

The SeaCrest Group
An Environmental Services Company

12 1995

Quarterly Toxicity Test
Fourth Quarter 1995

October 31, 1995

Mr Jim Chonka
Coral Production Company
1600 Stout Street, Suite 1810
Denver, Colorado 80202

Dear Jim

I am pleased to submit the following report for the acute biomonitoring test done on the Lone Pine Field well during October 1995. No toxicity was measured to either test species for this discharge sample.

Please call if you have any questions.

Sincerely,



Kelly A Carr
Laboratory Manager

enclosure Biomonitoring Report, Invoice

cc Gary Hackett

RECEIVED
NOV 8 1995
CORAL PRODUCTION CORP

**RESULTS OF BIOMONITORING TESTS CONDUCTED FOR
CORAL PRODUCTION'S LONE PINE OIL FIELD EFFLUENT**

PREPARED FOR

Mr Jim Chonka
Coral Production Company
1600 Stout Street, Suite 1810
Denver, Colorado 80202
NPDES Permit No CO-0040151

PREPARED BY

The SeaCrest Group
325 Interlocken Parkway
Suite 205
Broomfield, Colorado 80021

October 31, 1995

ACUTE TOXICITY TEST SUMMARY

Test 48-hour static renewal acute using *Ceriodaphnia dubia* and 96-hour static renewal using fathead minnows (*Pimephales promelas*)

Client Coral Production Company

NPDES Number CO0040151

Test procedure or protocol followed Peltier and Weber (1985), Colorado Department of Health Water Quality Control Division

Sample description Lone Pine Oil Field Treatment Facility Effluent

Time and date of sample collection 1100 hours, October 24, 1995

Time and date of sample receipt 0930 hours, October 25, 1995

Test initiation time and date *Ceriodaphnia* - 1330 hours, October 25, 1995
Fathead minnows - 1100 hours, October 26, 1995

Test completion time and date *Ceriodaphnia* - 1415 hours, October 27, 1995
Fathead minnows - 1030 hours, October 29, 1995

Dilution water Receiving stream water

Test organism source The SeaCrest Group in-house cultures

ABSTRACT OF RESULTS

Test Concentrations Control, 100%, 75%, 50%, 25%, 12.5%

Number of organisms in each concentration 20

Replicates at each concentration 4

	<i>Ceriodaphnia</i>	Fathead minnows
Test vessel size	30 ml	260 ml
Exposure volume	15 ml	200 ml
LC50	>100%	>100%
Temperature range (°C)	19.4-20.7	19.0-21.0
Dissolved oxygen range (mg/l)	7.0-7.9	6.1-9.0
pH range during test	7.6-8.7	7.9-8.8
	Control	100%
Total alkalinity (mg/l CaCO ₃)	373	707
Total hardness (mg/l CaCO ₃)	218	120
Chlorine (mg/l)	<0.01	<0.01
Ammonia (mg/l)	<1.0	<1.0

INTRODUCTION

In fulfillment of the requirements of their National Pollutant Discharge Elimination System (NPDES) permit Number CO-0040151, Burton/Hawks Incorporated is required to perform quarterly biomonitoring of the effluents from the Lone Pine Oil Field Facility. The biomonitoring uses *Ceriodaphnia* and fathead minnows (*Pimephales promelas*). An acute test was performed in October 1995 to satisfy quarterly requirements. This report summarizes the results of the test.

MATERIALS AND METHODS

Sample Collection and Handling

A grab sample of the effluent was taken on October 25, 1995. The sample was collected in 1-gallon plastic containers and shipped in an ice chest to the laboratory where it was refrigerated at 4°C until testing. Receiving stream water collected at the same time was shipped with the effluent sample. A chain of custody form showing times of collection and receipt in the lab is included in Appendix 1.

Dilution Water

Receiving water was used as the control and dilution water source for the tests. Laboratory reconstituted freshwater was run as an extra series to monitor for possible receiving stream toxicity.

Source and Acclimation of Test Organisms

The biomonitoring test used *Ceriodaphnia dubia* cultured in SeaCrest's laboratory. The original cultures were obtained from the Environmental Protection Agency, Region VIII labs in Denver. Batch cultures are maintained in three liter glass beakers and 10 gallon aquaria and maintained at 25°C. Young from these cultures are transferred to brood boards where they are grown for a two week period before being discarded. Neonates from these females are collected daily and only those young from broods of eight or more are used in tests. The animals are fed daily with a mixture of trout chow, alfalfa, and yeast. This is supplemented with an equal volume of algae cultured in the lab.

