Aqua Survey, Inc.

BIOMONITORING REPORT
Mysidopsis bahia

KIN-BUC LANDFILL
383 MEADOW ROAD
EDISON, NEW JERSEY 08817

August 29, 2002

JOB #22-338

469 Point Breeze Road
Flemington, NJ 08822

Phone: 908/788-8700
Fax: 908/788-9165
mail@aquasurvey.com
aquasurvey.com

asi

307600

NJDEP BIOMONITORING REPORT FORM - ACUTE BIOASSAY

NJPDES PERMIT #: **NJ Permit Equivalent** **DSN 001**

FACILITY NAME: **Kin-Buc Landfill**
FACILITY ADDRESS: **383 Meadow Road, Edison, NJ 08817**

FACILITY CONTACT PERSON: **Glen Grieb** **PHONE #:** **732 572-4743**

ACUTE TOXICITY LABORATORY: **AQUA SURVEY INC.**

ACUTE LABORATORY CERTIFICATION NO.: 10309

TEST SPECIFICATIONS

Effluent Type (e.g., final, predisinfection): Final

Test Type: Static Daily Renewal

TEST RESULTS

Test Starting Date: 8/05/02 Completion Date: 8/09/02

Test Endpoint: LC_{50} x
NMAT ____
EC_{50} ____

LC_{50}/EC_{50} (% effluent): >100% 95% Confidence Interval: N/A

Highest percent mortality in any test concentration (if applicable): N/A
Test concentration: N/A

Test Organism: Mysid shrimp (common name) *Mysidopsis bahia* (scientific name)

QUALITY CONTROL SUMMARY

Control mortality:	zero
Temperature maintained within 20° +/- 2°C?:	Yes
Dissolved Oxygen Levels always greater than 40% saturation?	Yes
Two or more concentrations exhibit a trend deviation?	No

CERTIFICATION

Accuracy of report certified by:

Thomas J. Dolce 8/29/02

Thomas J. Dolce
Laboratory Manager

Date

469 Point Breeze Road, Flemington, NJ 08822 ◆ (T) 908/788-8700 ◆ (F) 908/788-9165 ◆ mail@aquasurvey.com ◆ aquasurvey.com

TEST ORGANISM DATA

Test Organism Source: Culture x Commercial hatchery __ (Specify)

Test Organism Acclimation

Is the culture water and test dilution water the same and are the culture water temperature and dilution water temperature identical? Yes _ No x

If yes, proceed to Test Design section.

Fish and Grass Shrimp

Initial number of organisms:
Total acclimation period:
Acclimation period to 100 percent dilution water at the specified test temperature and test salinity:
Number of mortalities:
Test organism age at start of test (days):

Mysid and Cladoceran

Initial number of organisms: 150+
Test organism age at start of test (days): 3 days
Culture water source: Forty Fathoms
Culture water salinity: 25.1 ppt ; Culture water temperature: 23.1°C
Dilution water source: Manasquan
Dilution water salinity upon collection: 30.57 ppt
Number of mortalities: zero

TEST DESIGN

Number of effluent test concentrations: 5
Number of replicates/test concentration: 2
Number of test organisms/replicate: 10
Volume of liquid test chamber (liters): 0.5
Flowthrough bioassay exchange rate (replacements/day): N/A

EFFLUENT SAMPLING

Plant sampling location: Final Effluent just before weir
Effluent type: Final
Discharge (check one) Continuous x Intermittent _____
Effluent sample type: 24 composite

SAMPLE COLLECTION			SAMPLE DATA TAKEN UPON ARRIVAL AT LABORATORY			USE IN TOXICITY TEST	
ASI No.	Beginning Date/Time	Ending Date/Time	TEMP.	D.O.	pH	Date(s)	Time(s)
2021714	8/04/02;1100	8/05/02;1000	4.1	19.8	8.2	8/05/02	1615
2021730	8/05/02;1100	8/06/02;1000	4.5	7.9	8.4	8/06/02	1515
2021741	8/06/02;1100	8/07/02;1000	3.6	9.1	8.2	8/07/02	1640
2021743	8/07/02;1100	8/08/02;1000	4.5	8.5	8.5	8/08/02	1520

Maximum sample holding time (hours): <36
Testing location: Aqua Survey, Inc., Flemington, NJ

asi 469 Point Breeze Road, Flemington, NJ 08822 ◆ (T) 908/788-8700 ◆ (F) 908/788-9165 ◆ mail@aquasurvey.com ◆ aquasurvey.com

EFFLUENT SAMPLE ADJUSTMENTS

Were any salinity adjustments made? Yes __x__ No

If yes, specify the source of sea salts, brine or water used: Forty Fathoms, Marine Enterprises, MD

Were any pH adjustments made? Yes ___ No __x__

If yes, specify the reagent used __1N HCl__, the amount used

The pH level upon sample collection (initial pH)

The pH level after the addition of the sea salts (drifted pH)

The adjusted pH level

Was the effluent sample filtered in any manner? Yes ___ No __x__

If yes, please specify the mesh size: _____.

