk containing the data in Excel format for your convenience.

A cost breakdown has been included with these data and appears in Table 1 and Table 2. An invoice has been included with this data report. If you have any questions or comments concerning the data or cost breakdowns, please don't hesitate to contact me at 360-681-3627 or email: ls_bingler@pnl.gov at anytime. These samples will be disposed of on September 29th, unless otherwise advised by you.

Sincerely,

Linda S. Bingler
Project Manager

Enc.

cc: L. Massey

BATTELLE MARINE SCIENCES LABORATORY
1529 W. Sequim Bay Road
Sequim, WA 98382
(360) 683-4151

KINNETICS
CONCENTRATIONS OF METALS IN SEAWATER and EFFLUENT SAMPLES
Samples Received: 08/16-18/00

11/29/00

(concentrations in μg/L - not blank corrected)

(cf#1560)				direct	Fe/Pd	Fe/Pd	Fe/Pd	Fe/Pd	FIAS	direct	GFAA	Fe/Pd	direct	direct	Fe/Pd	CVAF
MSL Code	**Rep**	**Sponsor I.D.**	**Type**	**Be ICP/MS**	**Cr ICP/MS**	**Ni ICP/MS**	**Cu ICP/MS**	**Zn ICP/MS**	**As FIAS**	**Se ICP/MS**	**Ag GFAA**	**Cd ICP/MS**	**Sb ICP/MS**	**Tl ICP/MS**	**Pb ICP/MS**	**Hg CVAF**
SAMPLE RESULTS																
1560*1		MOA00MTL004	Total	NR	21.6	20.8	25.9	55.7	6.52	NR	0.0792	0.159	NR	NR	7.39	0.0429
1560*2		MOA00MTL005	Total	NR	76.0	74.8	94.0	175	11.4	NR	0.274	0.399	NR	NR	28.2	0.182
1560*3		MOA00MTL006	Total	NR	50.9	50.5	62.7	123	4.42	NR	0.188	0.279	NR	NR	18.6	0.105
1560*4		MOA00MTL004	Diss	NR	0.358	0.631	0.878	0.950	1.45	NR	0.0180	0.0598	NR	NR	0.0434	0.000778
1560*5		MOA00MTL005	Diss	NR	0.547	0.891	1.11	1.16	1.44	NR	0.0240	0.0635	NR	NR	0.0968	0.000954
1560*6		MOA00MTL006	Diss	NR	0.244	0.611	0.712	0.425	1.40	NR	0.0120 U	0.0531	NR	NR	0.00664	0.000370
1560*7		MOA00MTL001	Total	NR	10.1	9.86	12.0	30.2	4.80	NR	0.0477	0.101	NR	NR	3.14	0.0180
1560*8		MOA00MTL002	Total	NR	28.9	29.0	35.9	75.3	4.93	NR	0.183	0.192	NR	NR	10.4	0.0649
1560*9		MOA00MTL003	Total	NR	32.7	32.8	41.8	87.8	2.88	NR	0.158	0.210	NR	NR	12.2	0.0762
1560*10		MOA00MTL007	TRM	0.022 U	4.94	5.67	57.8	88.2	3.61	3.63	5.41	0.502	0.641	0.00617	4.88	0.118
1560*11		MOA00MTL001	Diss	NR	0.254	0.731	0.831	1.74	1.49	NR	0.0161	0.0651	NR	NR	0.0113	0.000367
1560*12		MOA00MTL002	Diss	NR	0.210	0.664	1.31	1.26	1.56	NR	0.0190	0.0610	NR	NR	0.0192	0.000439
1560*13		MOA00MTL003	Diss	NR	0.219	0.605	0.942	0.831	1.54	NR	0.0159	0.0581	NR	NR	0.00904	0.000336
1560*14		MOA00MTL007	Diss	0.014 U	3.50	4.36	34.8	43.4	3.17	3.57	1.39	0.216	0.429	0.00381	0.706	0.0200
PROCEDURAL BLANK																
		Fe/Pd		NA	0.0961	0.0147	0.115	0.220	NA	NA	NA	0.0227	NA	NA	0.00384	NA
		Dissolved		0.014 U	0.059 U	0.006 U	0.005 U	0.004 U	0.040 U	0.729 U	0.012 U	0.002 U	0.00517	0.001 U	0.003 U	0.00017 U
		TRM		0.022 U	0.053 U	0.005 U	0.004 U	0.016 U	0.012 U	0.328 U	NA	0.005 U	0.002 U	0.001 U	0.0381	NA
INSTRUMENT DETECTION LIMIT																
		Fe/Pd		**NA**	**0.010**	**0.003**	**0.008**	**0.020**	**NA**	**NA**	**NA**	**0.003**	**NA**	**NA**	**0.001**	**NA**
		Dissolved		**0.014**	**0.059**	**0.006**	**0.005**	**0.004**	**0.040**	**0.729**	**0.012**	**0.002**	**0.002**	**0.001**	**0.003**	**0.00017**
		TRM		**0.022**	**0.053**	**0.005**	**0.004**	**0.016**	**0.012**	**0.328**	**NA**	**0.005**	**0.002**	**0.001**	**0.002**	**NA**
STANDARD REFERENCE MATERIAL																
1643d		Dissolved		NA	18.1	58.3	19.8	73.6	NA	11.5	1.20	6.37	NA	NA	NA	NA
1643d		TRM		13.5	21.0	64.4	22.3	74.3	61.3	12.5	NA	6.63	56.8	7.83	18.9	NA
1643d		certified value		12.5	18.5	58.1	20.5	72.5	56.0	11.4	1.27	6.47	54.1	7.28	18.2	NC
1643d		range		±0.28	±0.2	±2.7	±3.8	±0.65	±0.73	±0.17	±0.057	±0.37	±1.1	±0.25	±0.64	NC
		% difference		**N/A**	**2%**	**0%**	**3%**	**2%**	**N/A**	**1%**	**6%**	**2%**	**N/A**	**N/A**	**N/A**	**N/A**
				8%	**14%**	**11%**	**9%**	**2%**	**9%**	**9%**	**N/A**	**2%**	**5%**	**8%**	**4%**	

BATTELLE MARINE SCIENCES LABORATORY
1529 W. Sequim Bay Road
Sequim, WA 98382
(360) 683-4151

KINNETICS
CONCENTRATIONS OF METALS IN SEAWATER and EFFLUENT SAMPLES
Samples Received: 08/16-18/00

11/29/00

(concentrations in μg/L - not blank corrected)

(cf#1560)				direct	Fe/Pd	Fe/Pd	Fe/Pd	Fe/Pd	FIAS	direct	GFAA	Fe/Pd	direct	direct	Fe/Pd	CVAF
MSL Code	**Rep**	**Sponsor I.D.**	**Type**	**Be ICP/MS**	**Cr ICP/MS**	**Ni ICP/MS**	**Cu ICP/MS**	**Zn ICP/MS**	**As FIAS**	**Se ICP/MS**	**Ag GFAA**	**Cd ICP/MS**	**Sb ICP/MS**	**Tl ICP/MS**	**Pb ICP/MS**	**Hg CVAF**
STANDARD REFERENCE MATERIAL, cont.																
CASS-4		Dissolved		NA	0.158 *	0.394 *	0.664	0.320 *	1.10	NA	NA	0.0335 *	NA	NA	0.0111 U	NA
CASS-4		certified value		NC	0.144	0.314	0.592	0.381	1.11	NC	NC	0.026	NC	NC	0.0098 U	N/A
CASS-4		range		NC	±0.029	±0.030	±0.055	±0.057	±0.16	NC	NC	±0.003	NC	NC	±0.0036	N/A
		% difference		**N/A**	**10%**	**25% #**	**12%**	**16%**	**1%**	**N/A**	**N/A**	**29% #**	**N/A**	**N/A**	**13%**	**N/A**
1641d		Dissolved		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1660
1641d		certified value		NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	1590
1641d		range		NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	±4.00
		% difference		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**4%**
MATRIX SPIKE RESULTS																
		Amount Spiked		NS	10.0	10.0	10.0	10.0	10.0	NS	10.0	10.0	NS	NS	10.0	0.0447
		1560*8	Total	NA	28.9	29.0	35.9	75.3	4.93	NA	0.183	0.192	NA	NA	10.4	0.0649
		1560*8 + Spike	Total	NA	37.9	37.4	45.0	84.1	13.1	NA	9.49	9.38	NA	NA	20.4	0.106
		Amount Recovered		N/A	9.00	8.40	9.10	8.80	8.17	N/A	9.31	9.19	N/A	N/A	10.0	0.0409
		Percent Recovery		**N/A**	**90%**	**84%**	**91%**	**88%**	**82%**	**N/A**	**93%**	**92%**	**N/A**	**N/A**	**100%**	**91%**
		Amount Spiked		NS	10.0	10.0	10.0	10.0	10.0	NS	10.0	10.0	NS	NS	10.0	0.0150
		1560*12	Diss	NA	0.210	0.664	1.31	1.26	1.56	NA	0.183	0.0610	NA	NA	0.0192	0.000439
		1560*12 + Spike	Diss	NA	9.52	9.66	9.95	9.75	11.3	NA	9.66	9.01	NA	NA	9.77	0.0150
		Amount Recovered		N/A	9.31	9.00	8.64	8.49	9.74	N/A	9.48	8.95	N/A	N/A	9.75	0.0146
		Percent Recovery		**N/A**	**93%**	**90%**	**86%**	**85%**	**97%**	**N/A**	**95%**	**89%**	**N/A**	**N/A**	**98%**	**97%**
REPLICATE RESULTS																
1560*2	1	MOA00MTL005	Total	NR	76.0	74.8	94.0	175	11.36	NR	0.274	0.399	NR	NR	28.2	0.182
1560*2	2	MOA00MTL005	Total	NR	69.3	70.0	91.6	163	11.76	NR	0.263	0.390	NR	NR	27.2	0.180
		% difference		**N/A**	**9%**	**7%**	**3%**	**7%**	**3%**	**N/A**	**4%**	**2%**	**N/A**	**N/A**	**4%**	**1%**
1560*5	1	MOA00MTL005	Diss	NR	0.547	0.891	1.11	1.16	1.44	NR	0.0240	0.0635	NR	NR	0.0968	0.000954
1560*5	2	MOA00MTL005	Diss	NR	0.517	0.886	1.12	1.15	1.50	NR	0.0201	0.0596	NR	NR	0.0924	0.000940
		% difference		**N/A**	**6%**	**1%**	**1%**	**1%**	**4%**	**N/A**	**18%**	**6%**	**N/A**	**N/A**	**5%**	**1%**

BATTELLE MARINE SCIENCES LABORATORY
1529 W. Sequim Bay Road
Sequim, WA 98382
(360) 683-4151

KINNETICS
CONCENTRATIONS OF METALS IN SEAWATER and EFFLUENT SAMPLES
Samples Received: 08/16-18/00

11/29/00

(concentrations in μg/L - not blank corrected)

(cf#1560)				direct	Fe/Pd	Fe/Pd	Fe/Pd	Fe/Pd	FIAS	direct	GFAA	Fe/Pd	direct	direct	Fe/Pd	CVAF
MSL		**Sponsor**		**Be**	**Cr**	**Ni**	**Cu**	**Zn**	**As**	**Se**	**Ag**	**Cd**	**Sb**	**Tl**	**Pb**	**Hg**
Code	**Rep**	**I.D.**	**Type**	**ICP/MS**	**ICP/MS**	**ICP/MS**	**ICP/MS**	**ICP/MS**	**FIAS**	**ICP/MS**	**GFAA**	**ICP/MS**	**ICP/MS**	**ICP/MS**	**ICP/MS**	**CVAF**

U = not detected at or above detection limit.
NC = not certified.
NA = not analyzed.
N/A = not applicable.
= outside Quality Control Criteria.
* = Blank Corrected.
NR = Analysis not requested.

1300 Sat 1 EAC Prep lab K-5

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	FROM:
Battelle Northwest Laboratory 1529 West Sequim Bay Road Sequim, WA 98382 Attn: Dr. Eric Crecelius (360)683-3625	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178

REQUIRED COMPLETION DATE: 30 days | **P.O. #:** AK00-1014 | **KLI Proj. #:** 514.02

ANALYSIS TYPE: Total dissolved and total recoverable metals: arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver, and zinc. All ICP/MS except As, Cr, Zn (GFAA) and Hg (CVAA).
Data to be reported in printed and digital formats.

MATRIX: Water | **Preservative:** None, 4° C | **Type of Container:** 1-l Teflon

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT Raw Wat	ASSIGNED LABORATORY NUMBER Filt
MOA00MTL004	C1-1S	1	8/14/00	1459	1560+1	1560+4
MOA00MTL005	C1-2S	1	8/14/00	1518	2	5
MOA00MTL006	C1-3S	1	8/14/00	1540	3	6

DATA REPORTS MUST INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS. PLEASE REPORT ALL QA/QC, INCLUDING METHOD BLANKS, MS/SDs, DUPLICATES, ETC.

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
Janet M. Savoie	8/15/00 1330	FED EX	[signature] 08/16/24	1245
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME

1560 Bat 2 prep - Shulf k-1 LB

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	FROM:
Battelle Northwest Laboratory 1529 West Sequim Bay Road Sequim, WA 98382 Attn: Dr. Eric Crecelius (360)683-3625	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178

REQUIRED COMPLETION DATE: 30 days | **P.O. #:** AK00-1014 | **KLI Proj. #:** 514.02

ANALYSIS TYPE: Total dissolved and total recoverable metals: arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver, and zinc. All ICP/MS except As, Cr, Zn (GFAA) and Hg (CVAA).
Data to be reported in printed and digital formats.

MATRIX: Water | **Preservative:** None, 4° C | **Type of Container:** 1-l Teflon

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER RAW	ASSIGNED LABORATORY NUMBER FILT
MOA00MTL001	F1-1S	1	8/16/00	1550	1560	-7	1560-11
MOA00MTL002	F1-2S	1	8/16/00	1612		-8	-12
MOA00MTL003	F1-3S	1	8/16/00	1630		-9	-13
MOA00MTL007	EFFLUENT	1	8/16/00	1609	1560	-10	1560-14

Cooler temp 3.3°C

DATA REPORTS MUST INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC, INCLUDING METHOD BLANKS, MS/SDs, DUPLICATES, ETC.

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
Janet M. Savoie	8/17/00 / 1200	FED EX	Christich Battelle MSL	1230 8/18/00
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME

APPENDIX D

Receiving Water Quality Monitoring

D3 Nortern Testing Laboratories

Intertidal Bacteria, TRC, and Color

NORTHERN TESTING LABORATORIES, INC.

3330 INDUSTRIAL AVENUE
8005 SCHOON STREET
POUCH 340043

FAIRBANKS, ALASKA 99701
ANCHORAGE, ALASKA 99518
PRUDHOE BAY, ALASKA 99734

(907) 456-3116 • FAX 456-3125
(907) 349-1000 • FAX 349-1018
(907) 659-2145 • FAX 659-2146

September 7, 2000
Kinnetic Laboratories, Incorporated
403 West 8th Avenue
Anchorage, AK 99501-3515

Attn: Mark Savoie

Please find enclosed the results for the Point Woronzof/Inlet Monitoring samples as you requested. This includes the individual data reports, a summary report, Quality Control specifications, and a disk containing an IBM formatted Excel file of the data. The sample analysis for Enterococci, MPN follows Standard Methods SM 9230 B specifications; sample analysis for Fecal Coliform, MPN follows Standard Methods SM 9221 E specifications; sample analysis for Color follows Standard Methods SM 2120 B. Total Residual Chlorine analysis took place in the field and followed Standard Methods SM 4500 E.

If you have any questions concerning these reports, please contact me at (907) 349-1000. It has been a pleasure working with you on this joint venture with the Municipality of Anchorage and I hope that next year you choose Northern Testing Laboratories as your laboratory of choice for the 2001 MOA Inlet Monitoring Project .

Sincerely,

Isaac A. Maceo
Anchorage Microbiology Supervisor
Northern Testing Laboratories
8005 Schoon Street
Anchorage, AK 99518

NORTHERN TESTING LABORATORIES, INC.

3380 INDUSTRIAL AVENUE
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KINNETIC LABORATORIES, INC.
403 W. 8th Avenue
Anchorage, AK 99501-3515
Attention: Mark Savoie

NORTHERN TESTING LABORATORIES, INC.

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QUALITY CONTROL
MOA/Inlet Monitoring Project 2000

SM 9221E

The Fecal Coliform Most Probable Number analysis includes two bacteriological controls: *Escherichia coli* (positive control) and *Pseudomonas aeruginosa* (negative control), and a Buffered Dilution Water blank.

SM 4500 E

Total Residual Chlorine analysis is a titrimetric method which includes a blank, and a Laboratory Control Sample (LCS). Percent Recovery of LCS ranged from 91% to 100%, with an average of 97%.

SM 2120 B

Visual Comparison Color analysis includes a duplicate analysis about every 10 samples. Duplicate results are within acceptable limits with 0% difference between duplicates obtained (Duplicate values are noted on page 3). All samples were pre-treated with paper filtration to remove turbidity and reported as "True Color."

SM 9230 B

The Enterococci Most Probable Number analysis includes two bacteriological controls: *Streptococcus faecalis* (positive control) and *Escherichia coli* (negative control).

NORTHERN TESTING LABORATORIES, INC.
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POUCH 340043 PRUDHOE BAY, ALASKA 99734 (907) 659-2145 • FAX 659-2146

COLOR DUPLICATES

SAMPLE ID	ORIGINAL VALUE	DUPLICATE VALUE
MOA00CLR005	<5	<5
MOA00CLR013	20	20
MOA00CLR021	<5	<5

FECAL COLIFORM DUPLICATES

SAMPLE ID	ORIGINAL VALUE	DUPLICATE VALUE
MOA00FEC025	<2.0	<2.0
MOA00FEC001	4.0	4.0
MOA00FEC005	2.0	13.0
MOA00FEC013	130.0	500.0
MOA00FEC017	13.0	30.0
MOA00FEC021	4.0	4.0

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Kinnetic Laboratories Inc.
Attn: Mark Savoie
403 West 8th Avenue
Anchorage, AK 99501-3515

2000 INLET MONITORING PROJECT, PT. WORONZOF

STATION LOCATION	SAMPLE ID	LABORATORY ID	SAMPLE DATE	SAMPLE TIME	METHOD	RESULT	UNIT	DATE ANALYZED
C1-1S	MOA00FEC025	A167775	8/14/00	14:59	SM9221E	<2.0	mpn/100mL	8/15/00
	MOA00CLR025	A167775			SM2120B	20	Color Units *	8/15/00
	MOA00TRC025	A167775			SM4500E	<0.0089	mg/L	8/14/00
C1-1S	MOA00FEC025 / DUP	A167776	8/14/00	14:59	SM9221E	<2.0	mpn/100mL	8/15/00
C1-2S	MOA00FEC026	A167777	8/14/00	15:18	SM9221E	<2.0	mpn/100mL	8/15/00
	MOA00CLR026	A167777			SM2120B	15	Color Units *	8/15/00
	MOA00TRC026	A167777			SM4500E	<0.0089	mg/L	8/14/00
C1-3S	MOA00FEC027	A167778	8/14/00	15:40	SM9221E	7.0	mpn/100mL	8/15/00
	MOA00CLR027	A167778			SM2120B	15	Color Units *	8/15/00
	MOA00TRC027	A167778			SM4500E	<0.0089	mg/L	8/14/00
C1-4S	MOA00FEC028	A167779	8/14/00	16:10	SM9221E	2.0	mpn/100mL	8/15/00
	MOA00CLR028	A167779			SM2120B	15	Color Units *	8/15/00
	MOA00TRC028	A167779			SM4500E	<0.0089	mg/L	8/14/00
C2-1S	MOA00FEC029	A167780	08/14/00	17:00	SM9221E	<2.0	mpn/100mL	8/15/00
	MOA00CLR029	A167780			SM2120B	10	Color Units *	8/15/00
	MOA00TRC029	A167780			SM4500E	<0.0089	mg/L	8/14/00
C2-2S(A)	MOA00FEC030	A167781	8/14/00	17:28	SM9221E	2.0	mpn/100mL	8/15/00
	MOA00CLR030	A167781			SM2120B	15	Color Units *	8/15/00
	MOA00TRC030	A167781			SM4500E	<0.0089	mg/L	8/14/00
C2-2S(B)	MOA00FEC031	A167782	8/14/00	17:28	SM9221E	<2.0	mpn/100mL	8/15/00
	MOA00CLR031	A167782			SM2120B	10	Color Units *	8/15/00
C2-2S(C)	MOA00FEC032	A167783	8/14/00	17:28	SM9221E	2.0	mpn/100mL	8/15/00
	MOA00CLR032	A167783			SM2120B	10	Color Units *	8/15/00
C2-3S	MOA00FEC033	A167784	8/14/00	17:53	SM9221E	2.0	mpn/100mL	8/15/00
	MOA00CLR033	A167784			SM2120B	10	Color Units *	8/15/00
	MOA00TRC033	A167784			SM4500E	<0.0089	mg/L	8/14/00

TRUE COLOR

DATE: 07-Sep-00

REPORTED BY: Isaac A. Maceo, Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

3330 INDUSTRIAL AVENUE
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(907) 349-1000 • FAX 349-1016
(907) 659-2145 • FAX 659-2146

STATION LOCATION	SAMPLE ID	LABORATORY ID	SAMPLE DATE	SAMPLE TIME	METHOD	RESULT	UNIT	DATE ANALYZED
C2-4S	MOA00FEC034	A167785	8/14/00	18:08	SM9221E	2.0	mpn/100mL	8/15/00
	MOA00CLR034	A167785			SM2120B	10	Color Units *	8/15/00
	MOA00TRC034	A167785			SM4500E	<0.0089	mg/L	8/14/00
C3-1S(A)	MOA00FEC035	A167786	8/14/00	19:02	SM9221E	2.0	mpn/100mL	8/15/00
	MOA00CLR035	A167786			SM2120B	<5	Color Units *	8/15/00
	MOA00TRC035	A167786			SM4500E	<0.0089	mg/L	8/14/00
C3-1S(B)	MOA00FEC036 / DUP	A167787	8/14/00	19:02	SM9221E	2.0	mpn/100mL	8/15/00
	MOA00CLR036 / DUP	A167787			SM2120B	<5	Color Units *	8/15/00
	MOA00TRC036 / DUP	A167787			SM4500E	<0.0089	mg/L	8/14/00
C3-1S(C)	MOA00FEC037 / TRIP	A167788	8/14/00	19:02	SM9221E	2.0	mpn/100mL	8/15/00
	MOA00CLR037 / TRIP	A167788			SM2120B	<5	Color Units *	8/15/00
	MOA00TRC037 / TRIP	A167788			SM4500E	<0.0089	mg/L	8/14/00
C3-2S	MOA00FEC038	A167789	8/14/00	19:20	SM9221E	<2.0	mpn/100mL	8/15/00
	MOA00CLR038	A167789			SM2120B	5	Color Units *	8/15/00
	MOA00TRC038	A167789			SM4500E	<0.0089	mg/L	8/14/00
C3-3S	MOA00FEC039	A167790	08/14/00	19:32	SM9221E	4.0	mpn/100mL	8/15/00
	MOA00CLR039	A167790			SM2120B	10	Color Units *	8/15/00
	MOA00TRC039	A167790			SM4500E	<0.0089	mg/L	8/14/00
C3-4S	MOA00FEC040	A167791	8/14/00	19:48	SM9221E	<2.0	mpn/100mL	8/15/00
	MOA00CLR040	A167791			SM2120B	<5	Color Units *	8/15/00
	MOA00TRC040	A167791			SM4500E	<0.0089	mg/L	8/14/00

* TRUE COLOR

DATE: 07-Sep-00

REPORTED BY: Isaac A. Maceo, Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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STATION LOCATION	SAMPLE ID	LABORATORY ID	SAMPLE DATE	SAMPLE TIME	METHOD	RESULT	UNIT	DATE ANALYZED
E1-1S	MOA00FEC001	A167821	8/16/00	11:26	SM9221E	4.0	mpn/100mL	8/17/00
	MOA00CLR001	A167821			SM2120B	<5	Color Units *	8/17/00
	MOA00TRC001	A167821			SM4500E	<0.0089	mg/L	8/16/00
E1-1S	MOA00FEC001 / DUP	A167822	8/16/00	11:26	SM9221E	4.0	mpn/100mL	8/17/00
E1-2S	MOA00FEC002	A167823	8/16/00	11:35	SM9221E	13.0	mpn/100mL	8/17/00
	MOA00CLR002	A167823			SM2120B	<5	Color Units *	8/17/00
	MOA00TRC002	A167823			SM4500E	<0.0089	mg/L	8/16/00
E1-3S	MOA00FEC003	A167824	8/16/00	11:45	SM9221E	8.0	mpn/100mL	8/17/00
	MOA00CLR003	A167824			SM2120B	10	Color Units *	8/17/00
	MOA00TRC003	A167824			SM4500E	<0.0089	mg/L	8/16/00
E1-4S	MOA00FEC004	A167825	8/16/00	11:55	SM9221E	11.0	mpn/100mL	8/17/00
	MOA00CLR004	A167825			SM2120B	10	Color Units *	8/17/00
	MOA00TRC004	A167825			SM4500E	<0.0089	mg/L	8/16/00
E2-1S	MOA00FEC005	A167826	8/16/00	12:30	SM9221E	2.0	mpn/100mL	8/17/00
	MOA00CLR005	A167826			SM2120B	<5	Color Units *	8/17/00
	MOA00TRC005	A167826			SM4500E	<0.0089	mg/L	8/16/00
E2-1S	MOA00FEC005 / DUP	A167827	8/16/00	12:30	SM9221E	13.0	mpn/100mL	8/17/00
	MOA00CLR005 / DUP	A167827			SM2120B	<5	Color Units *	8/17/00
E2-2S	MOA00FEC006	A167828	8/16/00	12:37	SM9221E	7.0	mpn/100mL	8/17/00
	MOA00CLR006	A167828			SM2120B	5	Color Units *	8/17/00
	MOA00TRC006	A167828			SM4500E	<0.0089	mg/L	8/16/00
E2-3S	MOA00FEC007	A167829	8/16/00	12:52	SM9221E	2.0	mpn/100mL	8/17/00
	MOA00FEC007	A167829			SM2120B	15	Color Units *	8/17/00
	MOA00FEC007	A167829			SM4500E	<0.0089	mg/L	8/16/00
E2-4S	MOA00FEC008	A167830	8/16/00	13:20	SM9221E	4.0	mpn/100mL	8/17/00
	MOA00FEC008	A167830			SM2120B	10	Color Units *	8/17/00
	MOA00FEC008	A167830			SM4500E	<0.0089	mg/L	8/16/00
E3-1S	MOA00FEC009	A167831	8/16/00	14:22	SM9221E	9.0	mpn/100mL	8/17/00
	MOA00FEC009	A167831			SM2120B	10	Color Units *	8/17/00
	MOA00FEC009	A167831			SM4500E	<0.0089	mg/L	8/16/00
E3-2S	MOA00FEC010	A167832	8/16/00	14:42	SM9221E	7.0	mpn/100mL	8/17/00
	MOA00FEC010	A167832			SM2120B	15	Color Units *	8/17/00
	MOA00FEC010	A167832			SM4500E	<0.0089	mg/L	8/16/00
E3-3S	MOA00FEC011	A167833	8/16/00	15:08	SM9221E	2.0	mpn/100mL	8/17/00
	MOA00FEC011	A167833			SM2120B	15	Color Units *	8/17/00
	MOA00FEC011	A167833			SM4500E	<0.0089	mg/L	8/16/00
E3-4S	MOA00FEC012	A167834	8/16/00	15:20	SM9221E	4.0	mpn/100mL	8/17/00
	MOA00FEC012	A167834			SM2120B	5	Color Units *	8/17/00
	MOA00FEC012	A167834			SM4500E	<0.0089	mg/L	8/16/00

* TRUE COLOR

DATE: 07-Sep-00

REPORTED BY: Isaac A. Maceo, Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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8005 SCHOON STREET
POUCH 340043

FAIRBANKS, ALASKA 99701
ANCHORAGE, ALASKA 99518
PRUDHOE BAY, ALASKA 99734

(907) 456-3116 • FAX 456-3125
(907) 349-1000 • FAX 349-1016
(907) 659-2145 • FAX 659-2146

STATION LOCATION	SAMPLE ID	LABORATORY ID	SAMPLE DATE	SAMPLE TIME	METHOD	RESULT	UNIT	DATE ANALYZED
Chester Creek Rep 1	MOA00FEC061	A167835	8/16/00	13:02	SM9221E	30.0	mpn/100mL	8/17/00
Chester Creek Rep 2	MOA00FEC62	A167836	8/16/00	13:02	SM9221E	110.0	mpn/100mL	8/17/00
Ship Creek Rep 1	MOA00FEC63	A167837	8/16/00	12:35	SM9221E	30.0	mpn/100mL	8/17/00
Ship Creek Rep 2	MOA00FEC64	A167838	8/16/00	12:35	SM9221E	4.0	mpn/100mL	8/17/00
Fish Creek Rep 1	MOA00FEC65	A167839	8/16/00	13:12	SM9221E	1600.0	mpn/100mL	8/17/00
Fish Creek Rep 2	MOA00FEC66	A167840	8/16/00	13:12	SM9221E	1600.0	mpn/100mL	8/17/00
Effluent Rep 1	MOA00FEC59	A167841	8/16/00	16:10	SM9221E	500.0	mpn/100mL	8/18/00
Effluent Rep 1	MOA00FEC60	A167842	8/16/00	16:10	SM9221E	500.0	mpn/100mL	8/18/00

* TRUE COLOR

DATE: 07-Sep-00

REPORTED BY: Isaac A. Maceo, Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

3330 INDUSTRIAL AVENUE
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STATION LOCATION	SAMPLE ID	LABORATORY ID	SAMPLE DATE	SAMPLE TIME	METHOD	RESULT	UNIT	DATE ANALYZED
F1-1S	MOA00FEC013	A167843	8/16/00	15:50	SM9221E	130.0	mpn/100mL	8/18/00
	MOA00CLR013	A167843			SM2120B	20	Color Units *	8/17/00
	MOA00TRC013	A167843			SM4500E	<0.0089	mg/L	8/16/00
F1-1S	MOA00FEC013 / DUP	A167844	8/16/00	15:50	SM9221E	500.0	mpn/100mL	8/18/00
	MOA00CLR013 / DUP	A167844			SM2120B	20	Color Units *	8/17/00
F1-2S	MOA00FEC014	A167845	8/16/00	16:12	SM9221E	11.0	mpn/100mL	8/18/00
	MOA00CLR014	A167845			SM2120B	20	Color Units *	8/17/00
	MOA00TRC014	A167845			SM4500E	<0.0089	mg/L	8/16/00
F1-3S	MOA00FEC015	A167846	8/16/00	16:30	SM9221E	4.0	mpn/100mL	8/18/00
	MOA00CLR015	A167846			SM2120B	10	Color Units *	8/17/00
	MOA00TRC015	A167846			SM4500E	<0.0089	mg/L	8/16/00
F1-4S	MOA00FEC016	A167847	8/16/00	16:50	SM9221E	2.0	mpn/100mL	8/18/00
	MOA00CLR016	A167847			SM2120B	15	Color Units *	8/17/00
	MOA00TRC016	A167847			SM4500E	<0.0089	mg/L	8/16/00
F2-1S	MOA00CLR017	A167848	8/16/00	17:21	SM9221E	13.0	mpn/100mL	8/18/00
	MOA00CLR017	A167848			SM2120B	<5	Color Units *	8/17/00
	MOA00TRC017	A167848			SM4500E	<0.0089	mg/L	8/16/00
F2-1S	MOA00FEC017 / DUP	A167849	08/16/00	17:21	SM9221E	30.0	mpn/100mL	8/18/00
F2-2S	MOA00FEC018	A167850	08/16/00	17:28	SM9221E	8.0	mpn/100mL	8/18/00
	MOA00CLR018	A167850			SM2120B	10	Color Units *	8/17/00
	MOA00TRC018	A167850			SM4500E	<0.0089	mg/L	8/16/00
F2-3S	MOA00FEC019	A167851	08/16/00	17:54	SM9221E	8.0	mpn/100mL	8/18/00
	MOA00CLR019	A167851			SM2120B	15	Color Units *	8/17/00
	MOA00TRC019	A167851			SM4500E	<0.0089	mg/L	8/16/00
F2-4S	MOA00FEC020	A167852	8/16/00	18:10	SM9221E	8.0	mpn/100mL	8/18/00
	MOA00CLR020	A167852			SM2120B	10	Color Units *	8/17/00
	MOA00TRC020	A167852			SM4500E	<0.0089	mg/L	8/16/00
F3-1S	MOA00FEC021	A167853	8/16/00	18:42	SM9221E	4.0	mpn/100mL	8/18/00
	MOA00CLR021	A167853			SM2120B	<5	Color Units *	8/17/00
	MOA00TRC021	A167853			SM4500E	<0.0089	mg/L	8/16/00
F3-1S	MOA00FEC021 / DUP	A167854	8/16/00	18:42	SM9221E	4.0	mpn/100mL	8/18/00
	MOA00CLR021 / DUP	A167854			SM2120B	<5	Color Units *	8/17/00
F3-2S	MOA00TRC022	A167855	8/16/00	18:48	SM9221E	2.0	mpn/100mL	8/18/00
	MOA00CLR022	A167855			SM2120B	10	Color Units *	8/17/00
	MOA00TRC022	A167855			SM4500E	<0.0089	mg/L	8/16/00
F3-3S	MOA00TRC023	A167856	8/16/00	19:14	SM9221E	9.0	mpn/100mL	8/18/00
	MOA00CLR023	A167856			SM2120B	15	Color Units *	8/17/00
	MOA00TRC023	A167856			SM4500E	<0.0089	mg/L	8/16/00
F3-4S	MOA00TRC024	A167857	8/16/00	19:45	SM9221E	4.0	mpn/100mL	8/18/00
	MOA00CLR024	A167857			SM2120B	15	Color Units *	8/17/00
	MOA00TRC024	A167857			SM4500E	<0.0089	mg/L	8/16/00

* TRUE COLOR

DATE: 07-Sep-00

REPORTED BY: Isaac A. Maceo, Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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STATION LOCATION	SAMPLE ID	LABORATORY ID	SAMPLE DATE	SAMPLE TIME	METHOD	RESULT	UNIT	DATE ANALYZED
IT-1 REP 1	MOA00FEC043	A167860	8/16/00	20:35	SM9221E	8.0	mpn/100mL	8/18/00
IT-1 REP 2	MOA00FEC044	A167861	8/16/00	20:35	SM9221E	4.0	mpn/100mL	8/18/00
IT-2 REP1	MOA00FEC045	A167862	8/16/00	20:39	SM9221E	2.0	mpn/100mL	8/18/00
IT-2 REP 2	MOA00FEC046	A167863	8/16/00	20:39	SM9221E	4.0	mpn/100mL	8/18/00
IT-3 REP1	MOA00FEC047	A167864	8/16/00	20:43	SM9221E	4.0	mpn/100mL	8/18/00
IT-3 REP 2	MOA00FEC048	A167865	8/16/00	20:43	SM9221E	2.0	mpn/100mL	8/18/00
IT-4 REP 1	MOA00FEC049	A167866	8/16/00	20:48	SM9221E	7.0	mpn/100mL	8/18/00
IT-4 REP 2	MOA00FEC050	A167867	8/16/00	20:48	SM9221E	30.0	mpn/100mL	8/18/00
IT-5 REP 1	MOA00FEC051	A167868	8/16/00	20:30	SM9221E	2.0	mpn/100mL	8/18/00
IT-5 REP 2	MOA00FEC052	A167869	8/16/00	20:30	SM9221E	17.0	mpn/100mL	8/18/00
IT-6 REP 1	MOA00FEC053	A167870	8/16/00	20:25	SM9221E	8.0	mpn/100mL	8/18/00
IT-6 REP 2	MOA00FEC054	A167871	8/16/00	20:25	SM9221E	13.0	mpn/100mL	8/18/00
IT-7 REP 1	MOA00FEC055	A167872	8/16/00	20:20	SM9221E	13.0	mpn/100mL	8/18/00
IT-7 REP 2	MOA00FEC056	A167873	8/16/00	20:20	SM9221E	4.0	mpn/100mL	8/18/00
IT-C4 REP 1	MOA00FEC057	A167874	8/16/00	21:05	SM9221E	4.0	mpn/100mL	8/18/00
IT-C4 REP 2	MOA00FEC058	A167875	8/16/00	21:05	SM9221E	23.0	mpn/100mL	8/18/00
Effluent Rep1	MOA00ENT001	A167928	8/17/00	16:00	SM9230 B	>2419.2	mpn/100mL	8/18/00
Effluent Rep 2	MOA00ENT002	A167929	8/17/00	16:00	SM9230 B	>2419.2	mpn/100mL	8/18/00

DATE: 07-Sep-00

REPORTED BY: Isaac A. Maceo, Anchorage Microbiology Supervisor

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	FROM:	
Northern Testing Laboratory 8005 Schoon Street Anchorage, AK 99518 Attn: Sample Custodian (907)349-1000	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178	
REQUIRED COMPLETION DATE:	**P.O. #:** AK00-1017	**KLI Proj. #:** 514.02

ANALYSIS TYPE: Fecal coliform (SM 9221E) and color determination (SM 2120B).
Data to be reported in printed and digital formats.

MATRIX: Water	**Preservative:** None, 4° C	**Type of Container:** 125-mL plastic or 250-mL (for duplicate Fecal analyses)

STATION LOCATION	FECAL SAMPLE ID	COLOR SAMPLE ID	DATE/TIME	LAB ID	COMMENTS
C1-1S	MOA00FEC025	MOA00CLR025	8/14/00 / 1459	A167775 A167776 dup (fecal only)	
C1-2S	MOA00FEC026	MOA00CLR026	8/14/00 / 1518	A167777	
C1-3S	MOA00FEC027	MOA00CLR027	8/14/00 / 1540	A167778	
C1-4S	MOA00FEC028	MOA00CLR028	8/14/00 / 1610	A167779	
C2-1S	MOA00FEC029	MOA00CLR029	8/14/00 / 1700	A167780	
C2-2S(A)	MOA00FEC030	MOA00CLR030	8/14/00 / 1728	A167781	
C2-2S(B)	MOA00FEC031	MOA00CLR031	8/14/00 / 1728	A167782	
C2-2S(C)	MOA00FEC032	MOA00CLR032	8/14/00 / 1728	A167783	
C2-3S	MOA00FEC033	MOA00CLR033	8/14/00 / 1753	A167784	
C2-4S	MOA00FEC034	MOA00CLR034	8/14/00 / 1808	A167785	
C3-1S(A)	MOA00FEC035	MOA00CLR035	8/14/00 / 1902	A167786 Color	Fecal laboratory triplicate in larger container; analyze 3 times
C3-1S(B)	MOA00FEC036	MOA00CLR036	8/14/00 / 1902	A167787 dup	
C3-1S(C)	MOA00FEC037	MOA00CLR037	8/14/00 / 1902	A167788 trip	
C3-2S	MOA00FEC038	MOA00CLR038	8/14/00 / 1920	A167789	
C3-3S	MOA00FEC039	MOA00CLR039	8/14/00 / 1932	A167790	
C3-4S	MOA00FEC040	MOA00CLR040	8/14/00 / 1948	A167791	

Fecal coliform samples in larger sample bottles (250-mL) should be analyzed in duplicate. One in ten color samples should also be run in duplicate. Please report duplicates with a "D" or "DUP" appended to the SAMPLE ID.

RELINQUISHED BY:	DATE/TIME	TRANSPORTED BY:	RECEIVED BY:	DATE/TIME
Mary Morris	8/14/00 2020	hand	[illegible]	8/14/00 2020
RELINQUISHED BY:	DATE/TIME	TRANSPORTED BY:	RECEIVED BY:	DATE/TIME
RELINQUISHED BY:	DATE/TIME	TRANSPORTED BY:	RECEIVED BY:	DATE/TIME

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00025
Client Project #: KLI #514.02
Source: C1-1S
NTL Lab#: A167775
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/14/00
Sample Date: 8/14/00
Sample Time: 14:59
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	20.0	5.00		8/15/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	<MRL	2.00		8/15/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00025 Duplicate
Client Project #: KLI #514.02
Source: C1-1S
NTL Lab#: A167776
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/14/00
Sample Date: 8/14/00
Sample Time: 14:59
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	<MRL	2.00		8/15/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00026
Client Project #: KLI #514.02
Source: C1-2S
NTL Lab#: A167777
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/14/00
Sample Date: 8/14/00
Sample Time: 15:18
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	15.0	5.00		8/15/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	<MRL	2.00		8/15/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00027
Client Project #: KLI #514.02
Source: C1-3S
NTL Lab#: A167778
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/14/00
Sample Date: 8/14/00
Sample Time: 15:40
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	15.0	5.00		8/15/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	7.00	2.00		8/15/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00028
Client Project #: KLI #514.02
Source: C1-4S
NTL Lab#: A167779
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/14/00
Sample Date: 8/14/00
Sample Time: 16:10
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	15.0	5.00		8/15/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	2.00	2.00		8/15/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00029
Client Project #: KLI #514.02
Source: C2-1S
NTL Lab#: A167780
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/14/00
Sample Date: 8/14/00
Sample Time: 17:00
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	10.0	5.00		8/15/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	<MRL	2.00		8/15/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00030
Client Project #: KLI #514.02
Source: C2-2S(A)
NTL Lab#: A167781
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/14/00
Sample Date: 8/14/00
Sample Time: 17:28
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	15.0	5.00		8/15/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	2.00	2.00		8/15/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00031
Client Project #: KLI #514.02
Source: C2-2S(B)
NTL Lab#: A167782
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/14/00
Sample Date: 8/14/00
Sample Time: 17:28
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	10.0	5.00		8/15/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	<MRL	2.00		8/15/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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POUCH 340043 — PRUDHOE BAY, ALASKA 99734 — (907) 659-2145 • FAX 659-2146

Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00032
Client Project #: KLI #514.02
Source: C2-2S(C)
NTL Lab#: A167783
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/14/00
Sample Date: 8/14/00
Sample Time: 17:28
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	10.0	5.00		8/15/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	2.00	2.00		8/15/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00033
Client Project #: KLI #514.02
Source: C2-3S
NTL Lab#: A167784
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/14/00
Sample Date: 8/14/00
Sample Time: 17:53
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	10.0	5.00		8/15/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	2.00	2.00		8/15/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00034
Client Project #: KLI #514.02
Source: C2-4S
NTL Lab#: A167785
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/14/00
Sample Date: 8/14/00
Sample Time: 18:08
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	10.0	5.00		8/15/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	2.00	2.00		8/15/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00035
Client Project #: KLI #514.02
Source: C3-1S(A)
NTL Lab#: A167786
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/14/00
Sample Date: 8/14/00
Sample Time: 19:02
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	<MRL	5.00		8/15/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	2.00	2.00		8/15/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00036 Duplicate
Client Project #: KLI #514.02
Source: C3-1S(B)
NTL Lab#: A167787
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/14/00
Sample Date: 8/14/00
Sample Time: 19:02
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	<MRL	5.00		8/15/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	2.00	2.00		8/15/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00037 Triplicate
Client Project #: KLI #514.02
Source: C3-1S(C)
NTL Lab#: A167788
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/14/00
Sample Date: 8/14/00
Sample Time: 19:02
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	<MRL	5.00		8/15/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	2.00	2.00		8/15/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00038
Client Project #: KLI #514.02
Source: C3-2S
NTL Lab#: A167789
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/14/00
Sample Date: 8/14/00
Sample Time: 19:20
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	5.00	5.00		8/15/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	<MRL	2.00		8/15/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00039
Client Project #: KLI #514.02
Source: C3-3S
NTL Lab#: A167790
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/14/00
Sample Date: 8/14/00
Sample Time: 19:32
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	10.0	5.00		8/15/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	4.00	2.00		8/15/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00040
Client Project #: KLI #514.02
Source: C3-4S
NTL Lab#: A167791
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/14/00
Sample Date: 8/14/00
Sample Time: 19:48
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	<MRL	5.00		8/15/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	<MRL	2.00		8/15/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	FROM:
Northern Testing Laboratory 8005 Schoon Street Anchorage, AK 99518 Attn: Sample Custodian (907)349-1000	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178

REQUIRED COMPLETION DATE:	P.O. #: AK00-1017	KLI Proj. #: 514.02

ANALYSIS TYPE: Fecal coliform (SM 9221E) and color determination (SM 2120B).
Data to be reported in printed and digital formats.

MATRIX: Water	Preservative: None, 4° C 8/16/00 MAS	Type of Container: 125-mL plastic or 250-mL (for duplicate Fecal analyses)

STATION LOCATION	FECAL SAMPLE ID	COLOR SAMPLE ID	DATE/TIME	LAB ID	COMMENTS
E1-1S	MOA00FEC001	MOA00CLR001	8/16/00 / 1126	A167821 A167822 dup	
E1-2S	MOA00FEC002	MOA00CLR002	8/16/00 / 1135	A167823	
E1-3S	MOA00FEC003	MOA00CLR003	8/16/00 / 1145	A167824	
E1-4S	MOA00FEC004	MOA00CLR004	8/16/00 / 1155	A167825	
E2-1S	MOA00FEC005	MOA00CLR005	8/16/00 / 1230	A167826 A167827 dup	
E2-2S	MOA00FEC006	MOA00CLR006	8/16/00 / 1237	A167828	
E2-3S	MOA00FEC007	MOA00CLR007	8/16/00 / 1252	A167829	
E2-4S	MOA00FEC008	MOA00CLR008	8/16/00 / 1320	A167830	
E3-1S	MOA00FEC009	MOA00CLR009	8/16/00 / 1422	A167831	
E3-2S	MOA00FEC010	MOA00CLR010	8/16/00 / 1442	A167832	
E3-3S	MOA00FEC011	MOA00CLR011	8/16/00 / 1508	A167833	
E3-4S	MOA00FEC012	MOA00CLR012	8/16/00 / 1520	A167834	

Fecal coliform samples in larger sample bottles (250-mL) should be analyzed in duplicate. One in ten color samples should also be run in duplicate. Please report duplicates with a "D" or "DUP" appended to the SAMPLE ID.

RELINQUISHED BY:	DATE/TIME	TRANSPORTED BY:	RECEIVED BY:	DATE/TIME
Marla Savoie	8/16/00 1530	[signature]	D Tommy	8-16-00 15:50
RELINQUISHED BY:	DATE/TIME	TRANSPORTED BY:	RECEIVED BY:	DATE/TIME
RELINQUISHED BY:	DATE/TIME	TRANSPORTED BY:	RECEIVED BY:	DATE/TIME

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	FROM:
Northern Testing Laboratory 8005 Schoon Street Anchorage, AK 99518 Attn: Sample Custodian (907)349-1000	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178

REQUIRED COMPLETION DATE:	P.O. #: AK00-1017	KLI Proj. #: 514.02

ANALYSIS TYPE: Fecal coliform (SM 9221E).
Data to be reported in printed and digital formats.

MATRIX: Water	Preservative: None, 4° C	Type of Container: 125-mL plastic

STATION LOCATION	FECAL SAMPLE ID	DATE/TIME	LAB ID	COMMENTS
~~Effluent Rep1~~	~~MOA00FEC059~~	~~8/16/00 /~~	MAS	
~~Effluent Rep2~~	~~MOA00FEC060~~	~~8/16/00 /~~	MAS	
Chester Creek Rep1	MOA00FEC061	8/16/00 / 1302	A167835	
Chester Creek Rep2	MOA00FEC062	8/16/00 / 1302	A167836	
Ship Creek Rep1	MOA00FEC063	8/16/00 / 1235	A167837	
Ship Creek Rep2	MOA00FEC064	8/16/00 / 1235	A167838	
Fish Creek Rep1	MOA00FEC065	8/16/00 / 1312	A167839	
Fish Creek Rep2	MOA00FEC066	8/16/00 / 1312	A167840	

RELINQUISHED BY:	DATE/TIME	TRANSPORTED BY:	RECEIVED BY:	DATE/TIME
Mark A Sawyer	8/16/00 1530	hand	D Tommy	8-16-00 15:50
RELINQUISHED BY:	DATE/TIME	TRANSPORTED BY:	RECEIVED BY:	DATE/TIME
RELINQUISHED BY:	DATE/TIME	TRANSPORTED BY:	RECEIVED BY:	DATE/TIME

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00001
Client Project #: 514.02
Source: E1-1S
NTL Lab#: A167821
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 11:26
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	<MRL	5.00		8/17/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	4.00	2.00		8/17/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00001 Duplicate
Client Project #: 514.02
Source: E1-1S
NTL Lab#: A167822
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 11:26
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	4.00	2.00		8/17/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00002
Client Project #: 514.02
Source: E1-2S
NTL Lab#: A167823
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 11:35
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	<MRL	5.00		8/17/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	13.0	2.00		8/17/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00003
Client Project #: 514.02
Source: E1-3S
NTL Lab#: A167824
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 11:45
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	10.0	5.00		8/17/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	8.00	2.00		8/17/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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POUCH 340043

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00004
Client Project #: 514.02
Source: E1-4S
NTL Lab#: A167825
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 11:55
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	10.0	5.00		8/17/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	11.0	2.00		8/17/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00005
Client Project #: 514.02
Source: E2-1S
NTL Lab#: A167826
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 12:30
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	<MRL	5.00		8/17/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	2.00	2.00		8/17/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

3330 INDUSTRIAL AVENUE
8005 SCHOON STREET
POUCH 340043

FAIRBANKS, ALASKA 99701
ANCHORAGE, ALASKA 99518
PRUDHOE BAY, ALASKA 99734

(907) 456-3116 • FAX 456-3125
(907) 349-1000 • FAX 349-1015
(907) 659-2145 • FAX 659-2146

Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00005 Duplicate
Client Project #: 514.02
Source: E2-1S
NTL Lab#: A167827
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 12:30
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	<MRL	5.00		8/17/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	13.0	2.00		8/17/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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(907) 659-2145 • FAX 659-2146

Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00006
Client Project #: 514.02
Source: E2-2S
NTL Lab#: A167828
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 12:37
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	5.00	5.00		8/17/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	7.00	2.00		8/17/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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(907) 349-1000 • FAX 349-1016
(907) 659-2145 • FAX 659-2146

Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00007
Client Project #: 514.02
Source: E2-3S
NTL Lab#: A167829
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 12:52
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	15.0	5.00		8/17/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	2.00	2.00		8/17/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

3330 INDUSTRIAL AVENUE
8005 SCHOON STREET
POUCH 340043

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(907) 349-1000 • FAX 349-1016
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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00008
Client Project #: 514.02
Source: E2-4S
NTL Lab#: A167830
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 13:20
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	10.0	5.00		8/17/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	4.00	2.00		8/17/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00009
Client Project #: 514.02
Source: E3-1S
NTL Lab#: A167831
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 14:22
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	10.0	5.00		8/17/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	9.00	2.00		8/17/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00010
Client Project #: 514.02
Source: E3-2S
NTL Lab#: A167832
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 14:42
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	15.0	5.00		8/17/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	7.00	2.00		8/17/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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POUCH 340043

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00011
Client Project #: 514.02
Source: E3-3S
NTL Lab#: A167833
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 15:08
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	15.0	5.00		8/17/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	2.00	2.00		8/17/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

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(907) 659-2145 • FAX 659-2146

Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00012
Client Project #: 514.02
Source: E3-4S
NTL Lab#: A167834
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 15:20
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	5.00	5.00		8/17/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	4.00	2.00		8/17/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00FEC061
Client Project #: 514.02
Source: Chester Creek Rep 1
NTL Lab#: A167835
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 13:02
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	30.0	2.00		8/17/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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(907) 349-1000 • FAX 349-1018
(907) 659-2145 • FAX 659-2146

Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00FEC062
Client Project #: 514.02
Source: Chester Creek Rep 2
NTL Lab#: A167836
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 13:02
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	110	2.00		8/17/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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POUCH 340043

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(907) 349-1000 • FAX 349-1016
(907) 659-2145 • FAX 659-2146

Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00FEC063
Client Project #: 514.02
Source: Ship Creek Rep 1
NTL Lab#: A167837
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 12:35
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	30.0	2.00		8/17/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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POUCH 340043 — PRUDHOE BAY, ALASKA 99734 — (907) 659-2145 • FAX 659-2146

Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00FEC064
Client Project #: 514.02
Source: Ship Creek Rep 2
NTL Lab#: A167838
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 12:35
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	4.00	2.00		8/17/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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POUCH 340043 — PRUDHOE BAY, ALASKA 99734 — (907) 659-2145 · FAX 659-2146

Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00FEC065
Client Project #: 514.02
Source: Fish Creek Rep 1
NTL Lab#: A167839
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 13:12
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	1600	2.00		8/17/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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(907) 349-1000 • FAX 349-1016
(907) 659-2145 • FAX 659-2146

Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00FEC066
Client Project #: 514.02
Source: Fish Creek Rep 2
NTL Lab#: A167840
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 13:12
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	1600	2.00		8/17/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	FROM:	
Northern Testing Laboratory 8005 Schoon Street Anchorage, AK 99518 Attn: Sample Custodian (907)349-1000	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178	
REQUIRED COMPLETION DATE:	**P.O. #:** AK00-1017	**KLI Proj. #:** 514.02

ANALYSIS TYPE: Fecal coliform (SM 9221E).
Data to be reported in printed and digital formats.