Fathead minnows were also obtained from in-house cultures. The larvae are produced by adults maintained in 10 gallon aquaria. Females deposit eggs on the underside of PVC pipe. The eggs are collected daily and transferred to aerated containers where they hatch after 3-4 days. The fish used in the present test were thirteen days old.

Quality Control/Quality Assurance

Various QA/QC procedures are utilized by Seacrest in conducting biomonitoring tests. These include the use of chain of custody forms to document sample receipt and times as well as to insure sample integrity. Analytical tests follow standard methods and include the use of standards to calibrate equipment and assure proper operation. *Ceriodaphnia* tests are conducted in an incubator maintained at a 20°C. Light regimes for tests follow a 16 hour light, 8 hour dark cycle. Health of the laboratory organisms are determined monthly through the conduct of a reference toxicant test.

Sample Preparation

Five concentrations (100, 75, 50, 25, and 12%) and a control consisting of 100% receiving water were used to test the effluents. Exposure concentrations were prepared by mixing effluent with the receiving water.

Test Design

Guidelines for conducting acute biomonitoring tests are contained in Peltier and Weber (1985). In summary, quadruplicate 30 ml plastic disposable beakers were used at each concentration in the *Ceriodaphnia* test. Each vessel contained 20 ml of exposure medium in which five neonates were placed, for a total of 20 organisms per concentration. The exposure medium was changed in each container after 24 hours and the test was terminated after 48 hours. Surviving organisms were counted daily and measurements of temperature, pH, and dissolved oxygen recorded. Total alkalinity, hardness, conductivity, and ammonia were measured in the effluent and control at the start of the test.

RESULTS

The results of the toxicity test are provided in Appendix 2. No significant toxicity was measured as 100% of the ceriodaphns survived in every effluent concentration. Control survival was 100% and the reconstituted water survival was also 100%.

In the fathead minnow test also, 100% of the fish survived in every effluent concentration. Control survival was 100% and the reconstituted water survival was also 100%.

DISCUSSION

The effluent showed no toxicity to either test species and therefore passed whole effluent toxicity test guidelines.

REFERENCES

Peltier, W H and C I Weber. 1985. Methods for measuring the acute toxicity of effluents to freshwater and marine organisms (third edition). Environmental Protection Agency Report No. EPA/600/4-85/013. 216pp.

The SeaCrest Group

An Environmental Services Company

325 Interlocken Parkway, Suite 205 • Broomfield Colorado 80021
(303) 438 0970 FAX (303) 438 0971

Chain of Custody Record Analytical Services Request

(enclose with each shipping container)

Client CORAL PRODUCTION Contact Jim Charka Address 1600 Sicut Project Number 395461
 Program/Site WALDEN FIELD Phone 303-623-3373 ORNVIA, CO. 80249

Collected by GARY HACKETT These fields may be used for field test results

Sample Identification	Date Sampled	Time	Sample Type	Acute	Cero Only	FH Minnow Only	Chronic	Cero Only	FH Minnow Only	TRE	Other	These fields may be used for field test results				Total
DISCHARGE	10-24	11 AM	H ₂ O	X												2
UPSTREAM	10-24	11 AM	H ₂ O	X												4
DISCHARGE	10-24	11 AM	H ₂ O									X				2
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> TO Analytical 10/25/95 1000 MW </div>																

Condition on Receipt/Temp _____
 Comments Please send copy of results to: GARY HACKETT
Box 69
WALDEN CO 80480

Relinquished by GARY HACKETT Representing CORAL To Whom _____ Date/Time 10-24-95 11 AM
 Relinquished by _____ Representing _____ To Whom _____ Date/Time _____
 Relinquished by _____ Representing _____ Rec at Lab By Tim Nichols Date/Time 10/25/95 09:13

The SeaCrest Group

An Environmental Services Company

325 Interlocken Parkway Suite 205 • Broomfield Colorado 80021
(303) 438 0970 • FAX (303) 438 0971

To Analytica
10/25/95 1000 MW

Chain of Custody Record
Analytical Services Request
(enclose with each shipping container)

Client City of Broomfield Contact Michelle Address 500 St +
 Program/Site Lepp Field Phone (303) 438-2933 Project Number 91151

Collected by _____

These fields may be used for field test results

Sample Identification	Date Sampled	Time	Sample Type	These fields may be used for field test results										Total						
				Acute	Cero Only	FH Minnow Only	Chronic	Cero Only	FH Minnow Only	TRE	Other	B Tex								
D. chloride	10/25/95	1100												X						