Were any adjustments to the levels of chlorine made? Yes ___ No __x__

If yes, specify the dechlorination agent used _____; and the amount of reagent used _____

Specify the chlorine levels prior to _____; and after addition of the reagent _____

Was an additional control included in the test containing the dechlorination agent? N/A

DILUTION WATER

Effluent Receiving Water: Raritan River

Dilution Water Source: Manasquan

(If reconstituted water is used specify type)

If a substitute dilution water (i.e. not the receiving water) was used, had its use been approved by NJDEP in the acute methodology questionnaire? Yes __x__ No ___

Collection Location: Manasquan Inlet 3rd. Ave.

Collection Date(s): 8/04/02

TEST RESULTS

LC_{50}/EC_{50} (% Effluent)	24 hour	48 hour	72 hour	96 hour
	>100%*	>100%*	>100%*	>100%*

Calculation Method: Probit Method
The Trimmed Spearman Karber Method
Graphical Interpolation
Visual Inspection __*__

NOTE: Attach the statistical printouts used to determine the LC_{50} value and the mortality data sheets.

Is the calculated LC_{50}/EC_{50} valid according to the specifications of the method used? Yes __x__ No ___

MISCELLANEOUS

Were any exposure chambers aerated during the test? Yes ___ No __x__

If yes, specify concentrations and duration, including the lowest percent saturation reached prior to aeration and at what time:_____.

Were test organisms observed for appearance and behavior at least daily? Yes __x__ No

NOTE: Attach a copy of the acute toxicity test benchsheets with observation coded for each day.

NOTE: Attach a copy of the raw data sheets for physical-chemical measurements taken during the test to the test report form.

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APPENDIX

AQUA SURVEY, INC.
96 HOUR BIOASSAY

GENERAL INFORMATION

Job #: 22-338 Client: KBL Organism: M. bahia

Dilution Water: Receiving ____ Culture Mamsquan Alternative ____

Test Type: Flow Through ____ Static Daily Renewal X Static Non- Renewal ____

Test Volume: 500mL Chamber Volume: 1L Light: 50-100 fc 85.6

Test Start Date: 8/5/02 Time: 1615 Technician: JC

Test End Date: 8/9/02 Time: 1600 Technician: M

ACCLIMATION INFORMATION (Laboratory or Field Acclimation Only)

Exchange Rate: Drip ____ Meter, Pump ____ Exchange Rate (mL/min) ____

Start Date: ____ Time: ____ Chamber Volume: ____

End Date: ____ Time: ____ Feeding: Day 0 ____ Day 1 ____ Day 2 ____ Day 3 ____

Remarks: ____ Mortality: Day 0 ____ Day 1 ____ Day 2 ____ Day 3 ____

Temperature Range: ____ (Field Use Only) Temperature: Day 0 ____ Day 1 ____ Day 2 ____ Day 3 ____ (Lab Use Only)

N/A

DILUTER INFORMATION

Set Up Date: ____ Water Used: ____ Diluter Number: ____ Technician: ____

Cycles During Pretest: ____ Elapsed Time: ____

Day 1 Cycles: ____ Elapsed Time: ____ Day 2 Cycles: ____ Elapsed Time: ____

Day 3 Cycles: ____ Elapsed Time: ____ Total Cycles: ____ Elapsed Time: ____

DESCRIPTION OF SAMPLES (Use Only for In- Lab Samples)

Effluent Odor: None Color: Cloudy, Yellow Other: ____

Diluent Odor: None Color: Clear Salinity: 32.5 ppt Other: ____

ASI Number	Sample Data Taken Upon Arrival at Laboratory			Use in Toxicity Test	
	Temperature	D.O.	pH	Date(s)	Time(s)
2021714	4.1	19.8	8.2	8/5/02	1615
2021730	4.5	7.9	8.4	8/6/02	1515
2021741	3.6	9.1	8.2	8/7/02	1640
2021743	4.5	8.5	8.5	8/8/02	1520

AERATION PROCEDURE

Aeration Required: ____ Aeration Not Required: ✓

Description of Problem: Do levels below 50% saturation ____ DO levels dropping rapidly ____

Cycles Increased: Date: ____ Time: ____ Technician: ____

Dilution aeration begun: Date: ____ Time: ____ Technician: ____

Test aeration begun: Date: ____ Time: ____ Technician: ____

Aqua Survey, Inc.