MATRIX: Water	**Preservative:** None, 4° C	**Type of Container:** 125-mL plastic

STATION LOCATION	FECAL SAMPLE ID	DATE/TIME	LAB ID	COMMENTS
Effluent Rep1	MOA00FEC059	8/15/00 / 16:10	A167841	
Effluent Rep2	MOA00FEC060	8/15/00 / 16:10	A167842	
Chester Creek Rep1	MOA00FEC061	8/15/00 /		
Chester Creek Rep2	MOA00FEC062	8/15/00 /		
Ship Creek Rep1	MOA00FEC063	8/15/00 /		
Ship Creek Rep2	MOA00FEC064	8/15/00 /		
Fish Creek Rep1	MOA00FEC065	8/15/00 /		
Fish Creek Rep2	MOA00FEC066	8/15/00 /		

RELINQUISHED BY:	DATE/TIME	TRANSPORTED BY:	RECEIVED BY:	DATE/TIME
[illegible]	8/16/00 16:30	Hand	[illegible]	8/16/00 2130
RELINQUISHED BY:	DATE/TIME	TRANSPORTED BY:	RECEIVED BY:	DATE/TIME
RELINQUISHED BY:	DATE/TIME	TRANSPORTED BY:	RECEIVED BY:	DATE/TIME

NORTHERN TESTING LABORATORIES, INC.

3330 INDUSTRIAL AVENUE
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(907) 349-1000 • FAX 349-1016
(907) 659-2145 • FAX 659-2146

Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00FEC059
Client Project #: 514.02
Source: Effluent Rep 1
NTL Lab#: A167841
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 16:10
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	500	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

3330 INDUSTRIAL AVENUE
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(907) 659-2145 • FAX 659-2146

Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00FEC060
Client Project #: 514.02
Source: Effluent Rep 2
NTL Lab#: A167842
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 16:10
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	500	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	FROM:
Northern Testing Laboratory 8005 Schoon Street Anchorage, AK 99518 Attn: Sample Custodian (907)349-1000	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178

REQUIRED COMPLETION DATE:	P.O. #: AK00-1017	KLI Proj. #: 514.02

ANALYSIS TYPE: Fecal coliform (SM 9221E) and color determination (SM 2120B).
Data to be reported in printed and digital formats.

MATRIX: Water	Preservative: None, 4° C	Type of Container: 125-mL plastic or 250-mL (for duplicate Fecal analyses)

all 8/16/00 gms

STATION LOCATION	FECAL SAMPLE ID	COLOR SAMPLE ID	DATE/TIME	LAB ID	COMMENTS
F1-1S	MOA00FEC013	MOA00CLR013	8/15/00 / 1550	A167843 / A167844 dup	
F1-2S	MOA00FEC014	MOA00CLR014	8/15/00 / 1612	A167845	
F1-3S	MOA00FEC015	MOA00CLR015	8/15/00 / 1630	A167846	
F1-4S	MOA00FEC016	MOA00CLR016	8/15/00 / 1650	A167847	
F2-1S	MOA00FEC017	MOA00CLR017	8/15/00 / 1721	A167848 / A167849 dup	
F2-2S	MOA00FEC018	MOA00CLR018	8/15/00 / 1728	A167850	
F2-3S	MOA00FEC019	MOA00CLR019	8/15/00 / 1754	A167851	
F2-4S	MOA00FEC020	MOA00CLR020	8/15/00 / 1810	A167852	
F3-1S	MOA00FEC021	MOA00CLR021	8/15/00 / 1842	A167853 / A167854 dup	
F3-2S	MOA00FEC022	MOA00CLR022	8/15/00 / 1848	A167855	
F3-3S	MOA00FEC023	MOA00CLR023	8/15/00 / 1914	A167856	
F3-4S	MOA00FEC024	MOA00CLR024	8/15/00 / 1945	A167857	

Fecal coliform samples in larger sample bottles (250-mL) should be analyzed in duplicate. One in ten color samples should also be run in duplicate. Please report duplicates with a "D" or "DUP" appended to the SAMPLE ID.

RELINQUISHED BY:	DATE/TIME	TRANSPORTED BY:	RECEIVED BY:	DATE/TIME
Janet M. Savoie	8/16/00 2000 gms	HAND	[illegible]	8/16/00 2130
RELINQUISHED BY:	DATE/TIME	TRANSPORTED BY:	RECEIVED BY:	DATE/TIME
RELINQUISHED BY:	DATE/TIME	TRANSPORTED BY:	RECEIVED BY:	DATE/TIME

NORTHERN TESTING LABORATORIES, INC.

3330 INDUSTRIAL AVENUE
8005 SCHOON STREET
POUCH 340043

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PRUDHOE BAY, ALASKA 99734

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00013
Client Project #: 514.02
Source: F1-1S
NTL Lab#: A167843
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 15:50
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	20.0	5.00		8/17/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	130	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00013 Duplicate
Client Project #: 514.02
Source: F1-1S
NTL Lab#: A167844
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 15:50
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	20.0	5.00		8/17/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	500	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00014
Client Project #: 514.02
Source: F1-2S
NTL Lab#: A167845
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 16:12
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	20.0	5.00		8/17/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	11.0	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00015
Client Project #: 514.02
Source: F1-3S
NTL Lab#: A167846
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 16:30
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	10.0	5.00		8/17/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	4.00	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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POUCH 340043

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00016
Client Project #: 514.02
Source: F1-4S
NTL Lab#: A167847
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 16:50
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	15.0	5.00		8/17/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	2.00	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

3330 INDUSTRIAL AVENUE
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POUCH 340043

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(907) 349-1000 • FAX 349-1016
(907) 659-2145 • FAX 659-2146

Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00017
Client Project #: 514.02
Source: F2-1S
NTL Lab#: A167848
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 17:21
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	<MRL	5.00		8/17/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	13.0	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00017 Duplicate
Client Project #: 514.02
Source: F2-1S
NTL Lab#: A167849
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 17:21
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	30.0	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00018
Client Project #: 514.02
Source: F2-2S
NTL Lab#: A167850
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 17:28
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	10.0	5.00		8/17/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	8.00	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00019
Client Project #: 514.02
Source: F2-3S
NTL Lab#: A167851
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 17:54
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	15.0	5.00		8/17/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	8.00	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

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POUCH 340043

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00020
Client Project #: 514.02
Source: F2-4S
NTL Lab#: A167852
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 18:10
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	10.0	5.00		8/17/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	8.00	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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POUCH 340043

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(907) 659-2145 • FAX 659-2146

Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00021
Client Project #: 514.02
Source: F3-1S
NTL Lab#: A167853
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 18:42
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	<MRL	5.00		8/17/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	4.00	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00021 Duplicate
Client Project #: 514.02
Source: F3-1S
NTL Lab#: A167854
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 18:42
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	<MRL	5.00		8/17/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	4.00	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00022
Client Project #: 514.02
Source: F3-2S
NTL Lab#: A167855
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 18:48
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	10.0	5.00		8/17/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	2.00	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
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Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00023
Client Project #: 514.02
Source: F3-3S
NTL Lab#: A167856
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 19:14
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	15.0	5.00		8/17/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	9.00	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00024
Client Project #: 514.02
Source: F3-4S
NTL Lab#: A167857
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 19:45
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 2120 B						
	Color, True	Unit	15.0	5.00		8/17/00
SM 4500 E						
	Chlorine, Total	mg/L	<MRL	0.0	8/16/00	8/16/00
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	4.00	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	FROM:
Northern Testing Laboratory 8005 Schoon Street Anchorage, AK 99518 Attn: Sample Custodian (907)349-1000	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178

REQUIRED COMPLETION DATE:	P.O. #: AK00-1017	KLI Proj. #: 514.02

ANALYSIS TYPE: Fecal coliform (SM 9221E).
Data to be reported in printed and digital formats. 8/16/00 JMS

MATRIX: Water	Preservative: None, 4° C	Type of Container: 125-mL plastic

STATION LOCATION	FECAL SAMPLE ID	DATE/TIME	LAB ID	COMMENTS
~~IT-0 Rep1~~	~~MOA00FEC041~~	~~8/15/00 / JMS~~	~~A167858~~	no
~~IT-0 Rep2~~	~~MOA00FEC042~~	~~8/15/00 / JMS~~	~~A167859~~	no
IT-1 Rep1	MOA00FEC043	8/15/00 / 2035	A167860	
IT-1 Rep2	MOA00FEC044	8/15/00 / 2035	A167861	
IT-2 Rep1	MOA00FEC045	8/15/00 / 2039	A167862	
IT-2 Rep2	MOA00FEC046	8/15/00 / 2039	A167863	
IT-3 Rep1	MOA00FEC047	8/15/00 / 2043	A167864	
IT-3 Rep2	MOA00FEC048	8/15/00 / 2043	A167865	
IT-4 Rep1	MOA00FEC049	8/15/00 / 2048	A167866	
IT-4 Rep2	MOA00FEC050	8/15/00 / 2048	A167867	
IT-5 Rep1	MOA00FEC051	8/15/00 / 2030	A167868	
IT-5 Rep2	MOA00FEC052	8/15/00 / 2030	A167869	
IT-6 Rep1	MOA00FEC053	8/15/00 / 2025	A167870	
IT-6 Rep2	MOA00FEC054	8/15/00 / 2025	A167871	

RELINQUISHED BY:	DATE/TIME	TRANSPORTED BY:	RECEIVED BY:	DATE/TIME
JM Savoie	8/16/00 2140	HAND	[illegible]	8/16/00 2130
RELINQUISHED BY:	DATE/TIME	TRANSPORTED BY:	RECEIVED BY:	DATE/TIME
RELINQUISHED BY:	DATE/TIME	TRANSPORTED BY:	RECEIVED BY:	DATE/TIME

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	FROM:
Northern Testing Laboratory 8005 Schoon Street Anchorage, AK 99518 Attn: Sample Custodian (907)349-1000	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178

REQUIRED COMPLETION DATE:	P.O. #: AK00-1017	KLI Proj. #: 514.02

ANALYSIS TYPE: Fecal coliform (SM 9221E).
Data to be reported in printed and digital formats. all 8/16/00 JMS

MATRIX: Water	Preservative: None, 4° C	Type of Container: 125-mL plastic

STATION LOCATION	FECAL SAMPLE ID	DATE/TIME	LAB ID	COMMENTS
IT-7 Rep1	MOA00FEC055	8/15/00 / 2020	A167872	
IT-7 Rep2	MOA00FEC056	8/15/00 / 2020	A167873	
IT-C4 Rep1	MOA00FEC057	8/15/00 / 2105	A167874	
IT-C4 Rep2	MOA00FEC058	8/15/00 / 2105	A167875	

RELINQUISHED BY:	DATE/TIME	TRANSPORTED BY:	RECEIVED BY:	DATE/TIME
JM Savoie	8/16/00/2140	HAND	[illegible]	8/16/00 2130
RELINQUISHED BY:	DATE/TIME	TRANSPORTED BY:	RECEIVED BY:	DATE/TIME
RELINQUISHED BY:	DATE/TIME	TRANSPORTED BY:	RECEIVED BY:	DATE/TIME

NORTHERN TESTING LABORATORIES, INC.

3330 INDUSTRIAL AVENUE
8005 SCHOON STREET
POUCH 340043

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PRUDHOE BAY, ALASKA 99734

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(907) 349-1000 • FAX 349-1016
(907) 659-2145 • FAX 659-2146

Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00FEC043
Client Project #: 514.02
Source: IT-1 Rep 1
NTL Lab#: A167860
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 20:35
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	8.00	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00FEC044
Client Project #: 514.02
Source: IT-1 Rep 2
NTL Lab#: A167861
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 20:35
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	4.00	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

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403 W. 8th Avenue
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Attn: Janet Savoie

Client ID: MOA00FEC045
Client Project #: 514.02
Source: IT-2 Rep 1
NTL Lab#: A167862
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 20:39
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	2.00	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00FEC046
Client Project #: 514.02
Source: IT-2 Rep 2
NTL Lab#: A167863
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 20:39
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	4.00	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00FEC047
Client Project #: 514.02
Source: IT-3 Rep 1
NTL Lab#: A167864
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 20:43
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	4.00	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00FEC048
Client Project #: 514.02
Source: IT-3 Rep 2
NTL Lab#: A167865
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 20:43
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	2.00	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00FEC049
Client Project #: 514.02
Source: IT-4 Rep 1
NTL Lab#: A167866
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 20:48
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	7.00	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

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403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00FEC050
Client Project #: 514.02
Source: IT-4 Rep 2
NTL Lab#: A167867
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 20:48
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	30.0	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

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Kinnetic Laboratories
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Attn: Janet Savoie

Client ID: MOA00FEC051
Client Project #: 514.02
Source: IT-5 Rep 1
NTL Lab#: A167868
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 20:30
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	2.00	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

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Attn: Janet Savoie

Client ID: MOA00FEC052
Client Project #: 514.02
Source: IT-5 Rep 2
NTL Lab#: A167869
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 20:30
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	17.0	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00FEC053
Client Project #: 514.02
Source: IT-6 Rep 1
NTL Lab#: A167870
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 20:25
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	8.00	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00FEC054
Client Project #: 514.02
Source: IT-6 Rep 2
NTL Lab#: A167871
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 20:25
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	13.0	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00FEC055
Client Project #: 514.02
Source: IT-7 Rep 1
NTL Lab#: A167872
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 20:20
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	13.0	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

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Attn: Janet Savoie

Client ID: MOA00FEC056
Client Project #: 514.02
Source: IT-7 Rep 2
NTL Lab#: A167873
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 20:20
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	4.00	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

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Attn: Janet Savoie

Client ID: MOA00FEC057
Client Project #: 514.02
Source: IT-C4 Rep 1
NTL Lab#: A167874
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 21:05
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	4.00	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
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Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00FEC058
Client Project #: 514.02
Source: IT-C4 Rep 2
NTL Lab#: A167875
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/16/00
Sample Date: 8/16/00
Sample Time: 21:05
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9221E						
	Fecal Coliform, MPN	mpn/100mL	23.0	2.00		8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	FROM:
Northern Testing Laboratory 8005 Schoon Street Anchorage, AK 99518 Attn: Sample Custodian (907)349-1000	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178

REQUIRED COMPLETION DATE:	P.O. #: AK00-1017	KLI Proj. #: 514.02

ANALYSIS TYPE: Enterococcus (SM 9230B).
Data to be reported in printed and digital formats.

MATRIX: Water	Preservative: None, 4° C	Type of Container: 125-mL plastic

STATION LOCATION	FECAL SAMPLE ID	DATE/TIME	LAB ID	COMMENTS
Effluent Rep1	MOA00ENT001	8/17/00 / 1600	A167~~8~~928	(0.7 mg/l Cl_2)
Effluent Rep2	MOA00ENT002	8/17/00 / 1600	A167929	" " "

RELINQUISHED BY:	DATE/TIME	TRANSPORTED BY:	RECEIVED BY:	DATE/TIME
[signature]	8/17/00 1645	Land	[signature]	8/17/00 1645
RELINQUISHED BY:	DATE/TIME	TRANSPORTED BY:	RECEIVED BY:	DATE/TIME
RELINQUISHED BY:	DATE/TIME	TRANSPORTED BY:	RECEIVED BY:	DATE/TIME

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00ENT001
Client Project #: 514.02
Source: Effluent Rep1
NTL Lab#: A167928
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/17/00
Sample Date: 8/17/00
Sample Time: 16:00
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9230 B						
	Enterococci MPN	mpn/100mL	>2419.2			8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00ENT002
Client Project #: 514.02
Source: Effluent Rep2
NTL Lab#: A167929
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/17/00
Sample Date: 8/17/00
Sample Time: 16:00
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
SM 9230 B						
	Enterococci MPN	mpn/100mL	>2419.2			8/18/00

Reported By: Isaac A. Maceo
Anchorage Microbiology Supervisor

KINNETIC LABORATORIES, INC. CHAIN OF CUSTODY RECORD

LABORATORY:	**FROM:**	
Northern Testing Laboratory 8005 Schoon Street Anchorage, AK 99518 Attn: Sample Custodian (907)349-1000	Kinnetic Laboratories, Inc. 403 West 8th Avenue Anchorage, AK 99501 Attn: Janet Savoie (907)276-6178	
REQUIRED COMPLETION DATE: 30 days	**P.O. #:** AK00-1015	**KLI Proj. #:** 514.02

ANALYSIS TYPE: EPA Method 610. Method detection limits (MDL) as per method. Please report all values (appropriately qualified if below MDL).

MATRIX: Water	**Preservative:** Sodium Thiosulfate, 4°C	**Type of Container:** 1-L amber glass

SAMPLE IDENTIFICATION #	STATION LOCATION	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	CONDITION UPON RECEIPT	ASSIGNED LABORATORY NUMBER
MOA00TAH001	F1-1S	1	8/16/00	1550		A167930
MOA00TAH002	F1-2S	1	8/16/00	1612		A167931
MOA00TAH003	F1-3S	4	8/16/00	1630		A167932
MOA00TAH004	C1-1S	1	8/14/00	1459	no preservative	A167933
MOA00TAH005	C1-2S	1	8/14/00	1518	no preservative	A167934
MOA00TAH006	C1-3S	1	8/14/00	1540	no preservative	A167935
MOA00TAH007	EFFLUENT	1	8/16/00	1605		A167936
MOA00TAH003dup						A167937
MOA00TAH003spike						A167938
MOA00TAH003spikedup						A167939

JMS

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION IF APPLICABLE, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: PLEASE REPORT ALL QA/QC, INCLUDING METHOD BLANKS, MS/SDs, DUPLICATES, ETC.

Please return completed original COC to KLI Anchorage.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
Janet M. Savoie	8/17/00 / 1200	~~FED EX~~ hand	[illegible]	8/17/00 1645
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME

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POUCH 340043 PRUDHOE BAY, ALASKA 99734 (907) 659-2145 • FAX 659-2146

Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00TAH001
Client Project #: 514.02
Source: F1-1S
NTL Lab#: A167930
Sample Matrix: Water
Comments:

Report Date: 8/31/00
Date Arrived: 8/17/00
Sample Date: 8/16/00
Sample Time: 15:50
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
EPA 625 (610 List)						
	Acenaphthene	ug/L	<MRL	1.01	8/23/00	8/26/00
	Acenaphthylene	ug/L	<MRL	1.01		
	Anthracene	ug/L	<MRL	1.01		
	Benzo(a)anthracene	ug/L	<MRL	1.01		
	Benzo(b)fluoranthene	ug/L	<MRL	1.01		
	Benzo(k)fluoranthene	ug/L	<MRL	1.01		
	Benzo(a)pyrene	ug/L	<MRL	1.01		
	Benzo(g,h,i)perylene	ug/L	<MRL	1.01		
	Chrysene	ug/L	<MRL	1.01		
	Dibenzo(a,h)anthracene	ug/L	<MRL	1.01		
	Fluoranthene	ug/L	<MRL	1.01		
	Fluorene	ug/L	<MRL	1.01		
	Indeno(1,2,3-cd)pyrene	ug/L	<MRL	1.01		
	Naphthalene	ug/L	<MRL	1.01		
	Phenanthrene	ug/L	<MRL	1.01		
	Pyrene	ug/L	<MRL	1.01		
	Total Polynuclear Aromatic Hydrocarbons	ug/L	<MRL	1.01		
	2-Fluorobiphenyl (Surr)	% Recovery	38 M			
	Nitrobenzene-d5 (Surr)	% Recovery	36			
	p-Terphenyl-d14 (Surr)	% Recovery	71			

Wendy M. Mitchell

Reported By: Wendy M. Mitchell
Anchorage Chemistry Supervisor

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00TAH002
Client Project #:
Source: F1-2S
NTL Lab#: A167931
Sample Matrix: Water
Comments:

Report Date: 8/31/00
Date Arrived: 8/17/00
Sample Date: 8/16/00
Sample Time: 16:12
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
EPA 625 (610 List)						
	Acenaphthene	ug/L	<MRL	1.01	8/23/00	8/26/00
	Acenaphthylene	ug/L	<MRL	1.01		
	Anthracene	ug/L	<MRL	1.01		
	Benzo(a)anthracene	ug/L	<MRL	1.01		
	Benzo(b)fluoranthene	ug/L	<MRL	1.01		
	Benzo(k)fluoranthene	ug/L	<MRL	1.01		
	Benzo(a)pyrene	ug/L	<MRL	1.01		
	Benzo(g,h,i)perylene	ug/L	<MRL	1.01		
	Chrysene	ug/L	<MRL	1.01		
	Dibenzo(a,h)anthracene	ug/L	<MRL	1.01		
	Fluoranthene	ug/L	<MRL	1.01		
	Fluorene	ug/L	<MRL	1.01		
	Indeno(1,2,3-cd)pyrene	ug/L	<MRL	1.01		
	Naphthalene	ug/L	<MRL	1.01		
	Phenanthrene	ug/L	<MRL	1.01		
	Pyrene	ug/L	<MRL	1.01		
	Total Polynuclear Aromatic Hydrocarbons	ug/L	<MRL	1.01		
	2-Fluorobiphenyl (Surr)	% Recovery	45			
	Nitrobenzene-d5 (Surr)	% Recovery	47			
	p-Terphenyl-d14 (Surr)	% Recovery	76			

Wendy M Mitchell

Reported By: Wendy M. Mitchell
Anchorage Chemistry Supervisor

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00TAH003
Client Project #: 514.02
Source: F1-3S
NTL Lab#: A167932
Sample Matrix: Water
Comments:

Report Date: 8/31/00
Date Arrived: 8/17/00
Sample Date: 8/16/00
Sample Time: 16:30
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
EPA 625 (610 List)						
	Acenaphthene	ug/L	<MRL	1.01	8/23/00	8/26/00
	Acenaphthylene	ug/L	<MRL	1.01		
	Anthracene	ug/L	<MRL	1.01		
	Benzo(a)anthracene	ug/L	<MRL	1.01		
	Benzo(b)fluoranthene	ug/L	<MRL	1.01		
	Benzo(k)fluoranthene	ug/L	<MRL	1.01		
	Benzo(a)pyrene	ug/L	<MRL	1.01		
	Benzo(g,h,i)perylene	ug/L	<MRL	1.01		
	Chrysene	ug/L	<MRL	1.01		
	Dibenzo(a,h)anthracene	ug/L	<MRL	1.01		
	Fluoranthene	ug/L	<MRL	1.01		
	Fluorene	ug/L	<MRL	1.01		
	Indeno(1,2,3-cd)pyrene	ug/L	<MRL	1.01		
	Naphthalene	ug/L	<MRL	1.01		
	Phenanthrene	ug/L	<MRL	1.01		
	Pyrene	ug/L	<MRL	1.01		
	Total Polynuclear Aromatic Hydrocarbons	ug/L	<MRL	1.01		
	2-Fluorobiphenyl (Surr)	% Recovery	51			
	Nitrobenzene-d5 (Surr)	% Recovery	61			
	p-Terphenyl-d14 (Surr)	% Recovery	73			

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403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00TAH004
Client Project #: 514.02
Source: C1-1S
NTL Lab#: A167933
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/17/00
Sample Date: 8/14/00
Sample Time: 14:59
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
EPA 625 (610 List)						
	Acenaphthene	ug/L	<MRL	1.01	8/21/00	8/25/00
	Acenaphthylene	ug/L	<MRL	1.01		
	Anthracene	ug/L	<MRL	1.01		
	Benzo(a)anthracene	ug/L	<MRL	1.01		
	Benzo(b)fluoranthene	ug/L	<MRL	1.01		
	Benzo(k)fluoranthene	ug/L	<MRL	1.01		
	Benzo(a)pyrene	ug/L	<MRL	1.01		
	Benzo(g,h,i)perylene	ug/L	<MRL	1.01		
	Chrysene	ug/L	<MRL	1.01		
	Dibenzo(a,h)anthracene	ug/L	<MRL	1.01		
	Fluoranthene	ug/L	<MRL	1.01		
	Fluorene	ug/L	<MRL	1.01		
	Indeno(1,2,3-cd)pyrene	ug/L	<MRL	1.01		
	Naphthalene	ug/L	<MRL	1.01		
	Phenanthrene	ug/L	<MRL	1.01		
	Pyrene	ug/L	<MRL	1.01		
	Total Polynuclear Aromatic Hydrocarbons	ug/L	<MRL	1.01		
	2-Fluorobiphenyl (Surr)	% Recovery	62			
	Nitrobenzene-d5 (Surr)	% Recovery	65			
	p-Terphenyl-d14 (Surr)	% Recovery	83			

wendy m mitchell

Reported By: Wendy M. Mitchell
Anchorage Chemistry Supervisor

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00TAH005
Client Project #: 514.02
Source: C1-2S
NTL Lab#: A167934
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/17/00
Sample Date: 8/14/00
Sample Time: 15:18
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
EPA 625 (610 List)						
	Acenaphthene	ug/L	<MRL	1.01	8/21/00	8/25/00
	Acenaphthylene	ug/L	<MRL	1.01		
	Anthracene	ug/L	<MRL	1.01		
	Benzo(a)anthracene	ug/L	<MRL	1.01		
	Benzo(b)fluoranthene	ug/L	<MRL	1.01		
	Benzo(k)fluoranthene	ug/L	<MRL	1.01		
	Benzo(a)pyrene	ug/L	<MRL	1.01		
	Benzo(g,h,i)perylene	ug/L	<MRL	1.01		
	Chrysene	ug/L	<MRL	1.01		
	Dibenzo(a,h)anthracene	ug/L	<MRL	1.01		
	Fluoranthene	ug/L	<MRL	1.01		
	Fluorene	ug/L	<MRL	1.01		
	Indeno(1,2,3-cd)pyrene	ug/L	<MRL	1.01		
	Naphthalene	ug/L	<MRL	1.01		
	Phenanthrene	ug/L	<MRL	1.01		
	Pyrene	ug/L	<MRL	1.01		
	Total Polynuclear Aromatic Hydrocarbons	ug/L	<MRL	1.01		
	2-Fluorobiphenyl (Surr)	% Recovery	59			
	Nitrobenzene-d5 (Surr)	% Recovery	65			
	p-Terphenyl-d14 (Surr)	% Recovery	92			

Wendy M Mitchell

Reported By: Wendy M. Mitchell
Anchorage Chemistry Supervisor

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00TAH006
Client Project #: 514.02
Source: C1-3S
NTL Lab#: A167935
Sample Matrix: Water
Comments:

Report Date: 8/29/00
Date Arrived: 8/17/00
Sample Date: 8/14/00
Sample Time: 15:40
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
EPA 625 (610 List)						
	Acenaphthene	ug/L	<MRL	1.01	8/21/00	8/25/00
	Acenaphthylene	ug/L	<MRL	1.01		
	Anthracene	ug/L	<MRL	1.01		
	Benzo(a)anthracene	ug/L	<MRL	1.01		
	Benzo(b)fluoranthene	ug/L	<MRL	1.01		
	Benzo(k)fluoranthene	ug/L	<MRL	1.01		
	Benzo(a)pyrene	ug/L	<MRL	1.01		
	Benzo(g,h,i)perylene	ug/L	<MRL	1.01		
	Chrysene	ug/L	<MRL	1.01		
	Dibenzo(a,h)anthracene	ug/L	<MRL	1.01		
	Fluoranthene	ug/L	<MRL	1.01		
	Fluorene	ug/L	<MRL	1.01		
	Indeno(1,2,3-cd)pyrene	ug/L	<MRL	1.01		
	Naphthalene	ug/L	<MRL	1.01		
	Phenanthrene	ug/L	<MRL	1.01		
	Pyrene	ug/L	<MRL	1.01		
	Total Polynuclear Aromatic Hydrocarbons	ug/L	<MRL	1.01		
	2-Fluorobiphenyl (Surr)	% Recovery	65			
	Nitrobenzene-d5 (Surr)	% Recovery	69			
	p-Terphenyl-d14 (Surr)	% Recovery	84			

Wendy M Mitchell

Reported By: Wendy M. Mitchell
Anchorage Chemistry Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00TAH007
Client Project #: 514.02
Source: Effluent
NTL Lab#: A167936
Sample Matrix: Water
Comments:

Report Date: 8/31/00
Date Arrived: 8/17/00
Sample Date: 8/16/00
Sample Time: 16:05
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
EPA 625 (610 List)						
	Acenaphthene	ug/L	<MRL	1.06	8/23/00	8/26/00
	Acenaphthylene	ug/L	<MRL	1.06		
	Anthracene	ug/L	<MRL	1.06		
	Benzo(a)anthracene	ug/L	<MRL	1.06		
	Benzo(b)fluoranthene	ug/L	<MRL	1.06		
	Benzo(k)fluoranthene	ug/L	<MRL	1.06		
	Benzo(a)pyrene	ug/L	<MRL	1.06		
	Benzo(g,h,i)perylene	ug/L	<MRL	1.06		
	Chrysene	ug/L	<MRL	1.06		
	Dibenzo(a,h)anthracene	ug/L	<MRL	1.06		
	Fluoranthene	ug/L	<MRL	1.06		
	Fluorene	ug/L	<MRL	1.06		
	Indeno(1,2,3-cd)pyrene	ug/L	<MRL	1.06		
	Naphthalene	ug/L	<MRL	1.06		
	Phenanthrene	ug/L	<MRL	1.06		
	Pyrene	ug/L	<MRL	1.06		
	Total Polynuclear Aromatic Hydrocarbons	ug/L	<MRL	1.06		
	2-Fluorobiphenyl (Surr)	% Recovery	55			
	Nitrobenzene-d5 (Surr)	% Recovery	57			
	p-Terphenyl-d14 (Surr)	% Recovery	69			

Wendy M Mitchell

Reported By: Wendy M. Mitchell
Anchorage Chemistry Supervisor

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00TAH003 Duplicate
Client Project #: 514.02
Source: F1-3S
NTL Lab#: A167937
Sample Matrix: Water
Comments:

Report Date: 8/31/00
Date Arrived: 8/17/00
Sample Date: 8/16/00
Sample Time: 16:30
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
EPA 625 (610 List)						
	Acenaphthene	ug/L	<MRL	1.01	8/23/00	8/26/00
	Acenaphthylene	ug/L	<MRL	1.01		
	Anthracene	ug/L	<MRL	1.01		
	Benzo(a)anthracene	ug/L	<MRL	1.01		
	Benzo(b)fluoranthene	ug/L	<MRL	1.01		
	Benzo(k)fluoranthene	ug/L	<MRL	1.01		
	Benzo(a)pyrene	ug/L	<MRL	1.01		
	Benzo(g,h,i)perylene	ug/L	<MRL	1.01		
	Chrysene	ug/L	<MRL	1.01		
	Dibenzo(a,h)anthracene	ug/L	<MRL	1.01		
	Fluoranthene	ug/L	<MRL	1.01		
	Fluorene	ug/L	<MRL	1.01		
	Indeno(1,2,3-cd)pyrene	ug/L	<MRL	1.01		
	Naphthalene	ug/L	<MRL	1.01		
	Phenanthrene	ug/L	<MRL	1.01		
	Pyrene	ug/L	<MRL	1.01		
	Total Polynuclear Aromatic Hydrocarbons	ug/L	<MRL	1.01		
	2-Fluorobiphenyl (Surr)	% Recovery	57			
	Nitrobenzene-d5 (Surr)	% Recovery	69			
	p-Terphenyl-d14 (Surr)	% Recovery	77			

wendy m mitchell

Reported By: Wendy M. Mitchell
Anchorage Chemistry Supervisor

NORTHERN TESTING LABORATORIES, INC.

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00TAH003 Matrix Spike
Client Project #: 514.02
Source: F1-3S
NTL Lab#: A167938
Sample Matrix: Water
Comments:

Report Date: 8/31/00
Date Arrived: 8/17/00
Sample Date: 8/16/00
Sample Time: 16:30
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
EPA 625 (610 List)						
	Acenaphthene	ug/L	6.16	1.01	8/23/00	8/26/00
	Acenaphthylene	ug/L	5.74	1.01		
	Anthracene	ug/L	7.10	1.01		
	Benzo(a)anthracene	ug/L	6.37	1.01		
	Benzo(b)fluoranthene	ug/L	5.61	1.01		
	Benzo(k)fluoranthene	ug/L	5.41	1.01		
	Benzo(a)pyrene	ug/L	4.71	1.01		
	Benzo(g,h,i)perylene	ug/L	5.04	1.01		
	Chrysene	ug/L	7.17	1.01		
	Dibenzo(a,h)anthracene	ug/L	4.48	1.01		
	Fluoranthene	ug/L	8.15	1.01		
	Fluorene	ug/L	6.46	1.01		
	Indeno(1,2,3-cd)pyrene	ug/L	5.90	1.01		
	Naphthalene	ug/L	5.68	1.01		
	Phenanthrene	ug/L	7.80	1.01		
	Pyrene	ug/L	7.14	1.01		
	Total Polynuclear Aromatic Hydrocarbons	ug/L	98.9	1.01		
	2-Fluorobiphenyl (Surr)	% Recovery	59			
	Nitrobenzene-d5 (Surr)	% Recovery	67			
	p-Terphenyl-d14 (Surr)	% Recovery	77			

Wendy M Mitchell

Reported By: Wendy M. Mitchell
Anchorage Chemistry Supervisor

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Kinnetic Laboratories
403 W. 8th Avenue
Anchorage, AK 99501

Attn: Janet Savoie

Client ID: MOA00TAH003 Matrix Spike Duplicate
Client Project #: 514.02
Source: F1-3S
NTL Lab#: A167939
Sample Matrix: Water
Comments:

Report Date: 8/31/00
Date Arrived: 8/17/00
Sample Date: 8/16/00
Sample Time: 16:30
Collected By:

** Legend **

MRL = Method Report Level
MCL = Max. Contaminant Level
B = Present In Method Blank
E = Estimated Value
M = Matrix Interference
H = Above MCL
D = Lost To Dilution

Method	Parameter	Units	Result	MRL	Date Prepared	Date Analyzed
EPA 625 (610 List)						
	Acenaphthene	ug/L	5.47	1.01	8/23/00	8/26/00
	Acenaphthylene	ug/L	5.24	1.01		
	Anthracene	ug/L	6.47	1.01		
	Benzo(a)anthracene	ug/L	6.05	1.01		
	Benzo(b)fluoranthene	ug/L	5.44	1.01		
	Benzo(k)fluoranthene	ug/L	5.31	1.01		
	Benzo(a)pyrene	ug/L	4.76	1.01		
	Benzo(g,h,i)perylene	ug/L	4.94	1.01		
	Chrysene	ug/L	6.83	1.01		
	Dibenzo(a,h)anthracene	ug/L	4.11	1.01		
	Fluoranthene	ug/L	6.57	1.01		
	Fluorene	ug/L	5.67	1.01		
	Indeno(1,2,3-cd)pyrene	ug/L	5.69	1.01		
	Naphthalene	ug/L	4.86	1.01		
	Phenanthrene	ug/L	7.25	1.01		
	Pyrene	ug/L	7.85	1.01		
	Total Polynuclear Aromatic Hydrocarbons	ug/L	92.5	1.01		
	2-Fluorobiphenyl (Surr)	% Recovery	53			
	Nitrobenzene-d5 (Surr)	% Recovery	61			
	p-Terphenyl-d14 (Surr)	% Recovery	81			

Wendy M Mitchell

Reported By: Wendy M. Mitchell
Anchorage Chemistry Supervisor

APPENDIX D

Receiving Water Quality Monitoring

D4 Kinnetic Laboratories, Inc.

Salinity, DO's, and Turbiditys

KINNETIC LABORATORIES, INC.
DISSOLVED OXYGEN DATA LOG

CLIENT: MUNICIPALITY OF ANCHORAGE AWWU
PROJECT: SUMMER 2000 PT WORONZOF WATER QUALITY

CALIBRATION STANDARDS:

	DATE	TIME	STD 1	STD 2	X STD	F=20/XSTD
D.O. (#1)	8/14/00	20:12	20.02	20.05	20.035	**0.998**
D.O. (#2)	8/17/00	00:09	19.41	19.43	19.42	**1.029**

SAMPLE ID	STATION	SAMPLE DATE	SAMPLE TIME	ANALYSIS DATE	ANALYSIS TIME	TITRANT mL	FACTOR	D.O. mg/L
MOA00DOX0001	E1-1S	8/16/00	11:26	8/16/00	15:38	9.51	0.998	9.49
MOA00DOX0002	E1-1M	8/16/00	11:26	8/16/00	15:42	9.41	0.998	9.39
MOA00DOX0003	E1-1B	8/16/00	11:26	8/16/00	15:47	9.51	0.998	9.49
MOA00DOX0004	E1-2S	8/16/00	11:35	8/16/00	15:50	9.36	0.998	9.34
MOA00DOX0005	E1-2M	8/16/00	11:35	8/16/00	16:09	9.32	0.998	9.30
MOA00DOX0006	E1-2B	8/16/00	11:35	8/16/00	16:13	9.40	0.998	9.38
MOA00DOX0007	E1-3S	8/16/00	11:45	8/16/00	16:18	9.44	0.998	9.42
MOA00DOX0008	E1-3M	8/16/00	11:45	8/16/00	16:21	9.52	0.998	9.50
MOA00DOX0009	E1-3B	8/16/00	11:45	8/16/00	16:37	9.48	0.998	9.46
MOA00DOX0010	E1-4S	8/16/00	11:55	8/16/00	16:41	9.46	0.998	9.44
MOA00DOX0011	E1-4M	8/16/00	11:55	8/16/00	16:45	9.43	0.998	9.41
MOA00DOX0012	E1-4B	8/16/00	11:55	8/16/00	16:50	9.31	0.998	9.29
MOA00DOX0013	E2-1S	8/16/00	12:30	8/16/00	17:04	9.64	0.998	9.62
MOA00DOX0014	E2-1M	8/16/00	12:30	8/16/00	17:07	9.45	0.998	9.43
MOA00DOX0015	E2-1B	8/16/00	12:30	8/16/00	17:12	9.50	0.998	9.48
MOA00DOX0016	E2-2S	8/16/00	12:37	8/16/00	17:14	9.52	0.998	9.50
MOA00DOX0017	E2-2M	8/16/00	12:37	8/16/00	17:26	9.55	0.998	9.53
MOA00DOX0018	E2-2B	8/16/00	12:37	8/16/00	17:29	9.50	0.998	9.48
MOA00DOX0019	E2-3S	8/16/00	12:52	8/16/00	17:33	9.51	0.998	9.49
MOA00DOX0020	E2-3M	8/16/00	12:52	8/16/00	17:36	9.51	0.998	9.49
MOA00DOX0021	E2-3B	8/16/00	12:52	8/16/00	17:49	9.42	0.998	9.40
MOA00DOX0022	E2-4S	8/16/00	13:20	8/16/00	17:53	9.49	0.998	9.47
MOA00DOX0023	E2-4M	8/16/00	13:20	8/16/00	17:58	9.49	0.998	9.47
MOA00DOX0024	E2-4B	8/16/00	13:20	8/16/00	18:00	9.54	0.998	9.52
MOA00DOX0025	E3-1S	8/16/00	14:22	8/16/00	19:52	9.50	0.998	9.48
MOA00DOX0026	E3-1M	8/16/00	14:22	8/16/00	19:55	9.55	0.998	9.53
MOA00DOX0027	E3-1B	8/16/00	14:22	8/16/00	20:06	9.50	0.998	9.48
MOA00DOX0028	E3-2S	8/16/00	14:43	8/16/00	20:09	9.60	0.998	9.58
MOA00DOX0029	E3-2M	8/16/00	14:43	8/16/00	20:30	9.50	0.998	9.48
MOA00DOX0030	E3-2B	8/16/00	14:43	8/16/00	20:32	9.43	0.998	9.41
MOA00DOX0031	E3-3S	8/16/00	15:08	8/16/00	20:38	9.62	0.998	9.60
MOA00DOX0032	E3-3M	8/16/00	15:08	8/16/00	20:41	9.60	0.998	9.58
MOA00DOX0033	E3-3B	8/16/00	15:08	8/16/00	20:50	9.51	0.998	9.49
MOA00DOX0034	E3-4S	8/16/00	15:20	8/16/00	20:53	9.40	0.998	9.38
MOA00DOX0035	E3-4M	8/16/00	15:20	8/16/00	21:12	9.53	0.998	9.51
MOA00DOX0036	E3-4B	8/16/00	15:20	8/16/00	21:16	9.62	0.998	9.60

ANALYZED BY: Steen Trump DATE: 8-17-00 SIGNATURE: Steen Trump

KINNETIC LABORATORIES, INC.
DISSOLVED OXYGEN DATA LOG

CLIENT: MUNICIPALITY OF ANCHORAGE AWWU
PROJECT: SUMMER 2000 PT WORONZOF WATER QUALITY

CALIBRATION STANDARDS:

	DATE	TIME	STD 1	STD 2	X STD	F=20/XSTD
D.O. (#1)	8/14/00	20:12	20.02	20.05	20.035	**0.998**
D.O. (#2)	8/17/00	00:09	19.41	19.43	19.42	**1.029**

SAMPLE ID	STATION	SAMPLE DATE	SAMPLE TIME	ANALYSIS DATE	ANALYSIS TIME	TITRANT mL	FACTOR	D.O. mg/L
MOA00DOX0037	F1-1S	8/16/00	15:50	8/16/00	21:21	9.20	0.998	9.18
MOA00DOX0038	F1-1M	8/16/00	15:50	8/16/00	21:25	9.25	0.998	9.23
MOA00DOX0039	F1-1B	8/16/00	15:50	8/16/00	21:31	9.46	0.998	9.44
MOA00DOX0040	F1-2S	8/16/00	16:12	8/16/00	21:34	9.48	0.998	9.46
MOA00DOX0041	F1-2M	8/16/00	16:12	8/16/00	21:54	9.56	0.998	9.54
MOA00DOX0042	F1-2B	8/16/00	16:12	8/16/00	21:57	9.52	0.998	9.50
MOA00DOX0043	F1-3S	8/16/00	16:30	8/16/00	22:02	9.58	0.998	9.56
MOA00DOX0044	F1-3M	8/16/00	16:30	8/16/00	22:05	9.61	0.998	9.59
MOA00DOX0045	F1-3B	8/16/00	16:30	8/16/00	22:11	9.47	0.998	9.45
MOA00DOX0046	F1-4S	8/16/00	16:50	8/16/00	22:14	9.44	0.998	9.42
MOA00DOX0047	F1-4M	8/16/00	16:50	8/16/00	22:32	9.51	0.998	9.49
MOA00DOX0048	F1-4B	8/16/00	16:50	8/16/00	22:37	9.61	0.998	9.59
MOA00DOX0049	F2-1S	8/16/00	17:21	8/17/00	0:09	9.10	1.029	9.36
MOA00DOX0050	F2-1M	8/16/00	17:21	8/17/00	0:12	9.17	1.029	9.44
MOA00DOX0051	F2-1B	8/16/00	17:21	8/17/00	0:15	8.97	1.029	9.23
MOA00DOX0052	F2-2S	8/16/00	17:28	8/17/00	0:18	8.96	1.029	9.22
MOA00DOX0053	F2-2M	8/16/00	17:28	8/17/00	0:20	8.88	1.029	9.14
MOA00DOX0054	F2-2B	8/16/00	17:28	8/17/00	0:22	9.04	1.029	9.30
MOA00DOX0055	F2-3S	8/16/00	17:54	8/17/00	0:30	9.09	1.029	9.35
MOA00DOX0056	F2-3M	8/16/00	17:54	8/17/00	0:33	9.08	1.029	9.34
MOA00DOX0057	F2-3B	8/16/00	17:54	8/17/00	0:44	9.04	1.029	9.30
MOA00DOX0058	F2-4S	8/16/00	18:10	8/17/00	0:41	9.07	1.029	9.33
MOA00DOX0059	F2-4M	8/16/00	18:10	8/17/00	0:46	9.14	1.029	9.41
MOA00DOX0060	F2-4B	8/16/00	18:10	8/17/00	0:36	9.06	1.029	9.32
MOA00DOX0061	F3-1S	8/16/00	18:42	8/17/00	0:50	9.03	1.029	9.29
MOA00DOX0062	F3-1M	8/16/00	18:42	8/17/00	0:56	8.96	1.029	9.22
MOA00DOX0063	F3-1B	8/16/00	18:42	8/17/00	1:03	8.93	1.029	9.19
MOA00DOX0064	F3-2S	8/16/00	18:48	8/17/00	1:08	8.94	1.029	9.20
MOA00DOX0065	F3-2M	8/16/00	18:48	8/17/00	1:11	9.11	1.029	9.37
MOA00DOX0066	F3-2B	8/16/00	18:48	8/17/00	1:14	9.00	1.029	9.26
MOA00DOX0067	F3-3S	8/16/00	19:14	8/17/00	1:17	9.02	1.029	9.28
MOA00DOX0068	F3-3M	8/16/00	19:14	8/17/00	1:20	9.00	1.029	9.26
MOA00DOX0069	F3-3B	8/16/00	19:14	8/17/00	1:23	9.22	1.029	9.49
MOA00DOX0070	F3-4S	8/16/00	19:45	8/17/00	1:27	9.21	1.029	9.48
MOA00DOX0071	F3-4M	8/16/00	19:45	8/17/00	1:30	8.95	1.029	9.21
MOA00DOX0072	F3-4B	8/16/00	19:45	8/17/00	1:32	8.82	1.029	9.08

ANALYZED BY: Steen Trump DATE: 8-16/17-00 SIGNATURE: Steen Trump

KINNETIC LABORATORIES, INC.
DISSOLVED OXYGEN DATA LOG

CLIENT: MUNICIPALITY OF ANCHORAGE AWWU
PROJECT: SUMMER 2000 PT WORONZOF WATER QUALITY

CALIBRATION STANDARDS:

	DATE	TIME	STD 1	STD 2	X STD	F=20/XSTD
D.O. (#1)	8/14/00	20:12	20.02	20.05	20.035	**0.998**
D.O. (#2)	8/17/00	00:09	19.41	19.43	19.42	**1.029**