Condition on Receipt/Temp _____

Comments _____

Relinquished by _____ Representing _____ To Whom _____ Date/Time _____
 Relinquished by Michelle Representing SeaCrest To Whom City of Broomfield Date/Time 10/25/95
 Relinquished by _____ Representing _____ Rec at Lab By Michelle Date/Time _____

WHITE COPY Accompanies Samples CANARY COPY Lab PINK COPY Sampler

**THE SEACREST GROUP
325 INTERLOCKEN PARKWAY
SUITE 205
BROOMFIELD, COLORADO 80021**

SAMPLE RECEIPT FORM

Project Number 395461

Date/Initials 10/25/95

Samples Were

1. ~~Shipped~~ or Hand Delivered or Messenger

NOTES

2 Airbill Present

Y

N

NA

NOTES

3 Ambient or chilled ~~Ice~~ or Blue Ice

Temp

pH

EFF
Recg 4) 0

77

NOTES

84

4 Cooler received Broken/Leaking

Y

N

NOTES

5 Sample Received Broken/Leaking (Improperly Sealed)

Y

N

NOTES

6 Samples Properly Preserved (chilled to 4°C)

Y

N

NOTES

7. Received within Holding Times

Y

N

NOTES

COC Tape Was

1 Present on Outer Package

Y

N

2 Unbroken on Outer Package

Y

N

3 Present on Sample

Y

N

4. Unbroken on Sample

Y

N

COC Record Was

1 Present Upon Receipt of Sample

Y

N

COLORADO - COPS WET TEST REPORT FORM - ACUTE

PERMITTEE Caral Productions COPS NO. CO-00 40151 OUTFALL Longpine Oil Fr.

TYPE TEST: ROUTINE. ACCELERATED. TEST SPECIES Ceriodaphnia dubia

TEST RESULTS. LC50 >100 % STATISTICAL METHOD: Probit

TEST TIME & DATE: BEGIN 1330 AM (DM) 10/25/95 END 1415 AM (DM) 10/27/95

DILUTIONS (% EFFLUENT)

MEASUREMENTS	CONTROL (0%)	100 %	75 %	50 %	25 %	12.5 %	Recon
NO @ START OF TEST:	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>
NO LIVE AFTER 24 HRS.	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>
AFTER 48 HRS.	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>
AFTER 72 HRS:	<u>[Scribbled out]</u>						
AFTER 96 HRS.	<u>[Scribbled out]</u>						

RECEIVING WATER USED FOR DILUTION? YES NO TOT. RESID. CHLORINE, MG/L 100% <0.01

TURBIDITY, MG/L. RECEIVING WATER 215 EFFLUENT 120 RECON WATER 219

CALCINITY, MG/L. RECEIVING WATER 373 EFFLUENT 707 RECON WATER 118

PH: INITIAL - CONTROL 8.4 100% 7.9 FINAL - CONTROL 8.2 100% 8.5

AMMONIA AS N, MG/L: INITIAL - 100% 4.0 FINAL - 100% —

WERE ALL TEST CONDITIONS IN CONFORMANCE WITH DIVISION GUIDELINES? YES NO

IF NO, LIST DEVIATIONS FROM TEST SPECIFICATIONS: _____

LABORATORY THE BEACREST GROUP ANALYST. Jim Case, Stacie Razin

REMARKS: _____

Jelly A Carr 11/3/95

7/1/93

The SeaCrest Group

Permittee Coral Lab Number 39541
 Address _____ Template Number 1B
 Contact _____ CDPS Permit# _____
 Site _____ Dilution Water BR 218 682W
 IWC% _____ Species Information Bd 35-10-25 810
 Sample Date 10-24-95 Test Started 10-25-95 1330
 Sample Volume _____ Test Ended 10-27-95 145

Test Conditions

Concentration & Replicates	Number Alive			Dissolved Oxygen			Temperature C			pH			Cond umhos	
	0	24	48	0	24	48	0	24	48	0	24	48		
100	#1	5	5	5	7.5	71	72	205	195	199	7.9	8.7	8.5	1297
	#2	5	5	5										
	#3	5	5	5										
	#4	5	5	5										
75	#1	5	5	5	7.6	71	72	204	204	196	8.0	8.4	8.3	1155
	#2	5	5	5										
	#3	5	5	5										
	#4	5	5	5										
50	#1	5	5	5	7.7	71	72	204	205	196	8.1	8.4	8.2	1035
	#2	5	5	5										
	#3	5	5	5										
	#4	5	5	5										
25	#1	5	5	5	7.9	71	72	204	206	196	8.3	8.3	8.1	877
	#2	5	5	5										
	#3	5	5	5										
	#4	5	5	5										
12	#1	5	5	5	7.9	70	72	204	207	196	8.3	8.2	8.2	810
	#2	5	5	5										
	#3	5	5	5										
	#4	5	5	5										
Control	#1	5	5	5	7.8	70	72	205	204	196	8.4	8.2	8.2	762
	#2	5	5	5										
	#3	5	5	5										
	#4	5	5	5										
Recon Control	#1	5	5	5	7.7	71	7.2	206	196	200	8.4	8.2	8.2	831
	#2	5	5	5										
	#3	5	5	5										
	#4	5	5	5										
Initials	JL	GA	HL											