LIVE COUNTS AND OBSERVATIONS

Job #: 22-338

Organism: M. bahia

Concentration %		Observation Interval- Hours									
		0		24		48		72		96	
		Live Count	Observ	Live Count	Observ	Live Count	Observ	Live Count	Observ	Live Count	Observ
40 FATHOMS Control	A	10	1	10	1	10	1	10		10	1
	B	10		10		10		10		10	
MAN.	A	10		10		10		10		10	
	B	10		10		10		10		10	
6.25	A	10		10		10		10		10	
	B	10		10		10		10		10	
12.5	A	10		10		10		10		10	
	B	10		10		10		10		10	
25	A	10		10		10		10		10	
	B	10		10		10		10		10	
50	A	10		10		10		10		10	
	B	10		10		10		10		10	
100	A	10		10		10		10		10	
	B	10	↓	10	↓	10	↓	10	↓	10	↓
Date		8/5/02		8/6/02		8-7-02		8/8/02		8/9/02	
Initials		JC/JR		JC		JC		JR		[illegible]	

Terms and Conditions for Test Organisms' Appearance and Behaviour

Term	Explanation	Code
Normal	Unaffected	1
Inactive	Abnormally low activity, motionless or nearly so, weak and enfeebled	2
Irritated	Hyperactivity, muscle spasms, erratic swimming	3
Surfacing	Rising and remaining unusually long at the surface	4
Abnormal body orientation	Inverted or turned approximately 90° laterally from normal body position	5
Abnormal skin color	Light discolored, dark discolored, or varidiscolored (mottled)	6
Abnormal skin condition	Mucus shedding or coagulations, hemorrahaging from gills, eyes or anal opening	7
Abnormal respiration	Rapid, slow, gulping or periodic flexure of the operculum of fish as to reverse water flow (coughing)	8

AQUA SURVEY, INC.
96 HOUR BIOASSAY

WATER QUALITY

Job #: 22-338

Organism: M. bahia

Client: KBL

Conc.	ALKALINITY (mg/L in 25 mL)					HARDNESS (mg/L in 25 mL)				
0 %	0	24	48	72	96	0	24	48	72	96
Start	9.1				3.0					
Stop	11.7				6.0					
Diff	2.6				3.0		N/A			
X	40	40	40	40	40	40	40	40	40	40
	104				120					
Initial/ Date/ Time	TP 8/5/02 1700				8/9/02 1620					
100 %	0	24	48	72	96	0 in 10 mL	24 in 10 mL	48 in 10 mL	72 in 10 mL	96
Start	0	0	0	0	6.0	16.1	0.0	7.3	19.8	
Stop	5.5	~~5.5~~	5.5	5.8	15.6	21.2	7.3	19.8	23.9	
Diff	5.5	~~5.5~~	5.5	5.8	9.6	11.1	7.3	12.5	4.1	
X	40	40	40	40	40	~~100~~ ~~40~~	~~100~~ ~~40~~	~~100~~ ~~40~~	~~100~~ ~~40~~	40
	220	~~28~~	220	232	384	111	730	1250	410	
Initial/ Date/ Time	MS 1700 8-5-02	(1)	MS 1600 8-7-02	JC 1200 8-8-02	8/9/02 1620	8/12/02 1430				

Residual Chlorine (mg/L in 25 mL)					
Conc.	0	24	48	72	96
0 %	ND				
100 %	ND	ND	ND	ND	
Initial/ Date/ Time	1700 MS 8-5-02	MS 1400 8-6-02	MS 1600 8-7-02	JC 1200 8-8-02	

ND= Non Detectable Limit

Nitrite (ppm in 25 mL)					
Conc.	0	24	48	72	96
0 %		N/A	8/28		
100 %					
Initial/ Date/ Time					