SAMPLE ID	STATION	SAMPLE DATE	SAMPLE TIME	ANALYSIS DATE	ANALYSIS TIME	TITRANT mL	FACTOR	D.O. mg/L
MOA00DOX0073	C1-1S	8/14/00	14:59	8/14/00	20:35	9.45	0.998	9.43
MOA00DOX0074	C1-1M	8/14/00	14:59	8/14/00	20:39	9.68	0.998	9.66
MOA00DOX0075	C1-1B	8/14/00	14:59	8/14/00	20:43	9.53	0.998	9.51
MOA00DOX0076	C1-2S	8/14/00	15:18	8/14/00	20:49	9.60	0.998	9.58
MOA00DOX0077	C1-2M	8/14/00	15:18	8/14/00	20:52	9.68	0.998	9.66
MOA00DOX0078	C1-2B	8/14/00	15:18	8/14/00	21:01	9.73	0.998	9.71
MOA00DOX0079	C1-3S	8/14/00	15:40	8/14/00	21:12	9.41	0.998	9.39
MOA00DOX0080	C1-3M	8/14/00	15:40	8/14/00	21:16	9.49	0.998	9.47
MOA00DOX0081	C1-3B	8/14/00	15:40	8/14/00	21:20	9.63	0.998	9.61
MOA00DOX0082	C1-4S	8/14/00	16:10	8/14/00	21:24	10.01	0.998	9.99
MOA00DOX0083	C1-4M	8/14/00	16:10	8/14/00	21:28	9.49	0.998	9.47
MOA00DOX0084	C1-4B	8/14/00	16:10	8/14/00	21:34	10.04	0.998	10.02
MOA00DOX0085	C2-1S	8/14/00	17:00	8/14/00	21:38	9.34	0.998	9.32
MOA00DOX0086	C2-1M	8/14/00	17:00	8/14/00	21:42	9.55	0.998	9.53
MOA00DOX0087	C2-1B	8/14/00	17:00	8/14/00	21:46	9.50	0.998	9.48
MOA00DOX0088	C2-2S A	8/14/00	17:28	8/14/00	21:48	9.62	0.998	9.60
MOA00DOX0089	C2-2S B	8/14/00	17:28	8/14/00	21:51	9.36	0.998	9.34
MOA00DOX0090	C2-2S C	8/14/00	17:28	8/14/00	21:54	9.68	0.998	9.66
MOA00DOX0091	C2-2M	8/14/00	17:28	8/14/00	21:57	9.50	0.998	9.48
MOA00DOX0092	C2-2B	8/14/00	17:28	8/14/00	22:00	9.49	0.998	9.47
MOA00DOX0093	C2-3S	8/14/00	17:53	8/14/00	23:24	9.20	0.998	9.18
MOA00DOX0094	C2-3M	8/14/00	17:53	8/14/00	23:31	9.24	0.998	9.22
MOA00DOX0095	C2-3B	8/14/00	17:53	8/14/00	23:33	9.35	0.998	9.33
MOA00DOX0096	C2-4S	8/14/00	18:08	8/14/00	23:38	9.43	0.998	9.41
MOA00DOX0097	C2-4M	8/14/00	18:08	8/14/00	23:40	9.33	0.998	9.31
MOA00DOX0098	C2-4B	8/14/00	18:08	8/14/00	23:45	9.38	0.998	9.36
MOA00DOX0099	C3-1S A	8/14/00	19:02	8/14/00	23:48	9.39	0.998	9.37
MOA00DOX0100	C3-1S B	8/14/00	19:02	8/14/00	23:53	9.38	0.998	9.36
MOA00DOX0101	C3-1S C	8/14/00	19:02	8/14/00	23:55	9.34	0.998	9.32
MOA00DOX0102	C3-1M	8/14/00	19:02	8/14/00	23:58	9.21	0.998	9.19
MOA00DOX0103	C3-1B	8/14/00	19:02	8/14/00	0:03	9.37	0.998	9.35
MOA00DOX0104	C3-2S	8/14/00	19:20	8/14/00	0:07	9.40	0.998	9.38
MOA00DOX0105	C3-2M	8/14/00	19:20	8/14/00	0:10	9.26	0.998	9.24
MOA00DOX0106	C3-2B	8/14/00	19:20	8/14/00	0:16	9.30	0.998	9.28
MOA00DOX0107	C3-3S	8/14/00	19:32	8/14/00	0:19	9.31	0.998	9.29
MOA00DOX0108	C3-3M	8/14/00	19:32	8/14/00	0:22	9.40	0.998	9.38
MOA00DOX0109	C3-3B	8/14/00	19:32	8/14/00	0:26	9.21	0.998	9.19
MOA00DOX0110	C3-4S	8/14/00	19:48	8/14/00	0:32	9.35	0.998	9.33
MOA00DOX0111	C3-4M	8/14/00	19:48	8/14/00	0:34	9.26	0.998	9.24
MOA00DOX0112	C3-4B	8/14/00	19:48	8/14/00	0:38	9.33	0.998	9.31

ANALYZED BY: Steen Trump DATE: 8-14-00 SIGNATURE: Steen Trump

KINNETIC LABORATORIES, INC.
TURBIDITY DATA LOG

CLIENT: MUNICIPALITY OF ANCHORAGE AWWU
PROJECT: SUMMER 2000 PT WORONZOF WATER QUALITY

CALIBRATION STANDARDS:

	STD 1:	STD 2:	DATE	TIME
TURBIDITY	20.0	20.0	8/15/00	2:00 PM

SAMPLE ID	STATION	SAMPLE DATE	SAMPLE TIME	ANALYSIS DATE	ANALYSIS TIME	DILUTION FACTOR	MEASURED TURBIDITY (NTU)	ACTUAL TURBIDITY (NTU)
MOA00TUR0001	E1-1S	8/16/00	11:26	8/17/00	13:55	10	38.0	380
MOA00TUR0002	E1-1M	8/16/00	11:26	8/17/00	13:57	10	38.0	380
MOA00TUR0003	E1-1B	8/16/00	11:26	8/17/00	14:00	10	40.0	400
MOA00TUR0004	E1-2S	8/16/00	11:35	8/17/00	14:03	10	38.0	380
MOA00TUR0005	E1-2M	8/16/00	11:35	8/17/00	14:05	10	38.0	380
MOA00TUR0006	E1-2B	8/16/00	11:35	8/17/00	14:07	10	38.0	380
MOA00TUR0007	E1-3S	8/16/00	11:45	8/17/00	17:36	10	37.0	370
MOA00TUR0008	E1-3M	8/16/00	11:45	8/17/00	17:38	10	33.0	330
MOA00TUR0009	E1-3B	8/16/00	11:45	8/17/00	17:40	10	37.0	370
MOA00TUR0010	E1-4S	8/16/00	11:55	8/17/00	18:13	10	36.0	360
MOA00TUR0011	E1-4M	8/16/00	11:55	8/17/00	18:15	10	33.0	330
MOA00TUR0012	E1-4B	8/16/00	11:55	8/17/00	18:17	10	36.0	360
MOA00TUR0013	E2-1S	8/16/00	12:30	8/17/00	18:21	10	38.0	380
MOA00TUR0014	E2-1M	8/16/00	12:30	8/17/00	18:22	10	37.0	370
MOA00TUR0015	E2-1B	8/16/00	12:30	8/17/00	18:24	10	37.0	370
MOA00TUR0016	E2-2S	8/16/00	12:37	8/17/00	18:30	10	39.0	390
MOA00TUR0017	E2-2M	8/16/00	12:37	8/17/00	18:32	10	38.0	380
MOA00TUR0018	E2-2B	8/16/00	12:37	8/17/00	18:34	10	39.0	390
MOA00TUR0019	E2-3S	8/16/00	12:52	8/17/00	18:42	10	39.0	390
MOA00TUR0020	E2-3M	8/16/00	12:52	8/17/00	18:43	10	40.0	400
MOA00TUR0021	E2-3B	8/16/00	12:52	8/17/00	18:45	10	40.0	400
MOA00TUR0022	E2-4S	8/16/00	13:20	8/17/00	18:50	10	38.0	380
MOA00TUR0023	E2-4M	8/16/00	13:20	8/17/00	18:51	10	39.0	390
MOA00TUR0024	E2-4B	8/16/00	13:20	8/17/00	18:53	10	40.0	400
MOA00TUR0025	E3-1S	8/16/00	14:22	8/17/00	19:03	10	30.0	300
MOA00TUR0026	E3-1M	8/16/00	14:22	8/17/00	19:05	10	29.0	290
MOA00TUR0027	E3-1B	8/16/00	14:22	8/17/00	19:06	10	29.0	290
MOA00TUR0028	E3-2S	8/16/00	14:43	8/17/00	19:12	10	17.0	170
MOA00TUR0029	E3-2M	8/16/00	14:43	8/17/00	19:14	10	26.0	260
MOA00TUR0030	E3-2B	8/16/00	14:43	8/17/00	19:16	10	35.0	350
MOA00TUR0031	E3-3S	8/16/00	15:08	8/17/00	19:23	10	13.0	130
MOA00TUR0032	E3-3M	8/16/00	15:08	8/17/00	19:24	10	30.0	300
MOA00TUR0033	E3-3B	8/16/00	15:08	8/17/00	19:26	10	85.0	850
MOA00TUR0034	E3-4S	8/16/00	15:20	8/17/00	19:31	10	14.0	140
MOA00TUR0035	E3-4M	8/16/00	15:20	8/17/00	19:32	10	20.0	200
MOA00TUR0036	E3-4B	8/16/00	15:20	8/17/00	19:34	10	23.0	230

ANALYZED BY: Steen Trump DATE: 8-17-00 SIGNATURE: Steen Trump

KINNETIC LABORATORIES, INC.
TURBIDITY DATA LOG

CLIENT: MUNICIPALITY OF ANCHORAGE AWWU
PROJECT: SUMMER 2000 PT WORONZOF WATER QUALITY

CALIBRATION STANDARDS:

	STD 1:	STD 2:	DATE	TIME
TURBIDITY	20.0	20.0	8/15/00	2:00 PM

SAMPLE ID	STATION	SAMPLE DATE	SAMPLE TIME	ANALYSIS DATE	ANALYSIS TIME	DILUTION FACTOR	MEASURED TURBIDITY (NTU)	ACTUAL TURBIDITY (NTU)
MOA00TUR0037	F1-1S	8/16/00	15:50	8/17/00	19:39	10	29.0	290
MOA00TUR0038	F1-1M	8/16/00	15:50	8/17/00	19:41	10	58.0	580
MOA00TUR0039	F1-1B	8/16/00	15:50	8/17/00	19:44	10	19.0	190
MOA00TUR0040	F1-2S	8/16/00	16:12	8/17/00	19:46	10	15.0	150
MOA00TUR0041	F1-2M	8/16/00	16:12	8/17/00	19:48	10	18.0	180
MOA00TUR0042	F1-2B	8/16/00	16:12	8/17/00	19:53	10	30.0 / 30.0	300 / 300
MOA00TUR0043	F1-3S	8/16/00	16:30	8/17/00	19:55	10	22.0	220
MOA00TUR0044	F1-3M	8/16/00	16:30	8/17/00	19:57	10	22.0	220
MOA00TUR0045	F1-3B	8/16/00	16:30	8/17/00	19:58	10	24.0	240
MOA00TUR0046	F1-4S	8/16/00	16:50	8/17/00	20:00	10	19.0	190
MOA00TUR0047	F1-4M	8/16/00	16:50	8/17/00	20:02	10	22.0	220
MOA00TUR0048	F1-4B	8/16/00	16:50	8/17/00	20:03	10	27.0	270
MOA00TUR0049	F2-1S	8/16/00	17:21	8/17/00	20:05	10	37.0	370
MOA00TUR0050	F2-1M	8/16/00	17:21	8/17/00	20:07	10	19.0	190
MOA00TUR0051	F2-1B	8/16/00	17:21	8/17/00	20:09	10	38.0	380
MOA00TUR0052	F2-2S	8/16/00	17:28	8/17/00	20:12	10	40.0	400
MOA00TUR0053	F2-2M	8/16/00	17:28	8/17/00	20:15	10	37.0	370
MOA00TUR0054	F2-2B	8/16/00	17:28	8/17/00	20:17	10	42.0	420
MOA00TUR0055	F2-3S	8/16/00	17:54	8/17/00	20:20	10	26.0	260
MOA00TUR0056	F2-3M	8/16/00	17:54	8/17/00	20:24	10	40.0	400
MOA00TUR0057	F2-3B	8/16/00	17:54	8/17/00	20:25	10	36.0	360
MOA00TUR0058	F2-4S	8/16/00	18:10	8/17/00	20:30	10	33.0	330
MOA00TUR0059	F2-4M	8/16/00	18:10	8/17/00	20:35	10	38.0	380
MOA00TUR0060	F2-4B	8/16/00	18:10	8/17/00	20:38	10	33.0	330
MOA00TUR0061	F3-1S	8/16/00	18:42	8/17/00	20:40	10	29.0	290
MOA00TUR0062	F3-1M	8/16/00	18:42	8/17/00	20:42	10	30.0	300
MOA00TUR0063	F3-1B	8/16/00	18:42	8/17/00	20:45	10	30.0	300
MOA00TUR0064	F3-2S	8/16/00	18:48	8/17/00	20:47	10	28.0	280
MOA00TUR0065	F3-2M	8/16/00	18:48	8/17/00	20:50	10	29.0	290
MOA00TUR0066	F3-2B	8/16/00	18:48	8/17/00	20:55	10	32.0	320
MOA00TUR0067	F3-3S	8/16/00	19:14	8/17/00	21:00	10	23.0	230
MOA00TUR0068	F3-3M	8/16/00	19:14	8/17/00	21:02	10	36.0	360
MOA00TUR0069	F3-3B	8/16/00	19:14	8/17/00	21:06	10	37.0	370
MOA00TUR0070	F3-4S	8/16/00	19:45	8/17/00	21:09	10	26.0	260
MOA00TUR0071	F3-4M	8/16/00	19:45	8/17/00	21:14	10	47.0	470
MOA00TUR0072	F3-4B	8/16/00	19:45	8/17/00	21:20	10	47.0	470

ANALYZED BY: GARY LAWLEY DATE: 8/17/00 SIGNATURE: Gary A. Lawley

KINNETIC LABORATORIES, INC.
TURBIDITY DATA LOG

CLIENT: MUNICIPALITY OF ANCHORAGE AWWU
PROJECT: SUMMER 2000 PT WORONZOF WATER QUALITY

CALIBRATION STANDARDS:

	STD 1:	STD 2:	DATE	TIME
TURBIDITY	20.0	20.0	8/15/00	2:00 PM

SAMPLE ID	STATION	SAMPLE DATE	SAMPLE TIME	ANALYSIS DATE	ANALYSIS TIME	DILUTION FACTOR	MEASURED TURBIDITY (NTU)	ACTUAL TURBIDITY (NTU)
MOA00TUR0073	C1-1S	8/14/00	14:59	8/15/00	14:20	10	27.0	270
MOA00TUR0074	C1-1M	8/14/00	14:59	8/15/00	14:25	10	29.0	290
MOA00TUR0075	C1-1B	8/14/00	14:59	8/15/00	14:35	10	41.0	410
MOA00TUR0076	C1-2S	8/14/00	15:18	8/15/00	14:39	10	38.0	380
MOA00TUR0077	C1-2M	8/14/00	15:18	8/15/00	14:41	10	41.0	410
MOA00TUR0078	C1-2B	8/14/00	15:18	8/15/00	14:43	10	40.5	405
MOA00TUR0079	C1-3S	8/14/00	15:40	8/15/00	14:51	10	26.0	260
MOA00TUR0080	C1-3M	8/14/00	15:40	8/15/00	14:53	10	41.0	410
MOA00TUR0081	C1-3B	8/14/00	15:40	8/15/00	14:55	10	45.0	450
MOA00TUR0082	C1-4S	8/14/00	16:10	8/15/00	15:07	10	29.0	290
MOA00TUR0083	C1-4M	8/14/00	16:10	8/15/00	15:08	10	50.0	500
MOA00TUR0084	C1-4B	8/14/00	16:10	8/15/00	15:09	10	38.0	380
MOA00TUR0085	C2-1S	8/14/00	17:00	8/15/00	15:14	10	25.0	250
MOA00TUR0086	C2-1M	8/14/00	17:00	8/15/00	15:16	10	27.0	270
MOA00TUR0087	C2-1B	8/14/00	17:00	8/15/00	15:18	10	47.0	470
MOA00TUR0088	C2-2S A	8/14/00	17:28	8/15/00	15:25	10	18.0	180
MOA00TUR0089	C2-2S B	8/14/00	17:28	8/15/00	15:27	10	17.8	178
MOA00TUR0090	C2-2S C	8/14/00	17:28	8/15/00	15:29	10	18.0	180
MOA00TUR0091	C2-2M	8/14/00	17:28	8/15/00	15:34	10	26.0	260
MOA00TUR0092	C2-2B	8/14/00	17:28	8/15/00	15:36	10	48.0	480
MOA00TUR0093	C2-3S	8/14/00	17:53	8/15/00	16:00	10	33.0 / 33.0	330 / 330
MOA00TUR0094	C2-3M	8/14/00	17:53	8/15/00	16:03	10	34.0	340
MOA00TUR0095	C2-3B	8/14/00	17:53	8/15/00	16:08	10	40.0	400
MOA00TUR0096	C2-4S	8/14/00	18:08	8/15/00	15:38	10	38.0	380
MOA00TUR0097	C2-4M	8/14/00	18:08	8/15/00	16:13	10	36.0	360
MOA00TUR0098	C2-4B	8/14/00	18:08	8/15/00	16:15	10	38.0	380
MOA00TUR0099	C3-1S A	8/14/00	19:02	8/15/00	16:24	10	34.0	340
MOA00TUR0100	C3-1S B	8/14/00	19:02	8/15/00	16:26	10	33.0	330
MOA00TUR0101	C3-1S C	8/14/00	19:02	8/15/00	16:27	10	33.0	330
MOA00TUR0102	C3-1M	8/14/00	19:02	8/15/00	16:34	10	29.0 / 30.0	290 / 300
MOA00TUR0103	C3-1B	8/14/00	19:02	8/15/00	16:39	10	34.0	340
MOA00TUR0104	C3-2S	8/14/00	19:20	8/15/00	16:43	10	28.0	280
MOA00TUR0105	C3-2M	8/14/00	19:20	8/15/00	16;45	10	37.0	370
MOA00TUR0106	C3-2B	8/14/00	19:20	8/15/00	16:48	10	44.0	440
MOA00TUR0107	C3-3S	8/14/00	19:32	8/15/00	16;53	10	31.0 / 31.0	310 / 310
MOA00TUR0108	C3-3M	8/14/00	19:32	8/15/00	16:56	10	40.0	400
MOA00TUR0109	C3-3B	8/14/00	19:32	8/15/00	16:59	10	40.0	400
MOA00TUR0110	C3-4S	8/14/00	19:48	8/15/00	17:05	10	36.0	360
MOA00TUR0111	C3-4M	8/14/00	19:48	8/15/00	17:07	10	36.0	360
MOA00TUR0112	C3-4B	8/14/00	19:48	8/15/00	17:12	10	36.0 / 36.0	360 / 360

ANALYZED BY: Steen Trump DATE: 8-15-00 SIGNATURE: Steen Trump

KINNETIC LABORATORIES, INC.
TURBIDITY DATA LOG

CLIENT: MUNICIPALITY OF ANCHORAGE AWWU
PROJECT: SUMMER 2000 PT WORONZOF WATER QUALITY

CALIBRATION STANDARDS:

	STD 1:	STD 2:	DATE	TIME
TURBIDITY	20.0	20.0	8/15/00	2:00 PM

SAMPLE ID	STATION	SAMPLE DATE	SAMPLE TIME	ANALYSIS DATE	ANALYSIS TIME	DILUTION FACTOR	MEASURED TURBIDITY (NTU)	ACTUAL TURBIDITY (NTU)
MOA00TUR0001	E1-1S	8/16/00	11:26	8/17/00	13:55	10	38.0	380
MOA00TUR0002	E1-1M	8/16/00	11:26	8/17/00	13:57	10	38.0	380
MOA00TUR0003	E1-1B	8/16/00	11:26	8/17/00	14:00	10	40.0	400
MOA00TUR0004	E1-2S	8/16/00	11:35	8/17/00	14:03	10	38.0	380
MOA00TUR0005	E1-2M	8/16/00	11:35	8/17/00	14:05	10	38.0	380
MOA00TUR0006	E1-2B	8/16/00	11:35	8/17/00	14:07	10	38.0	380
MOA00TUR0007	E1-3S	8/16/00	11:45	8/17/00	17:36	10	37.0	370
MOA00TUR0008	E1-3M	8/16/00	11:45	8/17/00	17:38	10	33.0	330
MOA00TUR0009	E1-3B	8/16/00	11:45	8/17/00	17:40	10	37.0	370
MOA00TUR0010	E1-4S	8/16/00	11:55	8/17/00	18:13	10	36.0	360
MOA00TUR0011	E1-4M	8/16/00	11:55	8/17/00	18:15	10	33.0	330
MOA00TUR0012	E1-4B	8/16/00	11:55	8/17/00	18:17	10	36.0	360
MOA00TUR0013	E2-1S	8/16/00	12:30	8/17/00	18:21	10	38.0	380
MOA00TUR0014	E2-1M	8/16/00	12:30	8/17/00	18:22	10	37.0	370
MOA00TUR0015	E2-1B	8/16/00	12:30	8/17/00	18:24	10	37.0	370
MOA00TUR0016	E2-2S	8/16/00	12:37	8/17/00	18:30	10	39.0	390
MOA00TUR0017	E2-2M	8/16/00	12:37	8/17/00	18:32	10	38.0	380
MOA00TUR0018	E2-2B	8/16/00	12:37	8/17/00	18:34	10	39.0	390
MOA00TUR0019	E2-3S	8/16/00	12:52	8/17/00	18:42	10	39.0	390
MOA00TUR0020	E2-3M	8/16/00	12:52	8/17/00	18:43	10	40.0	400
MOA00TUR0021	E2-3B	8/16/00	12:52	8/17/00	18:45	10	40.0	400
MOA00TUR0022	E2-4S	8/16/00	13:20	8/17/00	18:50	10	38.0	380
MOA00TUR0023	E2-4M	8/16/00	13:20	8/17/00	18:51	10	39.0	390
MOA00TUR0024	E2-4B	8/16/00	13:20	8/17/00	18:53	10	40.0	400
MOA00TUR0025	E3-1S	8/16/00	14:22	8/17/00	19:03	10	30.0	300
MOA00TUR0026	E3-1M	8/16/00	14:22	8/17/00	19:05	10	29.0	290
MOA00TUR0027	E3-1B	8/16/00	14:22	8/17/00	19:06	10	29.0	290
MOA00TUR0028	E3-2S	8/16/00	14:43	8/17/00	19:12	10	17.0	170
MOA00TUR0029	E3-2M	8/16/00	14:43	8/17/00	19:14	10	26.0	260
MOA00TUR0030	E3-2B	8/16/00	14:43	8/17/00	19:16	10	35.0	350
MOA00TUR0031	E3-3S	8/16/00	15:08	8/17/00	19:23	10	13.0	130
MOA00TUR0032	E3-3M	8/16/00	15:08	8/17/00	19:24	10	30.0	300
MOA00TUR0033	E3-3B	8/16/00	15:08	8/17/00	19:26	10	85.0	850
MOA00TUR0034	E3-4S	8/16/00	15:20	8/17/00	19:31	10	14.0	140
MOA00TUR0035	E3-4M	8/16/00	15:20	8/17/00	19:32	10	20.0	200
MOA00TUR0036	E3-4B	8/16/00	15:20	8/17/00	19:34	10	23.0	230

ANALYZED BY: Steen Trump DATE: 8-17-00 SIGNATURE: Steen Trump

KINNETIC LABORATORIES, INC.
TURBIDITY DATA LOG

CLIENT: MUNICIPALITY OF ANCHORAGE AWWU
PROJECT: SUMMER 2000 PT WORONZOF WATER QUALITY

CALIBRATION STANDARDS:

	STD 1:	STD 2:	DATE	TIME
TURBIDITY	20.0	20.0	8/15/00	2:00 PM

SAMPLE ID	STATION	SAMPLE DATE	SAMPLE TIME	ANALYSIS DATE	ANALYSIS TIME	DILUTION FACTOR	MEASURED TURBIDITY (NTU)	ACTUAL TURBIDITY (NTU)
MOA00TUR0037	F1-1S	8/16/00	15:50	8/17/00	19:39	10	29.0	290
MOA00TUR0038	F1-1M	8/16/00	15:50	8/17/00	19:41	10	58.0	580
MOA00TUR0039	F1-1B	8/16/00	15:50	8/17/00	19:44	10	19.0	190
MOA00TUR0040	F1-2S	8/16/00	16:12	8/17/00	19:46	10	15.0	150
MOA00TUR0041	F1-2M	8/16/00	16:12	8/17/00	19:48	10	18.0	180
MOA00TUR0042	F1-2B	8/16/00	16:12	8/17/00	19:53	10	30.0 / 30.0	300 / 300
MOA00TUR0043	F1-3S	8/16/00	16:30	8/17/00	19:55	10	22.0	220
MOA00TUR0044	F1-3M	8/16/00	16:30	8/17/00	19:57	10	22.0	220
MOA00TUR0045	F1-3B	8/16/00	16:30	8/17/00	19:58	10	24.0	240
MOA00TUR0046	F1-4S	8/16/00	16:50	8/17/00	20:00	10	19.0	190
MOA00TUR0047	F1-4M	8/16/00	16:50	8/17/00	20:02	10	22.0	220
MOA00TUR0048	F1-4B	8/16/00	16:50	8/17/00	20:03	10	27.0	270
MOA00TUR0049	F2-1S	8/16/00	17:21	8/17/00	20:05	10	37.0	370
MOA00TUR0050	F2-1M	8/16/00	17:21	8/17/00	20:07	10	19.0	190
MOA00TUR0051	F2-1B	8/16/00	17:21	8/17/00	20:09	10	38.0	380
MOA00TUR0052	F2-2S	8/16/00	17:28	8/17/00	20:12	10	40.0	400
MOA00TUR0053	F2-2M	8/16/00	17:28	8/17/00	20:15	10	37.0	370
MOA00TUR0054	F2-2B	8/16/00	17:28	8/17/00	20:17	10	42.0	420
MOA00TUR0055	F2-3S	8/16/00	17:54	8/17/00	20:20	10	26.0	260
MOA00TUR0056	F2-3M	8/16/00	17:54	8/17/00	20:24	10	40.0	400
MOA00TUR0057	F2-3B	8/16/00	17:54	8/17/00	20:25	10	36.0	360
MOA00TUR0058	F2-4S	8/16/00	18:10	8/17/00	20:30	10	33.0	330
MOA00TUR0059	F2-4M	8/16/00	18:10	8/17/00	20:35	10	38.0	380
MOA00TUR0060	F2-4B	8/16/00	18:10	8/17/00	20:38	10	33.0	330
MOA00TUR0061	F3-1S	8/16/00	18:42	8/17/00	20:40	10	29.0	290
MOA00TUR0062	F3-1M	8/16/00	18:42	8/17/00	20:42	10	30.0	300
MOA00TUR0063	F3-1B	8/16/00	18:42	8/17/00	20:45	10	30.0	300
MOA00TUR0064	F3-2S	8/16/00	18:48	8/17/00	20:47	10	28.0	280
MOA00TUR0065	F3-2M	8/16/00	18:48	8/17/00	20:50	10	29.0	290
MOA00TUR0066	F3-2B	8/16/00	18:48	8/17/00	20:55	10	32.0	320
MOA00TUR0067	F3-3S	8/16/00	19:14	8/17/00	21:00	10	23.0	230
MOA00TUR0068	F3-3M	8/16/00	19:14	8/17/00	21:02	10	36.0	360
MOA00TUR0069	F3-3B	8/16/00	19:14	8/17/00	21:06	10	37.0	370
MOA00TUR0070	F3-4S	8/16/00	19:45	8/17/00	21:09	10	26.0	260
MOA00TUR0071	F3-4M	8/16/00	19:45	8/17/00	21:14	10	47.0	470
MOA00TUR0072	F3-4B	8/16/00	19:45	8/17/00	21:20	10	47.0	470

ANALYZED BY: GARY LAWLEY DATE: 8/17/00 SIGNATURE: [illegible]

KINNETIC LABORATORIES, INC.
TURBIDITY DATA LOG

CLIENT: MUNICIPALITY OF ANCHORAGE AWWU
PROJECT: SUMMER 2000 PT WORONZOF WATER QUALITY

CALIBRATION STANDARDS:

	STD 1:	STD 2:	DATE	TIME
TURBIDITY	20.0	20.0	8/15/00	2:00 PM

SAMPLE ID	STATION	SAMPLE DATE	SAMPLE TIME	ANALYSIS DATE	ANALYSIS TIME	DILUTION FACTOR	MEASURED TURBIDITY (NTU)	ACTUAL TURBIDITY (NTU)
MOA00TUR0073	C1-1S	8/14/00	14:59	8/15/00	14:20	10	27.0	270
MOA00TUR0074	C1-1M	8/14/00	14:59	8/15/00	14:25	10	29.0	290
MOA00TUR0075	C1-1B	8/14/00	14:59	8/15/00	14:35	10	41.0	410
MOA00TUR0076	C1-2S	8/14/00	15:18	8/15/00	14:39	10	38.0	380
MOA00TUR0077	C1-2M	8/14/00	15:18	8/15/00	14:41	10	41.0	410
MOA00TUR0078	C1-2B	8/14/00	15:18	8/15/00	14:43	10	40.5	405
MOA00TUR0079	C1-3S	8/14/00	15:40	8/15/00	14:51	10	26.0	260
MOA00TUR0080	C1-3M	8/14/00	15:40	8/15/00	14:53	10	41.0	410
MOA00TUR0081	C1-3B	8/14/00	15:40	8/15/00	14:55	10	45.0	450
MOA00TUR0082	C1-4S	8/14/00	16:10	8/15/00	15:07	10	29.0	290
MOA00TUR0083	C1-4M	8/14/00	16:10	8/15/00	15:08	10	50.0	500
MOA00TUR0084	C1-4B	8/14/00	16:10	8/15/00	15:09	10	38.0	380
MOA00TUR0085	C2-1S	8/14/00	17:00	8/15/00	15:14	10	25.0	250
MOA00TUR0086	C2-1M	8/14/00	17:00	8/15/00	15:16	10	27.0	270
MOA00TUR0087	C2-1B	8/14/00	17:00	8/15/00	15:18	10	47.0	470
MOA00TUR0088	C2-2S A	8/14/00	17:28	8/15/00	15:25	10	18.0	180
MOA00TUR0089	C2-2S B	8/14/00	17:28	8/15/00	15:27	10	17.8	178
MOA00TUR0090	C2-2S C	8/14/00	17:28	8/15/00	15:29	10	18.0	180
MOA00TUR0091	C2-2M	8/14/00	17:28	8/15/00	15:34	10	26.0	260
MOA00TUR0092	C2-2B	8/14/00	17:28	8/15/00	15:36	10	48.0	480
MOA00TUR0093	C2-3S	8/14/00	17:53	8/15/00	16:00	10	33.0 / 33.0	330 / 330
MOA00TUR0094	C2-3M	8/14/00	17:53	8/15/00	16:03	10	34.0	340
MOA00TUR0095	C2-3B	8/14/00	17:53	8/15/00	16:08	10	40.0	400
MOA00TUR0096	C2-4S	8/14/00	18:08	8/15/00	15:38	10	38.0	380
MOA00TUR0097	C2-4M	8/14/00	18:08	8/15/00	16:13	10	36.0	360
MOA00TUR0098	C2-4B	8/14/00	18:08	8/15/00	16:15	10	38.0	380
MOA00TUR0099	C3-1S A	8/14/00	19:02	8/15/00	16:24	10	34.0	340
MOA00TUR0100	C3-1S B	8/14/00	19:02	8/15/00	16:26	10	33.0	330
MOA00TUR0101	C3-1S C	8/14/00	19:02	8/15/00	16:27	10	33.0	330
MOA00TUR0102	C3-1M	8/14/00	19:02	8/15/00	16:34	10	29.0 / 30.0	290 / 300
MOA00TUR0103	C3-1B	8/14/00	19:02	8/15/00	16:39	10	34.0	340
MOA00TUR0104	C3-2S	8/14/00	19:20	8/15/00	16:43	10	28.0	280
MOA00TUR0105	C3-2M	8/14/00	19:20	8/15/00	16;45	10	37.0	370
MOA00TUR0106	C3-2B	8/14/00	19:20	8/15/00	16:48	10	44.0	440
MOA00TUR0107	C3-3S	8/14/00	19:32	8/15/00	16;53	10	31.0 / 31.0	310 / 310
MOA00TUR0108	C3-3M	8/14/00	19:32	8/15/00	16:56	10	40.0	400
MOA00TUR0109	C3-3B	8/14/00	19:32	8/15/00	16:59	10	40.0	400
MOA00TUR0110	C3-4S	8/14/00	19:48	8/15/00	17:05	10	36.0	360
MOA00TUR0111	C3-4M	8/14/00	19:48	8/15/00	17:07	10	36.0	360
MOA00TUR0112	C3-4B	8/14/00	19:48	8/15/00	17:12	10	36.0 / 36.0	360 / 360

ANALYZED BY: Steen Trump DATE: 8-15-00 SIGNATURE: Steen Trump

Kinnetic Laboratories, Inc. - Salinity Data Form

Project: MOA 2000
Date: 8-14/16-00

Analyst: Steen Trump
Analysis Date: 1-17-01

Standardization of Salinometer Using a Primary Standard with K_{15} ~~0.99986~~ 0.53371 → *1 50% Sea - 50% fresh (Salinity = ~~34.994~~)

Run #1	Time = 1148	Temp. = 18°C	Standard Dial = ~~6780~~ 6785
Run #2	Time = 1142	Temp. = 18°C	Standard Dial = 6780
Run #3 (optnl)	Time = 1145	Temp. = 18°C	Standard Dial = 6772 **Final Standardization Setting** = 6785

Notes:

~~Bottle #~~ Sample	Station	Time	Temp. (Cel)	R_1	R_2	R_t	Salinity ppt	Orion model 140
MOA 00 SAL ~~X~~001	C3-1S	1153	18°C	0.26184	0.26180	0.26182	8.013	8.0
002	C3-1M	1201	18°C	0.26268	0.26269	0.262685	8.025	8.0
003	C3-1B	1206	18°C	0.26393	0.26389	0.26391	8.064	8.0
004	F2-3M	1211	18.2°C	0.26295	0.26290	0.262925	8.029	8.0
00~~0~~5	F2-3B	1218	18.3°C	0.25879	0.25879	0.25879	7.889	7.8
0006	F2-4M	1225	18.3°C	0.25950	0.25945	0.259475	7.909	7.8
*1 50%/50%	—	1233	18°C	0.53460	0.53468		17.448	

18
~~25~~ E
30E
20E
19E
25 E
2E

APPENDIX D

Receiving Water Quality Monitoring

D5 Hydrographic Data Profiles

MOA HYDROGRAPHIC DATA

STATION: C1-1 DATE: 8/14/00 TIME: 14:59

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	13.9248	.86701	7.923	12.362	124.64	6.2735	4.0987	0.
1.00	13.9175	.86764	7.920	12.851	129.53	6.2795	4.1044	0.
1.50	13.9128	.86948	7.920	12.756	128.57	6.2945	4.1167	0.
2.00	13.9055	.87021	7.920	12.772	128.72	6.3014	4.1231	0.
2.50	13.9012	.87160	7.920	12.782	128.82	6.3129	4.1325	0.
3.00	13.9000	.87265	7.920	12.785	128.84	6.3212	4.1391	0.
3.50	13.8997	.87265	7.918	12.791	128.91	6.3212	4.1392	0.
4.00	13.8995	.87178	7.915	12.792	128.91	6.3144	4.1340	0.
4.50	13.8983	.87230	7.915	12.794	128.93	6.3186	4.1374	0.
5.00	13.8961	.87399	7.909	12.809	129.09	6.3321	4.1481	0.
5.50	13.8960	.87468	7.904	12.802	129.02	6.3374	4.1522	0.
6.00	13.8958	.87624	7.898	12.809	129.10	6.3496	4.1616	0.
6.50	13.8945	.88617	7.888	12.795	129.02	6.4272	4.2215	0.

MOA HYDROGRAPHIC DATA

STATION: C1-2 DATE: 8/14/00 TIME: 15:18

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	13.9457	.88330	7.960	12.285	124.07	6.3969	4.1904	0.
1.00	13.9511	.88427	7.958	12.852	129.73	6.4035	4.1946	0.
1.50	13.9542	.88508	7.957	12.820	129.42	6.4092	4.1985	0.
2.00	13.9588	.88636	7.961	12.835	129.59	6.4184	4.2049	0.
2.50	13.9754	.88718	7.958	12.834	129.64	6.4219	4.2051	0.
3.00	13.9838	.88788	7.959	12.833	129.65	6.4260	4.2070	0.
3.50	13.9934	.88372	7.959	12.838	129.70	6.3920	4.1793	0.
4.00	14.0086	.89447	7.963	12.804	129.46	6.4731	4.2393	0.

MOA HYDROGRAPHIC DATA

STATION: C1-3 DATE: 8/14/00 TIME: 15:40

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	13.8881	.85408	7.896	9.732	97.97	6.1787	4.0314	0.
1.00	13.8791	.85308	7.902	9.690	97.52	6.1724	4.0278	0.
1.50	13.8692	.85296	7.911	9.637	96.97	6.1730	4.0298	0.
2.00	13.8598	.85330	7.912	9.651	97.09	6.1771	4.0344	0.
2.50	13.8407	.85361	7.922	9.667	97.22	6.1825	4.0414	0.
3.00	13.8382	.85375	7.924	9.748	98.02	6.1840	4.0429	0.
3.50	13.8237	.85409	7.931	9.865	99.17	6.1889	4.0489	0.
4.00	13.8248	.85454	7.936	9.936	99.89	6.1922	4.0513	0.
4.50	13.8256	.85505	7.940	9.979	100.32	6.1960	4.0541	0.
5.00	13.8235	.85568	7.945	10.011	100.65	6.2012	4.0584	0.
5.50	13.8242	.85649	7.946	10.054	101.08	6.2073	4.0630	0.
6.00	13.8269	.85739	7.945	10.103	101.59	6.2139	4.0677	0.
6.50	13.8288	.85856	7.948	10.117	101.74	6.2226	4.0741	0.
7.00	13.8367	.85984	7.948	10.138	101.97	6.2313	4.0795	0.
7.50	13.8430	.86070	7.948	10.159	102.20	6.2370	4.0830	0.
8.00	13.8436	.86157	7.948	10.168	102.30	6.2436	4.0880	0.
8.50	13.8483	.86264	7.949	10.188	102.52	6.2511	4.0931	0.
9.00	13.8499	.86392	7.948	10.241	103.06	6.2608	4.1003	0.
9.50	13.8539	.86495	7.948	10.258	103.24	6.2681	4.1053	0.
10.00	13.8563	.86521	7.948	10.277	103.44	6.2697	4.1062	0.
10.50	13.8571	.86439	7.948	10.311	103.78	6.2631	4.1010	0.
11.00	13.8544	.86299	7.948	10.342	104.08	6.2526	4.0933	0.
11.50	13.8424	.86060	7.948	10.369	104.32	6.2359	4.0822	0.
12.00	13.8345	.85830	7.948	10.406	104.66	6.2192	4.0706	0.
12.50	13.8241	.85758	7.948	10.416	104.73	6.2152	4.0691	0.
13.00	13.8204	.85738	7.948	10.453	105.09	6.2142	4.0689	0.
13.50	13.8158	.85699	7.948	10.483	105.38	6.2119	4.0678	0.
14.00	13.8149	.85542	7.948	10.510	105.64	6.1998	4.0586	0.
14.50	13.8086	.85483	7.945	10.545	105.98	6.1961	4.0567	0.
15.00	13.8029	.85228	7.947	10.587	106.37	6.1771	4.0430	0.
15.50	13.7888	.84999	7.945	10.636	106.82	6.1615	4.0331	0.
16.00	13.7817	.85117	7.945	10.702	107.48	6.1718	4.0421	0.
16.50	13.7909	.85185	7.943	10.748	107.96	6.1756	4.0436	0.
17.00	13.7919	.85067	7.941	10.774	108.22	6.1662	4.0362	0.
17.50	13.7858	.85065	7.940	10.824	108.72	6.1670	4.0377	0.
18.00	13.7825	.85005	7.939	10.874	109.20	6.1628	4.0350	0.
18.50	13.7801	.85076	7.939	10.915	109.62	6.1686	4.0399	0.
19.00	13.7877	.85182	7.936	10.942	109.90	6.1756	4.0441	0.
19.50	13.7888	.84911	7.933	10.998	110.45	6.1543	4.0276	0.
20.00	13.7803	.84714	7.929	11.041	110.86	6.1402	4.0180	0.
20.50	13.7738	.84739	7.929	11.098	111.42	6.1432	4.0212	0.
21.00	13.7746	.84621	7.929	11.120	111.64	6.1338	4.0139	0.
21.50	13.7721	.84785	7.926	11.170	112.14	6.1470	4.0244	0.
22.00	13.7793	.84986	7.924	11.220	112.67	6.1614	4.0345	0.
22.50	13.7840	.84964	7.920	11.257	113.05	6.1589	4.0318	0.
23.00	13.7780	.84859	7.920	11.320	113.67	6.1516	4.0271	0.
23.50	13.7789	.84676	7.916	11.363	114.09	6.1373	4.0159	0.
24.00	13.7692	.84618	7.916	11.393	114.36	6.1342	4.0150	0.
24.50	13.7705	.84480	7.917	11.408	114.51	6.1232	4.0064	0.
25.00	13.7742	.84666	7.917	11.635	116.81	6.1371	4.0165	0.

MOA HYDROGRAPHIC DATA

STATION: C1-4 DATE: 8/14/00 TIME: 16:10

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	13.9640	.86334	7.965	8.944	90.22	6.2386	4.0659	0.
1.00	13.9247	.86334	7.964	8.433	84.99	6.2449	4.0767	0.
1.50	13.9159	.86334	7.966	8.748	88.15	6.2463	4.0791	0.
2.00	13.9174	.86334	7.971	8.924	89.92	6.2460	4.0786	0.
2.50	13.9237	.86334	7.968	9.147	92.19	6.2449	4.0769	0.
3.00	13.9261	.86334	7.968	9.267	93.41	6.2445	4.0762	0.
3.50	13.9274	.86323	7.971	9.549	96.24	6.2434	4.0751	0.
4.00	13.9272	.86311	7.966	9.587	96.63	6.2424	4.0744	0.
4.50	13.9142	.86322	7.968	9.640	97.14	6.2453	4.0786	0.
5.00	13.9129	.86334	7.968	9.683	97.56	6.2464	4.0797	0.
5.50	13.9181	.86338	7.966	9.725	98.00	6.2459	4.0785	0.
6.00	13.9177	.86343	7.966	9.736	98.11	6.2463	4.0788	0.
6.50	13.9145	.86319	7.966	9.755	98.30	6.2449	4.0782	0.
7.00	13.9127	.86295	7.969	9.766	98.40	6.2433	4.0773	0.
7.50	13.9091	.86293	7.966	9.779	98.52	6.2436	4.0781	0.
8.00	13.9083	.86292	7.966	9.806	98.80	6.2437	4.0783	0.
8.50	13.9045	.86297	7.968	9.816	98.89	6.2446	4.0795	0.
9.00	13.9017	.86296	7.967	9.798	98.71	6.2449	4.0802	0.
9.50	13.9005	.86295	7.966	9.820	98.92	6.2450	4.0805	0.
10.00	13.9031	.86299	7.967	9.848	99.21	6.2449	4.0800	0.
10.50	13.8977	.86296	7.968	9.854	99.26	6.2454	4.0812	0.
11.00	13.8986	.86291	7.970	9.869	99.41	6.2449	4.0806	0.
11.50	13.8990	.86266	7.969	9.876	99.48	6.2428	4.0790	0.
12.00	13.8981	.86241	7.971	9.902	99.74	6.2410	4.0777	0.
12.50	13.8968	.86224	7.971	9.910	99.81	6.2399	4.0771	0.
13.00	13.8965	.86210	7.971	9.913	99.85	6.2388	4.0763	0.
13.50	13.8958	.86211	7.971	9.921	99.92	6.2389	4.0764	0.
14.00	13.8953	.86218	7.972	9.934	100.05	6.2395	4.0770	0.
14.50	13.8960	.86222	7.971	9.947	100.19	6.2397	4.0770	0.
15.00	13.8978	.86227	7.974	9.975	100.47	6.2397	4.0768	0.
15.50	13.8995	.86236	7.973	9.962	100.34	6.2401	4.0768	0.
16.00	13.8988	.86237	7.972	9.971	100.44	6.2402	4.0770	0.
16.50	13.9002	.86236	7.974	10.006	100.80	6.2399	4.0766	0.
17.00	13.8978	.86224	7.975	10.015	100.87	6.2393	4.0765	0.
17.50	13.8989	.86200	7.975	10.027	101.00	6.2372	4.0747	0.
18.00	13.8937	.86185	7.977	10.046	101.18	6.2368	4.0752	0.
18.50	13.8852	.86163	7.977	10.053	101.23	6.2364	4.0762	0.
19.00	13.8853	.86150	7.976	10.057	101.27	6.2354	4.0754	0.
19.50	13.8859	.86387	7.977	10.072	101.43	6.2537	4.0893	0.
20.00	13.8711	.85325	7.980	10.113	101.76	6.1734	4.0298	0.
20.50	13.8360	.85025	7.983	10.150	102.05	6.1556	4.0215	0.
21.00	13.8297	.84952	7.985	10.176	102.29	6.1509	4.0188	0.
21.50	13.8292	.84940	7.985	10.184	102.37	6.1500	4.0181	0.
22.00	13.8268	.85005	7.985	10.197	102.49	6.1554	4.0227	0.
22.50	13.8247	.85147	7.985	10.209	102.62	6.1667	4.0317	0.
23.00	13.8202	.85577	7.985	10.225	102.79	6.2009	4.0586	0.

MOA HYDROGRAPHIC DATA

STATION: C2-1 DATE: 8/14/00 TIME: 17:00

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	14.5783	.90657	7.924	2.668	27.53	6.4724	4.1495	0.
1.00	14.5143	.96030	7.922	5.531	56.77	6.8973	4.4859	0.
1.50	14.5012	.95991	7.920	6.959	71.35	6.8966	4.4875	0.
2.00	14.4992	.95953	7.918	7.649	78.39	6.8939	4.4858	0.
2.50	14.4955	.95937	7.918	8.340	85.44	6.8933	4.4859	0.
3.00	14.4911	.95899	7.918	8.145	83.44	6.8911	4.4849	0.
3.50	14.4763	.95847	7.918	8.069	82.63	6.8896	4.4861	0.
4.00	14.4611	.95780	7.916	8.097	82.89	6.8871	4.4866	0.
4.50	14.4494	.95736	7.915	8.061	82.50	6.8857	4.4874	0.
5.00	14.4336	.95697	7.913	8.062	82.48	6.8854	4.4897	0.
5.50	14.4134	.95669	7.913	8.262	84.49	6.8868	4.4939	0.
6.00	14.4010	.95626	7.911	8.301	84.87	6.8856	4.4950	0.
6.50	14.3885	.95580	7.909	7.960	81.35	6.8841	4.4959	0.
7.00	14.3728	.95548	7.909	7.805	79.74	6.8844	4.4986	0.
7.50	14.3491	.95537	7.904	7.854	80.21	6.8876	4.5048	0.
8.00	14.3202	.95565	7.906	7.938	81.02	6.8949	4.5150	0.
8.50	14.2687	.95621	7.903	8.056	82.14	6.9083	4.5334	0.
9.00	14.2426	.95665	7.898	8.213	83.70	6.9164	4.5436	0.
9.50	14.2316	.95697	7.895	8.401	85.60	6.9208	4.5488	0.
10.00	14.2327	.95733	7.890	8.669	88.33	6.9233	4.5505	0.
10.50	14.2255	.95750	7.884	9.035	92.04	6.9259	4.5537	0.
11.00	14.2145	.95756	7.879	9.385	95.59	6.9282	4.5572	0.
11.50	14.1946	.95749	7.874	9.635	98.10	6.9312	4.5625	0.
12.00	14.1916	.95748	7.868	9.733	99.08	6.9316	4.5633	0.
12.50	14.1880	.95735	7.856	9.745	99.20	6.9312	4.5636	0.
13.00	14.1806	.95721	7.823	9.803	99.77	6.9313	4.5649	0.
13.50	14.1704	.95695	7.788	9.936	101.10	6.9311	4.5663	0.
14.00	14.1631	.95675	7.770	9.992	101.66	6.9308	4.5672	0.

MOA HYDROGRAPHIC DATA

STATION: C2-2(A) DATE: 8/14/00 TIME: 17:28

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	14.5740	.87656	7.959	6.009	61.57	6.2429	3.9741	0.
1.00	14.5041	.97104	7.959	7.333	75.14	6.9822	4.5528	0.
1.50	14.4799	.97284	7.959	7.684	78.74	7.0005	4.5706	0.
2.00	14.4653	.97268	7.957	8.036	82.33	7.0018	4.5740	0.
2.50	14.4502	.97205	7.959	8.027	82.21	6.9995	4.5747	0.
3.00	14.4357	.97157	7.957	8.105	82.98	6.9984	4.5761	0.
3.50	14.4184	.97113	7.960	8.214	84.07	6.9980	4.5786	0.
4.00	14.3971	.97050	7.958	8.301	84.91	6.9969	4.5811	0.
4.50	14.3832	.97007	7.958	8.342	85.31	6.9960	4.5826	0.
5.00	14.3702	.96949	7.960	8.332	85.18	6.9938	4.5830	0.
5.50	14.3636	.96873	7.960	8.276	84.59	6.9891	4.5804	0.
6.00	14.3567	.96844	7.960	8.272	84.55	6.9880	4.5807	0.
6.50	14.3497	.96829	7.960	8.222	84.02	6.9880	4.5818	0.
7.00	14.3394	.96800	7.960	8.374	85.56	6.9875	4.5831	0.
7.50	14.3259	.96782	7.960	8.502	86.84	6.9886	4.5860	0.
8.00	14.3166	.96797	7.963	8.584	87.66	6.9913	4.5896	0.
8.50	14.2997	.96841	7.961	8.340	85.14	6.9977	4.5971	0.
9.00	14.2839	.96879	7.962	8.337	85.08	7.0035	4.6041	0.
9.50	14.2719	.96908	7.966	8.328	84.97	7.0078	4.6093	0.
10.00	14.2447	.96908	7.960	8.526	86.94	7.0127	4.6173	0.
10.50	14.2295	.96901	7.960	8.643	88.11	7.0148	4.6213	0.
11.00	14.2148	.96928	7.960	8.734	89.01	7.0195	4.6273	0.
11.50	14.2015	.96966	7.960	8.983	91.52	7.0249	4.6334	0.
12.00	14.1902	.97033	7.960	9.379	95.53	7.0320	4.6407	0.
12.50	14.1781	.97150	7.961	9.625	98.03	7.0433	4.6513	0.
13.00	14.1616	.97170	7.961	9.641	98.16	7.0478	4.6573	0.
13.50	14.1532	.97079	7.961	9.674	98.47	7.0423	4.6544	0.
14.00	14.1509	.96937	7.960	9.809	99.83	7.0315	4.6465	0.
14.50	14.1485	.96847	7.965	9.903	100.78	7.0249	4.6418	0.
15.00	14.1447	.96786	7.964	9.908	100.82	7.0207	4.6392	0.
15.50	14.1408	.96758	7.961	9.898	100.71	7.0192	4.6386	0.
16.00	14.1401	.96682	7.965	9.945	101.19	7.0133	4.6342	0.
16.50	14.1308	.96558	7.965	10.091	102.64	7.0053	4.6294	0.
17.00	14.1282	.96472	7.965	10.119	102.91	6.9990	4.6250	0.
17.50	14.1260	.96369	7.966	10.107	102.78	6.9913	4.6195	0.
18.00	14.1255	.96231	7.968	10.138	103.09	6.9805	4.6113	0.