	Effluent #1	Receiving #1	Recon	Effluent #2	Receiving #2	
Hardness	120	218	219	NA	NA	mg/l
Alkalinity	707	373	118			mg/l
Chlorine	< 0.01	< 0.01	NA			mg/l
Ammonia Initial	< 1.0	< 1.0				mg/l
Ammonia Final	—	—	↓	↓	↓	mg/l

COLORADO - COPS WET TEST REPORT FORM - ACUTE

PERMITTEE Coral Productions COPS NO CO-00 40151 OUTFALL Longpine Oil Field

TEST TYPE. ROUTINE. ACCELERATED TEST SPECIES. Pimephales promelas 13d

TEST RESULTS LC50. >100 % STATISTICAL METHOD: Probit

TEST TIME & DATE. BEGIN 1100 AM 10/25/95 END 1030 AM 10/29/95

DILUTIONS (% EFFLUENT)

MEASUREMENTS	CONTROL (0%)	100	75	50	25	12.5	Reco.
NO. @ START OF TEST:	20	20	20	20	20	20	20
NO. LIVE AFTER 24 HRS.	20	20	20	20	20	20	20
AFTER 48 HRS:	20	20	20	20	20	20	20
AFTER 72 HRS.	20	20	20	20	20	20	20
AFTER 96 HRS:	20	20	20	20	20	20	20

RECEIVING WATER USED FOR DILUTION? YES NO TOT. RESID. CHLORINE, MG/L. 100% < 0.01

HARDNESS, MG/L. RECEIVING WATER 218 EFFLUENT 120 RECON WATER 192

ALKALINITY, MG/L: RECEIVING WATER 373 EFFLUENT 707 RECON WATER 92

PH. INITIAL - CONTROL 8.4 100% 7.9 FINAL - CONTROL 8.4 100% 8.6

T. AMMONIA AS N, MG/L: INITIAL - 100% < 1.0 FINAL - 100% —

WERE ALL TEST CONDITIONS IN CONFORMANCE WITH DIVISION GUIDELINES? YES NO

IF NO, LIST DEVIATIONS FROM TEST SPECIFICATIONS: _____

LABORATORY. THE SEACREST GROUP ANALYST: Mike Newkirk

COMMENTS _____

John A. Cam 11/3/95

The SeaCrest Group

Permittee Coral Products Lab Number 395461
 Address _____ Template # 4
 Site _____ Contact _____ CDPS Permit # _____
 Sample Volume 2 gal IWC% _____ Sample Date & Time 10/24/95
 Test Start 10/25/95 1100 Test End 10/29/95 1030 Dilution Water Water Recs (210), 60% 95072(192)
 Special Test Conditions _____ Species Age & Source FHM 13d Whouse 951012

Conc & Replicate	Number Alive					Dissolved Oxygen					Temperature C					pH					Cond
	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	
100	5	5	5	5	5	7.0	6.3	6.5	6.2	6.4	19.1	19.7	20.8	19.1	19.0	7.9	8.8	8.7	8.7	8.6	1328
	5	5	5	5	5	7.1	7.7	7.1			20.8	19.0	20.2			7.7	8.1	8.1			
	5	5	5	5	5																
	5	5	5	5	5																
75	5	5	5	5	5	7.7	6.2	6.4	6.3	6.4	19.1	19.3	20.9	19.1	19.0	8.0	8.6	8.5	8.6	8.5	1197
	5	5	5	5	5	7.4	8.0	7.2			20.8	19.1	20.2			7.9	8.1	8.1			
	5	5	5	5	5																
	5	5	5	5	5																
50	5	5	5	5	5	8.2	6.4	6.5	6.3	6.5	19.2	19.7	20.9	19.1	19.0	8.1	8.5	8.5	8.5	8.5	1047
	5	5	5	5	5	7.6	8.2	7.2			20.9	19.1	20.2			8.0	8.2	8.2			
	5	5	5	5	5																
	5	5	5	5	5																
25	5	5	5	5	5	8.5	6.4	6.5	6.3	6.4	19.3	19.8	20.8	19.1	19.1	8.3	8.4	8.4	8.4	8.4	923
	5	5	5	5	5	7.7	8.5	7.2			20.9	19.1	20.2			8.2	8.3	8.2			
	5	5	5	5	5																
	5	5	5	5	5																
10	5	5	5	5	5	8.7	6.3	6.5	6.4	6.5	19.4	19.9	20.6	19.1	19.1	8.4	8.4	8.4	8.4	8.4	850
	5	5	5	5	5	7.8	8.8	7.3			21.0	19.2	20.1			8.2	8.3	8.2			
	5	5	5	5	5																
	5	5	5	5	5																
Recs	5	5	5	5	5	9.0	6.1	6.6	6.4	6.5	19.5	19.4	20.0	19.0	19.0	8.4	8.4	8.3	8.3	8.4	782
	5	5	5	5	5	8.0	8.4	7.2			21.0	19.2	20.0			8.3	8.4	8.2			
	5	5	5	5	5																
	5	5	5	5	5																
60% Recs	5	5	5	5	5	6.7	6.1	6.6	6.4	6.6	20.2	19.0	19.3	19.1	19.1	8.6	8.0	8.3	8.1	8.3	742
	5	5	5	5	5	7.0	6.9	6.8			21.0	21.0	20.0			8.5	8.5	8.4			
	5	5	5	5	5	6.8															
	5	5	5	5	5																
NA																					
Initials	MNV MNV MNV MNV MNV										MNV MNV MNV MNV MNV										

	Effluent #1	Receiving #1	Recon	Effluent #2	Receiving #2	
Hardness	120	218	192	NA	NA	mg/l
Alkalinity	707	373	92	↓	↓	mg/l
Chlorine	<0.01	<0.01	NA	↓	↓	mg/l
Ammonia Initial	<1.0	<1.0	↓	↓	↓	mg/l
Ammonia Final	—	—	↓	↓	↓	mg/l