MOA HYDROGRAPHIC DATA

STATION: C2-2(B) DATE: 8/14/00 TIME: 17:30

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	14.4787	.95487	7.932	9.855	100.91	6.8616	4.4642	0.
1.00	14.4118	.95635	7.936	9.959	101.84	6.8848	4.4927	0.
1.50	14.3939	.95668	7.939	9.962	101.84	6.8905	4.4999	0.
2.00	14.3951	.95676	7.941	9.965	101.87	6.8908	4.5000	0.
2.50	14.3992	.95674	7.943	9.977	102.00	6.8899	4.4986	0.
3.00	14.4079	.95674	7.942	9.985	102.10	6.8883	4.4960	0.
3.50	14.4190	.95675	7.946	10.005	102.33	6.8864	4.4928	0.
4.00	14.4013	.95694	7.944	10.037	102.62	6.8910	4.4991	0.
4.50	14.3594	.95733	7.946	10.072	102.89	6.9013	4.5137	0.
5.00	14.3455	.95774	7.944	10.081	102.95	6.9069	4.5202	0.
5.50	14.3302	.95842	7.944	10.093	103.05	6.9149	4.5287	0.
6.00	14.3193	.95902	7.941	10.117	103.27	6.9215	4.5355	0.
6.50	14.3002	.96044	7.941	10.141	103.49	6.9358	4.5495	0.
7.00	14.2921	.96173	7.941	10.181	103.88	6.9472	4.5596	0.
7.50	14.2915	.96199	7.941	10.170	103.77	6.9494	4.5613	0.
8.00	14.2868	.96214	7.941	10.217	104.24	6.9513	4.5635	0.
8.50	14.2804	.96354	7.942	10.237	104.43	6.9633	4.5737	0.
9.00	14.2753	.96627	7.939	10.252	104.59	6.9854	4.5915	0.
9.50	14.2768	.96928	7.937	10.278	104.87	7.0085	4.6091	0.
10.00	14.2722	.97373	7.937	10.296	105.08	7.0439	4.6370	0.
10.50	14.2579	.97746	7.937	10.329	105.40	7.0756	4.6635	0.
11.00	14.2130	.97967	7.933	10.371	105.74	7.1009	4.6901	0.
11.50	14.1974	.98061	7.933	10.383	105.84	7.1111	4.7003	0.
12.00	14.1927	.98034	7.933	10.420	106.20	7.1098	4.7001	0.
12.50	14.1892	.98040	7.933	10.453	106.53	7.1109	4.7014	0.
13.00	14.1839	.98085	7.931	10.481	106.80	7.1153	4.7057	0.
13.50	14.1867	.98048	7.930	10.495	106.95	7.1118	4.7026	0.
14.00	14.1897	.97994	7.928	10.527	107.28	7.1070	4.6984	0.
14.50	14.1885	.97943	7.928	10.559	107.61	7.1032	4.6957	0.
15.00	14.1836	.97813	7.930	10.602	108.02	7.0939	4.6892	0.
15.50	14.1804	.97620	7.931	10.631	108.30	7.0794	4.6786	0.
16.00	14.1778	.97443	7.931	10.672	108.70	7.0659	4.6687	0.
16.50	14.1730	.97332	7.930	10.695	108.92	7.0581	4.6634	0.
17.00	14.1676	.97302	7.930	10.737	109.33	7.0567	4.6632	0.
17.50	14.1596	.97317	7.928	10.784	109.80	7.0593	4.6665	0.
18.00	14.1576	.97286	7.928	10.846	110.42	7.0572	4.6652	0.
18.50	14.1549	.97198	7.928	10.896	110.92	7.0507	4.6606	0.
19.00	14.1518	.97104	7.923	10.929	111.24	7.0439	4.6559	0.
19.50	14.1498	.97006	7.923	10.474	106.59	7.0366	4.6505	0.
20.00	14.1478	.96907	7.919	10.019	101.93	7.0292	4.6451	0.

MOA HYDROGRAPHIC DATA

STATION: C2-2(C) DATE: 8/14/00 TIME: 17:32

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	14.6274	.93752	7.883	9.340	95.84	6.7020	4.3179	0.
1.00	14.6244	.95399	7.900	9.076	93.21	6.8293	4.4161	0.
1.50	14.6283	.95438	7.909	8.880	91.20	6.8316	4.4172	0.
2.00	14.6193	.95479	7.914	9.139	93.84	6.8363	4.4222	0.
2.50	14.4973	.95568	7.912	9.349	95.77	6.8644	4.4634	0.
3.00	14.4658	.95642	7.918	9.451	96.75	6.8757	4.4771	0.
3.50	14.4642	.95692	7.919	9.469	96.94	6.8798	4.4805	0.
4.00	14.4600	.95711	7.922	9.546	97.71	6.8820	4.4828	0.
4.50	14.4123	.95733	7.926	9.495	97.10	6.8920	4.4982	0.
5.00	14.3755	.95771	7.929	9.551	97.61	6.9014	4.5112	0.
5.50	14.3538	.95797	7.932	9.552	97.57	6.9072	4.5191	0.
6.00	14.3475	.95840	7.935	9.582	97.86	6.9116	4.5235	0.
6.50	14.3317	.95904	7.937	9.608	98.10	6.9193	4.5319	0.
7.00	14.3181	.96047	7.941	9.623	98.23	6.9329	4.5444	0.
7.50	14.3067	.96136	7.941	9.617	98.15	6.9417	4.5530	0.
8.00	14.3019	.96155	7.944	9.620	98.18	6.9440	4.5556	0.
8.50	14.3014	.96166	7.946	9.617	98.15	6.9449	4.5563	0.
9.00	14.2974	.96194	7.946	9.608	98.04	6.9478	4.5591	0.
9.50	14.2915	.96262	7.946	9.601	97.97	6.9541	4.5649	0.
10.00	14.2861	.96327	7.946	9.595	97.89	6.9600	4.5704	0.
10.50	14.2856	.96381	7.946	9.616	98.11	6.9642	4.5737	0.
11.00	14.2861	.96504	7.949	9.610	98.06	6.9737	4.5808	0.
11.50	14.2871	.96670	7.951	9.585	97.81	6.9864	4.5905	0.
12.00	14.2931	.96982	7.951	9.575	97.74	7.0095	4.6072	0.
12.50	14.2981	.97431	7.951	9.562	97.63	7.0435	4.6326	0.
13.00	14.2985	.97680	7.951	9.558	97.60	7.0629	4.6474	0.
13.50	14.2834	.97860	7.951	9.539	97.40	7.0795	4.6625	0.
14.00	14.2624	.97920	7.947	9.541	97.37	7.0879	4.6723	0.
14.50	14.2391	.97953	7.951	9.541	97.33	7.0947	4.6812	0.
15.00	14.2236	.97979	7.951	9.537	97.26	7.0995	4.6873	0.
15.50	14.2061	.98021	7.951	9.539	97.24	7.1060	4.6950	0.
16.00	14.1919	.98106	7.951	9.529	97.12	7.1152	4.7043	0.
16.50	14.1809	.98182	7.954	9.523	97.04	7.1231	4.7121	0.
17.00	14.1784	.98222	7.951	9.520	97.01	7.1266	4.7152	0.
17.50	14.1778	.98260	7.954	9.496	96.76	7.1297	4.7177	0.
18.00	14.1755	.98263	7.951	9.493	96.73	7.1302	4.7185	0.
18.50	14.1746	.98261	7.954	9.503	96.82	7.1302	4.7186	0.
19.00	14.1758	.98235	7.951	9.506	96.86	7.1279	4.7166	0.
19.50	14.1728	.98142	7.957	9.488	96.67	7.1211	4.7119	0.
20.00	14.1720	.98033	7.951	9.475	96.52	7.1127	4.7056	0.
20.50	14.1715	.97944	7.951	9.474	96.51	7.1058	4.7003	0.
21.00	14.1715	.97864	7.951	9.485	96.62	7.0995	4.6955	0.
21.50	14.1692	.97766	7.955	9.486	96.62	7.0922	4.6902	0.
22.00	14.1688	.97676	7.956	9.485	96.60	7.0852	4.6849	0.
22.50	14.1668	.97567	7.956	9.491	96.65	7.0770	4.6789	0.
23.50	14.1706	.97381	7.956	9.486	96.61	7.0617	4.6666	0.

MOA HYDROGRAPHIC DATA

STATION: C2-3 DATE: 8/14/00 TIME: 17:53

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	14.3840	1.01063	7.922	9.213	94.40	4.3418	2.5353	0.
1.00	14.3819	1.01049	7.925	9.293	95.22	5.8258	3.6795	0.
1.50	14.3818	1.01032	7.930	9.265	94.93	7.3098	4.8237	0.
2.00	14.3778	1.01027	7.937	9.271	94.98	7.3101	4.8246	0.
2.50	14.3667	1.01049	7.938	9.282	95.08	7.3138	4.8293	0.
3.00	14.3584	1.01075	7.943	9.283	95.07	7.3173	4.8333	0.
3.50	14.3593	1.01095	7.946	9.291	95.15	7.3187	4.8341	0.
4.00	14.3616	1.01102	7.946	9.290	95.15	7.3187	4.8338	0.
4.50	14.3602	1.01103	7.946	9.301	95.26	7.3191	4.8343	0.
5.00	14.3614	1.01103	7.946	9.298	95.23	7.3188	4.8339	0.
5.50	14.3627	1.01102	7.950	9.301	95.26	7.3185	4.8334	0.
6.00	14.3600	1.01096	7.950	9.308	95.33	7.3184	4.8338	0.
6.50	14.3541	1.01090	7.951	9.314	95.38	7.3190	4.8352	0.
7.00	14.3533	1.01086	7.951	9.316	95.40	7.3188	4.8352	0.
7.50	14.3470	1.01073	7.951	9.322	95.45	7.3189	4.8363	0.
8.00	14.3454	1.01064	7.951	9.332	95.55	7.3185	4.8362	0.
8.50	14.3398	1.01086	7.951	9.345	95.67	7.3212	4.8392	0.
9.00	14.3348	1.01121	7.951	9.351	95.72	7.3248	4.8428	0.
9.50	14.3304	1.01137	7.951	9.343	95.63	7.3268	4.8450	0.
10.00	14.3338	1.01136	7.951	9.356	95.78	7.3261	4.8439	0.
10.50	14.3394	1.01089	7.951	9.358	95.80	7.3213	4.8393	0.
11.00	14.3401	1.01080	7.951	9.363	95.86	7.3204	4.8385	0.
11.50	14.3357	1.01096	7.951	9.373	95.95	7.3224	4.8408	0.
12.00	14.3328	1.01111	7.951	9.384	96.06	7.3241	4.8425	0.
12.50	14.3312	1.01137	7.951	9.390	96.11	7.3263	4.8445	0.
13.00	14.3308	1.01141	7.951	9.410	96.32	7.3267	4.8448	0.
13.50	14.3287	1.01179	7.952	9.412	96.34	7.3301	4.8477	0.
14.00	14.3225	1.01196	7.951	9.414	96.34	7.3325	4.8506	0.
14.50	14.3225	1.01192	7.951	9.418	96.39	7.3321	4.8503	0.
15.00	14.3232	1.01182	7.952	9.427	96.48	7.3311	4.8494	0.
15.50	14.3215	1.01188	7.951	9.433	96.54	7.3319	4.8503	0.
16.00	14.3206	1.01194	7.951	9.441	96.62	7.3324	4.8509	0.
16.50	14.3179	1.01212	7.951	9.440	96.60	7.3343	4.8527	0.
17.00	14.3172	1.01225	7.951	9.463	96.84	7.3355	4.8537	0.
17.50	14.3193	1.01228	7.951	9.467	96.88	7.3353	4.8532	0.
18.00	14.3199	1.01225	7.951	9.482	97.04	7.3348	4.8528	0.
18.50	14.3210	1.01215	7.951	9.497	97.20	7.3338	4.8519	0.
19.00	14.3224	1.01207	7.951	9.505	97.28	7.3328	4.8509	0.
19.50	14.3204	1.01195	7.951	9.514	97.37	7.3322	4.8507	0.
20.00	14.3204	1.01092	7.951	9.530	97.52	7.3242	4.8445	0.
20.50	14.3233	1.01008	7.951	9.523	97.46	7.3170	4.8386	0.
21.00	14.3207	1.01010	7.952	9.536	97.59	7.3176	4.8395	0.
21.50	14.3241	1.01022	7.951	9.558	97.82	7.3179	4.8391	0.
22.00	14.3248	1.01028	7.951	9.568	97.92	7.3181	4.8392	0.
22.50	14.3263	1.01020	7.951	9.571	97.95	7.3172	4.8383	0.
23.00	14.3271	1.01038	7.952	9.574	97.99	7.3184	4.8391	0.
23.50	14.3274	1.01056	7.951	9.589	98.14	7.3197	4.8400	0.
24.00	14.3207	1.01084	7.951	9.605	98.30	7.3231	4.8437	0.
24.50	14.3164	1.01115	7.951	9.620	98.44	7.3262	4.8468	0.
25.00	14.3048	1.01183	7.951	9.624	98.46	7.3337	4.8543	0.
25.50	14.3035	1.01212	7.951	9.642	98.64	7.3362	4.8564	0.
26.00	14.3012	1.01208	7.951	9.650	98.72	7.3363	4.8569	0.
26.50	14.2939	1.01203	7.951	9.655	98.75	7.3372	4.8587	0.
27.00	14.2921	1.01200	7.951	9.669	98.89	7.3372	4.8591	0.
27.50	14.2945	1.01203	7.951	9.683	99.05	7.3370	4.8585	0.
28.00	14.2931	1.01204	7.951	9.705	99.26	7.3372	4.8589	0.
28.50	14.2925	1.01202	7.953	9.710	99.32	7.3372	4.8590	0.
29.00	14.2913	1.01195	7.951	9.718	99.40	7.3368	4.8588	0.
29.50	14.2902	1.01190	7.951	9.735	99.57	7.3365	4.8588	0.
30.00	14.2862	1.01187	7.951	9.746	99.67	7.3370	4.8598	0.
30.50	14.2848	1.01184	7.951	9.754	99.74	7.3370	4.8600	0.
31.00	14.2863	1.01191	7.951	9.766	99.87	7.3372	4.8600	0.
31.50	14.2858	1.01193	7.953	9.780	100.02	7.3374	4.8602	0.
32.00	14.2836	1.01189	7.951	9.775	99.96	7.3375	4.8606	0.
32.50	14.2836	1.01188	7.951	9.793	100.15	7.3373	4.8605	0.
33.00	14.2835	1.01194	7.951	9.807	100.28	7.3378	4.8609	0.
33.50	14.2827	1.01202	7.952	9.820	100.42	7.3385	4.8615	0.
34.00	14.2831	1.01202	7.953	9.815	100.37	7.3384	4.8614	0.
34.50	14.2827	1.01198	7.953	9.826	100.48	7.3381	4.8612	0.
35.00	14.2836	1.01196	7.953	9.832	100.54	7.3377	4.8608	0.
35.50	14.2836	1.01202	7.955	9.861	100.84	7.3382	4.8611	0.
36.00	14.2838	1.01203	7.955	9.899	101.23	7.3381	4.8611	0.

MOA HYDROGRAPHIC DATA

STATION: C2-4 DATE: 8/14/00 TIME: 18:08

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
1.00	14.4002	1.01344	7.941	9.197	94.28	7.3306	4.8367	0.
1.50	14.3984	1.01351	7.941	9.182	94.12	7.3316	4.8379	0.
2.00	14.3948	1.01345	7.941	9.201	94.31	7.3314	4.8380	0.
2.50	14.3881	1.01346	7.941	9.198	94.27	7.3330	4.8405	0.
3.00	14.3798	1.01347	7.941	9.208	94.36	7.3346	4.8431	0.
3.50	14.3708	1.01367	7.941	9.211	94.37	7.3378	4.8470	0.
4.00	14.3566	1.01366	7.941	9.217	94.41	7.3403	4.8512	0.
4.50	14.3533	1.01342	7.946	9.205	94.28	7.3390	4.8507	0.
5.00	14.3530	1.01315	7.943	9.206	94.28	7.3369	4.8491	0.
5.50	14.3492	1.01308	7.941	9.209	94.31	7.3370	4.8498	0.
6.00	14.3465	1.01327	7.943	9.220	94.42	7.3390	4.8518	0.
6.50	14.3452	1.01353	7.941	9.211	94.32	7.3412	4.8537	0.
7.00	14.3447	1.01368	7.941	9.219	94.40	7.3424	4.8547	0.
7.50	14.3432	1.01364	7.941	9.217	94.38	7.3423	4.8549	0.
8.00	14.3417	1.01361	7.941	9.224	94.45	7.3423	4.8551	0.
8.50	14.3392	1.01357	7.939	9.233	94.54	7.3425	4.8556	0.
9.00	14.3370	1.01357	7.941	9.241	94.61	7.3428	4.8562	0.
9.50	14.3354	1.01358	7.941	9.245	94.65	7.3431	4.8567	0.
10.00	14.3336	1.01372	7.940	9.247	94.67	7.3445	4.8581	0.
10.50	14.3303	1.01395	7.941	9.248	94.68	7.3469	4.8604	0.
11.00	14.3303	1.01402	7.938	9.247	94.67	7.3474	4.8608	0.
11.50	14.3290	1.01400	7.939	9.245	94.64	7.3474	4.8610	0.
12.00	14.3251	1.01377	7.941	9.256	94.74	7.3463	4.8608	0.
12.50	14.3220	1.01355	7.937	9.258	94.76	7.3452	4.8604	0.
13.00	14.3213	1.01359	7.938	9.256	94.73	7.3455	4.8608	0.
13.50	14.3201	1.01354	7.937	9.263	94.80	7.3453	4.8608	0.
14.00	14.3166	1.01330	7.937	9.272	94.89	7.3441	4.8604	0.
14.50	14.3161	1.01274	7.937	9.267	94.84	7.3397	4.8572	0.
15.00	14.3131	1.01193	7.937	9.273	94.89	7.3339	4.8532	0.
15.50	14.3107	1.01112	7.932	9.282	94.97	7.3280	4.8490	0.
16.00	14.3065	1.01011	7.934	9.277	94.90	7.3208	4.8442	0.
16.50	14.3053	1.00954	7.934	9.285	94.98	7.3165	4.8411	0.
17.00	14.3040	1.00925	7.932	9.290	95.02	7.3145	4.8397	0.
17.50	14.3022	1.00852	7.932	9.310	95.23	7.3091	4.8358	0.
18.00	14.3006	1.00739	7.931	9.299	95.11	7.3005	4.8295	0.
18.50	14.2998	1.00638	7.931	9.313	95.24	7.2927	4.8236	0.
19.00	14.2964	1.00564	7.931	9.315	95.25	7.2875	4.8202	0.
19.50	14.2957	1.00512	7.929	9.333	95.44	7.2835	4.8173	0.
20.00	14.2950	1.00467	7.928	9.348	95.58	7.2801	4.8147	0.
20.50	14.2949	1.00440	7.925	9.354	95.64	7.2780	4.8131	0.
21.00	14.2901	1.00261	7.928	9.366	95.75	7.2648	4.8038	0.
21.50	14.2868	1.00047	7.923	9.367	95.74	7.2487	4.7919	0.
22.00	14.2839	.99915	7.922	9.381	95.87	7.2389	4.7849	0.
22.50	14.2865	1.00013	7.918	9.397	96.04	7.2460	4.7899	0.
23.00	14.2895	1.00157	7.914	9.402	96.11	7.2567	4.7976	0.
23.50	14.2862	1.00058	7.915	9.420	96.28	7.2495	4.7926	0.
24.00	14.2805	.99768	7.910	9.436	96.42	7.2278	4.7769	0.
24.50	14.2744	.99484	7.905	9.456	96.60	7.2068	4.7617	0.
25.00	14.2689	.99208	7.898	9.477	96.79	7.1862	4.7468	0.

MOA HYDROGRAPHIC DATA

STATION: C3-1 DATE: 8/14/00 TIME: 19:02

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	14.6076	1.10113	7.943	6.501	67.27	7.9746	5.2974	0.
1.00	14.6108	1.12547	7.945	7.196	74.47	8.1642	5.4423	0.
1.50	14.6117	1.12351	7.945	7.892	81.68	8.1487	5.4303	0.
2.00	14.6050	1.12455	7.945	7.082	73.29	8.1582	5.4387	0.
2.50	14.5966	1.12463	7.945	6.799	70.35	8.1605	5.4418	0.
3.00	14.5873	1.12434	7.945	6.648	68.78	8.1601	5.4430	0.
3.50	14.5743	1.12369	7.945	6.549	67.73	8.1576	5.4432	0.
4.00	14.5762	1.12290	7.946	6.456	66.77	8.1510	5.4379	0.
4.50	14.5710	1.12242	7.946	6.450	66.70	8.1483	5.4366	0.
5.00	14.5714	1.12226	7.946	6.510	67.32	8.1469	5.4355	0.
5.50	14.5706	1.12278	7.946	6.560	67.84	8.1511	5.4388	0.
6.00	14.5711	1.12321	7.947	6.574	67.98	8.1543	5.4412	0.
6.50	14.5700	1.12371	7.947	6.654	68.81	8.1584	5.4445	0.
7.00	14.5621	1.12437	7.945	6.849	70.82	8.1652	5.4510	0.
7.50	14.5633	1.12447	7.946	6.974	72.11	8.1656	5.4512	0.
8.00	14.5621	1.12416	7.948	7.091	73.32	8.1634	5.4497	0.
8.50	14.5513	1.12398	7.943	7.531	77.85	8.1642	5.4521	0.
9.00	14.5543	1.12469	7.945	8.189	84.66	8.1690	5.4553	0.
9.50	14.5546	1.12018	7.946	8.703	89.96	8.1336	5.4280	0.
10.00	14.5537	1.12417	7.947	8.895	91.96	8.1650	5.4523	0.
10.50	14.5518	1.12866	7.945	9.035	93.43	8.2006	5.4799	0.
11.00	14.5516	1.12399	7.947	9.107	94.15	8.1639	5.4518	0.
11.50	14.5526	1.13207	7.949	9.258	95.74	8.2270	5.5001	0.
12.00	14.5463	1.14979	7.945	9.359	96.86	8.3674	5.6088	0.
12.50	14.5447	1.15492	7.943	9.355	96.85	8.4080	5.6402	0.
13.00	14.5448	1.15657	7.945	9.407	97.38	8.4210	5.6501	0.
13.50	14.5443	1.15773	7.945	9.434	97.67	8.4301	5.6572	0.
14.00	14.5438	1.15866	7.945	9.421	97.54	8.4375	5.6629	0.
14.50	14.5445	1.15922	7.945	9.401	97.33	8.4417	5.6660	0.
15.00	14.5431	1.16027	7.945	9.423	97.56	8.4502	5.6728	0.
15.50	14.5425	1.15973	7.945	9.419	97.52	8.4460	5.6696	0.

MOA HYDROGRAPHIC DATA

STATION: C3-2 DATE: 8/14/00 TIME: 19:20

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	14.5042	1.05649	7.909	6.285	64.85	7.6466	5.0626	0.
1.00	14.6151	1.12213	7.904	6.909	71.49	8.1372	5.4209	0.
1.50	14.5791	1.17793	7.948	7.533	78.13	8.5828	5.7686	0.
2.00	14.5795	1.18124	7.950	6.973	72.33	8.6087	5.7884	0.
2.50	14.5858	1.18169	7.946	7.026	72.88	8.6108	5.7890	0.
3.00	14.5897	1.18209	7.938	6.973	72.34	8.6131	5.7901	0.
3.50	14.5806	1.18249	7.947	7.037	72.99	8.6182	5.7954	0.
4.00	14.5895	1.18301	7.937	7.055	73.20	8.6203	5.7956	0.
4.50	14.5827	1.18342	7.939	6.934	71.93	8.6249	5.8003	0.
5.00	14.5786	1.18413	7.939	7.042	73.05	8.6314	5.8059	0.
5.50	14.5860	1.18396	7.940	7.321	75.95	8.6283	5.8024	0.
6.00	14.5865	1.18390	7.939	7.583	78.67	8.6277	5.8018	0.
6.50	14.5781	1.18363	7.940	7.394	76.70	8.6274	5.8029	0.
7.00	14.5728	1.18369	7.940	7.444	77.21	8.6290	5.8050	0.
7.50	14.5863	1.18328	7.940	7.774	80.66	8.6227	5.7980	0.
8.00	14.5823	1.18247	7.940	7.869	81.63	8.6171	5.7943	0.
8.50	14.5755	1.18021	7.940	8.327	86.36	8.6008	5.7829	0.
9.00	14.5753	1.17736	7.940	8.434	87.46	8.5783	5.7658	0.
9.50	14.5709	1.16985	7.942	8.427	87.34	8.5202	5.7219	0.
10.00	14.5713	1.18092	7.941	8.708	90.31	8.6071	5.7885	0.
10.50	14.5714	1.18326	7.942	8.994	93.28	8.6255	5.8026	0.
11.00	14.5707	1.18307	7.940	9.134	94.73	8.6240	5.8016	0.
11.50	14.5708	1.18273	7.940	9.139	94.79	8.6213	5.7995	0.
12.00	14.5711	1.18227	7.940	9.176	95.17	8.6175	5.7965	0.
12.50	14.5701	1.18231	7.942	9.187	95.28	8.6180	5.7970	0.
13.00	14.5724	1.18255	7.942	9.192	95.33	8.6194	5.7977	0.
13.50	14.5722	1.18285	7.940	9.213	95.55	8.6217	5.7995	0.
14.00	14.5709	1.18276	7.940	9.261	96.05	8.6212	5.7994	0.
14.50	14.5709	1.18214	7.942	9.249	95.92	8.6163	5.7956	0.
15.00	14.5714	1.17790	7.943	9.290	96.33	8.5827	5.7698	0.
15.50	14.5694	1.17656	7.945	9.319	96.62	8.5726	5.7623	0.
16.00	14.5695	1.17644	7.945	9.340	96.83	8.5715	5.7615	0.
16.50	14.5705	1.18048	7.942	9.355	97.01	8.6031	5.7855	0.
17.00	14.5711	1.18202	7.945	9.339	96.85	8.6150	5.7946	0.
17.50	14.5692	1.18245	7.945	9.349	96.96	8.6187	5.7978	0.
18.00	14.5711	1.18223	7.945	9.374	97.22	8.6165	5.7958	0.
18.50	14.5695	1.18225	7.945	9.390	97.38	8.6170	5.7964	0.
19.00	14.5691	1.18252	7.945	9.395	97.44	8.6192	5.7981	0.
19.50	14.5725	1.18269	7.945	9.401	97.51	8.6197	5.7980	0.
20.00	14.5686	1.18268	7.945	9.402	97.50	8.6204	5.7992	0.
20.50	14.5692	1.18263	7.945	9.412	97.61	8.6198	5.7986	0.

MOA HYDROGRAPHIC DATA

STATION: C3-3 DATE: 8/14/00 TIME: 19:32

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	14.5781	1.19381	7.944	7.993	82.95	8.7082	5.8649	0.
1.00	14.5802	1.20965	7.949	7.652	79.48	8.8326	5.9600	0.
1.50	14.5835	1.21346	7.949	7.311	75.96	8.8619	5.9819	0.
2.00	14.5876	1.21500	7.948	7.299	75.84	8.8730	5.9897	0.
2.50	14.5935	1.21650	7.945	7.187	74.69	8.8835	5.9968	0.
3.00	14.5957	1.21734	7.945	7.000	72.75	8.8896	6.0011	0.
3.50	14.5986	1.21762	7.945	7.057	73.35	8.8910	6.0017	0.
4.00	14.6013	1.21748	7.944	7.126	74.07	8.8893	6.0000	0.
4.50	14.6018	1.21694	7.945	7.241	75.27	8.8848	5.9964	0.
5.00	14.6040	1.21604	7.945	7.241	75.27	8.8772	5.9903	0.
5.50	14.6119	1.21601	7.944	7.168	74.52	8.8751	5.9873	0.
6.00	14.6167	1.21583	7.944	7.199	74.85	8.8725	5.9845	0.
6.50	14.6131	1.21540	7.943	7.432	77.27	8.8699	5.9831	0.
7.00	14.6211	1.21546	7.944	7.805	81.16	8.8685	5.9807	0.
7.50	14.6302	1.21740	7.941	8.368	87.03	8.8817	5.9893	0.
8.00	14.6349	1.21877	7.941	8.795	91.49	8.8913	5.9960	0.
8.50	14.6305	1.21352	7.940	8.903	92.58	8.8509	5.9657	0.
9.00	14.6246	1.21072	7.942	8.998	93.54	8.8301	5.9507	0.
9.50	14.6276	1.21344	7.943	9.090	94.52	8.8508	5.9661	0.
10.00	14.6257	1.21317	7.941	9.114	94.77	8.8491	5.9651	0.
10.50	14.6255	1.21234	7.943	9.160	95.24	8.8425	5.9601	0.
11.00	14.6282	1.21537	7.943	9.310	96.82	8.8657	5.9774	0.
11.50	14.6353	1.22020	7.941	9.403	97.82	8.9021	6.0041	0.
12.00	14.6364	1.22091	7.942	9.472	98.55	8.9074	6.0081	0.
12.50	14.6416	1.22365	7.940	9.510	98.97	8.9278	6.0228	0.
13.00	14.6393	1.22134	7.940	9.562	99.49	8.9100	6.0096	0.
13.50	14.6144	1.20513	7.944	9.614	99.91	8.7878	5.9200	0.
14.00	14.6157	1.20437	7.944	9.651	100.28	8.7815	5.9149	0.
14.50	14.6260	1.21269	7.944	9.704	100.90	8.8447	5.9617	0.
15.00	14.6469	1.22800	7.940	9.726	101.25	8.9606	6.0471	0.
15.50	14.6547	1.23316	7.940	9.732	101.35	8.9994	6.0755	0.
16.00	14.6572	1.23468	7.940	9.769	101.74	9.0108	6.0839	0.
16.50	14.6569	1.23466	7.940	9.805	102.12	9.0106	6.0838	0.
17.00	14.6571	1.23483	7.940	9.817	102.24	9.0119	6.0847	0.
17.50	14.6588	1.23505	7.940	9.836	102.45	9.0132	6.0854	0.
18.00	14.6582	1.23510	7.940	9.852	102.62	9.0136	6.0859	0.
18.50	14.6586	1.23507	7.940	9.874	102.84	9.0133	6.0855	0.
19.00	14.6590	1.23501	7.943	9.880	102.91	9.0126	6.0849	0.
19.50	14.6590	1.23488	7.940	9.901	103.12	9.0115	6.0841	0.
20.00	14.6576	1.23456	7.940	9.919	103.31	9.0093	6.0826	0.
20.50	14.6564	1.23382	7.943	9.930	103.42	9.0037	6.0785	0.
21.00	14.6554	1.23321	7.943	9.922	103.33	8.9990	6.0751	0.
21.50	14.6558	1.23348	7.942	9.973	103.86	9.0010	6.0766	0.
22.00	14.6577	1.23415	7.945	10.020	104.36	9.0058	6.0800	0.

MOA HYDROGRAPHIC DATA

STATION: C3-4 DATE: 8/14/00 TIME: 19:48

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	14.6700	1.00865	7.999	7.804	78.61	7.6468	5.3524	0.
1.00	14.5226	1.08711	7.905	8.360	86.22	7.8821	5.2403	0.
1.50	14.5271	1.08640	7.966	7.980	82.31	7.8756	5.2346	0.
2.00	14.5287	1.08408	7.966	7.960	82.10	7.8571	5.2202	0.
2.50	14.5183	1.08309	7.970	8.178	84.32	7.8514	5.2175	0.
3.00	14.5187	1.08387	7.973	8.276	85.33	7.8573	5.2219	0.
3.50	14.5177	1.08346	7.973	8.222	84.77	7.8543	5.2198	0.
4.00	14.5193	1.08641	7.975	7.853	80.99	7.8770	5.2370	0.
4.50	14.5252	1.08841	7.973	7.426	76.60	7.8914	5.2470	0.
5.00	14.5204	1.08809	7.975	7.427	76.60	7.8898	5.2466	0.
5.50	14.5334	1.08996	7.973	7.646	78.88	7.9018	5.2537	0.
6.00	14.5539	1.08638	7.964	7.972	82.27	7.8696	5.2256	0.
6.50	14.5359	1.08345	7.971	8.365	86.28	7.8502	5.2137	0.
7.00	14.5266	1.08303	7.976	8.566	88.34	7.8488	5.2141	0.
7.50	14.5243	1.08455	7.978	8.524	87.90	7.8611	5.2239	0.
8.00	14.5280	1.09304	7.975	8.570	88.42	7.9267	5.2737	0.
8.50	14.5605	1.11850	7.964	8.813	91.10	8.1193	5.4161	0.
9.00	14.5550	1.11143	7.968	9.008	93.08	8.0650	5.3754	0.
9.50	14.5523	1.10957	7.969	8.958	92.54	8.0510	5.3650	0.
10.00	14.5430	1.09380	7.970	9.127	94.20	7.9294	5.2733	0.
10.50	14.5297	1.08259	7.978	9.061	93.44	7.8444	5.2102	0.
11.00	14.5335	1.09367	7.979	9.133	94.24	7.9302	5.2754	0.
11.50	14.5621	1.11925	7.965	9.133	94.41	8.1245	5.4199	0.
12.00	14.5711	1.13018	7.963	9.166	94.82	8.2083	5.4826	0.
12.50	14.5711	1.13112	7.963	9.174	94.91	8.2156	5.4882	0.
13.00	14.5667	1.12463	7.963	9.235	95.50	8.1656	5.4506	0.
13.50	14.5559	1.11290	7.966	9.282	95.92	8.0759	5.3836	0.
14.00	14.5619	1.11732	7.966	9.287	96.00	8.1092	5.4082	0.
15.00	14.5607	1.11501	7.966	9.292	96.03	8.0912	5.3945	0.
15.50	14.5551	1.11084	7.968	9.375	96.86	8.0597	5.3713	0.
16.00	14.5563	1.11028	7.968	9.372	96.83	8.0550	5.3675	0.
16.50	14.5580	1.11181	7.967	9.346	96.58	8.0666	5.3761	0.
17.00	14.5618	1.11533	7.966	9.353	96.67	8.0933	5.3960	0.
17.50	14.5615	1.11651	7.965	9.369	96.84	8.1026	5.4031	0.
18.00	14.5683	1.12223	7.964	9.398	97.17	8.1459	5.4352	0.
18.50	14.5682	1.12310	7.966	9.418	97.39	8.1527	5.4405	0.
19.00	14.5728	1.12847	7.963	9.398	97.22	8.1937	5.4712	0.
19.50	14.5690	1.12490	7.966	9.439	97.62	8.1665	5.4509	0.
20.00	14.5671	1.12084	7.964	9.447	97.68	8.1351	5.4271	0.
20.50	14.5603	1.11369	7.966	9.462	97.78	8.0804	5.3863	0.
21.00	14.5608	1.11361	7.968	9.477	97.94	8.0796	5.3856	0.
21.50	14.5583	1.11135	7.969	9.459	97.74	8.0624	5.3728	0.
22.00	14.5672	1.12044	7.964	9.492	98.14	8.1316	5.4245	0.
22.50	14.5704	1.12406	7.964	9.490	98.14	8.1593	5.4452	0.
23.00	14.5681	1.12290	7.965	9.511	98.35	8.1506	5.4389	0.
23.50	14.5790	1.13320	7.965	9.511	98.42	8.2290	5.4972	0.
24.00	14.5964	1.15053	7.951	9.541	98.85	8.3612	5.5958	0.
24.50	14.5651	1.12432	7.963	9.561	98.86	8.1622	5.4483	0.
25.00	14.5621	1.11565	7.968	9.592	99.14	8.0949	5.3971	0.
25.50	14.5685	1.12289	7.966	9.588	99.15	8.1502	5.4385	0.
26.00	14.5799	1.13526	7.963	9.585	99.20	8.2447	5.5092	0.
26.50	14.5868	1.14824	7.957	9.588	99.31	8.3450	5.5849	0.
27.00	14.5958	1.15617	7.956	9.592	99.40	8.4053	5.6297	0.
27.50	14.5981	1.16080	7.955	9.619	99.71	8.4411	5.6568	0.
28.00	14.6095	1.17361	7.954	9.627	99.87	8.5392	5.7301	0.
28.50	14.6194	1.18062	7.953	9.663	100.31	8.5920	5.7690	0.
29.00	14.6038	1.16797	7.954	9.679	100.37	8.4960	5.6980	0.
29.50	14.5990	1.16235	7.957	9.704	100.60	8.4528	5.6656	0.
30.00	14.5955	1.15823	7.959	9.717	100.70	8.4212	5.6419	0.
30.50	14.6003	1.16037	7.959	9.703	100.58	8.4369	5.6532	0.
31.00	14.6107	1.17400	7.955	9.714	100.79	8.5416	5.7318	0.
31.50	14.6182	1.18196	7.953	9.739	101.09	8.6025	5.7773	0.
32.00	14.6211	1.18533	7.952	9.742	101.15	8.6283	5.7966	0.
32.50	14.6250	1.18760	7.954	9.753	101.29	8.6453	5.8089	0.
33.00	14.6250	1.18801	7.954	9.775	101.52	8.6484	5.8113	0.

33.50	14.6281	1.18897	7.954	9.772	101.49	8.6553	5.8161	0.
34.00	14.6310	1.18866	7.954	9.776	101.53	8.6521	5.8132	0.
34.50	14.6312	1.18740	7.957	9.801	101.80	8.6421	5.8055	0.
35.00	14.6301	1.18625	7.957	9.819	101.97	8.6332	5.7989	0.
35.50	14.6297	1.18653	7.955	9.846	102.25	8.6354	5.8006	0.

MOA HYDROGRAPHIC DATA

STATION: E1-1 DATE: 8/16/00 TIME: 11:26

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
1.00	13.9226	1.04445	7.959	10.545	107.21	7.6664	5.1698	0.
1.50	13.9238	1.04459	7.953	10.786	109.67	7.6672	5.1703	0.
2.00	13.9205	1.04456	7.947	10.416	105.90	7.6675	5.1711	0.
2.50	13.9239	1.04541	7.938	9.648	98.10	7.6735	5.1751	0.
3.00	13.9223	1.04647	7.932	9.584	97.45	7.6822	5.1821	0.
3.50	13.9216	1.04723	7.926	9.688	98.51	7.6883	5.1869	0.
4.00	13.9206	1.04775	7.921	9.683	98.46	7.6926	5.1903	0.
4.50	13.9211	1.04830	7.917	9.613	97.75	7.6967	5.1934	0.
5.00	13.9223	1.04886	7.915	9.501	96.61	7.7009	5.1965	0.
5.50	13.9217	1.04945	7.908	9.679	98.43	7.7057	5.2002	0.
6.00	13.9212	1.04981	7.899	9.847	100.14	7.7086	5.2025	0.
6.50	13.9217	1.05005	7.891	9.805	99.71	7.7103	5.2038	0.
7.00	13.9210	1.05025	7.880	9.649	98.12	7.7119	5.2051	0.
7.50	13.9216	1.05044	7.873	9.550	97.13	7.7133	5.2061	0.
8.00	13.9213	1.05061	7.864	9.350	95.09	7.7146	5.2071	0.
8.50	13.9195	1.05075	7.848	9.440	96.00	7.7161	5.2085	0.
9.00	13.9198	1.05082	7.827	9.496	96.58	7.7165	5.2088	0.
9.50	13.9198	1.05121	7.813	9.710	98.75	7.7195	5.2111	0.
10.00	13.9205	1.05054	7.794	10.024	101.94	7.7140	5.2068	0.

MOA HYDROGRAPHIC DATA

STATION: E1-2 DATE: 8/16/00 TIME: 11:35

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
1.50	13.9314	1.05198	8.017	5.973	60.78	7.7242	5.2129	0.
2.00	13.9372	1.05675	8.022	8.549	87.00	7.7607	5.2401	0.
2.50	13.9350	1.05789	8.022	9.642	98.12	7.7702	5.2477	0.
3.00	13.9350	1.05881	8.022	10.074	102.53	7.7774	5.2532	0.
3.50	13.9363	1.05935	8.022	10.507	106.93	7.7813	5.2560	0.
4.00	13.9364	1.05957	8.024	10.347	105.30	7.7830	5.2573	0.
4.50	13.9351	1.05952	8.026	10.297	104.80	7.7828	5.2574	0.
5.00	13.9347	1.05946	8.026	10.313	104.95	7.7824	5.2571	0.
5.50	13.9350	1.05973	8.026	10.236	104.17	7.7844	5.2586	0.
6.00	13.9341	1.06015	8.026	10.267	104.49	7.7879	5.2614	0.
6.50	13.9357	1.06064	8.026	10.260	104.43	7.7914	5.2639	0.
7.00	13.9379	1.06169	8.026	10.124	103.05	7.7992	5.2696	0.
7.50	13.9416	1.06295	8.031	10.017	101.97	7.8084	5.2760	0.
8.00	13.9411	1.06376	8.031	10.008	101.88	7.8149	5.2811	0.
8.50	13.9434	1.06540	8.031	9.897	100.77	7.8273	5.2903	0.
9.00	13.9465	1.06676	8.037	9.843	100.23	7.8374	5.2976	0.
9.50	13.9490	1.06697	8.036	9.946	101.28	7.8385	5.2980	0.
10.00	13.9470	1.06797	8.036	10.050	102.35	7.8468	5.3047	0.
10.50	13.9467	1.06878	8.039	10.012	101.96	7.8532	5.3097	0.
11.00	13.9475	1.06948	8.039	9.955	101.39	7.8586	5.3137	0.
11.50	13.9482	1.07022	8.040	9.833	100.15	7.8642	5.3179	0.
12.00	13.9478	1.07082	8.040	9.812	99.94	7.8690	5.3216	0.
12.50	13.9477	1.07150	8.043	9.803	99.85	7.8743	5.3258	0.
13.00	13.9507	1.07248	8.040	9.816	99.99	7.8815	5.3308	0.
13.50	13.9461	1.07312	8.043	9.793	99.76	7.8874	5.3361	0.
14.00	13.9488	1.07372	8.043	9.884	100.69	7.8914	5.3386	0.
14.50	13.9496	1.07393	8.045	10.600	103.70	7.8927	5.3399	0.
15.50	13.9496	1.07389	8.061	9.963	101.50	7.8926	5.3395	0.

MOA HYDROGRAPHIC DATA

STATION: E1-3 DATE: 8/16/00 TIME: 11:45

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
1.00	13.9511	1.03126	8.036	9.812	99.91	7.5564	5.0809	0.
1.50	13.9506	1.06305	8.031	9.812	99.91	7.8080	5.2743	0.
2.00	13.9507	1.06442	8.031	9.864	100.45	7.8188	5.2826	0.
2.50	13.9546	1.06445	8.031	9.654	98.31	7.8181	5.2815	0.
3.00	13.9563	1.06440	8.031	9.357	95.29	7.8174	5.2806	0.
4.00	13.9555	1.06438	8.035	9.061	92.27	7.8173	5.2807	0.
4.50	13.9522	1.06415	8.036	9.206	93.74	7.8161	5.2803	0.
5.00	13.9481	1.06414	8.036	9.286	94.55	7.8168	5.2815	0.
5.50	13.9456	1.06423	8.036	9.359	95.30	7.8179	5.2827	0.
6.00	13.9436	1.06433	8.036	9.243	94.11	7.8191	5.2839	0.
6.50	13.9436	1.06447	8.036	8.871	90.31	7.8202	5.2848	0.
7.00	13.9434	1.06441	8.037	8.870	90.31	7.8197	5.2844	0.
7.50	13.9421	1.06428	8.036	8.923	90.85	7.8188	5.2840	0.
8.00	13.9414	1.06452	8.037	8.907	90.68	7.8208	5.2856	0.
8.50	13.9406	1.06421	8.029	9.567	97.40	7.8184	5.2839	0.
9.00	13.9410	1.06454	7.995	9.575	97.49	7.8209	5.2857	0.

MOA HYDROGRAPHIC DATA

STATION: E1-4 DATE: 8/16/00 TIME: 11:55

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
1.00	13.9599	1.04402	8.050	8.328	84.73	7.6556	5.1558	0.
1.50	13.9598	1.06455	8.050	8.362	85.17	7.8180	5.2806	0.
2.00	13.9613	1.06696	8.050	8.384	85.40	7.8367	5.2948	0.
2.50	13.9591	1.06749	8.050	8.401	85.57	7.8413	5.2986	0.
3.00	13.9526	1.06731	8.050	8.415	85.71	7.8412	5.2995	0.
3.50	13.9529	1.06812	8.050	8.487	86.44	7.8475	5.3043	0.
4.00	13.9507	1.06780	8.050	8.562	87.20	7.8453	5.3030	0.
4.50	13.9504	1.06721	8.052	8.628	87.86	7.8407	5.2995	0.
5.00	13.9499	1.06886	8.052	8.796	89.58	7.8538	5.3096	0.
5.50	13.9513	1.06945	8.053	8.927	90.93	7.8581	5.3127	0.
6.00	13.9515	1.06947	8.052	8.860	90.24	7.8582	5.3128	0.

MOA HYDROGRAPHIC DATA

STATION: E2-1 DATE: 8/16/00 TIME: 12:30

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
1.00	13.8777	1.02068	8.050	7.177	72.82	7.4871	5.0390	0.
1.50	13.8769	1.02763	8.048	7.897	80.13	7.5422	5.0815	0.
2.00	13.8734	1.02785	8.048	8.617	87.45	7.5446	5.0838	0.
2.50	13.8695	1.02735	8.050	8.401	85.25	7.5414	5.0820	0.
3.00	13.8699	1.02680	8.047	8.533	86.59	7.5368	5.0784	0.
3.50	13.8703	1.02648	8.048	8.663	87.90	7.5342	5.0763	0.
4.00	13.8713	1.02625	8.047	8.769	88.98	7.5321	5.0745	0.
4.50	13.8704	1.02611	8.045	8.869	90.00	7.5311	5.0739	0.
5.00	13.8700	1.02603	8.045	9.089	92.22	7.5305	5.0736	0.
5.50	13.8712	1.02606	8.043	9.327	94.65	7.5305	5.0733	0.
6.00	13.8691	1.02607	8.041	9.500	96.40	7.5309	5.0740	0.
6.50	13.8713	1.02610	8.041	9.585	97.26	7.5307	5.0735	0.
7.00	13.8717	1.02606	8.035	9.564	97.05	7.5303	5.0731	0.
7.50	13.8722	1.02611	8.026	9.647	97.90	7.5305	5.0732	0.
8.00	13.8715	1.02604	7.998	9.570	97.11	7.5300	5.0729	0.

MOA HYDROGRAPHIC DATA

STATION: E2-2 DATE: 8/16/00 TIME: 12:37

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	13.8769	.38888	8.059	-	-	2.7044	1.4346	0.
1.00	13.8754	1.02553	8.059	8.356	84.79	7.5259	5.0692	0.
1.50	13.8700	1.02817	8.061	8.342	84.66	7.5479	5.0869	0.
2.00	13.8646	1.02817	8.059	8.232	83.53	7.5489	5.0885	0.
2.50	13.8632	1.02808	8.059	8.298	84.20	7.5483	5.0883	0.
3.00	13.8620	1.02805	8.059	8.501	86.25	7.5483	5.0885	0.
3.50	13.8609	1.02803	8.059	8.822	89.51	7.5482	5.0886	0.
4.00	13.8604	1.02797	8.061	9.061	91.93	7.5478	5.0883	0.
4.50	13.8599	1.02795	8.059	8.947	90.78	7.5477	5.0883	0.
5.00	13.8587	1.02795	8.062	8.715	88.42	7.5479	5.0886	0.
5.50	13.8596	1.02795	8.059	8.734	88.61	7.5477	5.0883	0.
6.00	13.8596	1.02795	8.059	8.794	89.23	7.5476	5.0883	0.
6.50	13.8596	1.02795	8.059	8.904	90.34	7.5476	5.0882	0.
7.00	13.8587	1.02794	8.062	9.018	91.49	7.5477	5.0885	0.
7.50	13.8587	1.02793	8.062	9.070	92.02	7.5475	5.0883	0.
8.00	13.8575	1.02790	8.062	9.111	92.43	7.5475	5.0885	0.
8.50	13.8592	1.02790	8.059	9.233	93.67	7.5471	5.0880	0.
9.00	13.8575	1.02796	8.061	9.465	96.03	7.5479	5.0888	0.
9.50	13.8587	1.02805	8.059	9.637	97.77	7.5483	5.0889	0.
10.00	13.8581	1.02808	8.062	9.733	98.75	7.5486	5.0893	0.
10.50	13.8575	1.02808	8.064	9.851	99.94	7.5486	5.0894	0.
11.00	13.8594	1.02810	8.062	9.974	101.20	7.5483	5.0889	0.
11.50	13.8580	1.02832	8.064	10.130	102.77	7.5503	5.0906	0.
12.00	13.8598	1.02861	8.064	9.713	98.55	7.5522	5.0918	0.

MOA HYDROGRAPHIC DATA

STATION: E2-3 DATE: 8/16/00 TIME: 12:52

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	13.4580	.74483	8.064	9.672	98.18	5.3940	3.4909	0.
1.00	13.8850	1.02593	8.064	9.672	98.18	6.4601	5.0687	0.
1.50	13.8797	1.02566	8.064	9.674	98.18	7.5261	5.0686	0.
2.00	13.8749	1.02555	8.064	9.674	98.17	7.5261	5.0694	0.
2.50	13.8747	1.02539	8.064	9.686	98.29	7.5248	5.0684	0.
3.00	13.8744	1.02534	8.064	9.695	98.38	7.5244	5.0682	0.
3.50	13.8744	1.02548	8.064	9.710	98.54	7.5255	5.0690	0.
4.00	13.8750	1.02572	8.064	9.717	98.61	7.5272	5.0702	0.
4.50	13.8757	1.02605	8.064	9.716	98.60	7.5296	5.0720	0.
5.00	13.8771	1.02644	8.064	9.734	98.79	7.5324	5.0739	0.
5.50	13.8775	1.02700	8.061	9.753	98.99	7.5367	5.0771	0.
6.00	13.8780	1.02751	8.064	9.753	98.99	7.5406	5.0800	0.
6.50	13.8787	1.02761	8.064	9.764	99.10	7.5411	5.0804	0.
7.00	13.8779	1.02751	8.064	9.781	99.27	7.5405	5.0800	0.
7.50	13.8777	1.02747	8.064	9.786	99.33	7.5401	5.0798	0.
8.00	13.8784	1.02752	8.064	9.797	99.43	7.5404	5.0799	0.
8.50	13.8780	1.02761	8.064	9.802	99.48	7.5411	5.0805	0.
9.00	13.8773	1.02777	8.066	9.810	99.57	7.5425	5.0816	0.
9.50	13.8803	1.02795	8.066	9.821	99.68	7.5432	5.0817	0.
10.00	13.8801	1.02779	8.067	9.851	99.99	7.5419	5.0808	0.

MOA HYDROGRAPHIC DATA

STATION: E2-4 DATE: 8/16/00 TIME: 13:20

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	13.7906	.94447	8.067	10.220	103.64	6.9023	4.6027	0.
1.00	13.9088	1.02967	8.061	10.305	104.66	7.5522	5.0842	0.
1.50	13.8921	1.02939	8.059	10.332	104.91	7.5532	5.0876	0.
2.00	13.8870	1.02935	8.062	10.364	105.22	7.5538	5.0888	0.
2.50	13.8858	1.02937	8.062	10.385	105.42	7.5541	5.0892	0.
3.00	13.8861	1.02946	8.064	10.418	105.76	7.5547	5.0896	0.
3.50	13.8861	1.02959	8.062	10.431	105.90	7.5557	5.0904	0.
4.00	13.8860	1.02963	8.061	10.443	106.02	7.5560	5.0906	0.
4.50	13.8865	1.02963	8.064	10.471	106.30	7.5558	5.0905	0.
5.00	13.8867	1.02963	8.064	10.499	106.58	7.5558	5.0904	0.
5.50	13.8859	1.02963	8.064	10.523	106.83	7.5558	5.0906	0.
6.00	13.8880	1.02966	8.064	10.571	107.32	7.5556	5.0900	0.
6.50	13.8872	1.02975	8.064	10.591	107.53	7.5564	5.0908	0.
7.00	13.8873	1.02983	8.062	10.674	108.37	7.5570	5.0913	0.

MOA HYDROGRAPHIC DATA

STATION: E3-1 DATE: 8/16/00 TIME: 14:22

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	13.9645	.96325	8.067	10.960	111.08	5.6943	4.6655	0.
1.00	13.9600	.96303	8.068	11.141	112.91	7.0176	4.6654	0.
1.50	13.9468	.96207	8.067	11.183	113.30	7.0124	4.6634	0.
2.00	13.9416	.96147	8.067	11.229	113.75	7.0086	4.6614	0.
2.50	13.9379	.96098	8.067	11.275	114.20	7.0054	4.6594	0.
3.00	13.9338	.96074	8.066	11.354	114.99	7.0042	4.6591	0.
3.50	13.9334	.96060	8.067	11.384	115.30	7.0031	4.6584	0.
4.00	13.9323	.95964	8.068	11.538	116.85	6.9957	4.6528	0.

MOA HYDROGRAPHIC DATA

STATION: E3-2 DATE: 8/16/00 TIME: 14:43

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	14.0011	.95359	8.022	9.517	96.49	6.9363	4.5966	0.
1.00	13.9544	.95364	8.026	9.576	97.00	6.9450	4.6104	0.
1.50	13.9473	.95357	8.026	9.576	96.98	6.9457	4.6121	0.
2.00	13.9424	.95287	8.025	9.580	97.01	6.9410	4.6092	0.
2.50	13.9409	.95269	8.026	9.587	97.08	6.9398	4.6085	0.
3.00	13.9387	.95282	8.026	9.594	97.14	6.9412	4.6099	0.
3.50	13.9345	.95278	8.031	9.596	97.15	6.9416	4.6109	0.
4.00	13.9265	.95230	8.031	9.613	97.31	6.9392	4.6103	0.
4.50	13.9196	.95203	8.031	9.629	97.45	6.9383	4.6106	0.
5.00	13.9108	.95060	8.038	9.636	97.50	6.9285	4.6045	0.
5.50	13.8954	.94964	8.041	9.653	97.63	6.9238	4.6032	0.
6.00	13.8864	.94932	8.048	9.662	97.70	6.9228	4.6038	0.
6.50	13.8750	.94901	8.055	9.679	97.86	6.9224	4.6052	0.
7.00	13.8709	.94890	8.060	9.686	97.92	6.9221	4.6057	0.
7.50	13.8701	.94887	8.059	9.701	98.07	6.9220	4.6057	0.
8.00	13.8709	.94886	8.061	9.703	98.09	6.9218	4.6054	0.
8.50	13.8673	.94890	8.062	9.713	98.18	6.9227	4.6066	0.
9.00	13.8637	.94887	8.062	9.725	98.29	6.9231	4.6075	0.

MOA HYDROGRAPHIC DATA

STATION: E3-3 DATE: 8/16/00 TIME: 15:08

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	14.0326	.96793	8.065	11.611	117.88	7.0429	4.6737	0.
1.00	13.9782	.96284	8.066	11.762	119.24	7.0128	4.6589	0.
1.50	13.9412	.95869	8.067	11.866	120.18	6.9870	4.6447	0.
2.00	13.9297	.95754	8.067	11.969	121.19	6.9799	4.6411	0.
2.50	13.9362	.95840	8.068	12.130	122.85	6.9855	4.6444	0.
3.00	13.9374	.95891	8.069	12.308	124.65	6.9892	4.6470	0.
3.50	13.9413	.96005	8.070	12.506	126.67	6.9974	4.6527	0.
4.00	13.9524	.96252	8.068	13.113	132.87	7.0147	4.6644	0.

MOA HYDROGRAPHIC DATA

STATION: E3-4 DATE: 8/16/00 TIME: 15:20

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	14.1200	.97236	8.062	11.060	112.51	7.0618	4.6745	0.
1.00	14.1257	.97257	8.058	11.180	113.75	7.0623	4.6741	0.
1.50	14.1232	.98029	8.062	11.259	114.59	7.1231	4.7212	0.
2.00	14.1346	.98745	8.062	11.333	115.40	7.1770	4.7608	0.
2.50	14.1537	.99295	8.062	11.427	116.44	7.2165	4.7881	0.
3.00	14.1544	.99391	8.059	11.569	117.90	7.2239	4.7937	0.
3.50	14.1560	.99483	8.064	11.783	120.08	7.2307	4.7987	0.

MOA HYDROGRAPHIC DATA

STATION: F1-1 DATE: 8/16/00 TIME: 15:50

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	14.7231	.98628	7.836	12.209	125.82	7.0608	4.5777	0.
1.00	14.6109	1.02152	7.960	12.413	127.85	7.3540	4.8208	0.
1.50	14.5020	1.07218	8.002	12.708	130.95	7.7694	5.1572	0.
2.00	14.4882	1.08923	8.102	15.023	154.90	7.9055	5.2639	0.
2.50	14.5232	1.08892	8.094	16.299	168.14	7.8960	5.2509	0.
3.00	14.5780	1.08190	7.954	17.516	180.81	7.8301	5.1914	0.

MOA HYDROGRAPHIC DATA

STATION: F1-2 DATE: 8/16/00 TIME: 16:12

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	14.5508	1.01279	7.979	11.183	114.99	4.8246	2.9185	0.
1.00	14.5440	1.01099	7.981	11.322	116.40	6.0456	4.7785	0.
1.50	14.5221	1.00813	7.985	11.431	117.45	7.2666	4.7681	0.
2.00	14.5114	1.00612	7.989	11.553	118.66	7.2529	4.7593	0.
2.50	14.5003	1.00331	7.992	11.697	120.10	7.2331	4.7459	0.
3.00	14.4914	1.00160	7.991	11.916	122.32	7.2214	4.7383	0.
3.50	14.4704	.99899	7.998	11.906	122.14	7.2049	4.7291	0.

MOA HYDROGRAPHIC DATA

STATION: F1-3 DATE: 8/16/00 TIME: 16:30

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	14.3472	.97732	8.046	11.222	114.72	4.3863	2.6054	0.
1.00	14.3396	.97680	8.048	11.326	115.76	5.7197	3.6197	0.
1.50	14.3351	.97627	8.048	11.358	116.08	7.0532	4.6341	0.
2.00	14.3303	.97566	8.049	11.437	116.86	7.0493	4.6319	0.
2.50	14.3210	.97462	8.050	11.519	117.67	7.0428	4.6284	0.
3.00	14.3240	.97459	8.048	11.590	118.41	7.0419	4.6273	0.
3.50	14.3202	.97463	8.047	11.786	120.40	7.0429	4.6286	0.

MOA HYDROGRAPHIC DATA

STATION: F1-4 DATE: 8/16/00 TIME: 16:50

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	14.4406	.98736	-	-	-	5.0270	4.6689	0.
1.00	14.4072	.98570	-	-	-	6.0662	4.6690	0.
1.50	14.3965	.98443	-	-	-	7.1055	4.6646	0.
2.00	14.3871	.98412	-	-	-	7.1048	4.6655	0.
2.50	14.3726	.98455	-	-	-	7.1107	4.6724	0.

MOA HYDROGRAPHIC DATA

STATION: F2-1 DATE: 8/16/00 TIME: 17:21

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	14.5942	1.13625	8.048	11.091	114.82	8.2523	5.5126	0.
1.00	14.5982	1.13722	8.047	11.173	115.69	8.2589	5.5171	0.
1.50	14.5962	1.13769	8.045	11.226	116.23	8.2630	5.5205	0.
2.00	14.5889	1.13652	8.047	11.275	116.72	8.2554	5.5158	0.
2.50	14.5888	1.13638	8.047	11.350	117.49	8.2542	5.5150	0.
3.00	14.5890	1.13659	8.045	11.427	118.29	8.2558	5.5161	0.
3.50	14.5876	1.13563	8.043	11.493	118.97	8.2484	5.5107	0.
4.00	14.5871	1.13551	8.043	11.612	120.19	8.2475	5.5101	0.
4.50	14.5870	1.13550	8.042	11.737	121.49	8.2475	5.5101	0.
5.00	14.5902	1.13609	8.040	11.826	122.42	8.2513	5.5125	0.
5.50	14.5903	1.13623	8.041	12.470	129.09	8.2524	5.5133	0.

MOA HYDROGRAPHIC DATA

STATION: F2-2 DATE: 8/16/00 TIME: 17:28

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	14.7625	1.15671	8.037	10.901	113.35	8.3768	5.5803	0.
1.00	14.7762	1.15984	8.039	10.940	113.81	8.3983	5.5945	0.
1.50	14.7814	1.16121	8.040	10.963	114.06	8.4078	5.6010	0.
2.00	14.7893	1.16201	8.037	11.015	114.62	8.4123	5.6031	0.
2.50	14.7890	1.16233	8.038	11.054	115.04	8.4148	5.6051	0.
3.00	14.7866	1.16233	8.037	11.099	115.50	8.4153	5.6058	0.
3.50	14.7869	1.16222	8.037	11.163	116.16	8.4143	5.6050	0.
4.00	14.7860	1.16215	8.037	11.216	116.71	8.4139	5.6048	0.
4.50	14.7818	1.16208	8.036	11.265	117.21	8.4142	5.6058	0.
5.00	14.7761	1.16180	8.034	11.335	117.92	8.4131	5.6059	0.
5.50	14.7795	1.16169	8.034	11.411	118.72	8.4115	5.6041	0.
6.00	14.7785	1.16164	8.032	11.501	119.66	8.4112	5.6041	0.
6.50	14.7779	1.16141	8.032	11.562	120.29	8.4096	5.6029	0.
7.00	14.7735	1.16076	8.029	11.656	121.25	8.4054	5.6004	0.
7.50	14.7668	1.15953	8.028	11.770	122.41	8.3971	5.5952	0.
8.00	14.7651	1.15922	8.025	11.867	123.42	8.3950	5.5939	0.
8.50	14.7592	1.15836	8.021	12.001	124.79	8.3895	5.5906	0.
9.00	14.7586	1.15806	8.018	12.128	126.10	8.3872	5.5890	0.
9.50	14.7560	1.15770	8.016	12.247	127.34	8.3849	5.5876	0.
10.00	14.7569	1.15757	8.077	15.411	160.23	8.3836	5.5865	0.

MOA HYDROGRAPHIC DATA

STATION: F2-3 DATE: 8/16/00 TIME: 17:54

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	14.5595	1.11109	8.044	11.674	120.63	5.6031	3.5192	0.
1.00	14.4469	1.10457	8.048	11.726	120.85	6.8004	5.3694	0.
1.50	14.4166	1.09911	8.048	11.825	121.77	7.9977	5.3461	0.
2.00	14.3902	1.09480	8.050	11.899	122.44	7.9692	5.3285	0.
2.50	14.3817	1.09147	8.049	11.988	123.31	7.9447	5.3111	0.
3.00	14.3826	1.09072	8.046	12.073	124.18	7.9386	5.3063	0.
3.50	14.3930	1.09155	8.046	12.186	125.37	7.9430	5.3080	0.
4.00	14.3994	1.09183	8.043	12.329	126.87	7.9438	5.3075	0.
4.50	14.3988	1.09180	8.041	12.425	127.85	7.9436	5.3075	0.
5.00	14.4007	1.09188	8.041	12.583	129.48	7.9438	5.3074	0.
5.50	14.4041	1.09267	8.037	12.713	130.83	7.9492	5.3110	0.
6.00	14.4027	1.09214	8.050	13.756	141.55	7.9453	5.3082	0.
6.50	14.3998	1.09089	8.145	14.799	152.26	7.9361	5.3016	0.
7.00	14.3925	1.08842	8.136	15.354	157.94	7.9180	5.2889	0.
7.50	14.3853	1.08615	8.090	15.077	155.07	7.9016	5.2775	0.
8.00	14.3784	1.08452	8.090	14.800	152.20	7.8902	5.2698	0.
8.50	14.3789	1.09059	8.136	12.546	129.02	7.9378	5.3062	0.
9.00	14.3820	1.09344	8.090	8.000	82.30	7.9594	5.3223	0.

MOA HYDROGRAPHIC DATA

STATION: F2-4 DATE: 8/16/00 TIME: 18:10

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	14.5553	1.11194	8.048	10.301	106.44	6.1836	3.9494	0.
1.00	14.5142	1.10852	8.050	10.424	107.60	8.0515	5.3716	0.
1.50	14.5013	1.10706	8.052	10.483	108.17	8.0426	5.3669	0.
2.00	14.4640	1.10252	8.050	10.513	108.38	8.0147	5.3515	0.
2.50	14.3495	1.09029	8.053	10.566	108.61	7.9420	5.3142	0.
3.00	14.3068	1.07968	8.057	10.629	109.10	7.8672	5.2636	0.
3.50	14.2981	1.07743	8.062	10.660	109.39	7.8512	5.2527	0.
4.00	14.3094	1.07848	8.062	10.690	109.73	7.8571	5.2555	0.
4.50	14.3074	1.07642	8.060	10.708	109.90	7.8413	5.2436	0.
5.00	14.2963	1.07335	8.062	10.751	110.30	7.8194	5.2286	0.
5.50	14.2994	1.07283	8.062	10.768	110.48	7.8146	5.2244	0.
6.00	14.3096	1.07370	8.062	10.800	110.84	7.8194	5.2264	0.
6.50	14.3158	1.07421	8.062	10.842	111.28	7.8221	5.2275	0.
7.00	14.3169	1.07443	8.062	10.857	111.44	7.8235	5.2284	0.
7.50	14.3207	1.07478	8.062	10.877	111.66	7.8254	5.2293	0.
8.00	14.3223	1.07504	8.062	10.933	112.24	7.8271	5.2304	0.
8.50	14.3218	1.07512	8.062	10.978	112.69	7.8278	5.2309	0.
9.00	14.3220	1.07508	8.062	11.039	113.32	7.8274	5.2306	0.

MOA HYDROGRAPHIC DATA

STATION: F3-1 DATE: 8/16/00 TIME: 18:42

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	14.2459	1.09541	8.037	11.221	115.13	8.0037	5.3781	0.
1.00	14.2442	1.09544	8.039	11.354	116.49	8.0042	5.3788	0.
1.50	14.2420	1.09560	8.039	11.282	115.74	8.0059	5.3805	0.
2.00	14.2419	1.09593	8.038	11.324	116.18	8.0085	5.3824	0.
2.50	14.2444	1.09651	8.042	11.351	116.46	8.0125	5.3851	0.
3.00	14.2434	1.09683	8.044	11.397	116.94	8.0151	5.3873	0.
3.50	14.2412	1.09653	8.042	11.438	117.35	8.0132	5.3862	0.
4.00	14.2408	1.09595	8.044	11.469	117.66	8.0086	5.3827	0.
4.50	14.2403	1.09577	8.044	11.529	118.28	8.0072	5.3818	0.
5.00	14.2394	1.09565	8.044	11.582	118.81	8.0064	5.3813	0.
5.50	14.2363	1.09502	8.047	11.635	119.34	8.0020	5.3784	0.
6.00	14.2348	1.09473	8.046	11.690	119.91	8.0000	5.3771	0.
6.50	14.2384	1.09547	8.047	11.764	120.68	8.0050	5.3804	0.
7.00	14.2377	1.09587	8.047	11.863	121.69	8.0083	5.3830	0.
7.50	14.2378	1.09586	8.048	11.917	122.25	8.0081	5.3828	0.
8.00	14.2361	1.09578	8.048	11.985	122.94	8.0078	5.3829	0.
8.50	14.2351	1.09566	8.048	12.106	124.18	8.0070	5.3824	0.
9.00	14.2341	1.09363	8.050	12.191	125.03	7.9912	5.3704	0.
9.50	14.2350	1.07545	8.046	12.400	127.07	7.8477	5.2601	0.

MOA HYDROGRAPHIC DATA

STATION: F3-2 DATE: 8/16/00 TIME: 18:48

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	14.2402	1.09685	8.044	9.473	97.19	8.0162	5.3887	0.
1.00	14.2407	1.09729	8.044	9.540	97.88	8.0195	5.3911	0.
1.50	14.2413	1.09727	8.046	9.549	97.98	8.0192	5.3908	0.
2.00	14.2409	1.09715	8.046	9.565	98.14	8.0183	5.3901	0.
2.50	14.2406	1.09711	8.047	9.572	98.20	8.0179	5.3899	0.
3.00	14.2413	1.09713	8.048	9.572	98.20	8.0179	5.3898	0.
3.50	14.2396	1.09716	8.048	9.569	98.17	8.0185	5.3905	0.
4.00	14.2410	1.09754	8.048	9.589	98.38	8.0211	5.3923	0.
4.50	14.2420	1.09762	8.048	9.595	98.45	8.0215	5.3924	0.
5.00	14.2404	1.09740	8.048	9.610	98.60	8.0200	5.3916	0.
5.50	14.2403	1.09719	8.048	9.618	98.68	8.0183	5.3903	0.
6.00	14.2383	1.09683	8.048	9.620	98.69	8.0159	5.3887	0.
6.50	14.2363	1.09632	8.048	9.642	98.91	8.0122	5.3862	0.
7.00	14.2347	1.09574	8.048	9.660	99.09	8.0079	5.3831	0.
7.50	14.2328	1.09483	8.050	9.670	99.18	8.0010	5.3782	0.
8.00	14.2310	1.09448	8.051	9.694	99.42	7.9986	5.3766	0.
8.50	14.2318	1.09608	8.052	9.702	99.52	8.0110	5.3860	0.
9.00	14.2320	1.09672	8.053	9.707	99.57	8.0159	5.3898	0.
9.50	14.2319	1.09669	8.054	9.731	99.81	8.0157	5.3896	0.
10.00	14.2306	1.09610	8.053	9.746	99.96	8.0113	5.3864	0.
10.50	14.2302	1.09667	8.056	9.774	100.26	8.0158	5.3899	0.
11.00	14.2314	1.09804	8.055	9.788	100.41	8.0263	5.3978	0.
11.50	14.2318	1.09752	8.058	9.810	100.63	8.0221	5.3945	0.
12.00	14.2329	1.09915	8.059	9.824	100.79	8.0346	5.4040	0.
12.50	14.2339	1.10012	8.059	9.833	100.88	8.0420	5.4095	0.
13.00	14.2310	1.10013	8.059	9.971	101.94	8.0709	5.4538	0.
13.50	14.2306	1.09967	8.065	10.365	103.79	8.2472	5.7196	0.

MOA HYDROGRAPHIC DATA

STATION: F3-3 DATE: 8/16/00 TIME: 19:14

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	14.1701	1.03757	8.050	9.762	99.72	7.5636	5.0522	0.
1.00	14.1812	1.04553	8.054	9.808	100.25	7.6239	5.0968	0.
1.50	14.1952	1.05833	8.065	9.808	100.35	7.7218	5.1697	0.
2.00	14.2064	1.07562	8.065	9.815	100.52	7.8557	5.2708	0.
2.50	14.2143	1.09499	8.060	9.801	100.49	8.0067	5.3854	0.
3.00	14.2093	1.10083	8.059	9.818	100.68	8.0538	5.4224	0.
3.50	14.2054	1.10431	8.058	9.827	100.78	8.0820	5.4447	0.
4.00	14.1901	1.10241	8.058	9.839	100.87	8.0701	5.4380	0.
4.50	14.1603	1.09815	8.058	9.867	101.08	8.0426	5.4216	0.
5.00	14.1567	1.09676	8.061	9.882	101.21	8.0323	5.4142	0.
5.50	14.1588	1.09718	8.060	9.886	101.25	8.0351	5.4161	0.
6.00	14.1624	1.09822	8.061	9.914	101.56	8.0425	5.4212	0.
6.50	14.1625	1.09896	8.062	9.948	101.91	8.0483	5.4256	0.
7.00	14.1577	1.09749	8.058	9.924	101.65	8.0376	5.4182	0.
7.50	14.1552	1.09631	8.061	9.945	101.85	8.0287	5.4117	0.
8.00	14.1554	1.09575	8.063	9.981	102.22	8.0242	5.4083	0.
8.50	14.1560	1.09570	8.063	9.999	102.40	8.0236	5.4077	0.
9.00	14.1558	1.09578	8.063	10.018	102.59	8.0243	5.4083	0.
9.50	14.1558	1.09597	8.063	10.021	102.63	8.0257	5.4093	0.
10.00	14.1573	1.09629	8.061	10.043	102.86	8.0278	5.4108	0.
10.50	14.1575	1.09652	8.063	10.067	103.11	8.0296	5.4121	0.
11.00	14.1551	1.09599	8.063	10.085	103.28	8.0259	5.4096	0.
11.50	14.1536	1.09534	8.063	10.103	103.46	8.0210	5.4061	0.
12.00	14.1532	1.09551	8.064	10.124	103.67	8.0223	5.4072	0.
12.50	14.1537	1.09575	8.063	10.149	103.93	8.0241	5.4085	0.
13.00	14.1539	1.09587	8.064	10.166	104.11	8.0249	5.4091	0.
13.50	14.1494	1.09451	8.063	10.202	104.46	8.0151	5.4022	0.
14.00	14.1469	1.09291	8.064	10.208	104.51	8.0029	5.3932	0.
14.50	14.1438	1.09155	8.066	10.238	104.80	7.9927	5.3859	0.
15.00	14.1427	1.09075	8.067	10.261	105.03	7.9865	5.3814	0.
15.50	14.1431	1.09025	8.065	10.265	105.07	7.9825	5.3781	0.
16.00	14.1432	1.09001	8.067	10.296	105.39	7.9806	5.3767	0.
16.50	14.1429	1.08978	8.069	10.333	105.76	7.9787	5.3753	0.
17.00	14.1435	1.08977	8.066	10.381	106.25	7.9785	5.3750	0.

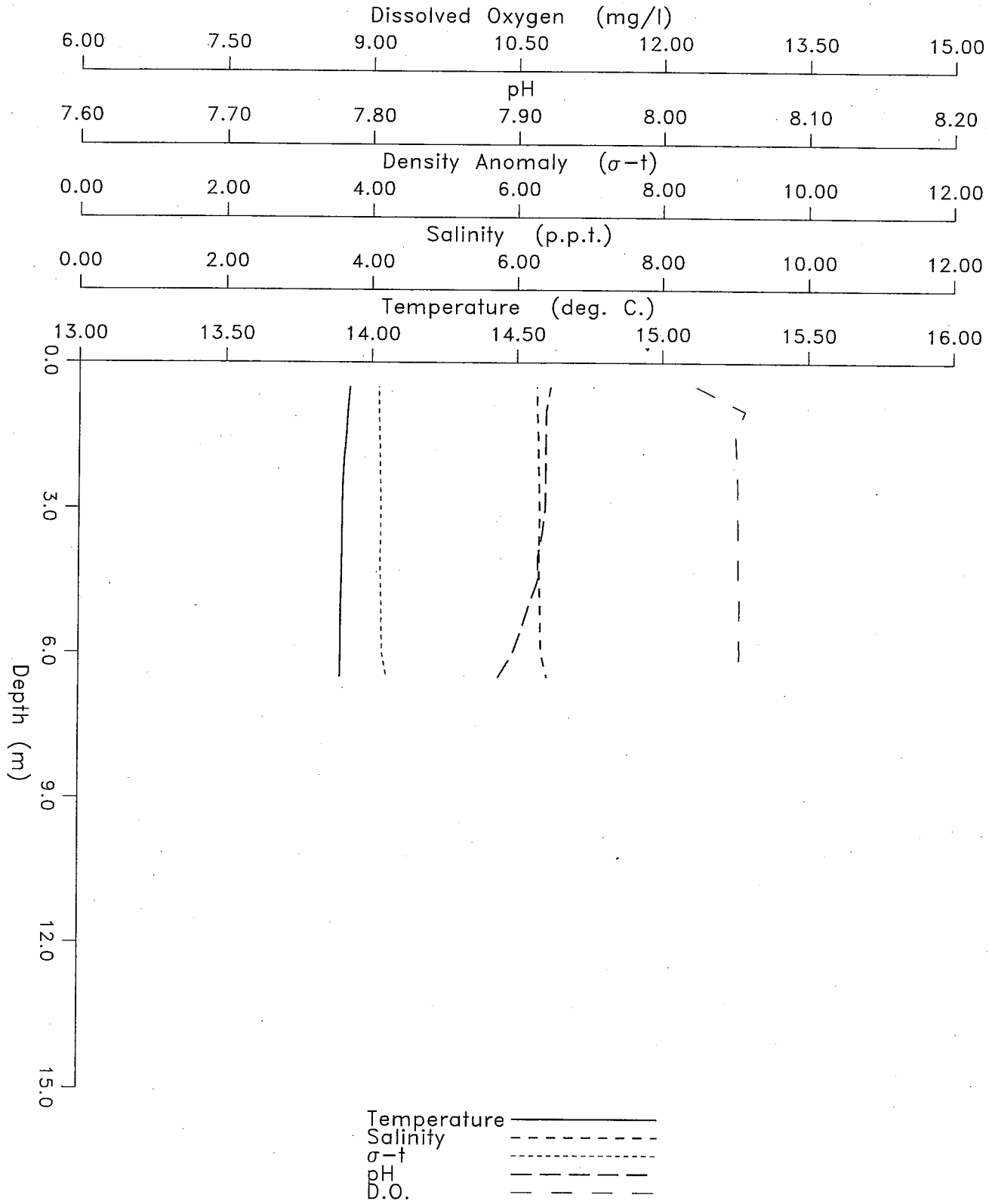
MOA HYDROGRAPHIC DATA

STATION: F3-4 DATE: 8/16/00 TIME: 19:45

Meters	Temp	Cond (s/m)	pH	D.O.(mg/l)	Oxy Sat(%)	Salinity	Sigma-t	Flag
.50	14.1525	1.06995	8.052	9.603	98.22	7.8220	5.2534	0.
1.00	14.1246	1.08017	8.061	9.661	98.80	7.9082	5.3240	0.
1.50	14.1102	1.09363	8.061	9.669	98.92	8.0175	5.4102	0.
2.00	14.1070	1.09781	8.061	9.672	98.97	8.0512	5.4366	0.
2.50	14.1039	1.10172	8.060	9.671	98.96	8.0827	5.4614	0.
3.00	14.1038	1.10456	8.058	9.689	99.17	8.1051	5.4786	0.
3.50	14.1025	1.10884	8.058	9.698	99.28	8.1392	5.5050	0.
4.00	14.1048	1.11121	8.058	9.694	99.25	8.1575	5.5187	0.
4.50	14.1024	1.10971	8.058	9.703	99.33	8.1461	5.5103	0.
5.00	14.1007	1.10756	8.063	9.701	99.29	8.1293	5.4976	0.
5.50	14.1003	1.11012	8.058	9.711	99.41	8.1496	5.5133	0.
6.00	14.1039	1.11370	8.058	9.728	99.61	8.1772	5.5339	0.
6.50	14.1077	1.11655	8.060	9.736	99.71	8.1989	5.5500	0.
7.00	14.1110	1.11953	8.058	9.754	99.92	8.2219	5.5671	0.
7.50	14.1104	1.12087	8.056	9.762	100.00	8.2325	5.5754	0.
8.00	14.1110	1.12146	8.058	9.773	100.12	8.2370	5.5787	0.
8.50	14.1128	1.12295	8.058	9.783	100.23	8.2484	5.5872	0.
9.00	14.1170	1.12592	8.058	9.789	100.32	8.2710	5.6039	0.
9.50	14.1223	1.12925	8.058	9.786	100.31	8.2962	5.6224	0.
10.00	14.1243	1.13098	8.058	9.808	100.55	8.3094	5.6322	0.
10.50	14.1250	1.13228	8.058	9.824	100.72	8.3195	5.6399	0.
11.00	14.1312	1.13668	8.056	9.833	100.85	8.3531	5.6647	0.
11.50	14.1370	1.14068	8.056	9.847	101.03	8.3835	5.6871	0.
12.00	14.1398	1.14279	8.055	9.844	101.02	8.3996	5.6990	0.
12.50	14.1417	1.14365	8.055	9.844	101.02	8.4060	5.7036	0.
13.00	14.1405	1.14456	8.053	9.859	101.18	8.4133	5.7095	0.
13.50	14.1406	1.14515	8.053	9.884	101.44	8.4180	5.7130	0.
14.00	14.1379	1.14425	8.053	9.887	101.46	8.4113	5.7083	0.
14.50	14.1346	1.14332	8.056	9.920	101.79	8.4046	5.7037	0.
15.00	14.1358	1.14402	8.058	9.923	101.83	8.4098	5.7075	0.
15.50	14.1382	1.14482	8.058	9.926	101.86	8.4156	5.7116	0.
16.00	14.1402	1.14536	8.056	9.948	102.10	8.4194	5.7142	0.
16.50	14.1369	1.14435	8.058	9.963	102.24	8.4120	5.7090	0.
17.00	14.1387	1.14396	8.058	9.979	102.40	8.4085	5.7060	0.
17.50	14.1380	1.14399	8.058	10.004	102.66	8.4089	5.7064	0.
18.00	14.1368	1.14351	8.055	10.029	102.91	8.4053	5.7038	0.
18.50	14.1360	1.14304	8.058	10.037	102.99	8.4016	5.7012	0.
19.00	14.1328	1.14203	8.058	10.038	102.98	8.3943	5.6960	0.
19.50	14.1340	1.14137	8.058	10.062	103.23	8.3887	5.6915	0.
20.00	14.1340	1.14102	8.056	10.082	103.43	8.3859	5.6894	0.
20.50	14.1336	1.14007	8.058	10.097	103.59	8.3784	5.6837	0.
21.00	14.1313	1.13856	8.058	10.115	103.76	8.3669	5.6752	0.
21.50	14.1251	1.13630	8.058	10.149	104.08	8.3501	5.6634	0.
22.00	14.1193	1.13258	8.061	10.174	104.31	8.3219	5.6426	0.
22.50	14.1148	1.12997	8.063	10.195	104.49	8.3021	5.6281	0.
23.00	14.1134	1.12909	8.063	10.202	104.56	8.2953	5.6231	0.
23.50	14.1140	1.12915	8.063	10.227	104.82	8.2956	5.6233	0.
24.00	14.1141	1.12937	8.063	10.240	104.95	8.2973	5.6245	0.
24.50	14.1152	1.12966	8.063	10.254	105.10	8.2993	5.6259	0.
25.00	14.1158	1.12989	8.063	10.289	105.46	8.3009	5.6271	0.
25.50	14.1155	1.12981	8.063	10.293	105.50	8.3003	5.6266	0.
26.00	14.1144	1.12956	8.061	10.309	105.66	8.2985	5.6254	0.
26.50	14.1163	1.12984	8.069	10.497	107.59	8.3002	5.6264	0.