THE SEACREST GROUP

Quality Assurance Check List - Acute and Chronic Whole Effluent Toxicity Test

Client: Coral Productions

Date of Test: October, 1995

SeaCrest Lab Number: 395461

Species Tested: Ceriodaphnia dubia, Pimephales promelas

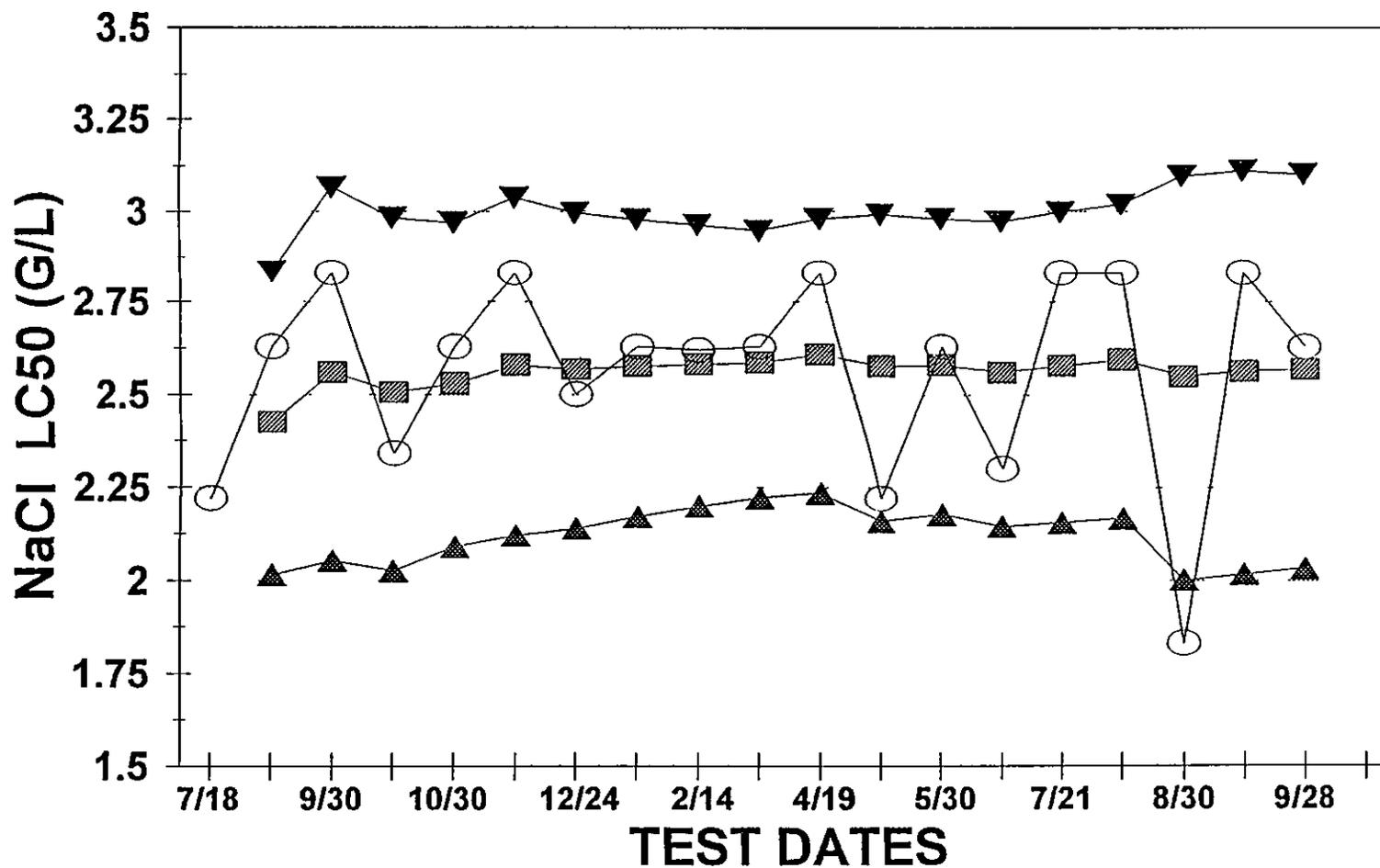
Sample received in lab properly preserved? (shipped in ice or equivalent)	<input checked="" type="radio"/>	N
Test initiated within 36 hours of collection?	<input checked="" type="radio"/>	N
Test protocol conforms with CDH guidelines <i>C dubia</i> ?	<input checked="" type="radio"/>	N
Test protocol conforms with CDH guidelines <i>P promelas</i> ?	<input checked="" type="radio"/>	N
Avg Test Temp $\pm 1^{\circ}\text{C}$ - <i>C dubia</i> ?	<input checked="" type="radio"/>	N
Avg Test Temp $\pm 1^{\circ}\text{C}$ - <i>P promelas</i> ?	<input checked="" type="radio"/>	N
DO level >4 mg/l, no supersaturation - <i>C dubia</i> ?	<input checked="" type="radio"/>	N
DO level >4 mg/l, no supersaturation - <i>P promelas</i> ?	<input checked="" type="radio"/>	N
Reconstituted water w/in 15% of receiving water Hardness - <i>C dubia</i> ?	<input checked="" type="radio"/>	N
Reconstituted water w/in 15% of receiving water Hardness - <i>P promelas</i> ?	<input checked="" type="radio"/>	N
Mortality in control <10%, <20% for chronic - <i>C dubia</i> ?	<input checked="" type="radio"/>	N
Mortality in control <10%, <20% for chronic - <i>P promelas</i> ?	<input checked="" type="radio"/>	N
<i>P promelas</i> avg min wt gain per fish in control at least 0.25 mg?	<input checked="" type="radio"/>	N
<i>Ceriodaphnia</i> average # of young in control at least 15?	<input checked="" type="radio"/>	N
<i>P promelas</i> in control < 24 hours old (chronic test)?	<input checked="" type="radio"/>	N
<i>Ceriodaphnia</i> neonates in control < 24 hours old?	<input checked="" type="radio"/>	N
Appropriate reference toxicity test conducted?	<input checked="" type="radio"/>	N
Lab ref tox test results within the confidence limit for the lab?	<input checked="" type="radio"/>	N