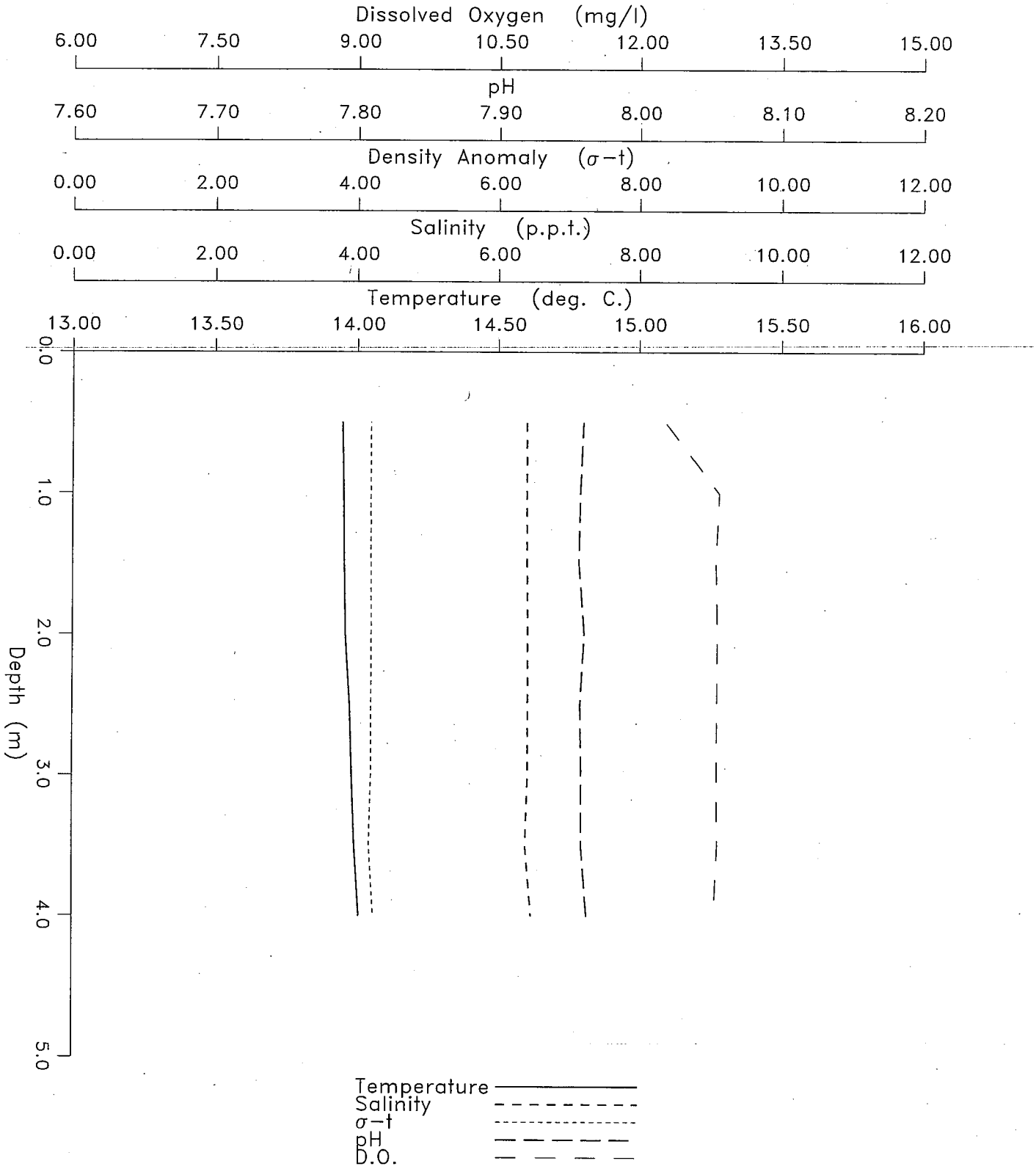
MOA HYDROGRAPHIC DATA

Station: C1-1 Date: 8/14/00 Time: 14:59



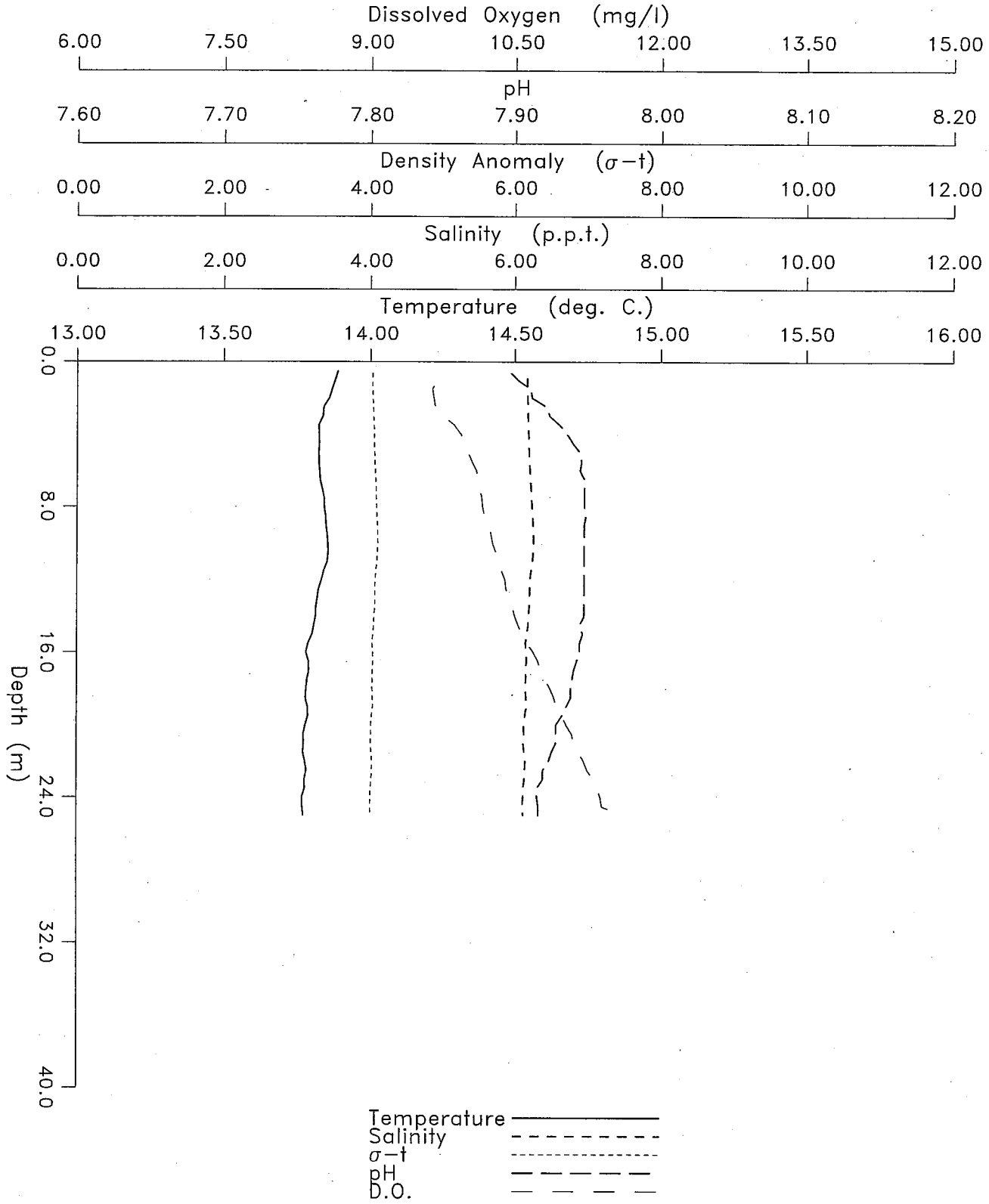
MOA HYDROGRAPHIC DATA

Station: C1-2 Date: 8/14/00 Time: 15:18



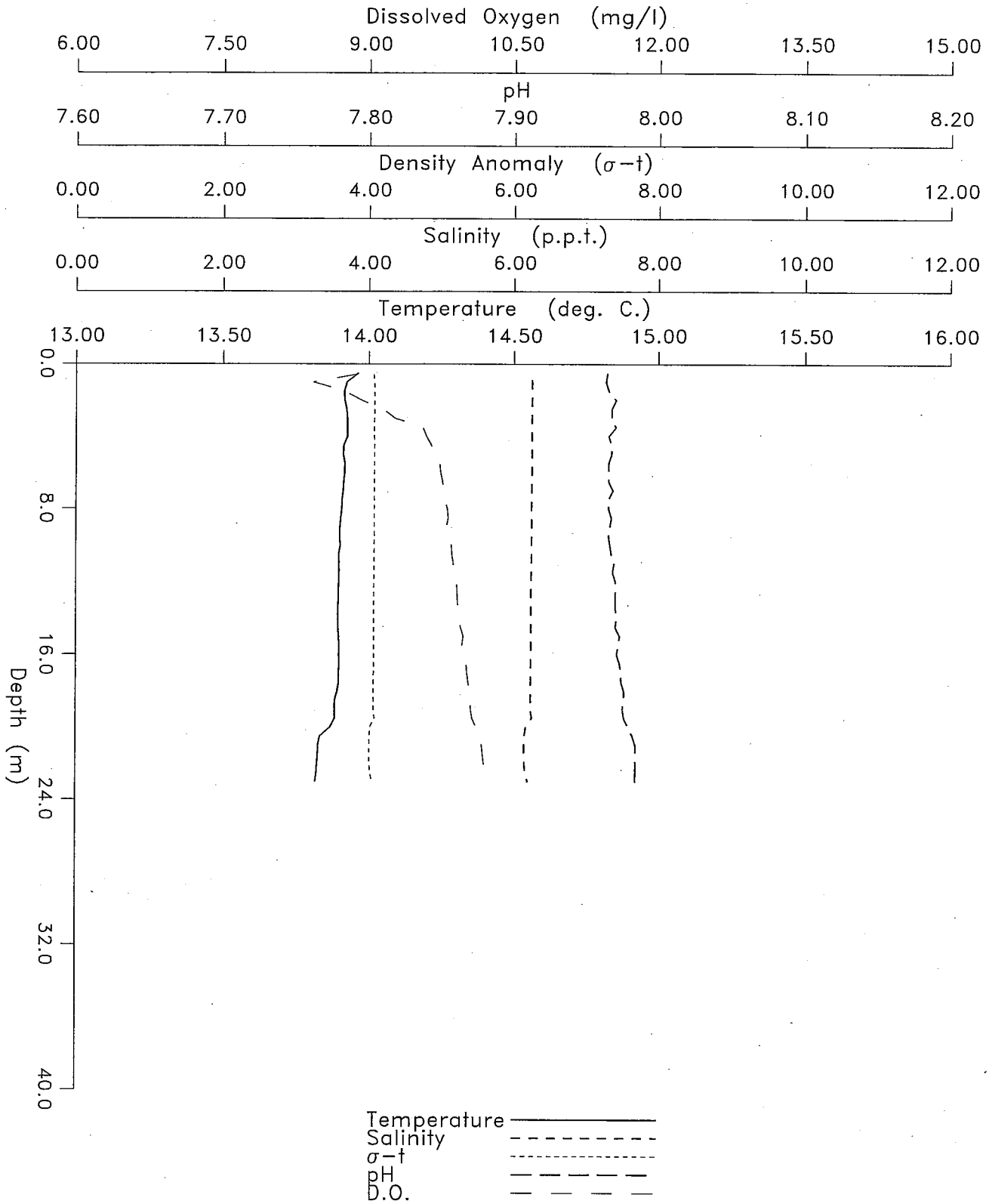
MOA HYDROGRAPHIC DATA

Station: C1-3 Date: 8/14/00 Time: 15:40



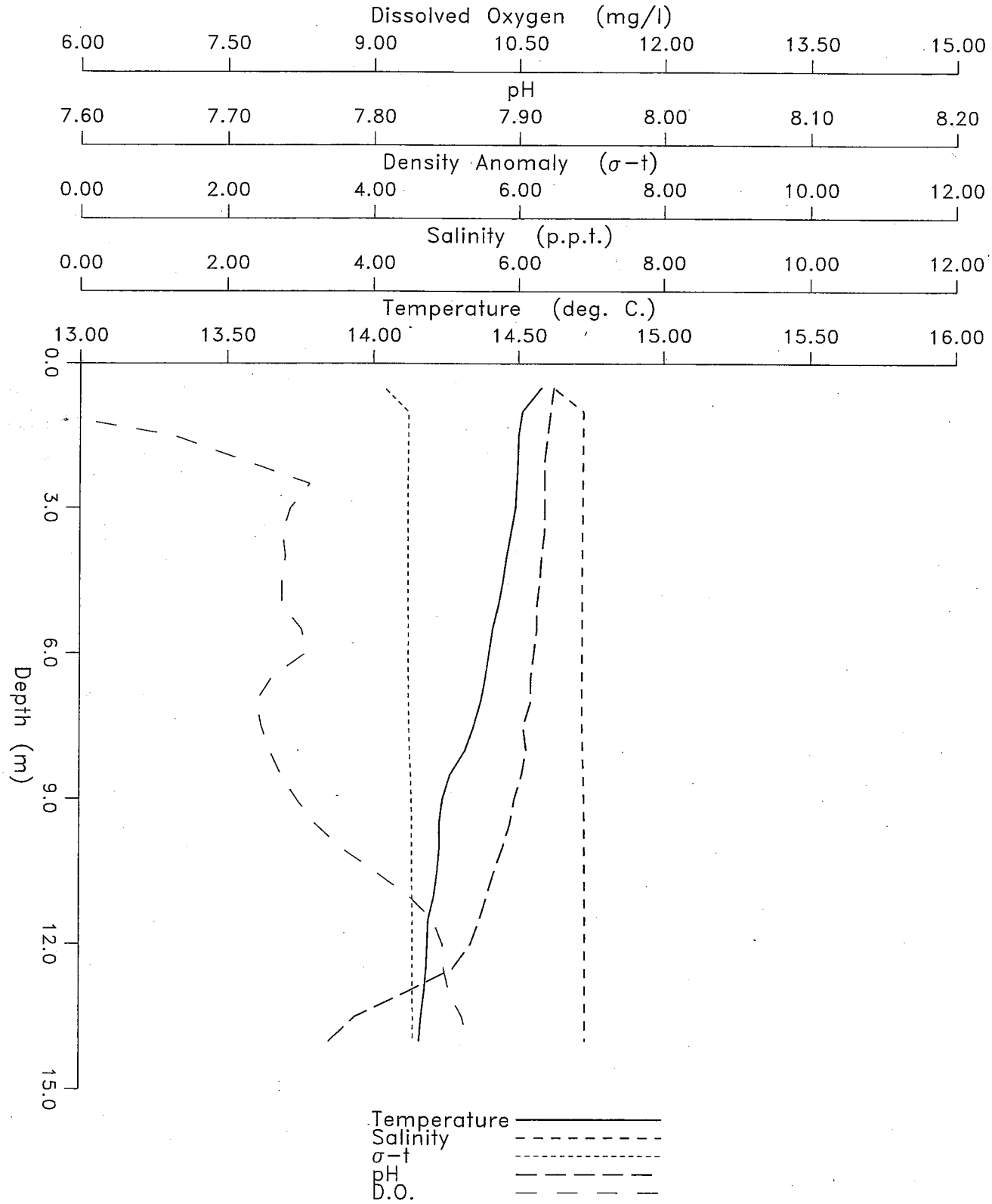
MOA HYDROGRAPHIC DATA

Station: C1-4 Date: 8/14/00 Time: 16:10



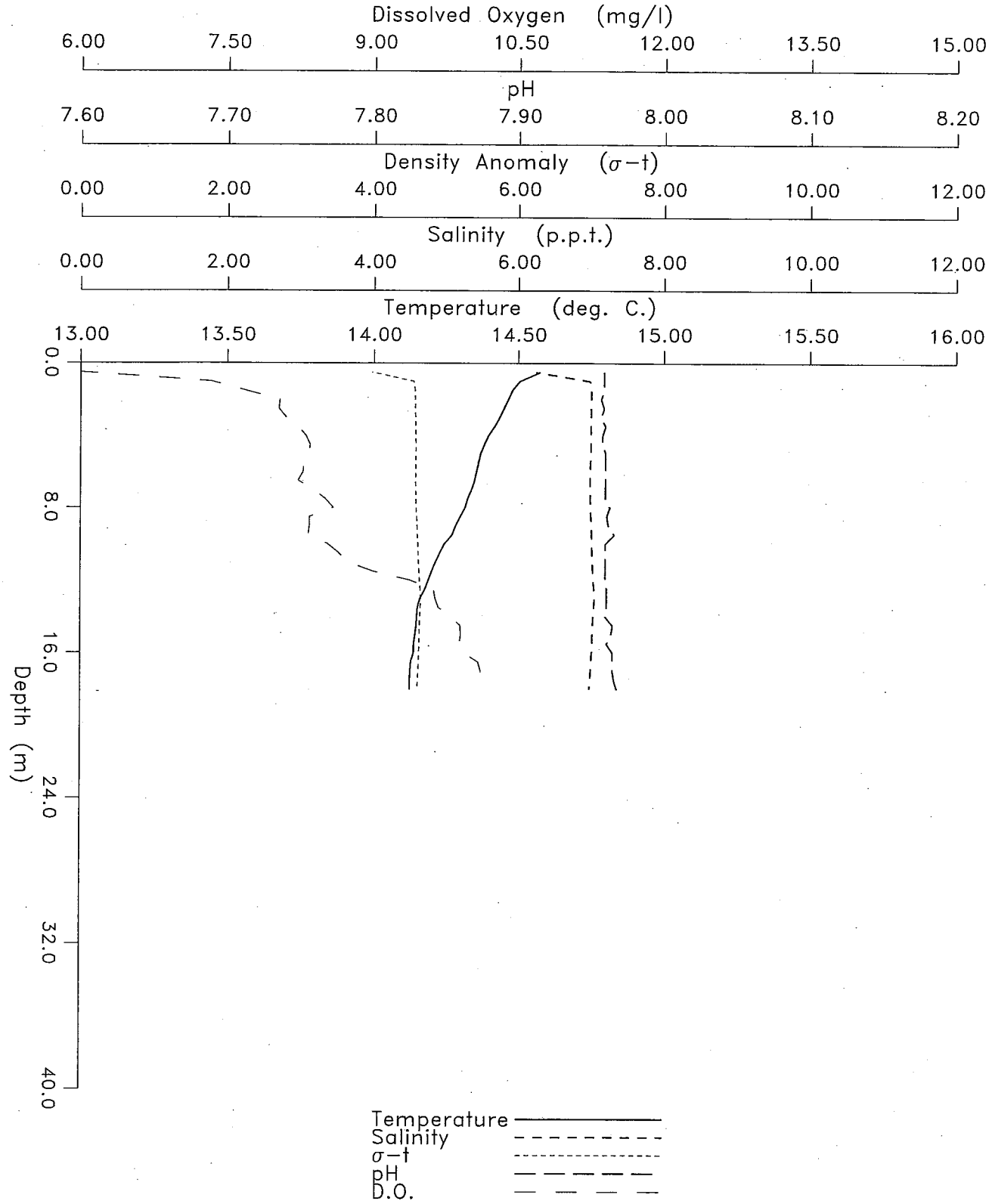
MOA HYDROGRAPHIC DATA

Station: C2-1 Date: 8/14/00 Time: 17:00



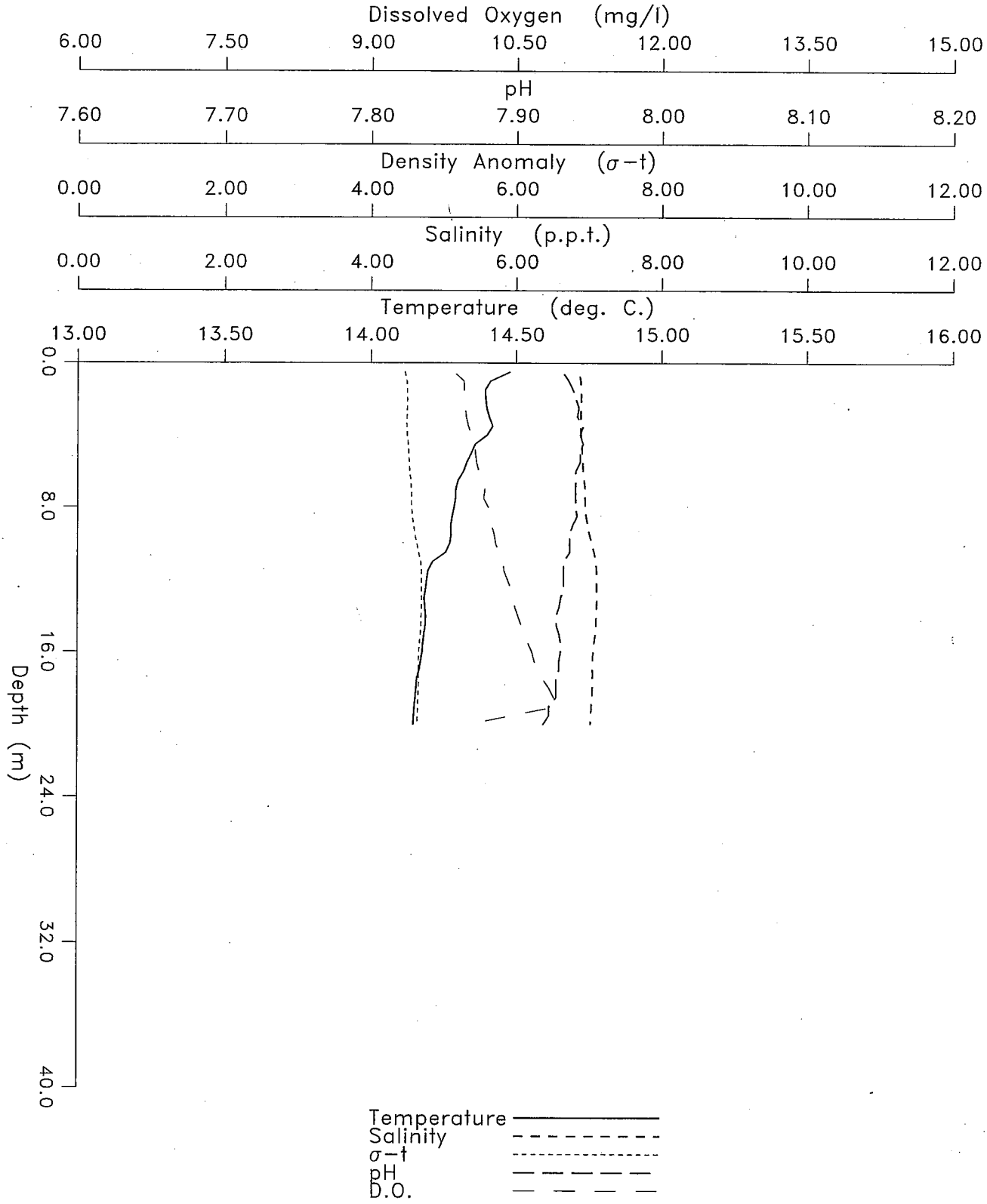
MOA HYDROGRAPHIC DATA

Station: C2-2(A) Date: 8/14/00 Time: 17:28



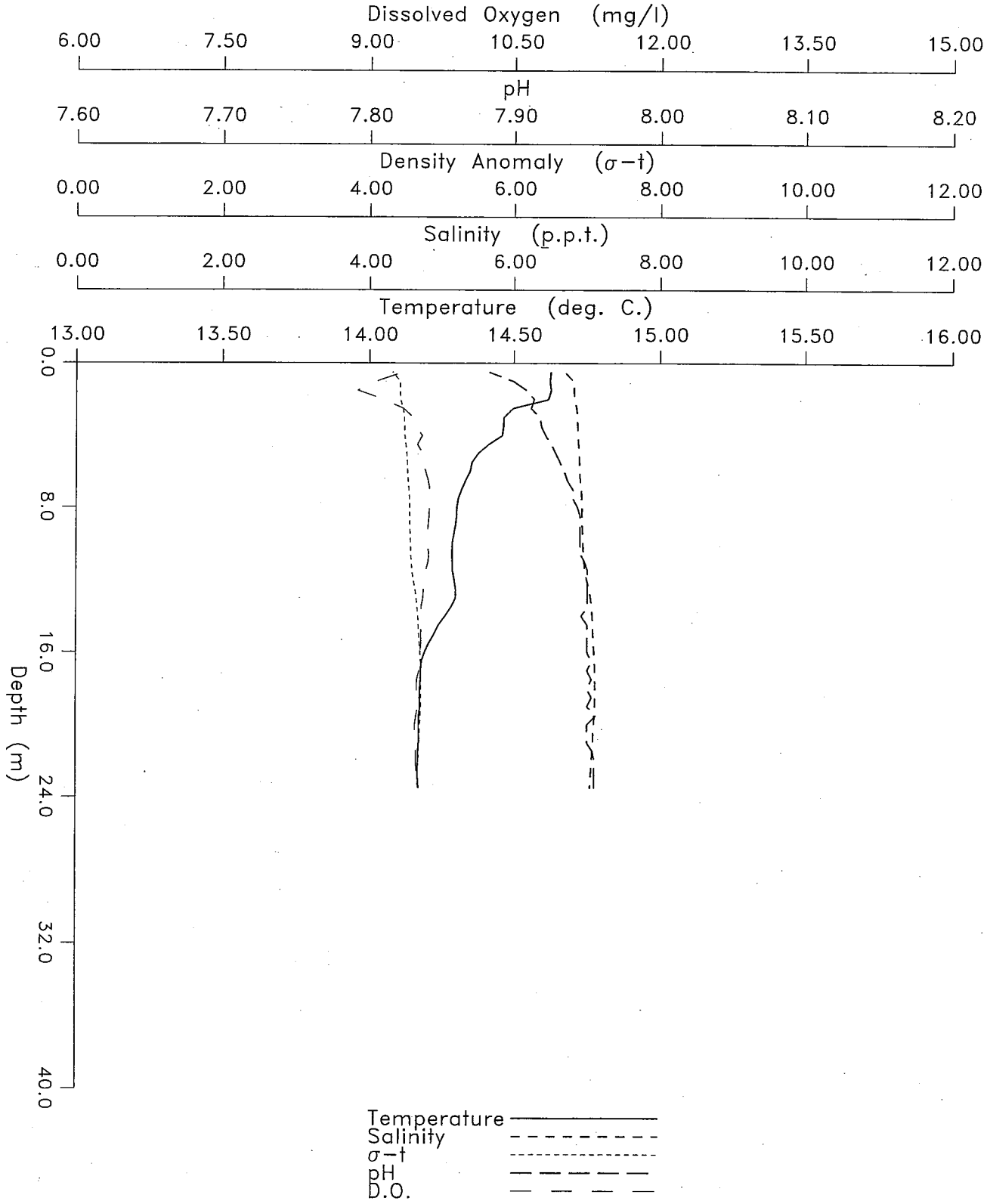
MOA HYDROGRAPHIC DATA

Station: C2-2(B) Date: 8/14/00 Time: 17:30



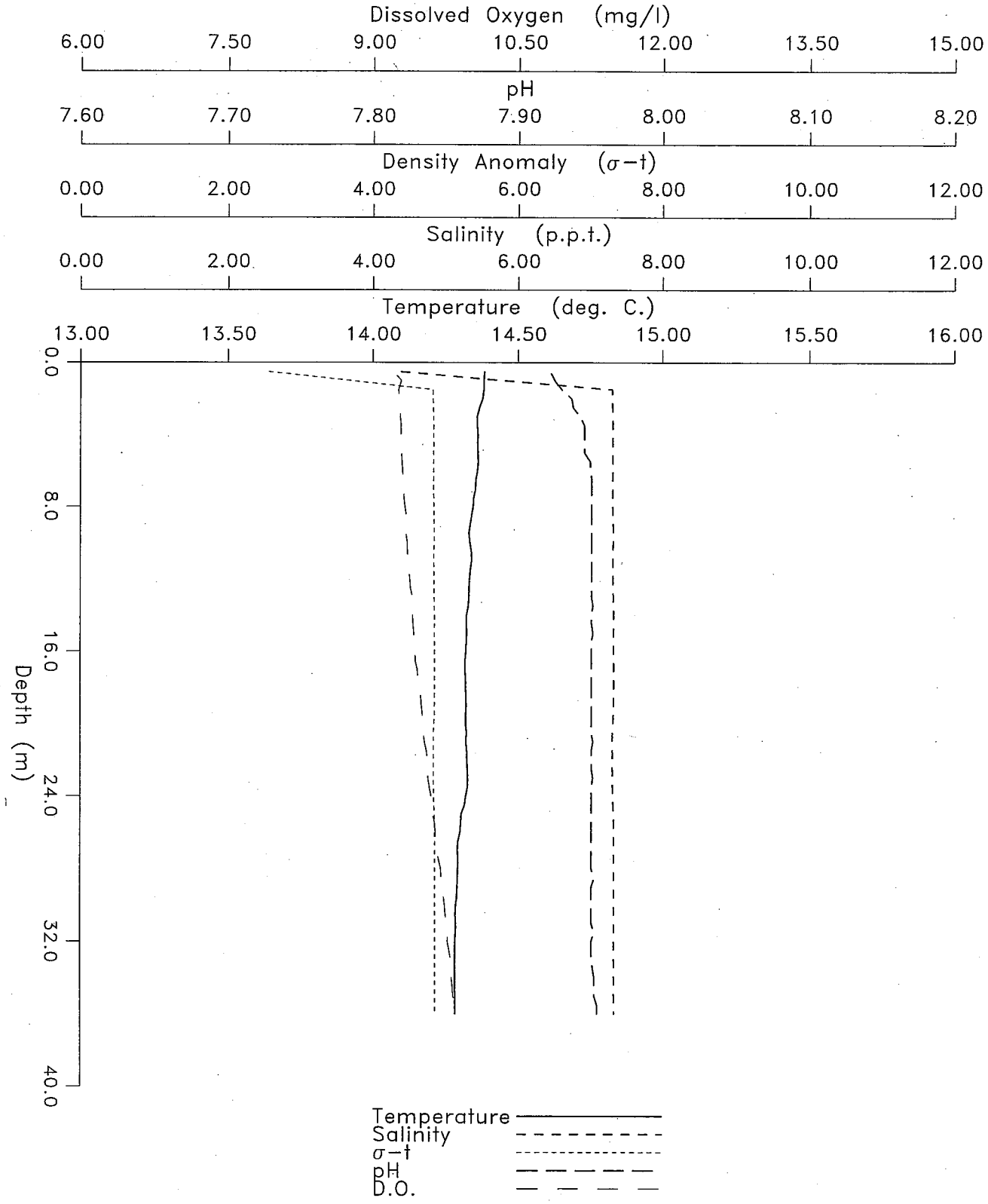
MOA HYDROGRAPHIC DATA

Station: C2-2(C) Date: 8/14/00 Time: 17:32



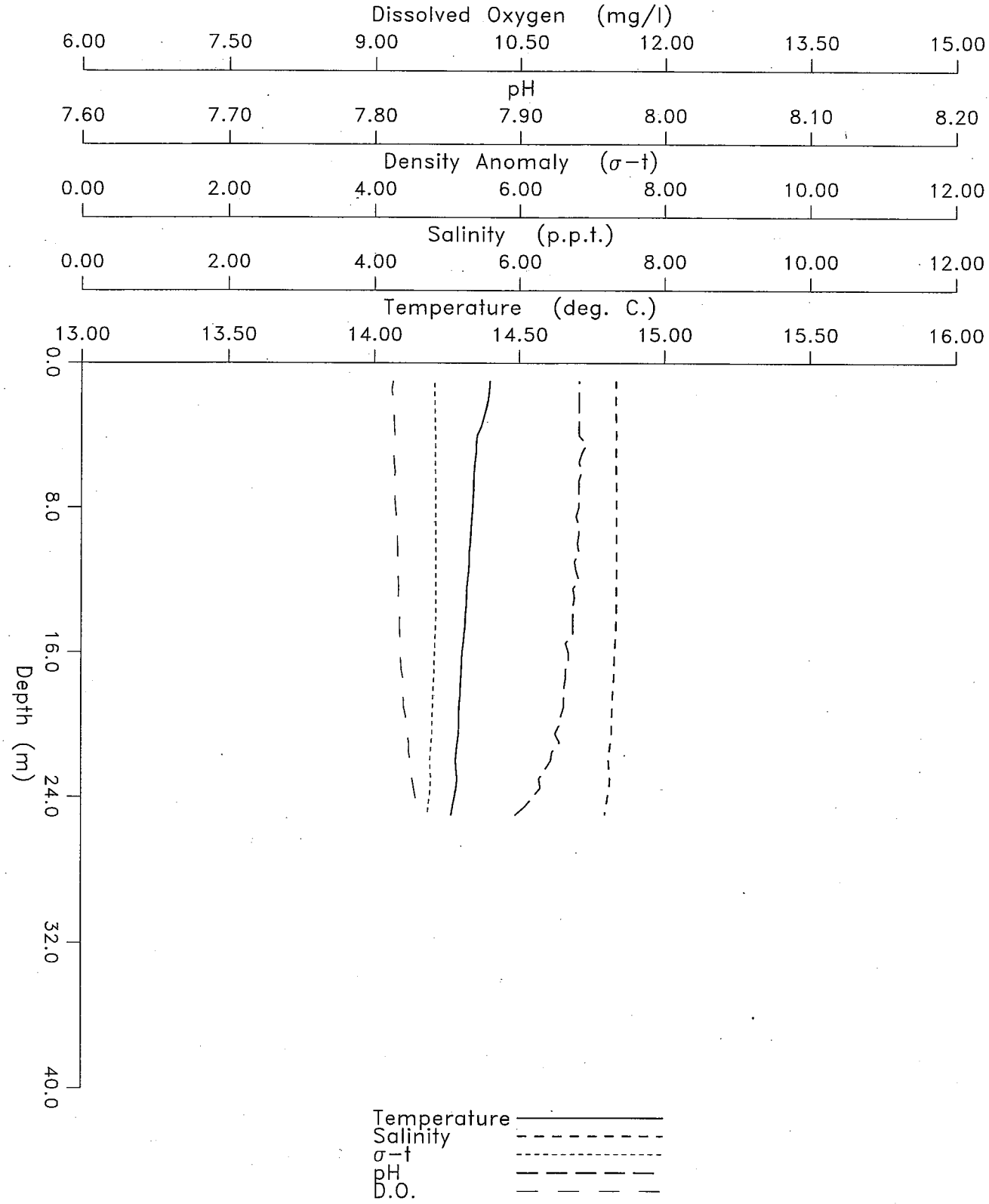
MOA HYDROGRAPHIC DATA

Station: C2-3 Date: 8/14/00 Time: 17:53



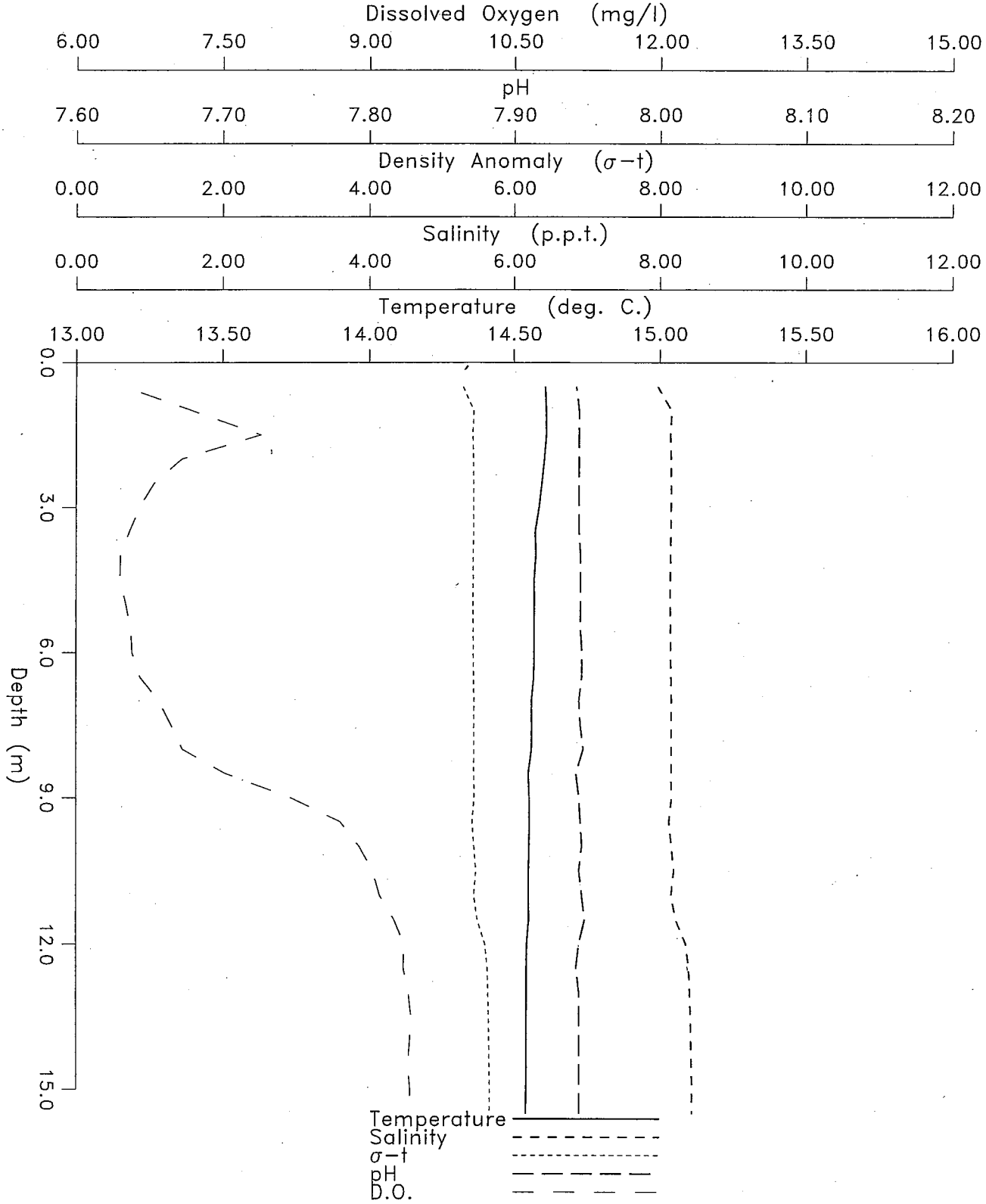
MOA HYDROGRAPHIC DATA

Station: C2-4 Date: 8/14/00 Time: 18:08



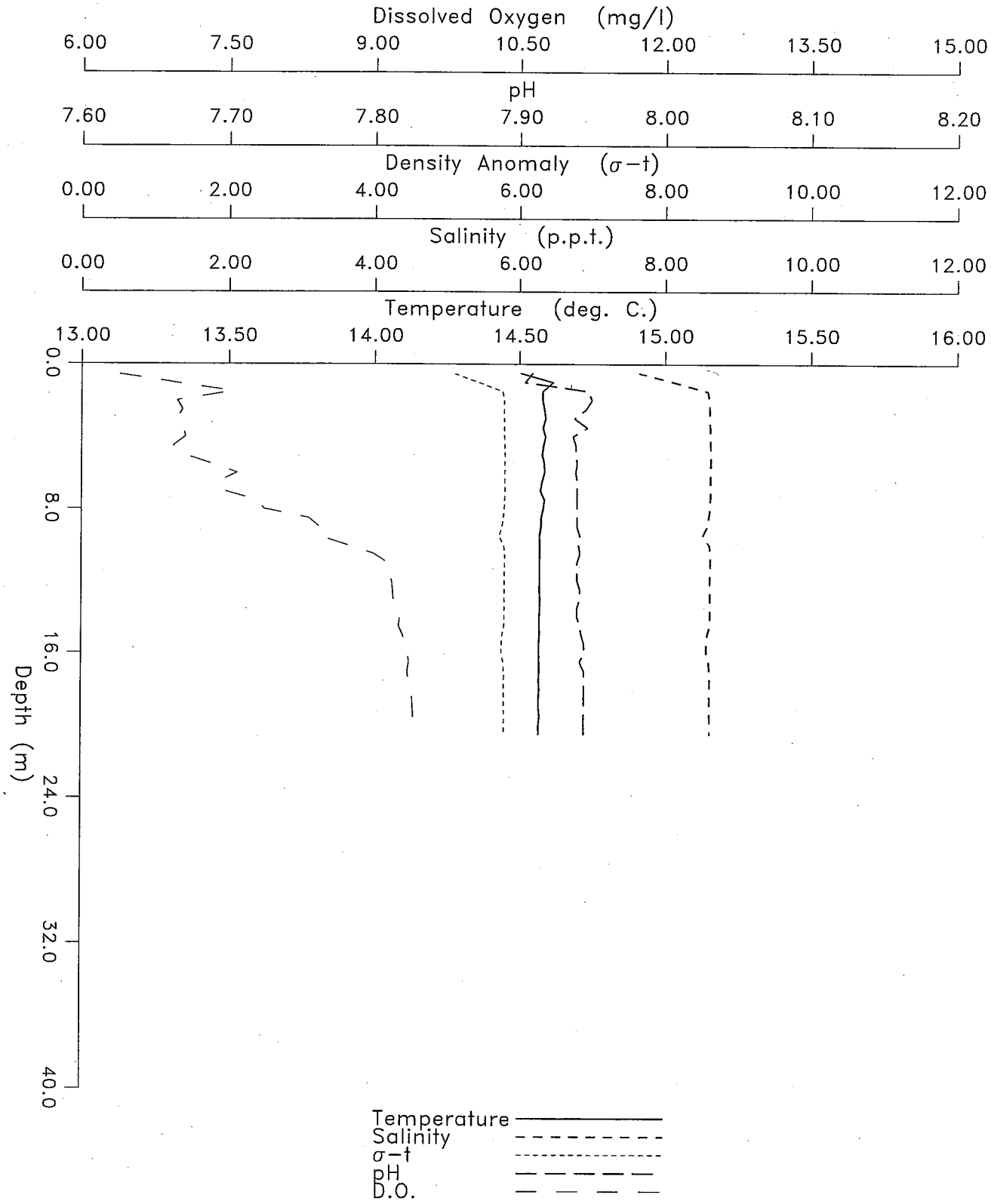
MOA HYDROGRAPHIC DATA

Station: C3-1 Date: 8/14/00 Time: 19:02



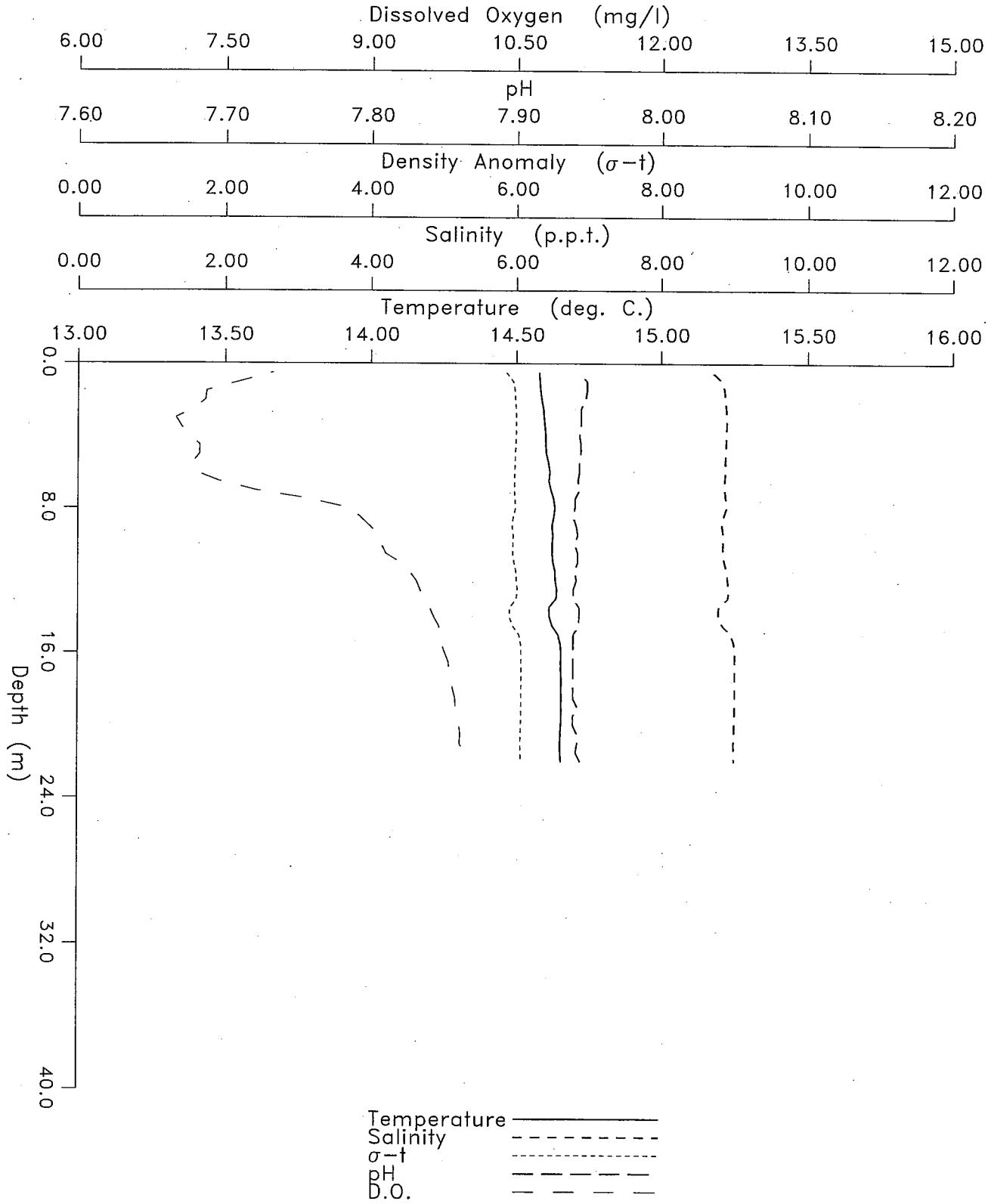
MOA HYDROGRAPHIC DATA

Station: C3-2 Date: 8/14/00 Time: 19:20



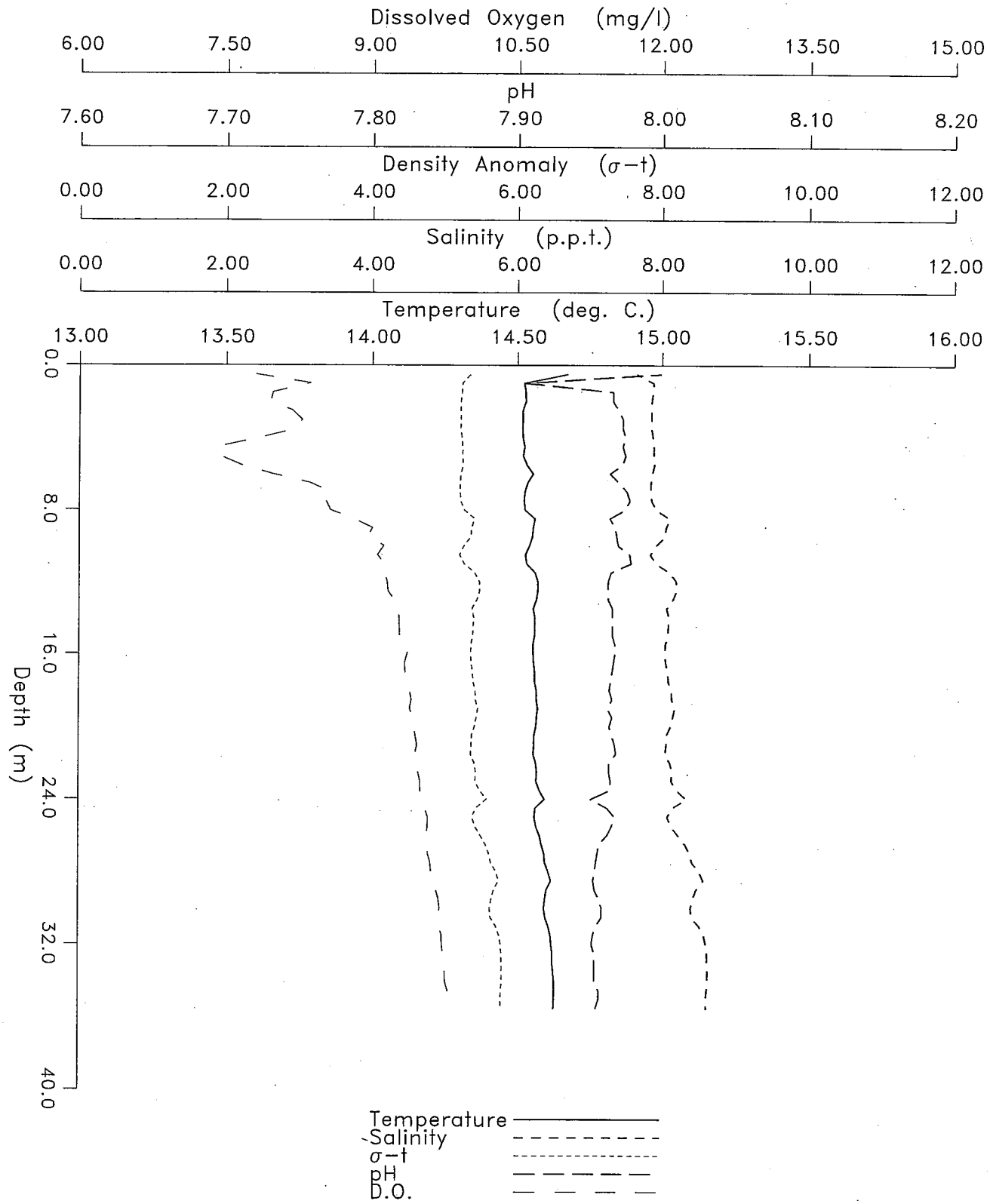
MOA HYDROGRAPHIC DATA

Station: C3-3 Date: 8/14/00 Time: 19:32



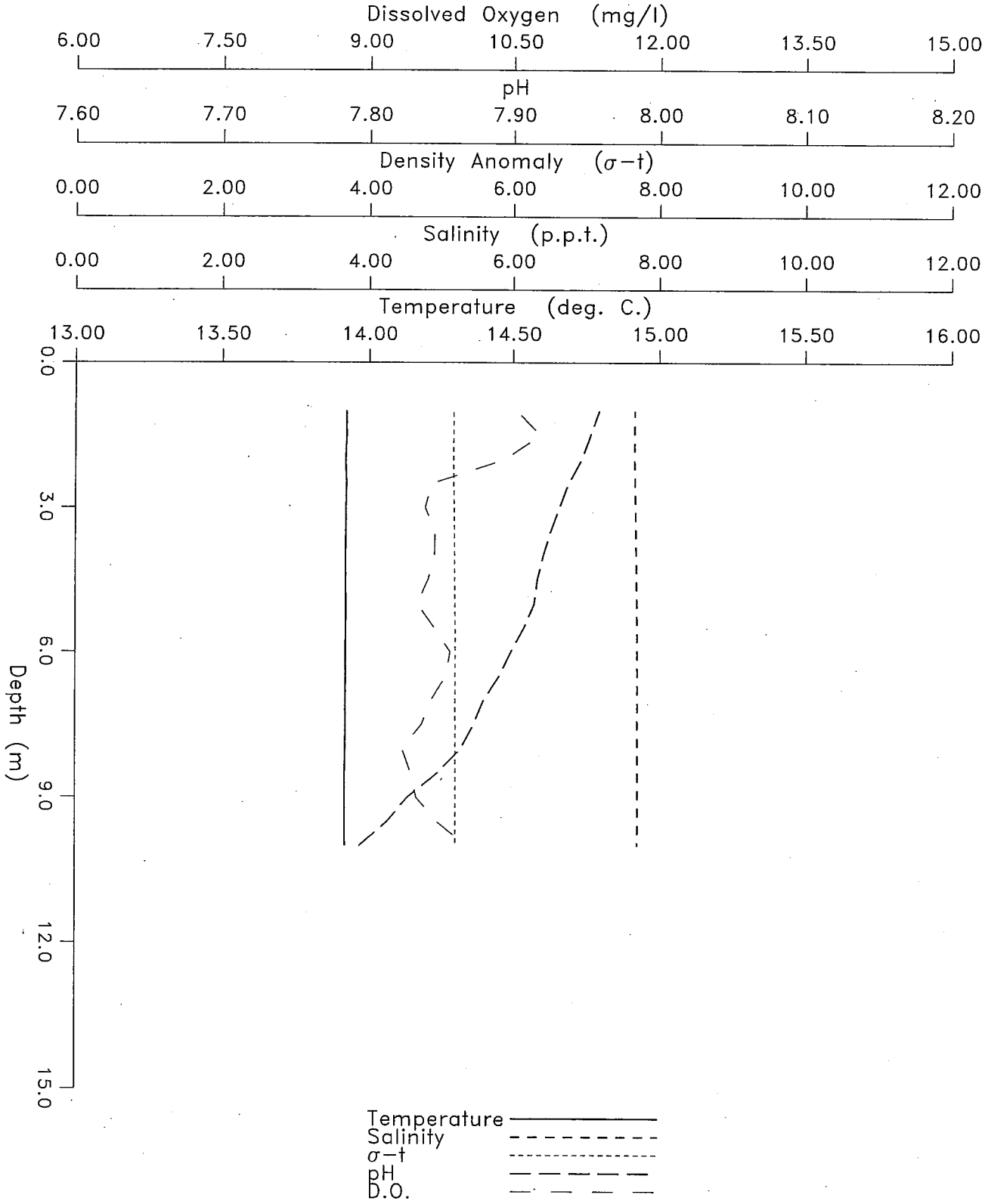
MOA HYDROGRAPHIC DATA

Station: C3-4 Date: 8/14/00 Time: 19:48



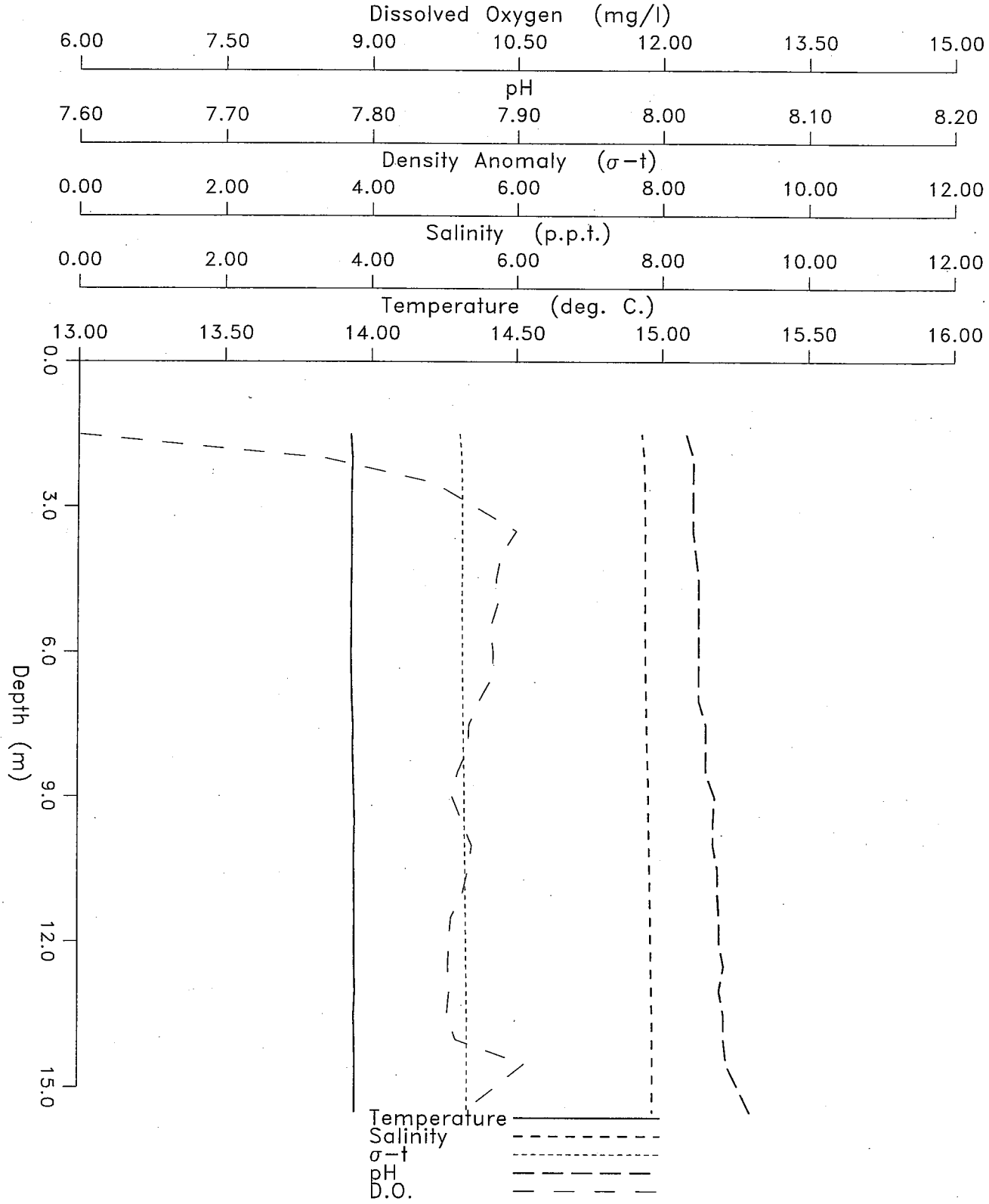
MOA HYDROGRAPHIC DATA

Station: E1-1 Date: 8/16/00 Time: 11:26



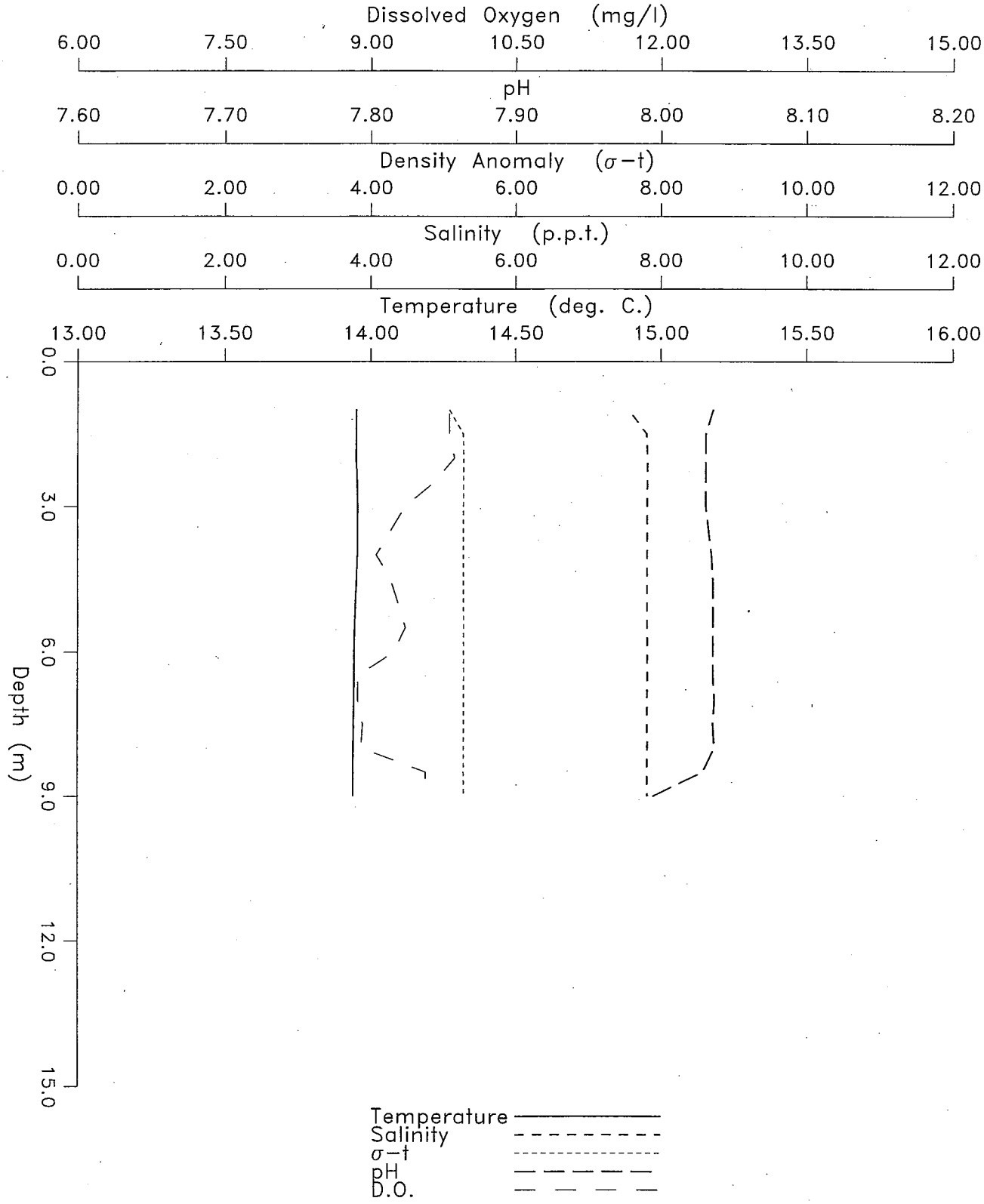
MOA HYDROGRAPHIC DATA

Station: E1-2 Date: 8/16/00 Time: 11:35



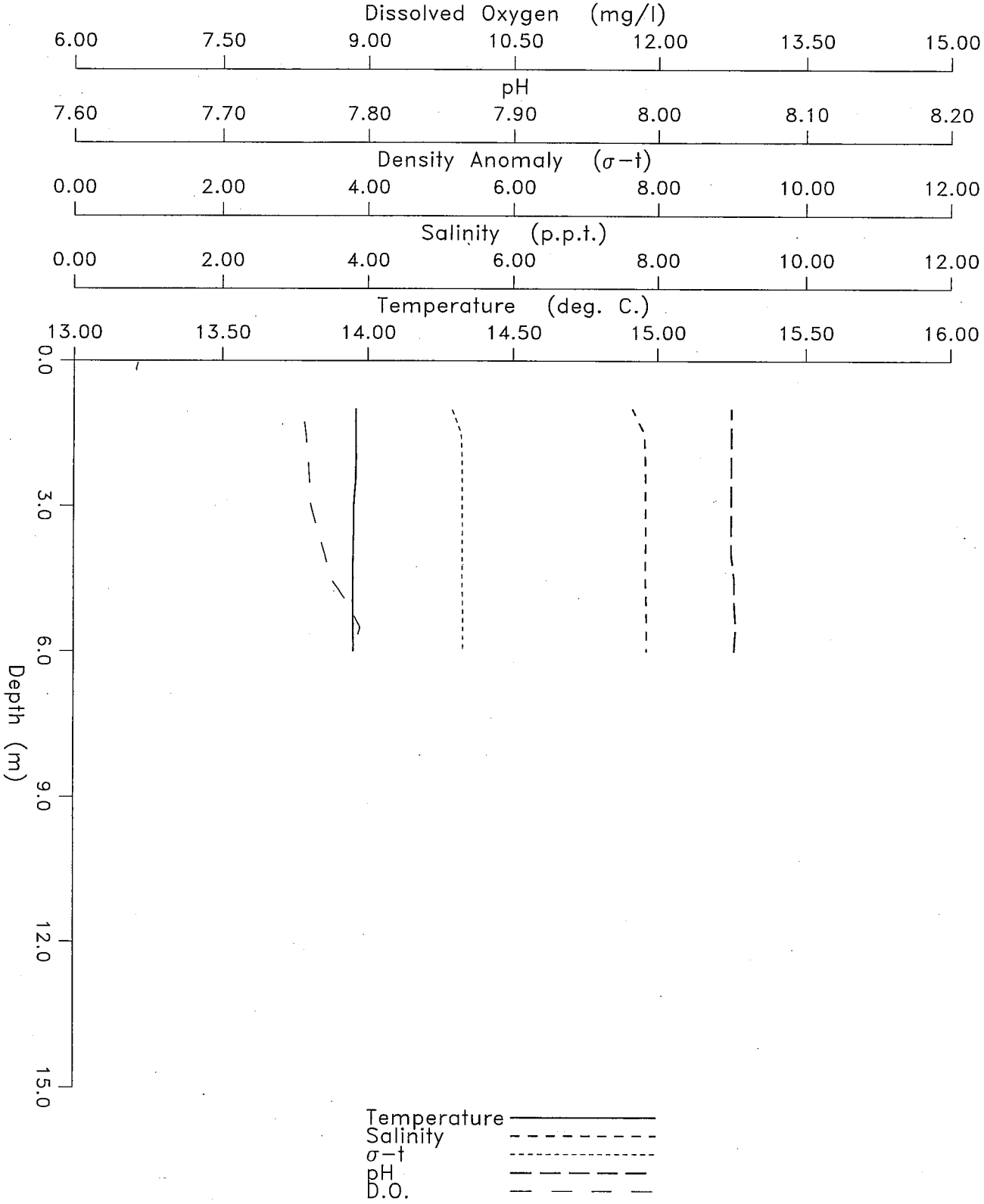
MOA HYDROGRAPHIC DATA

Station: E1-3 Date: 8/16/00 Time: 11:45



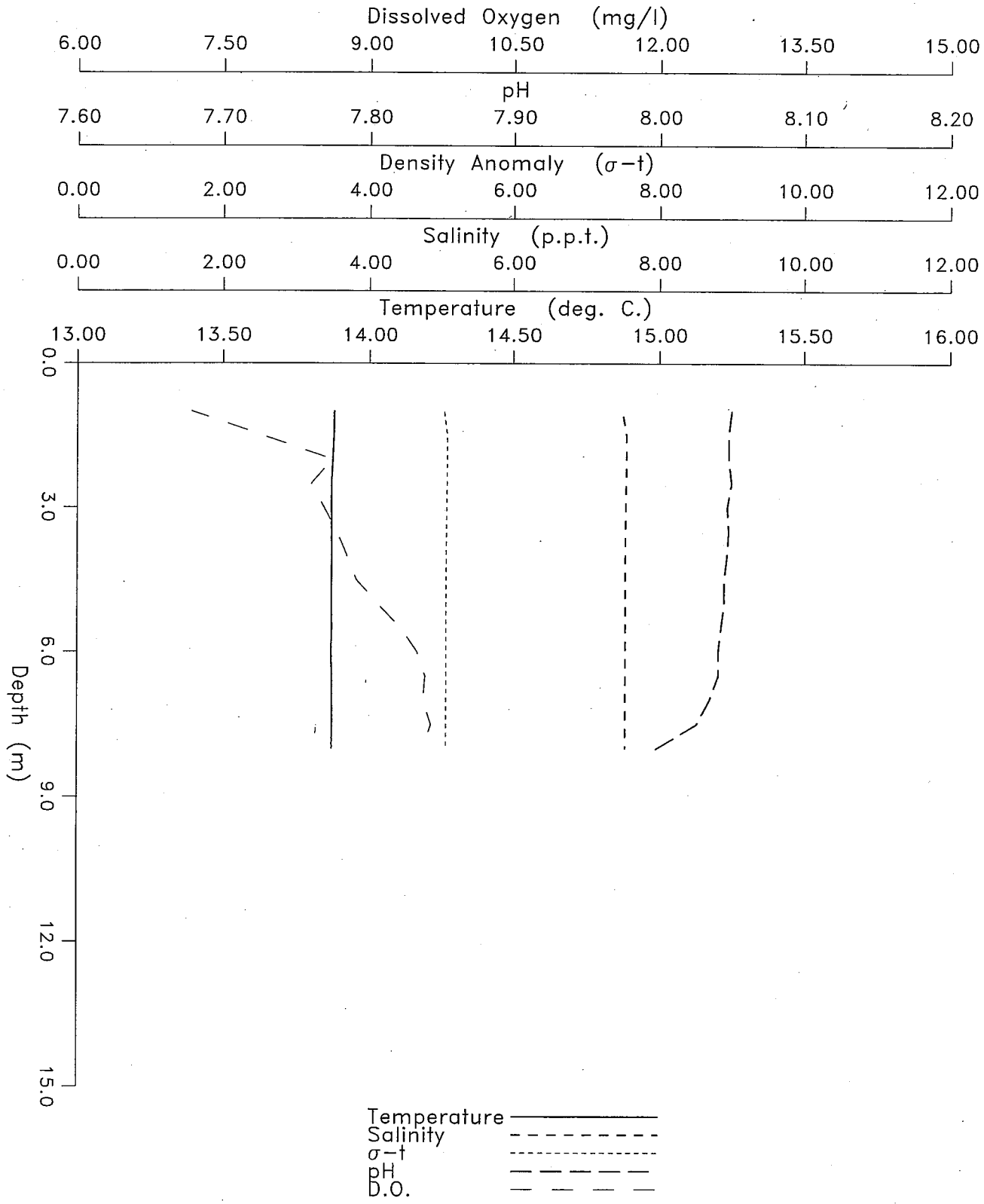
MOA HYDROGRAPHIC DATA

Station: E1-4 Date: 8/16/00 Time: 11:55



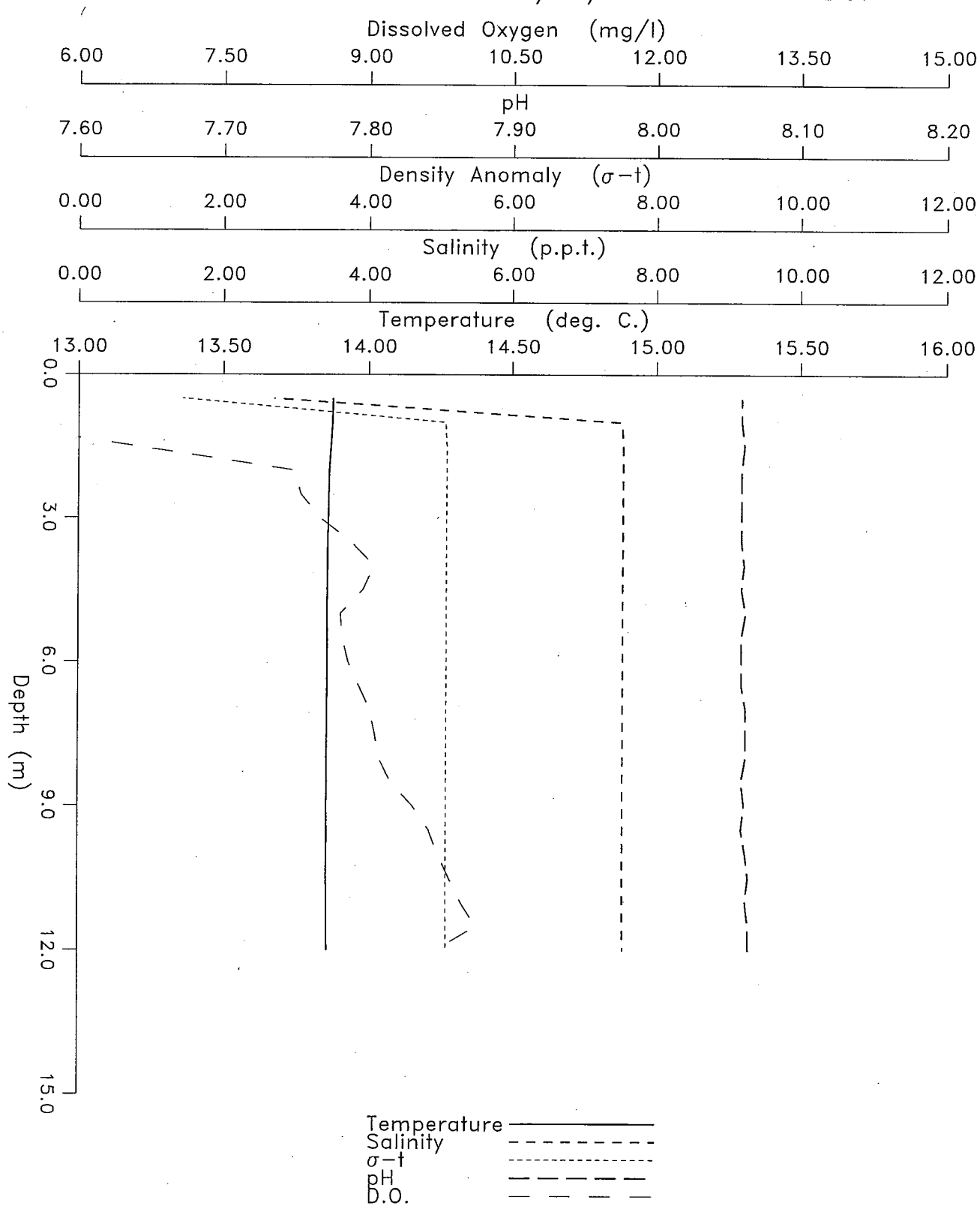
MOA HYDROGRAPHIC DATA

Station: E2-1 Date: 8/16/00 Time: 12:30



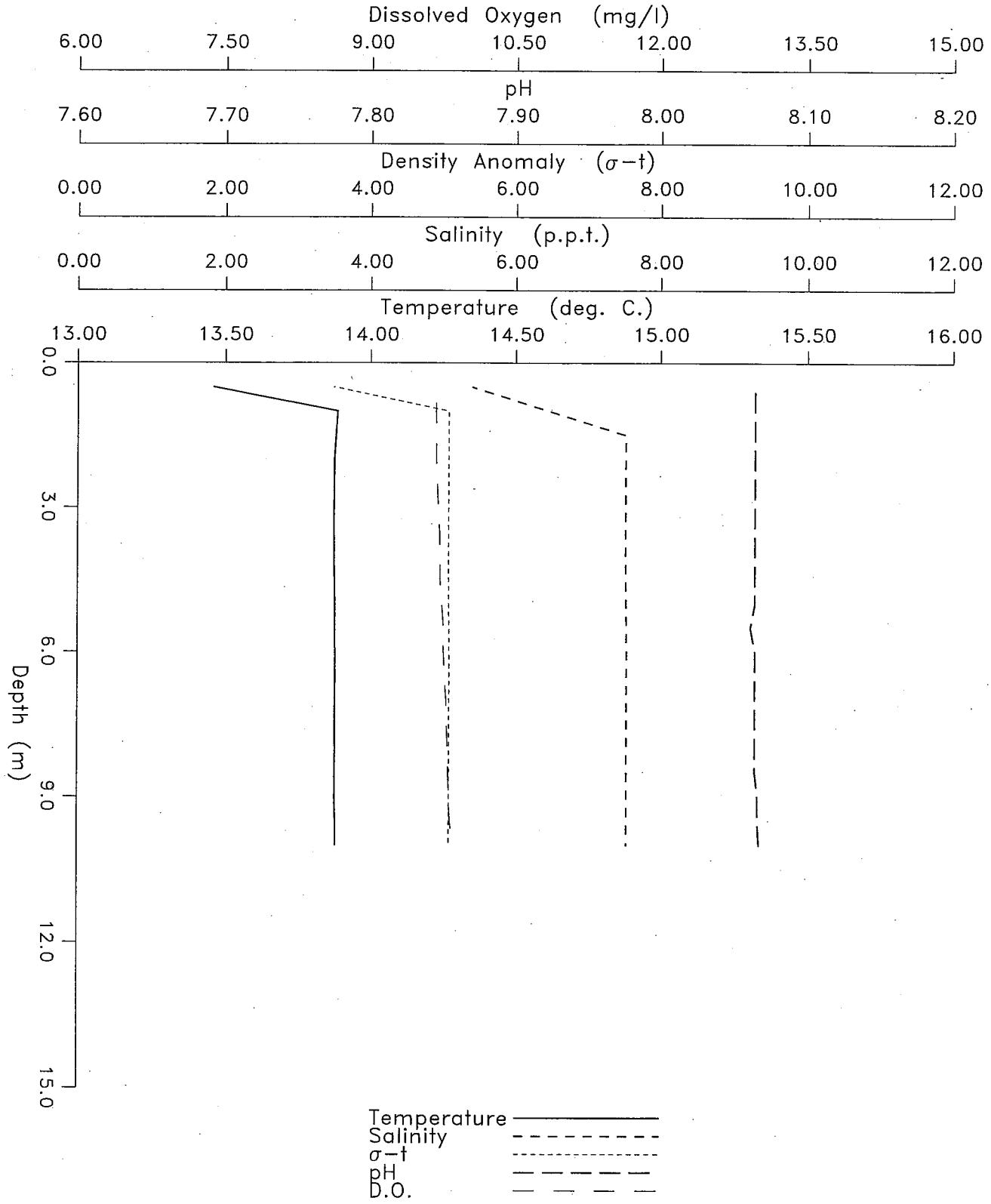
MOA HYDROGRAPHIC DATA

Station: E2-2 Date: 8/16/00 Time: 12:37



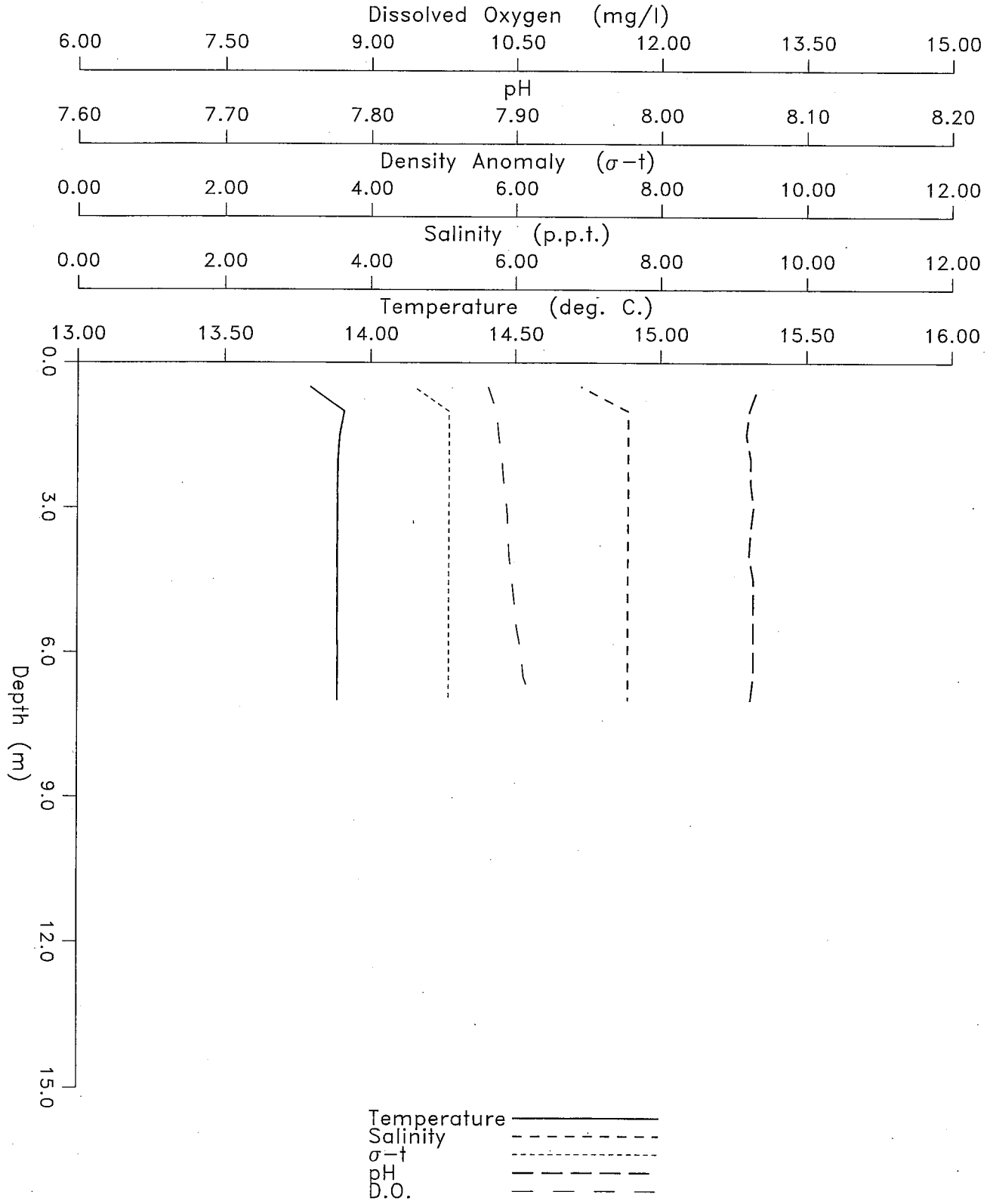
MOA HYDROGRAPHIC DATA

Station: E2-3 Date: 8/16/00 Time: 12:52



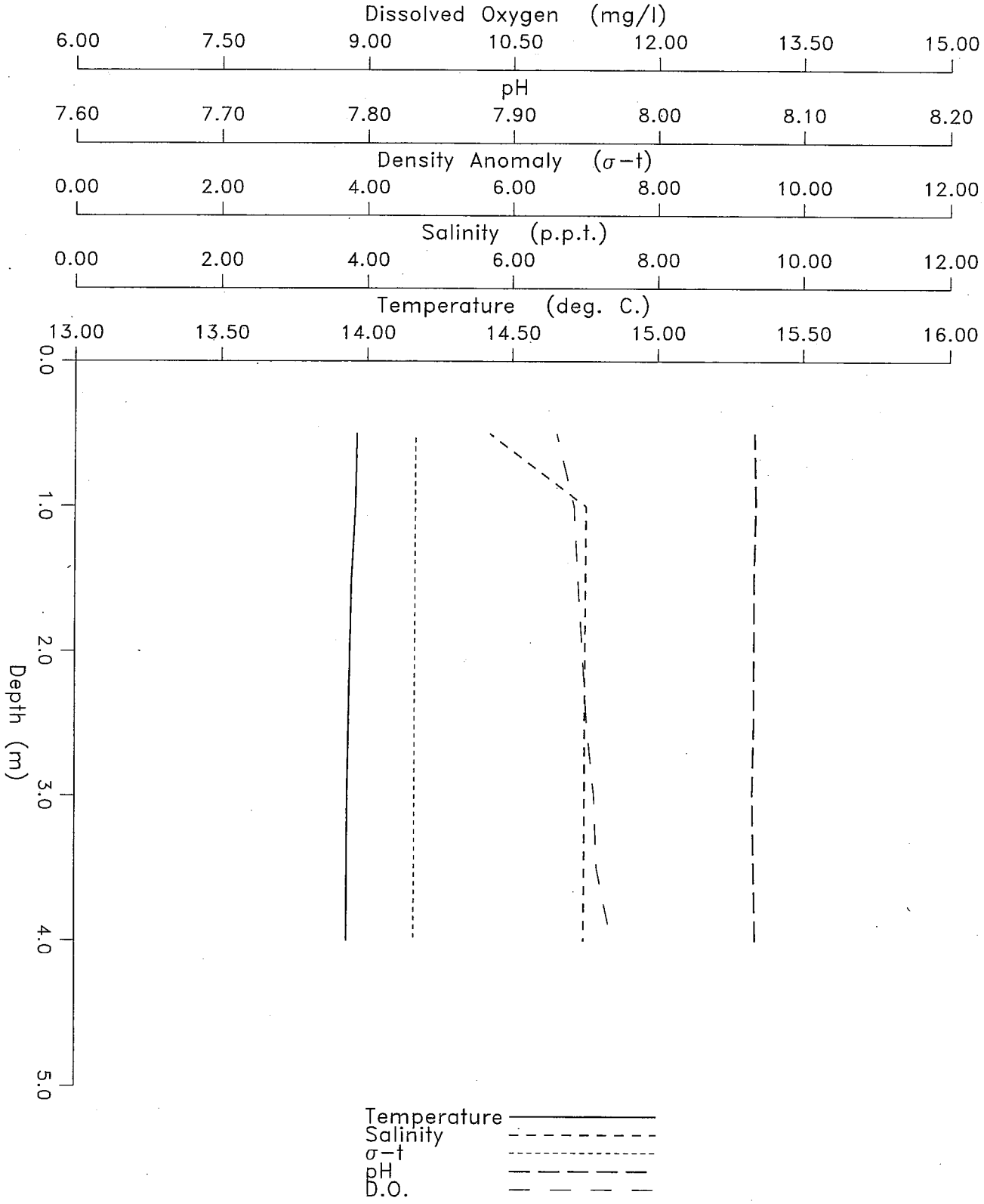
MOA HYDROGRAPHIC DATA

Station: E2-4 Date: 8/16/00 Time: 13:20



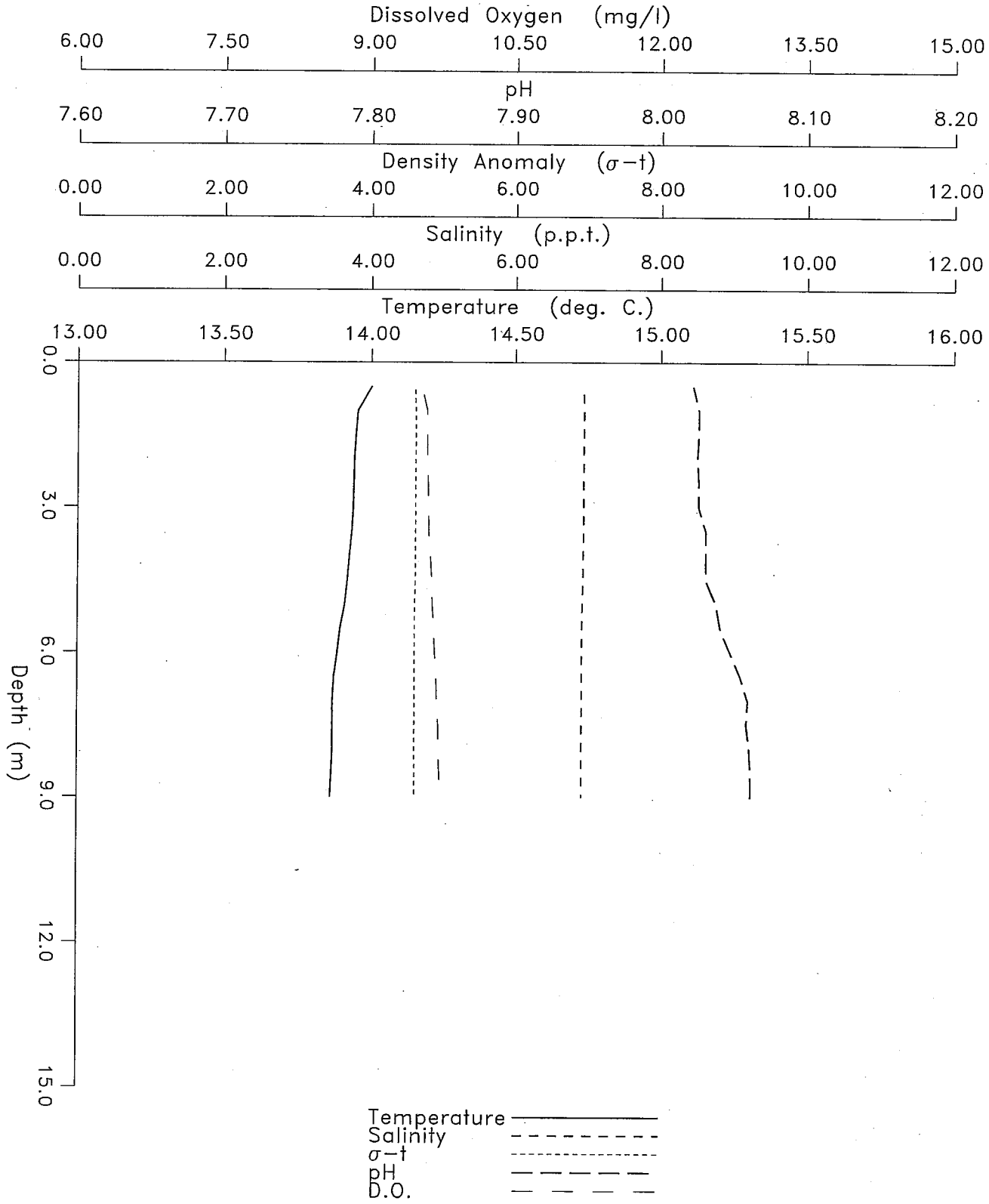
MOA HYDROGRAPHIC DATA

Station: E3-1 Date: 8/16/00 Time: 14:22



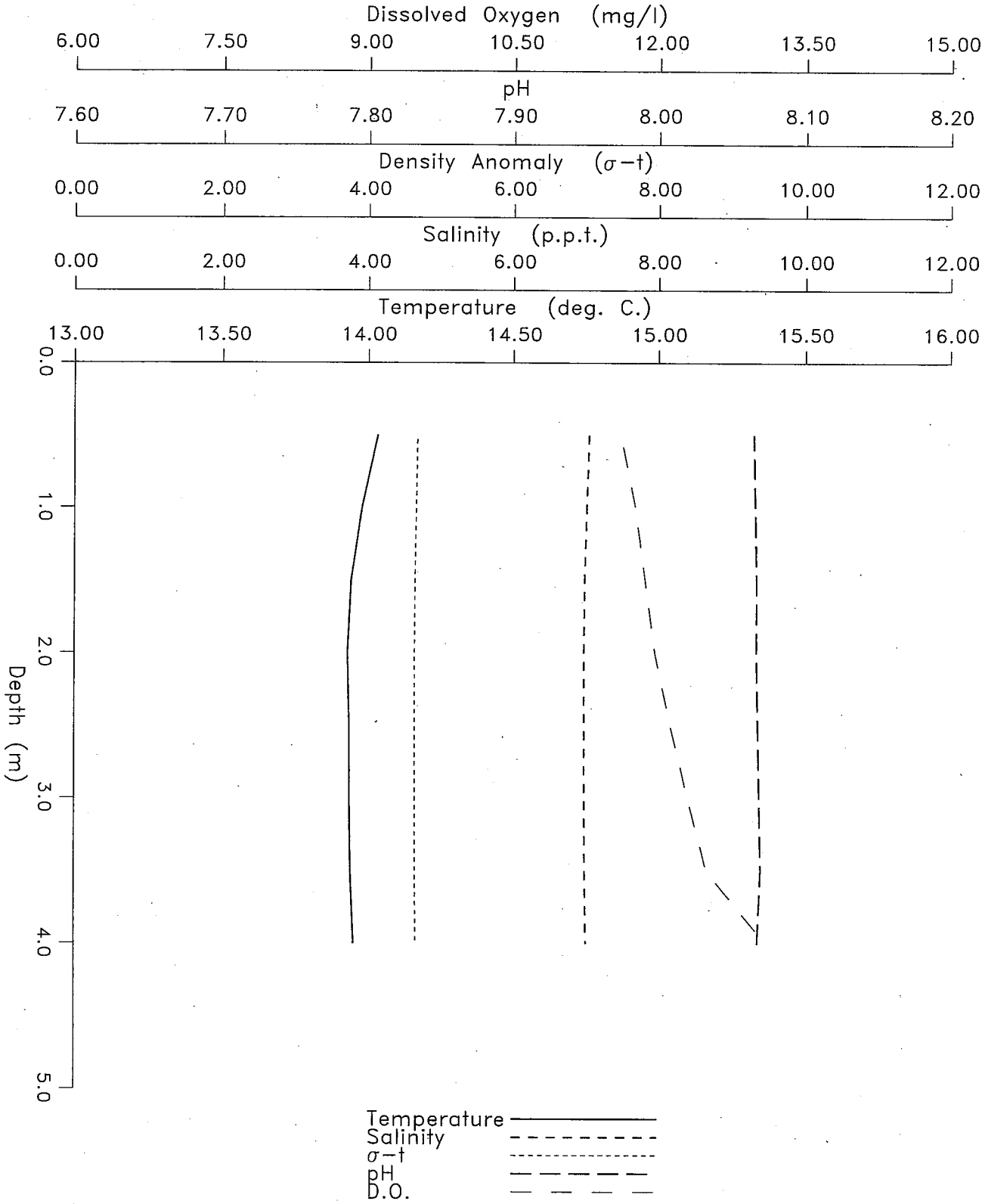
MOA HYDROGRAPHIC DATA

Station: E3-2 Date: 8/16/00 Time: 14:43



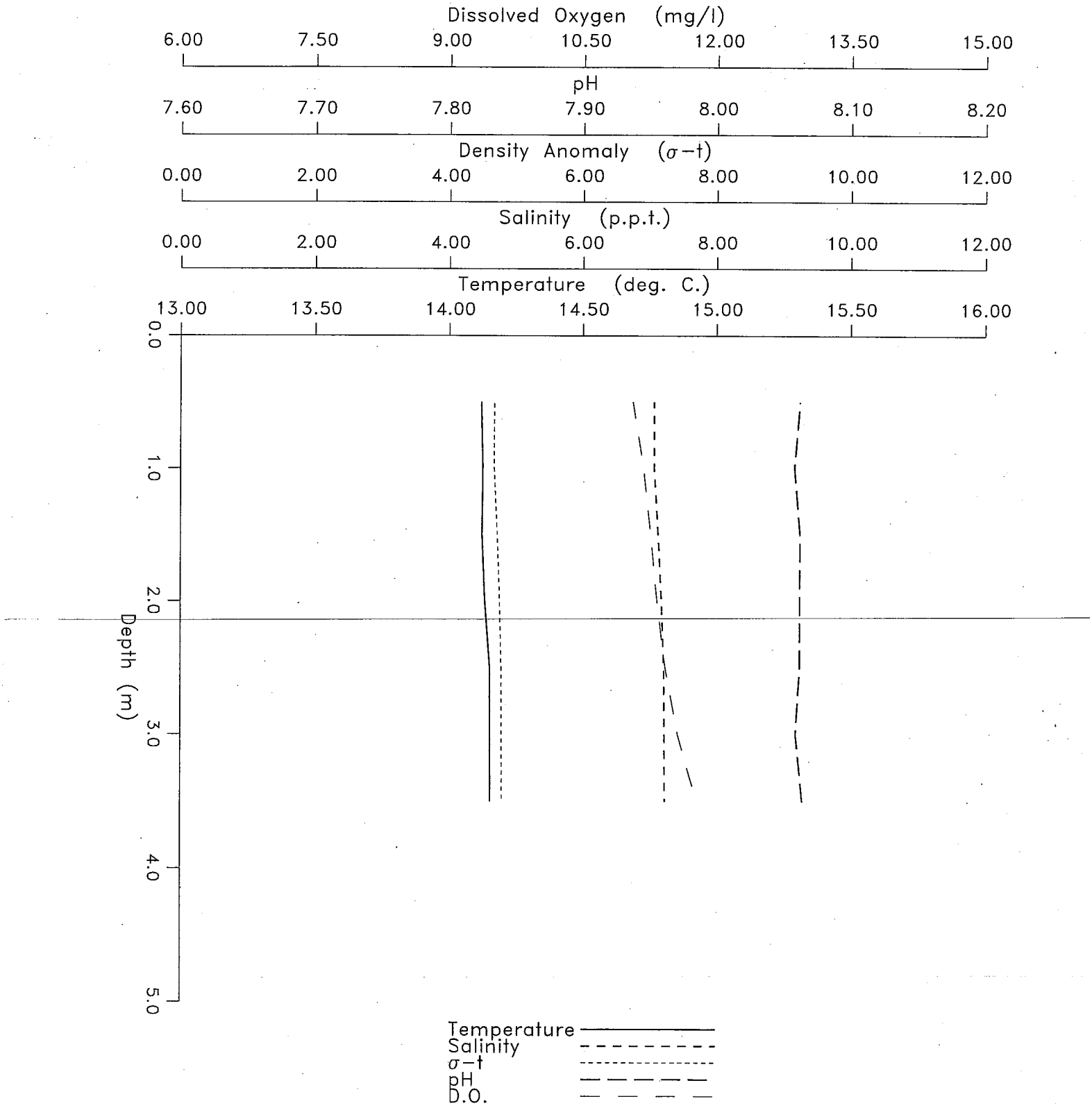
MOA HYDROGRAPHIC DATA

Station: E3-3 Date: 8/16/00 Time: 15:08



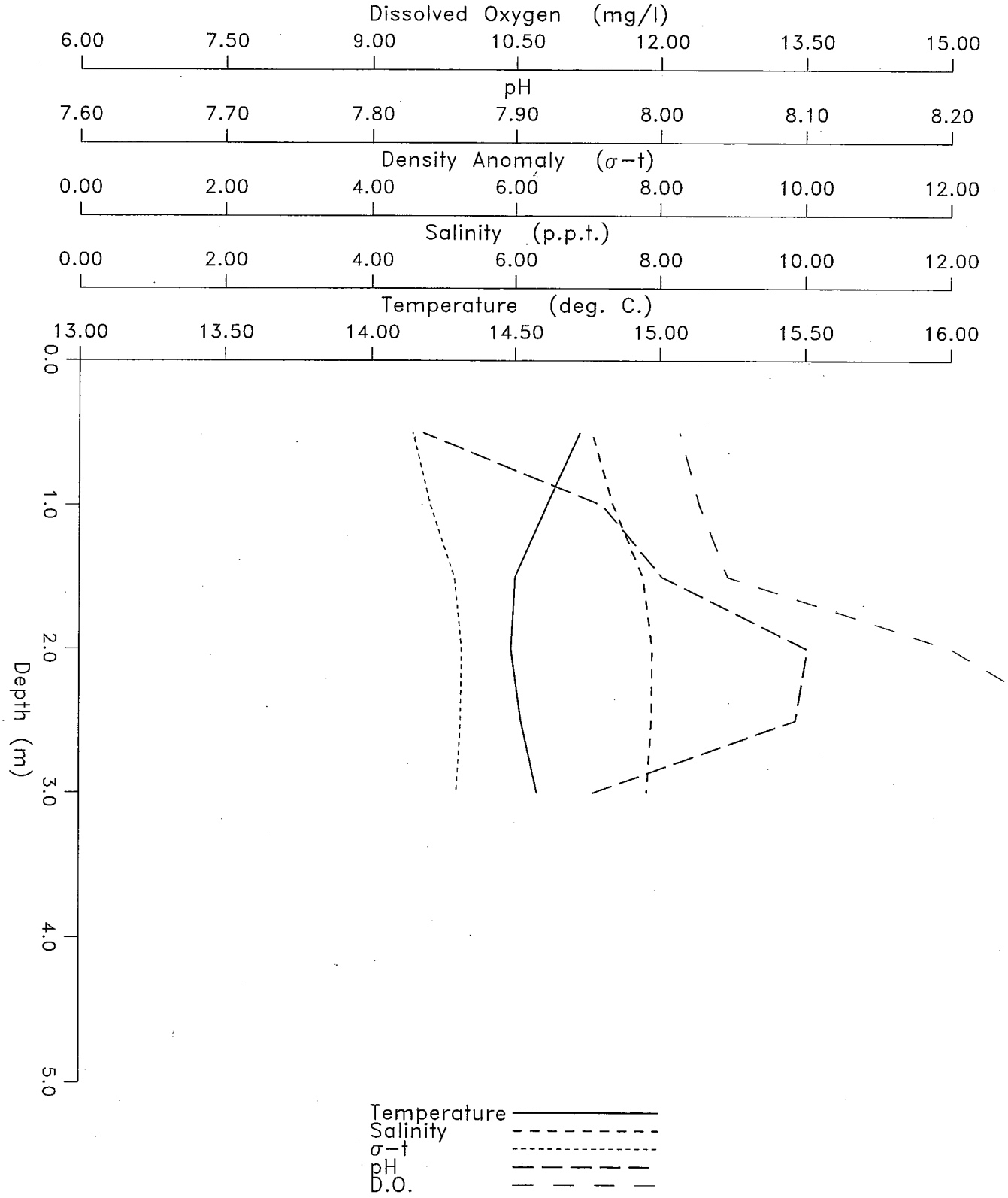
MOA HYDROGRAPHIC DATA

Station: E3-4 Date: 8/16/00 Time: 15:20



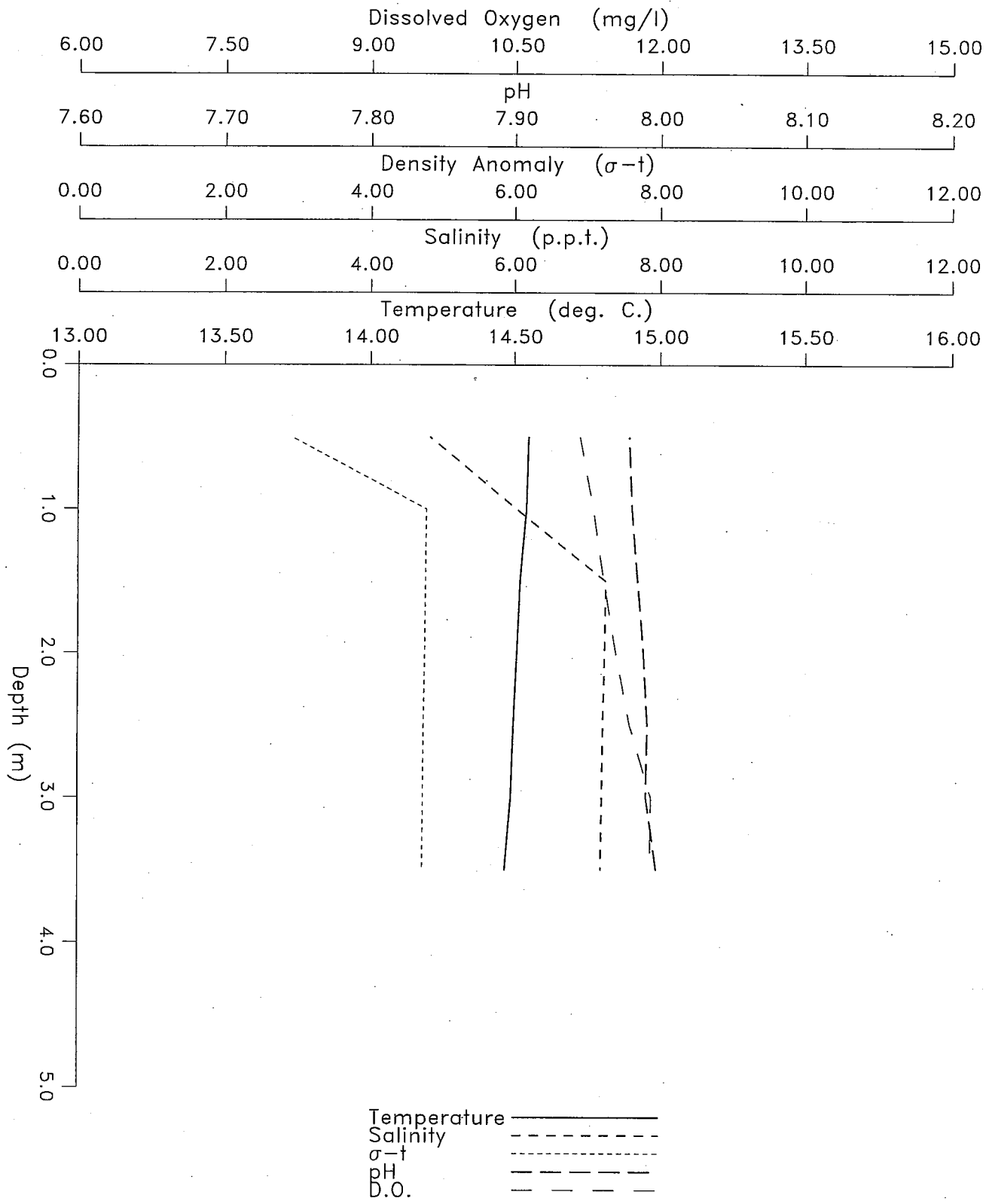
MOA HYDROGRAPHIC DATA

Station: F1-1 Date: 8/16/00 Time: 15:50



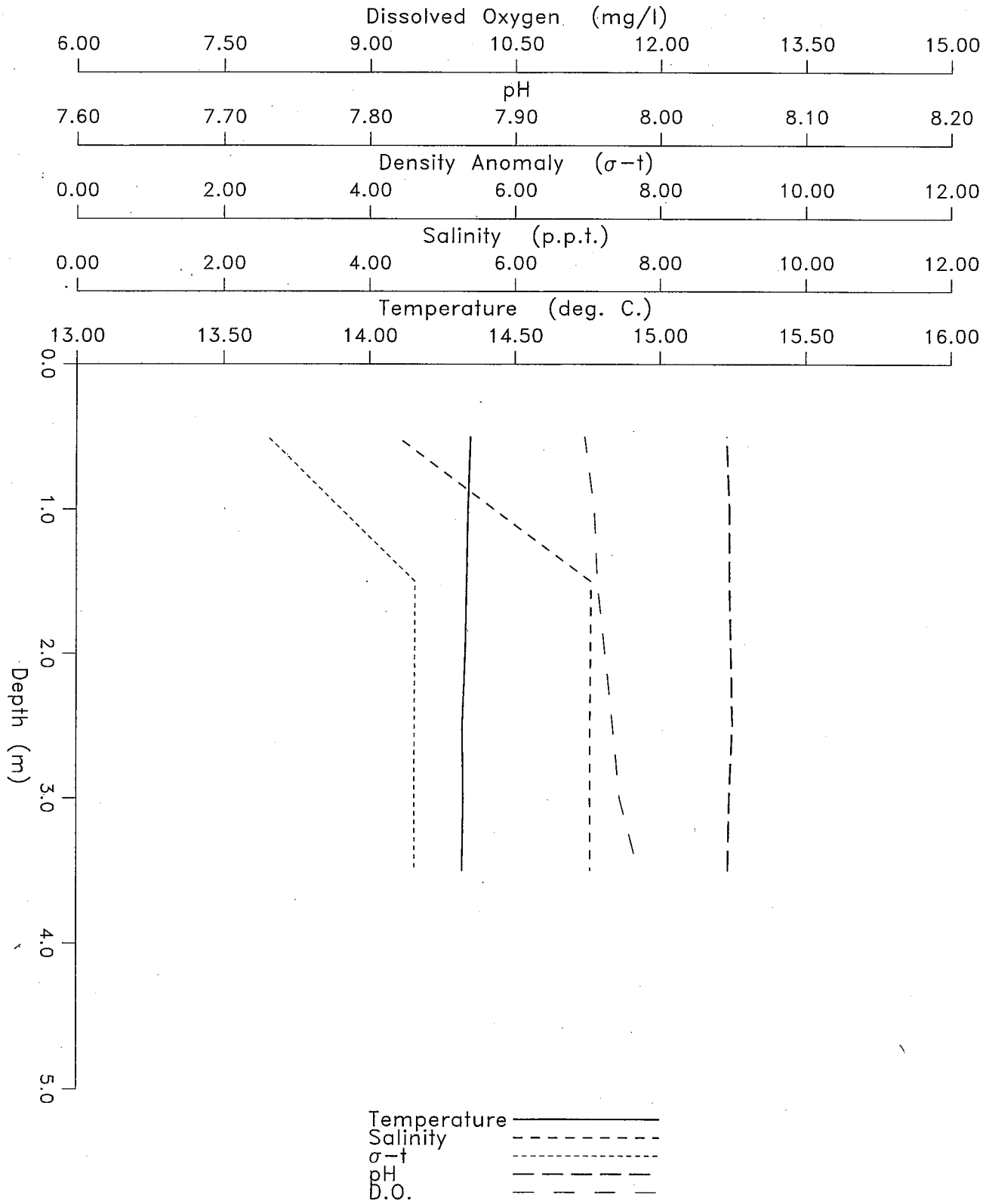
MOA HYDROGRAPHIC DATA

Station: F1-2 Date: 8/16/00 Time: 16:12



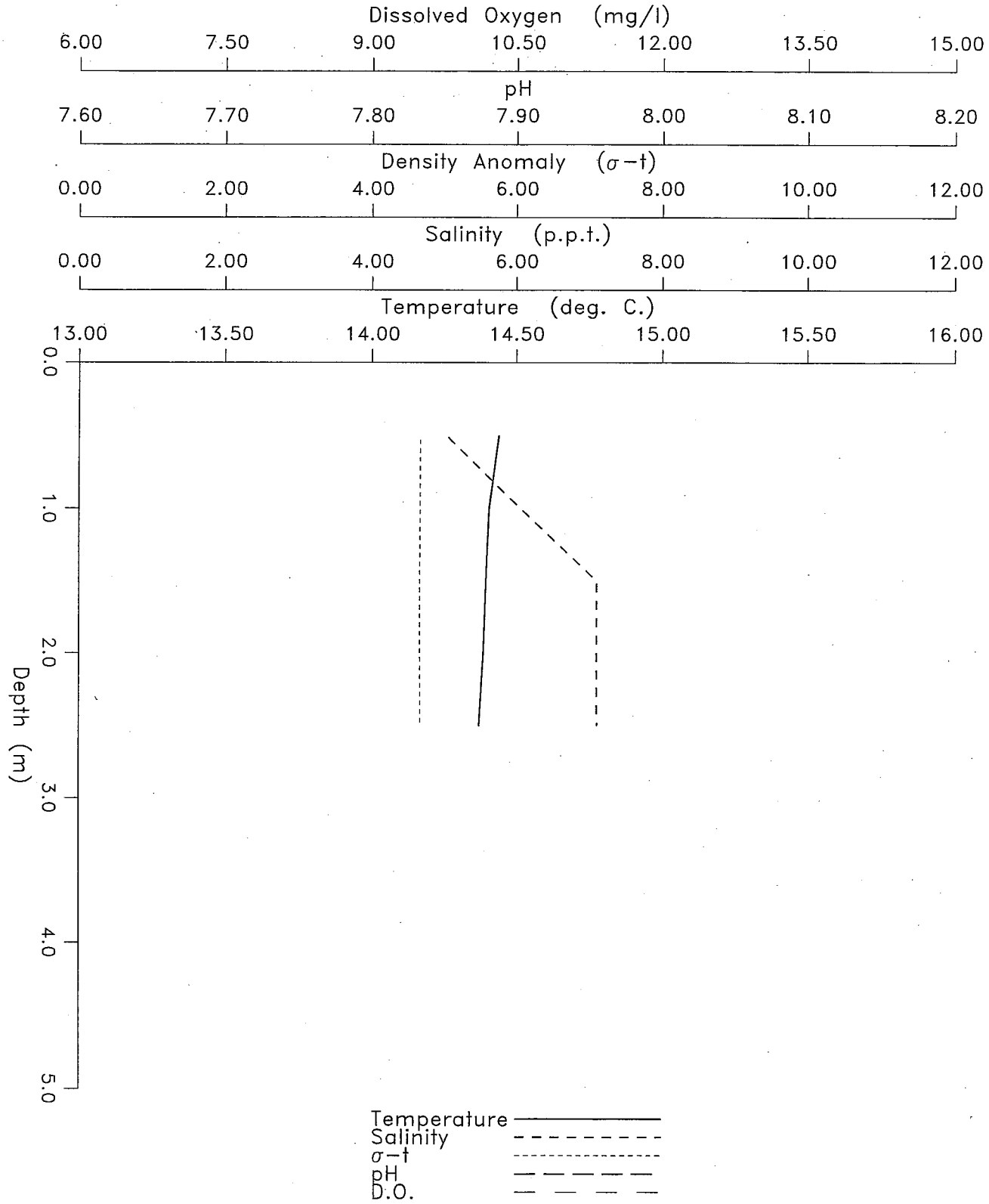
MOA HYDROGRAPHIC DATA

Station: F1-3 Date: 8/16/00 Time: 16:30



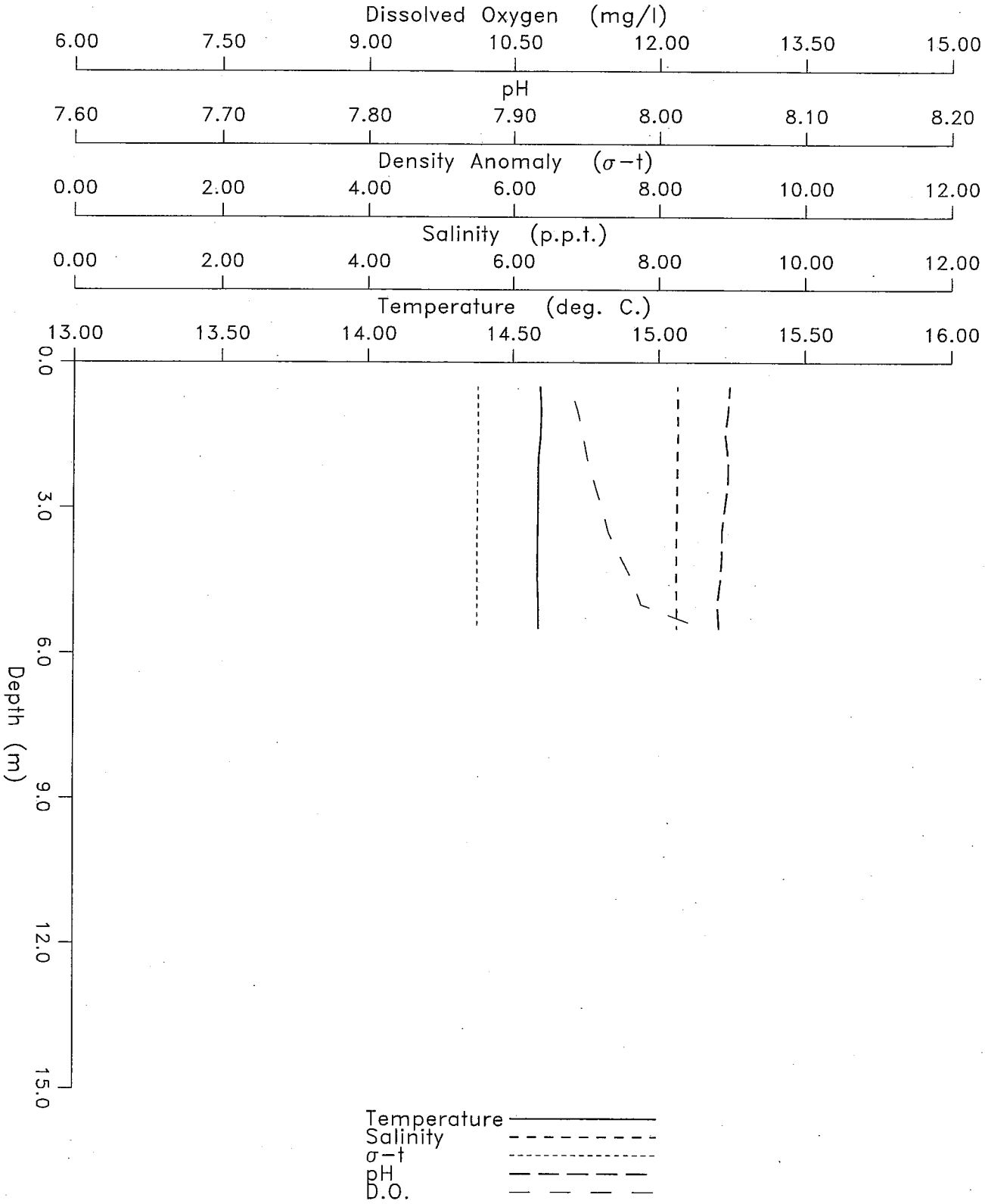
MOA HYDROGRAPHIC DATA

Station: F1-4 Date: 8/16/00 Time: 16:50



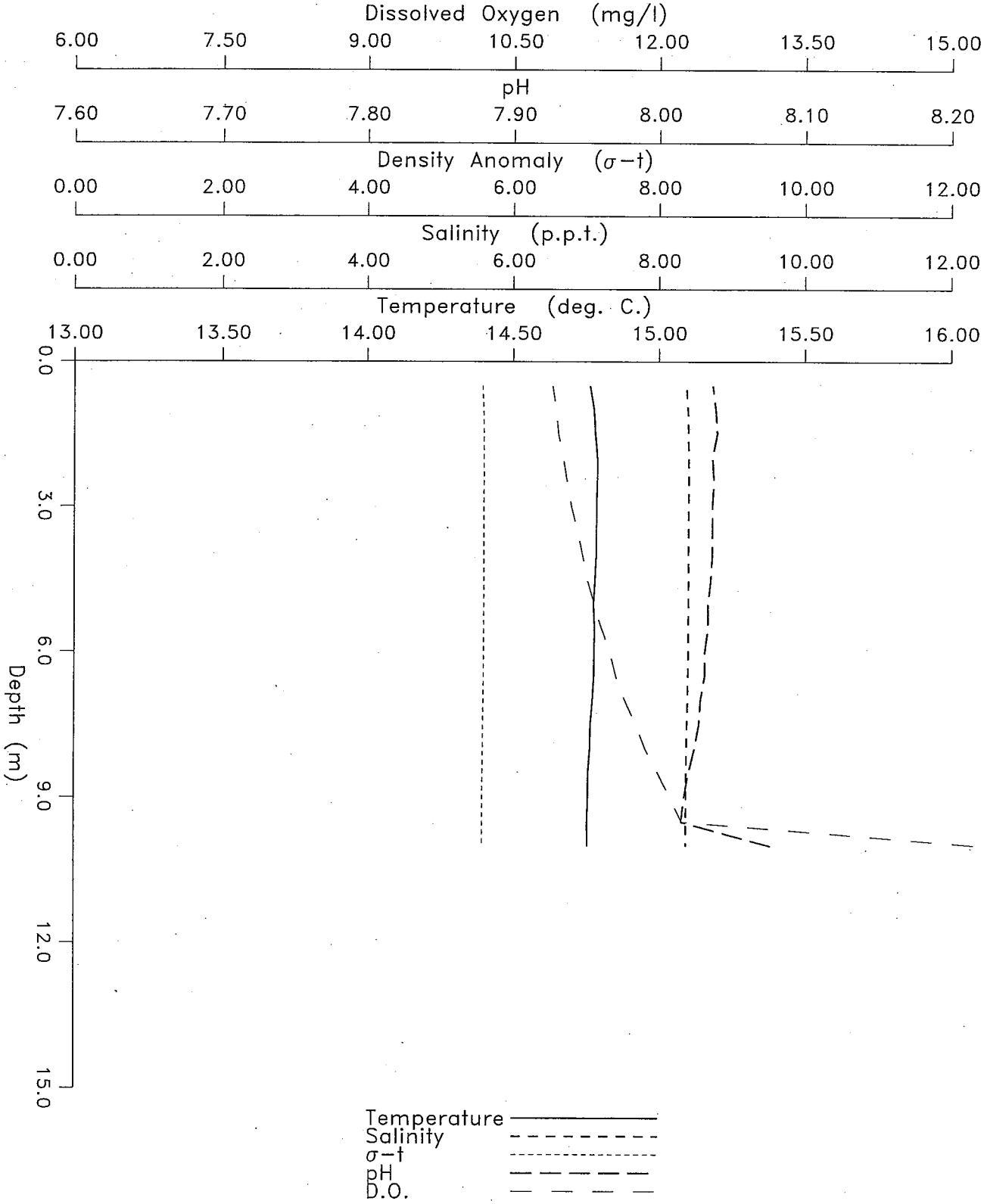
MOA HYDROGRAPHIC DATA

Station: F2−1 Date: 8/16/00 Time: 17:21



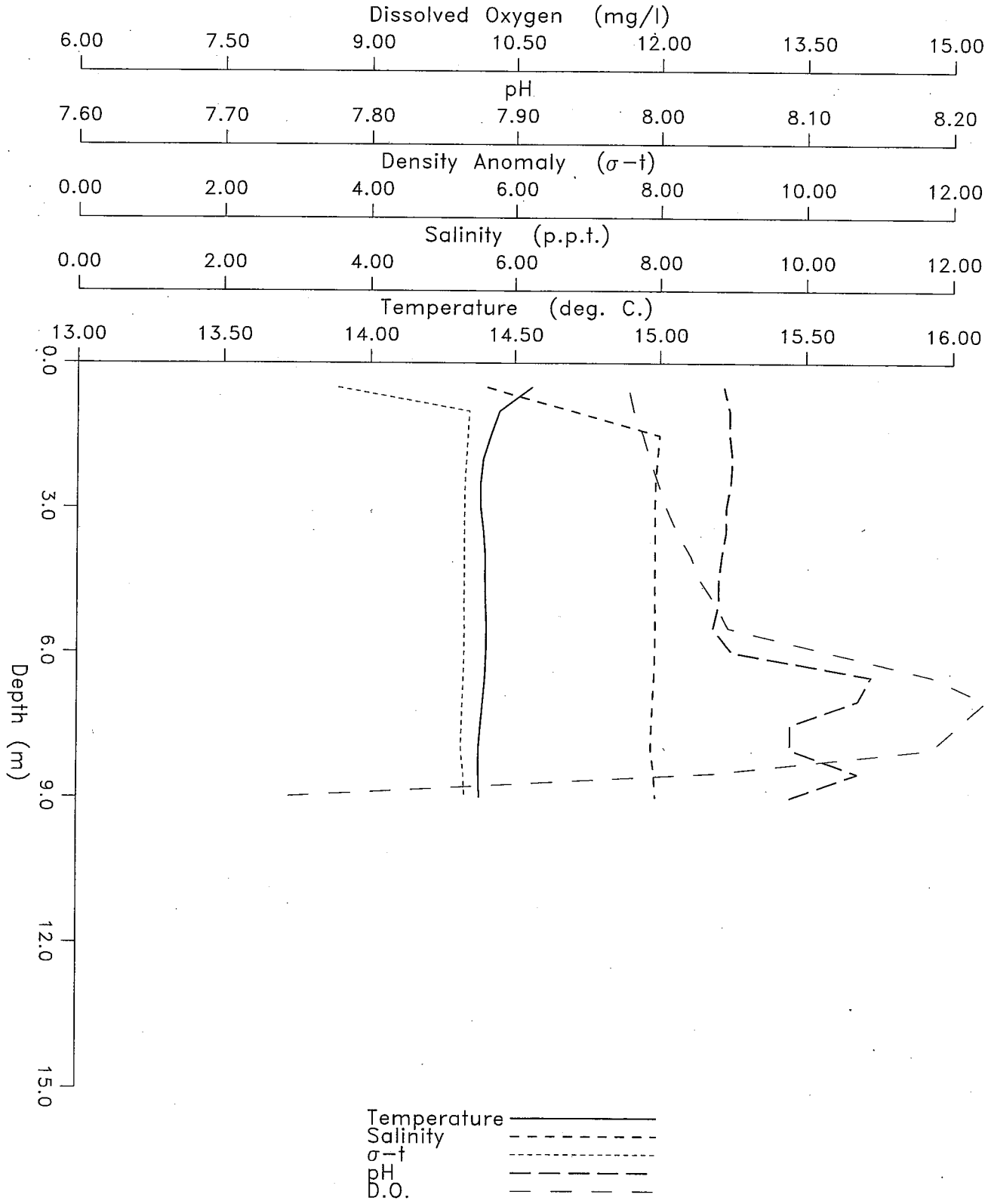
MOA HYDROGRAPHIC DATA

Station: F2-2 Date: 8/16/00 Time: 17:28



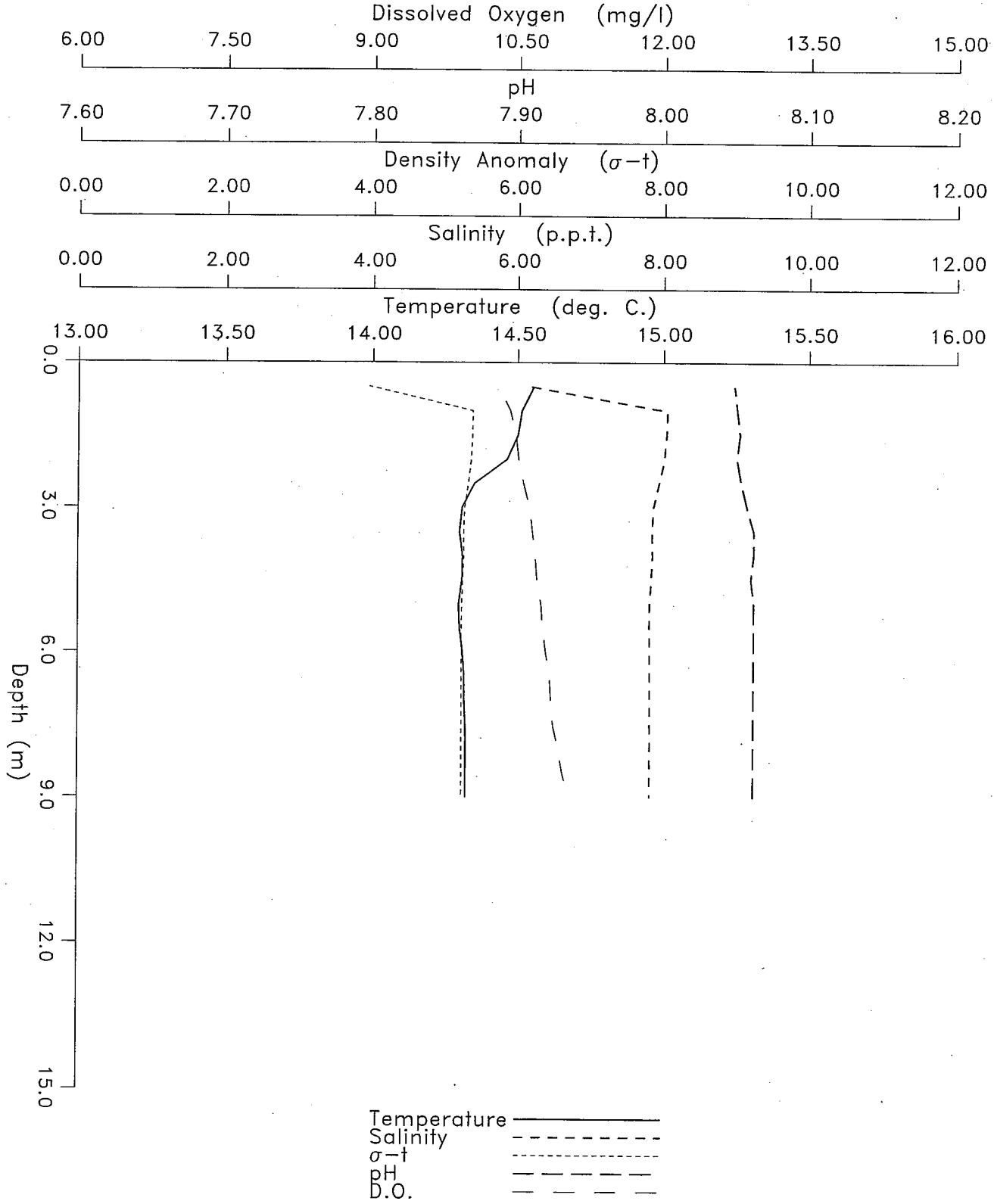
MOA HYDROGRAPHIC DATA

Station: F2-3 Date: 8/16/00 Time: 17:54



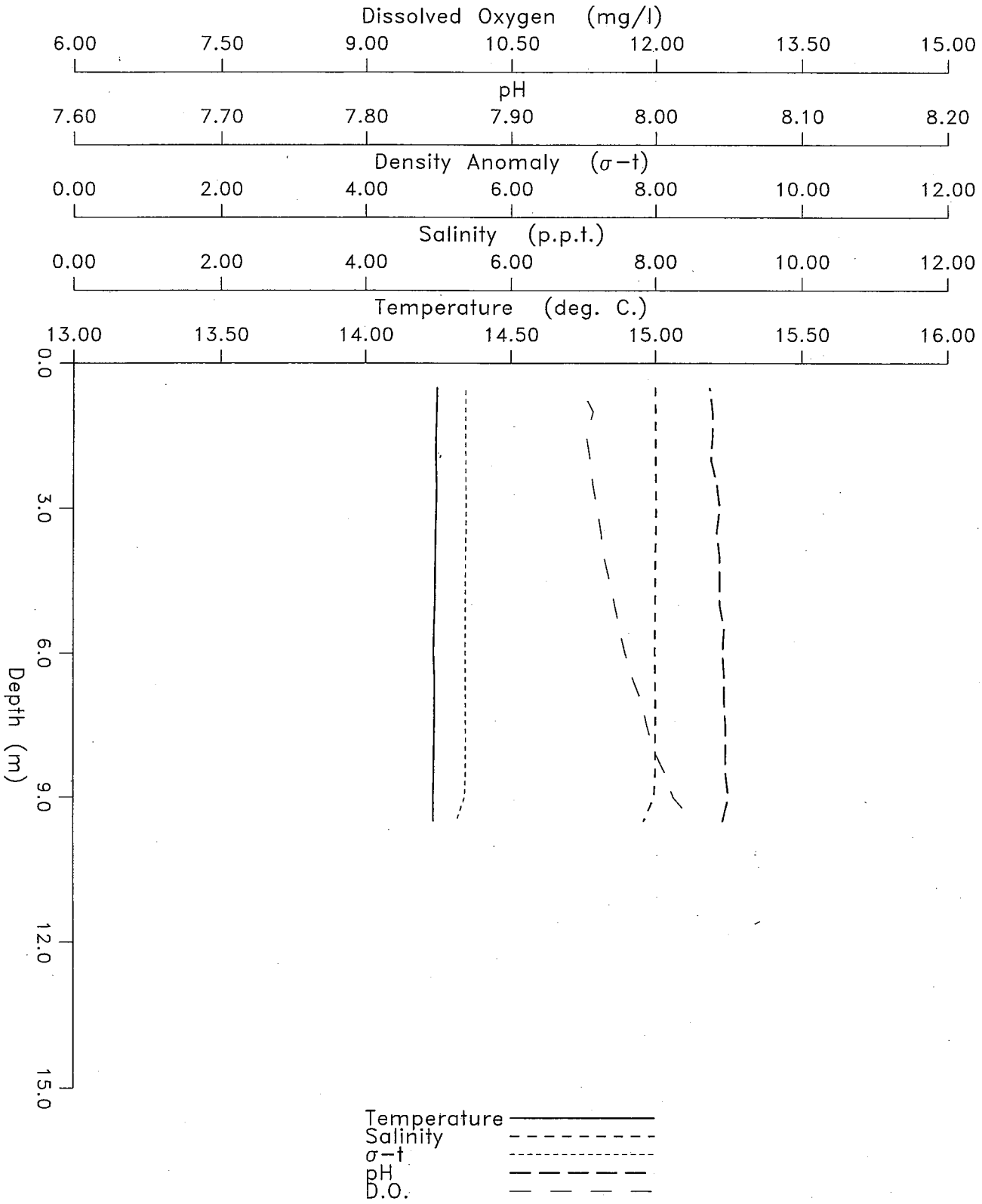
MOA HYDROGRAPHIC DATA

Station: F2-4 Date: 8/16/00 Time: 18:10



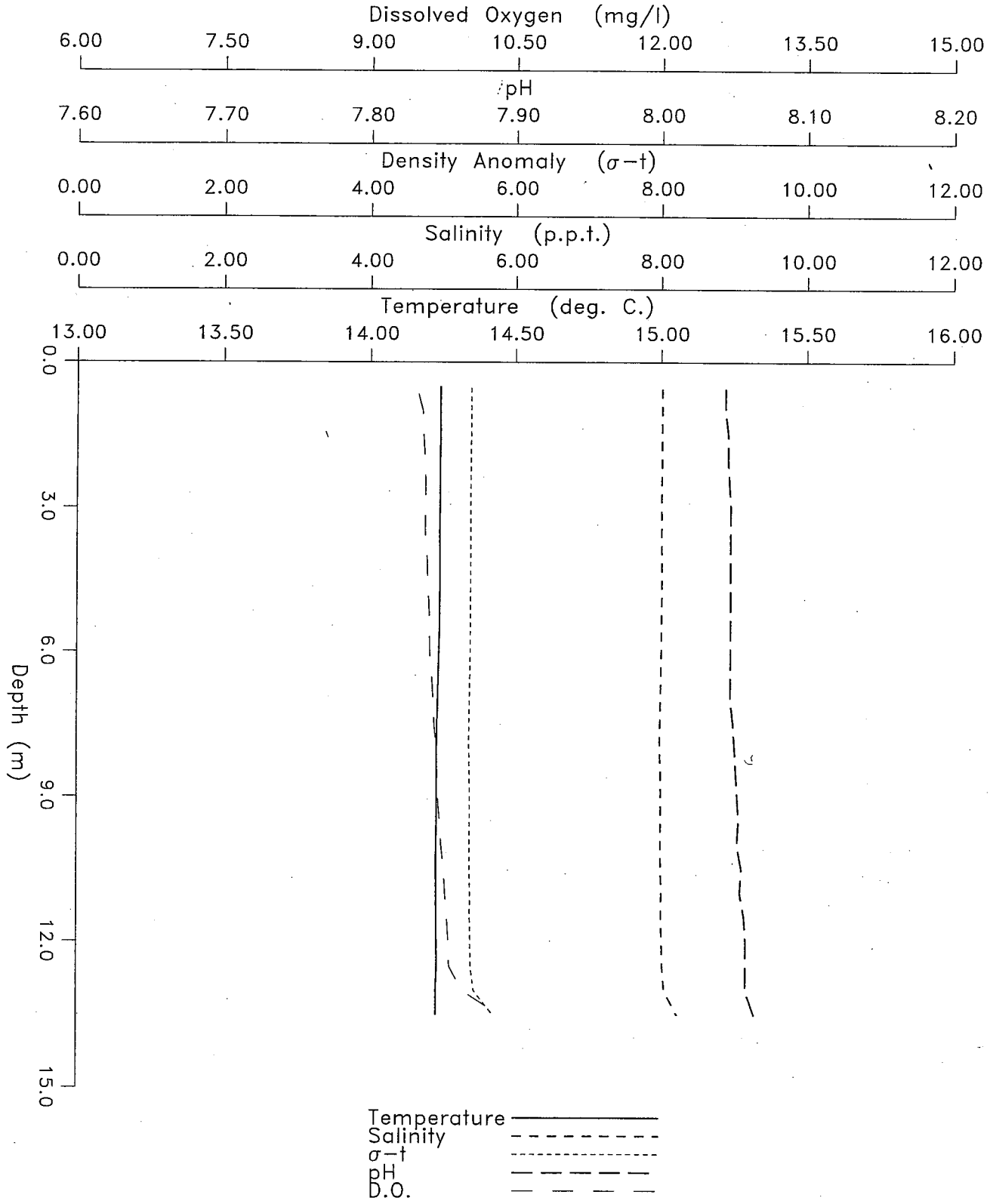
MOA HYDROGRAPHIC DATA

Station: F3-1 Date: 8/16/00 Time: 18:42



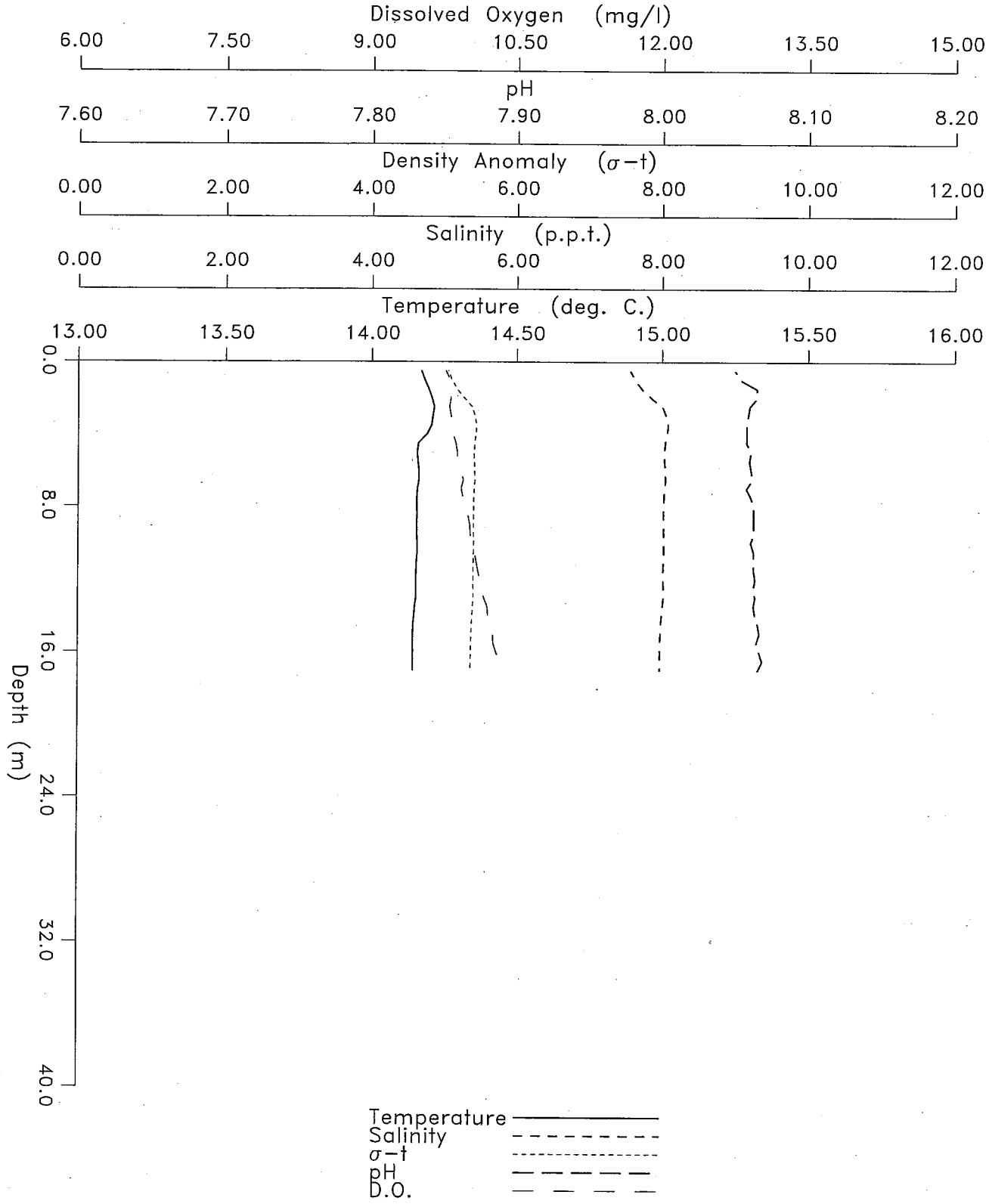
MOA HYDROGRAPHIC DATA

Station: F3-2 Date: 8/16/00 Time: 18:48



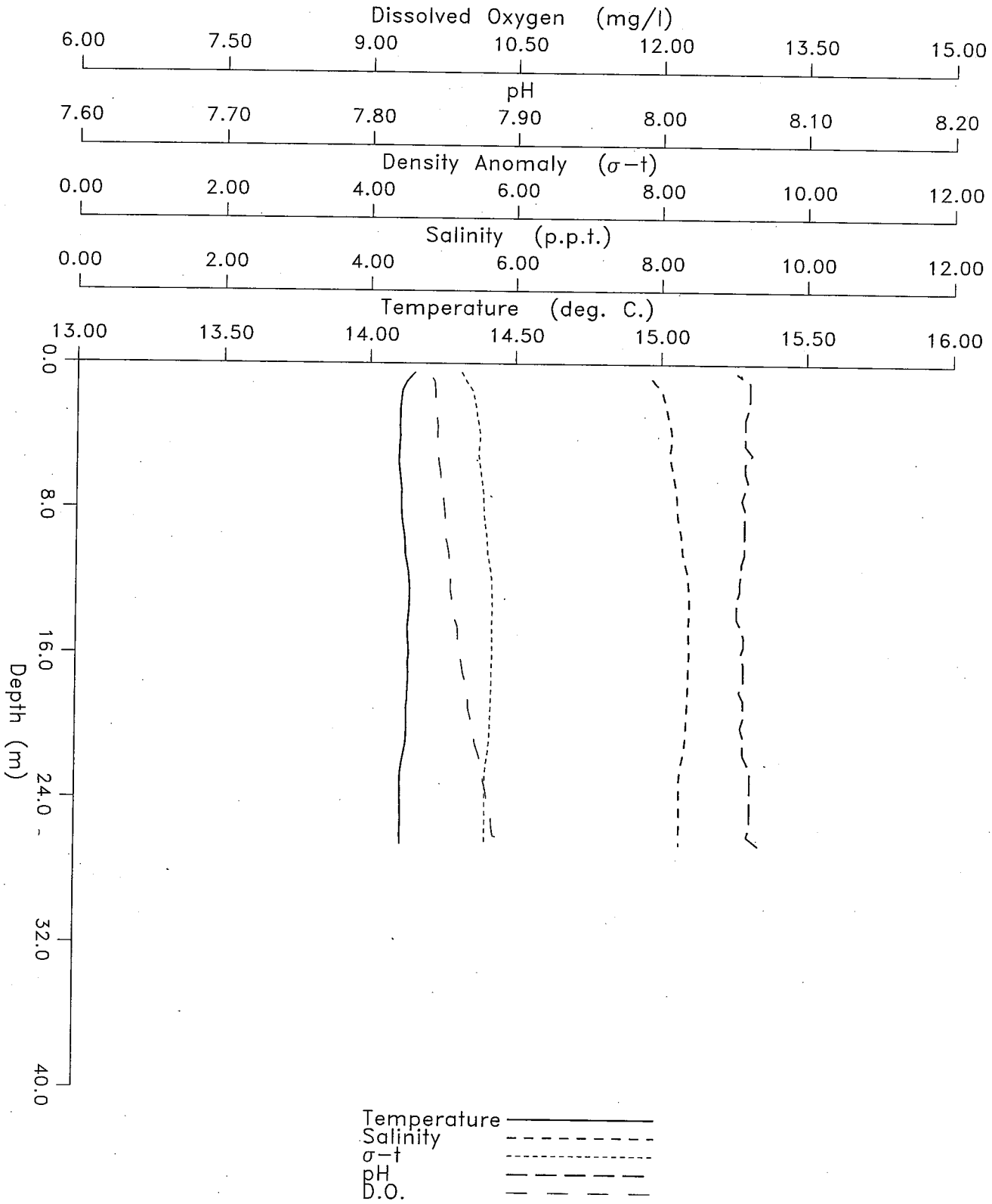
MOA HYDROGRAPHIC DATA

Station: F3-3 Date: 8/16/00 Time: 19:14



MOA HYDROGRAPHIC DATA

Station: F3-4 Date: 8/16/00 Time: 19:45



APPENDIX D

Receiving Water Quality Monitoring

D6 Field Data Sheets

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/14/00	Page 1 of 36
STATION: C1-1	TIME: 1459	
TIDE STAGE: Flood	DEPTH: 12 Feet Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 14' 03.2"	DGPS? Circle Y or N	DGPS REFERENCE STN: Kenai
LONGITUDE (W): 149° 58' 38.7"		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION: Control Drop at Pt. Mackenzie

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	25	25	73	73	15	04	04	04	04	
MID				74	74						
BOTTOM				75	75						

QC SAMPLES COLLECTED: none

CSTD Seabird: 376	CAST NO.: 1	CSTD ON TIME: 1503

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	none		
SHEEN OR OIL	none		
ODOR	none		
RECREATION	skiff on shore		1
WILDLIFE	none		

WEATHER INFORMATION/COMMENTS: partly cloudy

Reviewed By: Mark A. [illegible] Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/14/00	Page 2 of 36
STATION: C1-2	TIME: 1518	
TIDE STAGE: Flood	DEPTH: 10 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 14' 30.6"	DGPS? Circle (Y) or N	DGPS REFERENCE STN: Kenai
LONGITUDE (W): 149° 57' 26.5		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION:

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	26	26	76	76	16	05	05 06	05	05 06	
MID				77	77						
BOTTOM				78	78						

QC SAMPLES COLLECTED: Dups on TSS + Cyanide

CSTD Seabird: 376	CAST NO.: 2	CSTD ON TIME: 1520

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	none		
SHEEN OR OIL	none		
ODOR	none		
RECREATION	none		
WILDLIFE	beluga whales	cruising 1/4 mile from boat	~ 5

WEATHER INFORMATION/COMMENTS: partly cloudy

Reviewed By: Mary A. Aurin Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/14/00	Page 3 of 36
STATION: C1-3	TIME: 1540	
TIDE STAGE: Flood	DEPTH: 55 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 15' 10.2"	DGPS? Circle (Y) or N	DGPS REFERENCE STN: Kenai
LONGITUDE (W): 149° 55' 42.1"		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION: 300 m offshore south of Cam Pt.

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	27	27	79	79	17	06	07	06	07	X
MID	X	X	X	80	80	X	X	X	X	X	X
BOTTOM	X	X	X	81	81	X	X	X	X	X	X

QC SAMPLES COLLECTED:

CSTD Seabird: 376	CAST NO.: 3	CSTD ON TIME: 1543

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	↓		
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: partly cloudy

Reviewed By: Mark A. Savoie Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/14/00	Page 4 of 36
STATION: C1-4	TIME: 1610	
TIDE STAGE: Flood	DEPTH: 80 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 15' 26.5	DGPS? Circle (Y) or N	DGPS REFERENCE STN: Kenai
LONGITUDE (W): 149° 55' 24.3		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION:

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	28	28	82	82	—	—	—	—	—	—
MID				83	83						—
BOTTOM				84	84						—

QC SAMPLES COLLECTED:

CSTD Seabird:	CAST NO.:	CSTD ON TIME:

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	sticks + branches		
FOAM (other than trace)	none		
SHEEN OR OIL	none		
ODOR	none		
RECREATION	none		
WILDLIFE	belugas near pt.		

WEATHER INFORMATION/COMMENTS:

sunny light breeze

Reviewed By: Monica. [illegible] Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/14/00	Page 5 of 36
STATION: C2-1	TIME: 1700	
TIDE STAGE: Flood	DEPTH: 35 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 14' 03.7"	DGPS? Circle (Y) or N	DGPS REFERENCE STN: Kenai
LONGITUDE (W): 149° 58' 38.3"		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION:

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	29	29	85	85	–	–	–	–	–	–
MID				86	86						–
BOTTOM				87	87						–

QC SAMPLES COLLECTED:

CSTD Seabird: 376	CAST NO.: 5	CSTD ON TIME: 1704

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	none		
SHEEN OR OIL	none		
ODOR	none		
RECREATION	skiff on board - set netter?		
WILDLIFE	none		

WEATHER INFORMATION/COMMENTS: sunny, few clouds

Reviewed By: Mark A. Brown Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/14/00	Page 6 of 36
STATION: C2-2	TIME: 1728	
TIDE STAGE:	DEPTH: 42 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 14' ~~03.7~~ 32.2"	DGPS? Circle (Y) or N	DGPS REFERENCE STN: Kenai
LONGITUDE (W): 149° 56' 39.3"		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION:

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	30/31/32	30/31/32	88/89/90	88/89/90	–	–	–	–	–	–
MID				91	91						–
BOTTOM				92	92						–

QC SAMPLES COLLECTED: sampling variability – 3 seperate surface casts – 3 CTD casts without turnoff

CSTD Seabird:	CAST NO.: 6, ~~8~~ three times up	CSTD ON TIME:

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS:

Reviewed By: Mark A. Sarm Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/14/00	Page 7 of 36
STATION: C2-3	TIME: 1753	
TIDE STAGE: Flood	DEPTH: 26 Feet Meters (Fathoms) (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 15' 34.4"	DGPS? Circle (Y) or N	DGPS REFERENCE STN: Kenai
LONGITUDE (W): 149° 54' 20.1"		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION: offshore of new Pt McKenzie Dock ~ 500m

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	33	33	93	93	–	–	–	–	–	–
MID				94	94						–
BOTTOM				95	95						–

QC SAMPLES COLLECTED:

CSTD Seabird: 376	CAST NO.: 7	CSTD ON TIME: 1754

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: overcast

Reviewed By: Mark A. Brown Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/14	Page 8 of 36
STATION: C2-4	TIME: 1808	
TIDE STAGE: Flood	DEPTH: 40 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 16' 27.9"	DGPS? Circle (Y) or N	DGPS REFERENCE STN: Kenai
LONGITUDE (W): 149° 53' 50.7"		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION: offshore of Pt.

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	34	34	96	96	–	–	–	–	–	–
MID				97	97						–
BOTTOM				98	98						–

QC SAMPLES COLLECTED:

CSTD Seabird: 376	CAST NO.: 8	CSTD ON TIME: 1809

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	none		
SHEEN OR OIL	none		
ODOR	none		
RECREATION	none		
WILDLIFE	none		

WEATHER INFORMATION/COMMENTS: overcast / partly cloudy
<5 knot wind

Reviewed By: Mona A. Brown Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/14/00	Page 9 of 36
STATION: C3-1	TIME: 1902	
TIDE STAGE: Flood	DEPTH: 50 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 14' 02.5"	DGPS? Circle (Y) or N	DGPS REFERENCE STN: Kenai
LONGITUDE (W): 149° 58' 37.7"		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION: At control drop pt.

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	35/36 37	35/36 37	99/100 101	99/100 101	—	—	—	—	—	01
MID				102	102						02
BOTTOM				103	103						03

QC SAMPLES COLLECTED: Laboratory Variability: DOs (3) reps from same Niskin, Turbity (3) reps from one container same for color & fecal

CSTD Seabird: 376	CAST NO.: 9	CSTD ON TIME: 1903

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	none		
SHEEN OR OIL	none		
ODOR	none		
RECREATION	none		
WILDLIFE	none		

WEATHER INFORMATION/COMMENTS: wind picking up 5-10 knots westerly

Reviewed By: Mona A. Brown Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/14/00	Page 10 of 36
STATION: C3-2	TIME: 1920	
TIDE STAGE: Flood	DEPTH: 50 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 14' 15.8"	DGPS? Circle Y or N	DGPS REFERENCE STN: Kenai
LONGITUDE (W): 149° 56' 44.4"	(Y)	COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION:

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	38	38	104	104	—	—	—	—	—	—
MID				105	105						—
BOTTOM				106	106						—

QC SAMPLES COLLECTED: ~1/2 mile NE of Pt. MacKenzie

CSTD Seabird: 376	CAST NO.: 10	CSTD ON TIME: 1922

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	↓		
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: 15-25 Knot westerly winds partly cloudy - winds shifting to NW getting very strong

Reviewed By: Mark A. Brown Date: 12/6/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/14/00	Page 11 of 36
STATION: C3-3	TIME: 1932	
TIDE STAGE: Flood	DEPTH: 84 Feet Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 14' 31.3"	DGPS? Circle Y or N	DGPS REFERENCE STN: Kenai USCG
LONGITUDE (W): 149° 55' 39.9"		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION: ~ 1/2 way between port and far side of Knik Arm

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	39	39	107	107	–	–	–	–	–	–
MID				108	108						–
BOTTOM				109	109						–

QC SAMPLES COLLECTED:

CSTD Seabird: 376	CAST NO.: 11	CSTD ON TIME: 1933

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: 20-25 knot NW winds

Reviewed By: Mark A. [signature] Date: 12/1/00

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KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/14/00	Page 12 of 36
STATION: C3-4	TIME: 1948	
TIDE STAGE: Flood	DEPTH: 180 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 14' 58.9"	DGPS? Circle (Y) or N	DGPS REFERENCE STN: Konai
LONGITUDE (W): 149° 54' 19.3"		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION:

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	040	040	110	110	–	–	–	–	–	–
MID				111	111						–
BOTTOM				112	112						–

QC SAMPLES COLLECTED:

CSTD Seabird: 376	CAST NO.: 12	CSTD ON TIME: 1949

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	↓		
SHEEN OR OIL	↓		
ODOR	↓		
RECREATION	↓		
WILDLIFE	↓		

WEATHER INFORMATION/COMMENTS: Large tide rip + 3-4' waves
20-25 knot winds, picked
drogue due to extreme conditions

Reviewed By: Mark A. Sarno Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/16/00	Page 13 of 36
STATION: E1-1	TIME: 1126	
TIDE STAGE: Ebb	DEPTH: 30 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 12' 20.0"	DGPS? Circle (Y) or N	DGPS REFERENCE STN: Kenai
LONGITUDE (W): 150° 01' 17.7"		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION: At outfall

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	01	01	01	01	–	–	–	–	–	–
MID				02	02						–
BOTTOM				03	03						–

QC SAMPLES COLLECTED:

CSTD Seabird: 376	CAST NO.: 13	CSTD ON TIME: 1127

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	None		
FOAM (other than trace)	↓		
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS:

Reviewed By: Mark A. Brown Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/16/00	Page 14 of 36
STATION: E1-2	TIME: 1135	
TIDE STAGE: Ebb	DEPTH: 40 Feet Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 12' 17.9"	DGPS? Circle Y or N	DGPS REFERENCE STN: Kenai
LONGITUDE (W): 150° 02' 14.0"		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION: ~ 700 m from outfall

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	02	02	04	04	–	–	–	–	–	–
MID				05	05						–
BOTTOM				06	06						–

QC SAMPLES COLLECTED: none

CSTD Seabird: 376	CAST NO.: 14	CSTD ON TIME: 1136

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS:

Reviewed By: Mark A. Savoie Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/16/00	Page 15 of 36
STATION: E1-3	TIME: 1145	
TIDE STAGE: Ebb	DEPTH: 27 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 12' 02.3"	DGPS? Circle (Y) or N	DGPS REFERENCE STN: Kenai
LONGITUDE (W): 150° 03' 09.9"		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION:

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	v	03	03	07	07	–	–	–	–	–	–
MID				08	08						–
BOTTOM				09	09						–

QC SAMPLES COLLECTED:

CSTD Seabird: 376	CAST NO.: 15	CSTD ON TIME: 1145

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS:

Reviewed By: Mark A. Savoie Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/16/00	Page 16 of 36
STATION: E1-4	TIME: 1155	
TIDE STAGE: Ebb	DEPTH: 18 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 11' 51.2"	DGPS? Circle (Y) or N	DGPS REFERENCE STN: Kenai
LONGITUDE (W): 150° 03' 43.5"		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION:

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	04	04	10	10	–	–	–	–	–	–
MID				11	11						–
BOTTOM				12	12						–

QC SAMPLES COLLECTED: none

CSTD Seabird: 376	CAST NO.: 16	CSTD ON TIME: 1154

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	↓		
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS:

Clear, sunny, no wind

Reviewed By: Mark A. Savoie Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/16/00	Page 17 of 36
STATION: E2-1	TIME: 1230	
TIDE STAGE: Ebb	DEPTH: 22 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 12' 20.7	DGPS? Circle Y or (N)	DGPS REFERENCE STN: –
LONGITUDE (W): 150° 01' 17.1		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION: At outfall, Diff signal not coming in clear

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE		05	05	13	13	–	–	–	–	–	–
MID				14	14						–
BOTTOM				15	15						–

QC SAMPLES COLLECTED:

CSTD Seabird: 376	CAST NO.: 17	CSTD ON TIME: 1230

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: Clear, sunny, light breeze

Reviewed By: Mark A. Amori Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/16/00	Page 18 of 36
STATION: E2-2	TIME: 1237	
TIDE STAGE: Ebb	DEPTH: 30 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 12′ 19.3″	DGPS? Circle Y or N	DGPS REFERENCE STN: Kenai USCG
LONGITUDE (W): 150° 02′ 0.2″		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION: 650 m west of outfall

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE		06	06	16	16	–	–	–	–	–	–
MID				17	17						–
BOTTOM				18	18						–

QC SAMPLES COLLECTED:

CSTD Seabird: 376	CAST NO.: 18	CSTD ON TIME: 1237

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: clear, sunny, light breeze

Reviewed By: Mona A. Amori Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/16/00	Page 19 of 36
STATION: E2-3	TIME: 1252	
TIDE STAGE: Ebb	DEPTH: 27 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 12' 05.5"	DGPS? Circle (Y) or N	DGPS REFERENCE STN: Kenai USCG
LONGITUDE (W): 150° 02' 55.9"		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION: ~ 1.5 km west of outfall

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	07	07	19	19	–	–	–	–	–	–
MID				20	20						–
BOTTOM				21	21						–

QC SAMPLES COLLECTED: CTD not pumping, fixed valve + redeployed for cast #20

CSTD Seabird: 376	CAST NO.: 19/20	CSTD ON TIME: 1252/1304

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	↓		
SHEEN OR OIL	↓		
ODOR	↓		
RECREATION	↓		
WILDLIFE	↓		

WEATHER INFORMATION/COMMENTS: Clear, sunny

Reviewed By: Mark A. Amori Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/16/00	Page 20 of 36
STATION: EZ-4	TIME: 1320	
TIDE STAGE: Ebb	DEPTH: 21 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 11' 36.3"	DGPS? Circle (Y) or N	DGPS REFERENCE STN: Kenai USGS
LONGITUDE (W): 150° 04' 41.5"		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION:

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	08	08	22	22	–	–	–	–	–	–
MID				23	23						–
BOTTOM				24	24						–

QC SAMPLES COLLECTED:

CSTD Seabird: 376	CAST NO.: 21	CSTD ON TIME: 1321

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	↓		
SHEEN OR OIL	↓		
ODOR	↓		
RECREATION	↓		
WILDLIFE	↓		

WEATHER INFORMATION/COMMENTS: Light breeze, clear & sunny

Reviewed By: Mark A. Savoie Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/16/00	Page 21 of 36
STATION: E3-1	TIME: 1422	
TIDE STAGE: Ebb	DEPTH: 10 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 12' 20.6	DGPS? Circle (Y) or N	DGPS REFERENCE STN: Kenai
LONGITUDE (W): 150 01' 19.5		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION: At outfall drop pt.

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	09	09	25	25	–	–	–	–	–	–
MID				26	26						–
BOTTOM				27	27						–

QC SAMPLES COLLECTED: none

CSTD Seabird: 376	CAST NO.: 22	CSTD ON TIME: 1422

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: Clear, sunny, light breeze

Reviewed By: Mark A. Brown Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/16/00	Page 22 of 36
STATION: E3-2	TIME: 1443	
TIDE STAGE: Ebb	DEPTH: 28 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 12' 15.1"	DGPS? Circle Y or N	DGPS REFERENCE STN: Kenai USCG
LONGITUDE (W): 150° 01' ~~54.4~~ 56.4		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION: 640 m west of outfall on ZID boundary.

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	10	10	28	28	–	–	–	–	–	–
MID				29	29						–
BOTTOM				30	30						–

QC SAMPLES COLLECTED:

CSTD Seabird: 376	CAST NO.: 23	CSTD ON TIME: 1442

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	↓		
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: Clear, sunny, light breeze

Reviewed By: Mark A. Amori Date: 12/6/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/16/00	Page 23 of 36
STATION: E3-3	TIME: 1508	
TIDE STAGE: Ebb	DEPTH: 15 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 11' 55.6"	DGPS? Circle (Y) or N	DGPS REFERENCE STN: Kenai