Comments _____

Signature *Kelly A. Carr* Date 10/31/95

Position *Lab Manager*

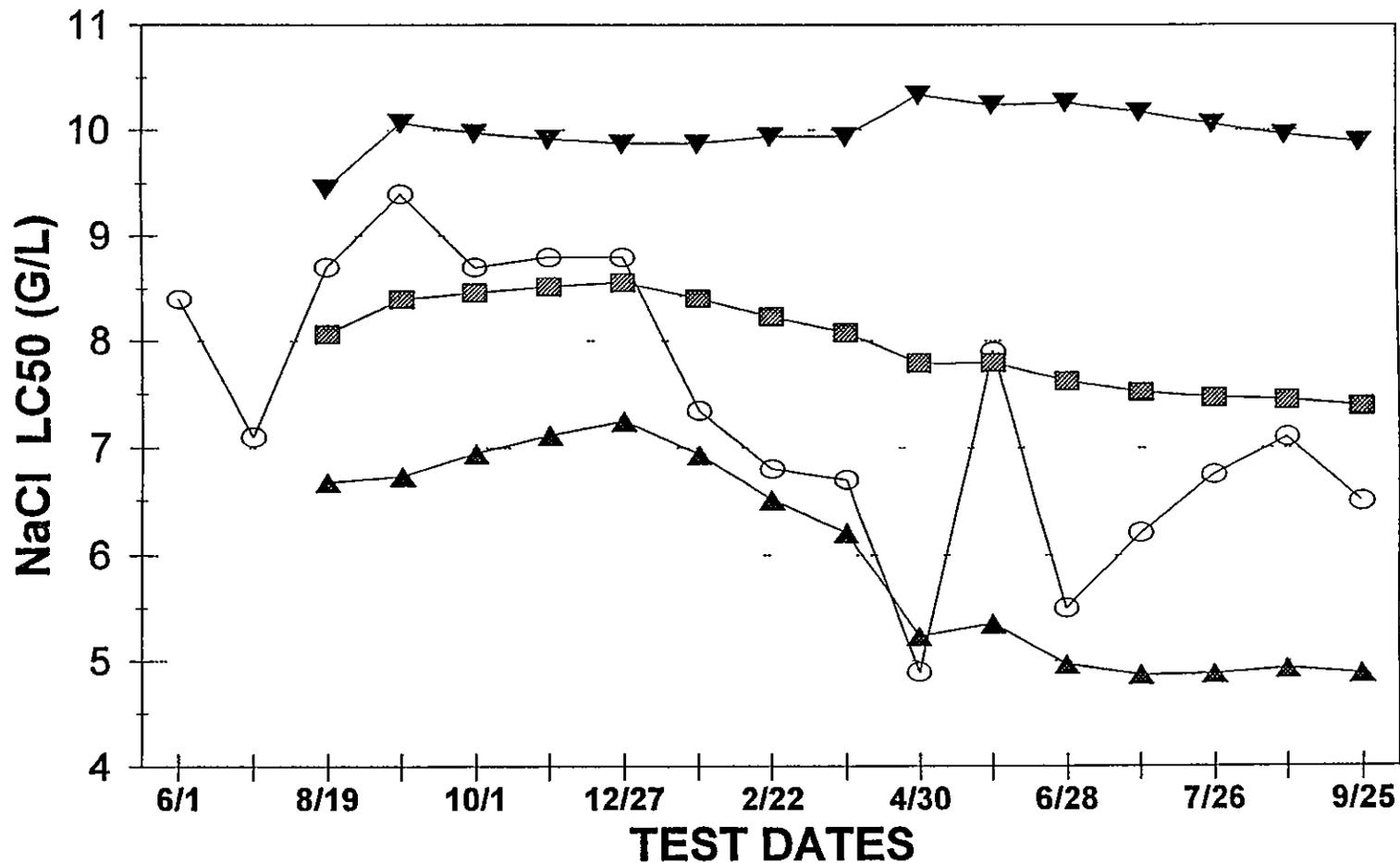
CONTROL CHART CERIOS NaCl REFTOX 1994/1995 48 HOUR LC50



■ MEAN LC50 ▼ X + 2STD ▲ X - 2 STD ○ LC50

FATHEAD MINNOW NaCl REFTOX

1994/1995 96 HOUR LC50



—■— MEAN LC50 —▼— X+2STD —▲— X-2 STD —○— LC50



an Analytica Group company

325 Interlocken Parkway
Suite 200
Broomfield CO 80021
(303) 469 8868
(800) 873 8707
FAX (303) 469 5254

BETX
TEST
Love Pine

The SeaCrest Group
325 Interlocken Parkway, #205
Suite 205
Broomfield, CO 80021
Attn Ken Fucik

Order # 95-10-183
Date 11/13/95 12 58
Work ID 395461 Coral Production
Date Received 10/25/95
Date Completed 11/01/95

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Client Description</u>	<u>Sample Number</u>	<u>Client Description</u>
01	Discharge		

Enclosed are the analytical results for the submitted sample(s) Please review the CASE NARRATIVE for a discussion of any data and/or quality control issues A listing of data qualifiers and analytical codes is located on the TEST METHODOLOGIES page at the end of the report.