LONGITUDE (W): 150° 02' 02.1"		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION:

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	11	11	31	31	–	–	–	–	–	–
MID				32	32						–
BOTTOM				33	32						–

QC SAMPLES COLLECTED:

CSTD Seabird: 376	CAST NO.: 24	CSTD ON TIME: 1508

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	few sticks	rivers	
FOAM (other than trace)	none		
SHEEN OR OIL	↓		
ODOR	↓		
RECREATION	↓		
WILDLIFE	↓		

WEATHER INFORMATION/COMMENTS: Clear, sunny, light SW wind

Reviewed By: Mark A. Sawyer Date: 12/1/00

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KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/16/00	Page 24 of 36
STATION: E3-4	TIME: 1520	
TIDE STAGE: Ebb	DEPTH: 12 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 11' 39.7"	DGPS? Circle (Y) or N	DGPS REFERENCE STN: Kenai
LONGITUDE (W): 150° 02' 16.7"		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION: On inside of shoal between Plant & dredge operation.

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	12	12	34	34	—	—	—	—	—	—
MID				35	35						—
BOTTOM				36	36						—

QC SAMPLES COLLECTED: none

CSTD Seabird: 376	CAST NO.: 25	CSTD ON TIME: 1520

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: Clear, sunny light breeze

Reviewed By: [signature] Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/16/00	Page 25 of 36
STATION: F1-1	TIME: 1550	
TIDE STAGE: Flood	DEPTH: 12 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 12' 20.8"	DGPS? Circle Y or N	DGPS REFERENCE STN: Kenai USCG
LONGITUDE (W): 150° 01' 16.6"		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION: At low slack in middle of effluent plume

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	13	13	37	37	11	01	01	01	01	–
MID				38	38						–
BOTTOM				39	39						–

QC SAMPLES COLLECTED:

CSTD Seabird: 376	CAST NO.: 26	CSTD ON TIME: 1550

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL			
FOAM (other than trace)			
SHEEN OR OIL			
ODOR	slight chlorine odor		
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS:

Reviewed By: Mark A. Swain Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/16/00	Page 26 of 36
STATION: F1-2	TIME: 1612	
TIDE STAGE: Flood	DEPTH: 11 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 12′ 22.8	DGPS? Circle (Y) or N	DGPS REFERENCE STN: Kenai
LONGITUDE (W): 150° 00′ 33.6		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION: 650 m east of outfall, ~200 m from shore

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	14	14	40	40	12/13	02	02	02	02	—
MID				41	41						—
BOTTOM				42	42						—

QC SAMPLES COLLECTED: Dups on EPA 602

CSTD Seabird: 376	CAST NO.: 27	CSTD ON TIME: 1612

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: Clear, sunny, light breeze

Reviewed By: Mark A. Brown Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/16/00	Page 27 of 36
STATION: F1-3	TIME: 1630	
TIDE STAGE: Flood	DEPTH: 4.0 from CTD Feet (Meters) Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 12' 15.3"	DGPS? Circle Y or N	DGPS REFERENCE STN: K
LONGITUDE (W): 149° 59' 48.8"		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION: ~300 m offshore +

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	15	15	43	43	14	03	03	03	03	—
MID				44	44						—
BOTTOM				45	45						—

QC SAMPLES COLLECTED: EPA602 - C Station Sample # 19

EPA 610 - 3 bottles for QC Field blank - time 1625

CSTD Seabird: 376	CAST NO.: 28	CSTD ON TIME: 1630

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	↓		
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: Clear, sunny

Reviewed By: Mary A. Brown Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/16/00	Page 28 of 36
STATION: F1-4	TIME: 1650	
TIDE STAGE: Flood	DEPTH: 11 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 12' 11.5	DGPS? Circle Y or N: (Y)	DGPS REFERENCE STN: Kenai
LONGITUDE (W): 149 ~~150~~° 59' 35.5		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION: ~1.5

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	16	16	46	46	–	–	–	–	–	–
MID				47	47						–
BOTTOM				48	48						–

QC SAMPLES COLLECTED:

CSTD Seabird: 376	CAST NO.: 29	CSTD ON TIME: 1650

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	↓		
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS:

Reviewed By: Mark A. [illegible] Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/16/00	Page 29 of 36
STATION: F2-1	TIME: 1721	
TIDE STAGE: FLOOD	DEPTH: 23 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 12' 20.1	DGPS? Circle Y or N	DGPS REFERENCE STN:
LONGITUDE (W): 150° 01' 17.5	(Y)	COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION: A4 outfall

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	17	17	49	49	—	—	—	—	—	—
MID	X	X	X	50	50	X	X	X	X	X	—
BOTTOM	X	X	X	51	51	X	X	X	X	X	—

QC SAMPLES COLLECTED:

CSTD Seabird: 376	CAST NO.: 30	CSTD ON TIME: 1721

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	none		
SHEEN OR OIL	none		
ODOR	none		
RECREATION	~ 6-8 people	on beach	
WILDLIFE	none		

WEATHER INFORMATION/COMMENTS:

Reviewed By: Mark Anson Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/16/00	Page 30 of 36
STATION: F2-2	TIME: 1728	
TIDE STAGE: Flood	DEPTH: 30 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 12' 31.8"	DGPS? Circle Y or N	DGPS REFERENCE STN: Kenai
LONGITUDE (W): 150° 00' 39.6"	(Y)	COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION: 650 m east of outfall on ZID boundary

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	18	18	52	52	—	—	—	—	—	—
MID				53	53						—
BOTTOM				54	54						—

QC SAMPLES COLLECTED:

CSTD Seabird: 376	CAST NO.: 31	CSTD ON TIME: 1728

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL			
FOAM (other than trace)	none		
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: Clear, sunny light wind < 2 knots

Reviewed By: Mark A. Savoie Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/16/00	Page 31 of 36
STATION: F2-3	TIME: 1754	
TIDE STAGE: Flood	DEPTH: 27 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 12' 33.0"	DGPS? Circle (Y) or N	DGPS REFERENCE STN: Kenai USCG
LONGITUDE (W): 149° 58' 56.7		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION: ~2 km east of outfall

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	19	19	55	55	–	–	–	–	–	–
MID				56	56						4
BOTTOM				57	57						5

QC SAMPLES COLLECTED: Sal at Mid + bottom

CSTD Seabird: 376	CAST NO.: 32	CSTD ON TIME: 1755

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: Westerly wind <5 knots
Clear, Sunny

Reviewed By: Mark A. Amorin Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/16/00	Page 32 of 36
STATION: F2-4	TIME: 1810	
TIDE STAGE: Flood	DEPTH: 27 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 12' 25.1"	DGPS? Circle (Y) or N	DGPS REFERENCE STN: Kenai USCG
LONGITUDE (W): ~~150°~~ 149° 58' ~~36.8"~~ 33.6"		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION: ~2.5 Km east of outfall

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	20	20	58	58	–	–	–	–	–	–
MID				59	59						6
BOTTOM				60	60						–

QC SAMPLES COLLECTED: Sal MID

CSTD Seabird: 376	CAST NO.: 33	CSTD ON TIME: 1810

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS:

Reviewed By: Mark A. Savoie Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/16/00	Page 33 of 36
STATION: F3-1	TIME: 1842	
TIDE STAGE: Flood	DEPTH: 30 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 12' 20.8"	DGPS? Circle Y or N	DGPS REFERENCE STN: Kenai USCG
LONGITUDE (W): 150° 01' 16.0		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION: At Outfall

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	21	21	61	61	–	–	–	–	–	–
MID				62	62						–
BOTTOM				63	63						–

QC SAMPLES COLLECTED: none

CSTD Seabird: 376	CAST NO.: 34	CSTD ON TIME: 1842

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	↓		
SHEEN OR OIL			
ODOR			
RECREATION	people on beach		
WILDLIFE	none		

WEATHER INFORMATION/COMMENTS: Clear, sunny, light wind

Reviewed By: Mark A. Barnie Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/16/00	Page 34 of 36
STATION: F3-2	TIME: 1848	
TIDE STAGE: Flood	DEPTH: 34 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 12' 32.3"	DGPS? Circle (Y) or N	DGPS REFERENCE STN: Kenai USCG
LONGITUDE (W): 150° 00' 40.2		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION: 650 m N-east of outfall on ZID boundary

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	22	22	64	64	–	–	–	–	–	–
MID				65	65						–
BOTTOM				66	66						–

QC SAMPLES COLLECTED:

CSTD Seabird: 376	CAST NO.: 35	CSTD ON TIME: 1848

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: Light wind <5 Knots westerly, clear. sunny

Reviewed By: Mark A. Savain Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/16/00	Page 36 of 36
STATION: F3-4	TIME: 1945	
TIDE STAGE: Flood	DEPTH: 17 ~~Feet~~ Meters (Circle unit) Fathoms	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 13' 08.0"	DGPS? Circle Y or N	DGPS REFERENCE STN: Kenai USCG
LONGITUDE (W): 149° 57' 11.7"		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION:

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	24	24	70	70	–	–	–	–	–	X
MID	X	X	X	71	71	X	X	X	X	X	X
BOTTOM	X	X	X	72	72	X	X	X	X	X	X

QC SAMPLES COLLECTED: none

CSTD Seabird: 376	CAST NO.: 37	CSTD ON TIME: 1945

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	↓		
SHEEN OR OIL	↓		
ODOR	↓		
RECREATION	jet skiers	Anchorage	4-5
WILDLIFE	none		

WEATHER INFORMATION/COMMENTS: clear, sunny, gorgeous!

Reviewed By: Mark A. Savoie Date: 12/1/00

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Pt. Woronzof NPDES*	DATE: 8/16/00	Page 35 of 36
STATION: F3-3	TIME: 1914	
TIDE STAGE: Flood	DEPTH: 27 (Feet) Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION

LATITUDE (N): 61° 12' 52.0"	DGPS? Circle (Y) or N	DGPS REFERENCE STN: Kenai USCG
LONGITUDE (W): 149 ~~150~~° 58' 45.6"		COORDINATE SYSTEM: *Nad83*

STATION LOCATION/DESCRIPTION: ~ 2 Km from outfall

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB/ pH	EPA 602	EPA 610	TSS	METALS	CYANIDE	SAL (QC)
SURFACE	✓	23	23	67	67	—	—	—	—	—	—
MID				68	68						—
BOTTOM				69	69						—

QC SAMPLES COLLECTED:

CSTD Seabird: 376	CAST NO.: 36	CSTD ON TIME: 1914

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	↓		
SHEEN OR OIL	↓		
ODOR	↓		
RECREATION	↓		
WILDLIFE			

WEATHER INFORMATION/COMMENTS: Clear, sunny

Reviewed By: Mark A. Sarvis Date: 12/1/00