If you have any questions regarding the analyses, please feel free to call

Sincerely,

Claire K Toon
Project Manager

Samples were prepared and analyzed according to methods outlined in the following references

- o Test Methods for Evaluating Solid Waste, USEPA SW-846, Third Edition, Revision 3, January 1995

Problems encountered with the analyses are discussed in the following narrative

The sample was received at greater than four degrees Celsius

Sample 01A Discharge Collected 10/24/95 Matrix WATER

<u>Test Description</u>	<u>Method</u>	<u>Result</u>	<u>Q</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>
BTEX	EPA 8020					
Benzene		ND		1 0	ug/L	10/30/95
Toluene		ND		1 0	ug/L	10/30/95
Ethylbenzene		ND		1 0	ug/L	10/30/95
Xylenes, Total		ND		2 0	ug/L	10/30/95
SURROGATES, % Recovery						
p-Bromofluorobenzene		86 7		Min	80 Max	120

Order # 95-10-183
ANALYTICA, INC.

The SeaCrest Group
TEST METHODOLOGIES

Page 5

BTEX_W: BTEX (GCPID)

METHOD 8020

Sample 01A Discharge

Matrix WATER

<u>Analysis</u>	<u>Method</u>	<u>Collected</u>	<u>Received</u>	<u>TCLP date</u>	<u>Extracted</u>	<u>Analyzed</u>
BTEX	EPA 8020	10/24/95	10/25/95	NA		10/30/95

The SeaCrest Group

An Environmental Services Company

325 Interlocken Parkway Suite 205 • Broomfield Colorado 80021
(303) 438 0970 • FAX (303) 438-0971

9510183

Chain of Custody Record Analytical Services Request

(enclose with each shipping container)

Client <u>Coral Production</u>	Contact <u>Traci Chonka</u>	Address <u>1600 Stout</u>	Project Number <u>395461</u>
Program/Site <u>Landscape Field</u>	Phone <u>(303) 623-4593 3573</u>	<u>Denver, CO 80202</u>	

Collected by _____

These fields may be used for field test results

Sample Identification	Date Sampled	Time	Sample Type	Acute	Cerio Only	FH Minnow Only	Chronic	Cerio Only	FH Minnow Only	TRE	Other	B-Test	These fields may be used for field test results				Total
Discharge	10/24/95	1100										X					

Condition on Receipt/Temp _____

Comments _____

Relinquished by _____	Representing _____	To Whom _____	Date/Time _____
Relinquished by <u>M. K. Newkirk</u>	Representing <u>SeaCrest</u>	To Whom <u>Analytics</u>	Date/Time <u>10/25/95 1000</u>
Relinquished by _____	Representing _____	Rec at Lab By <u>Ralph S. B. Jr.</u>	Date/Time <u>10/25/95 1000</u>

ACZ Laboratories, Inc
 30400 Downhill Drive
 Steamboat Springs, CO 80487
 (800) 334-5493

Lab Sample ID **L7960-01**
 Client Sample ID **Discharge**
 Client Project ID **November**
 ACZ Report ID **RG19499**

Coral Production Corp
 1600 Stout Street Suite 1810
 Denver, CO 80202
 Jim Weber

L 12 1995

Date Sampled **11/20/95 11 00**
 Date Received **11/21/95**
 Date Reported **11/30/95**

Sample Matrix **Surface Water**

*Lone Pine Field
 (Monthly Analysis)*

Metals Analysis

Parameter	EPA Method	Result	Qual	Units	MDL	PQL	Date	Analyst
Copper, total recoverable	M200 7 ICP		U	mg/L	0 01	0 05	11/28/95	rd
Iron, total recoverable	M200 7 ICP		U	mg/L	0 01	0 05	11/28/95	rd
Manganese dissolved	M200 7 ICP		U	mg/L	0 005	0 03	11/30/95	rd
Zinc, total recoverable	M200 7 ICP	0 01	B	mg/L	0 01	0 05	11/28/95	rd

Metals Prep

Parameter	EPA Method	Result	Qual	Units	MDL	PQL	Date	Analyst
Total Recoverable Digestion	M3005 ICP						11/25/95	jaw

Wet Chemistry

Parameter	EPA Method	Result	Qual	Units	MDL	PQL	Date	Analyst
Lab Filtration & Acidification	***						11/22/95	ch
Residue, Non Filterable (TSS) @103-5C	M160 2 - Gravimetric	10	B	mg/L	5	20	11/22/95	sak

Inorganic Qualifiers (based on EPA CLP 3/90)

U = Analyte was analyzed for but not detected at the indicated MDL
 B = Analyte concentration detected at a value between MDL and PQL
 PQL = Practical Quantitation Limit

Scott Habermehl
 Project Manager Scott Habermehl