(1) MS

0

1

6.3 = 252

Aug 5-Aug 13

AQUA SURVEY, INC.
Hardness Worksheet

Lot # EDTA:
Molarity EDTA: 0.0100M

Job #	ASI #	Dish ID	Sample Volume (mL)	Burette Reading Initial	Burette Reading Final	Difference (A)	mg/L* $CaCO_3$	Initial/ Date/ Time
22-337 DiL	2021685	13	10	0.0	0.5	0.5	50	[illegible] 1430
-337/340	2021711	14		0.5	1.8	1.3	130	
-337	2021731	A		1.8	3.1	1.3	130	
-337/340	2021734	B		3.1	4.2	2.9	290	
-337	2021744	C		4.2	6.4	2.2	220	
-340	2021749	D		6.4	7.7	1.3	130	
-337(96) DiL	2021685	34		7.7	8.1	0.4	40	
-337(96)	2021744	162		8.1	10.1	2.0	200	
22-338	2021714	287	10	10.1	21.2	11.1	1111	
-338	2021730	220		0.0	7.3	7.3	730	
-338	2021741	76		7.3	19.8	12.5	1250	
-338	2021743	46		~~0.0~~ 19.8	23.9	4.1	410	
22-339	2021712	7	10	0.0	1.1	1.1	110	
-339	2021735	11		1.1	3.0	1.9	190	
-339	2021750	12		3.0	5.3	2.3	230	
22-341	2021715	153	10	0.0	4.1	4.1	410	
-341	2021737	23		4.1	6.7	2.6	260	
-341	2021756	57		6.7	10.3	3.6	360	
-341 dup		11		10.3	14.1	3.8	380	
-341 trp		250		14.1	17.8	3.7	370	

* mg $CaCO_3$= AxBX1000/mL Sample
Where A= volume of standard EDTA titrant used
Where B= 1 when EDTA molarity =0.01
NOTE: If sample volume is changed the simplified equation must be altered to reflect change

Or simplified when 25mLsample used mg $CaCO_3$/L= Ax40

Job #: 22-338
Client: KBL
Sample: Effluent
ASI Sample #: 2021714
Collection Date/Time: 8/5/02
Approx. sample volume: 4l
Initial pH 8.4
(Salinity adjusted): 8.5

Normality & Vol. of HCl/NaOH: NA pH:

Normality & Vol. of HCl/NaOH: pH:

Normality & Vol. of HCl/NaOH: pH:
Date/Time: 8/5/02 1545 Initial: JR

ASI Sample #: 2021730
Collection Date/Time: 8/6/02
Approx. sample volume: 4L
Initial pH 8.5
(Salinity adjusted): 8.5

Normality & Vol. of HCl/NaOH: NA pH:

Normality & Vol. of HCl/NaOH: pH:

Normality & Vol. of HCl/NaOH: pH:
Date/Time: 8/6/02 1450 Initial: JC

ASI Sample #: 2021741
Collection Date/Time: 8/7/02
Approx. sample volume: 4L
Initial pH 8.5
(Salinity adjusted): 8.4

Normality & Vol. of HCl/NaOH: NA pH:

Normality & Vol. of HCl/NaOH: pH:

Normality & Vol. of HCl/NaOH: pH:
Date/Time: 8/7/02 1615 Initial: JC

ASI Sample #: 2021745
Collection Date/Time: 8/8/02
Approx. sample volume: 4l
Initial pH 8.5
(Salinity adjusted): 8.5

Normality & Vol. of HCl/NaOH: NA pH:

Normality & Vol. of HCl/NaOH: pH:

Normality & Vol. of HCl/NaOH: pH:
Date/Time: 8/8/02 1450 Initial: JR

AQUA SURVEY, INC.

CULTURE LAB DISTRIBUTION FORM

DATE: 8/5/02

TEST JOB#: 22-338 CLIENT: KBL

TEST LOCATION: IN-LAB [X] FIELD [ ]

TEST SPECIES: M. bahia

TOTAL NUMBER ORGANISMS TRANSFERRED: 150+

AQUA SURVEY, INC. CULTURE LAB INVESTIGATORS: CC/CD

A. ORGANISMS

1. ASI CULTURE/HOLDING UNIT: 76l Tank
2. RECEIVING LOG #: N/A
3. CULTURE LOG #: 22-0415
4. AGE/SIZE INFORMATION: HD 8/2/02

B. HOLDING [X] CULTURE [ ] WATER PARAMETERS

1. TEMPERATURE: 22.0°C
2. SALINITY: 29.0ppt
3. WATER SOURCE: Manasquan

C. TRANSFER CUSTODY & TRANSFER

1. LIVESTOCK RELINQUISHMENT DATE: 8/5/02
   TIME: 1600hrs
   BY: CC

2. LIVESTOCK RECEIVING DATE: 8/5/02
   TIME: 1600hrs
   BY: JR

3. CULTURE SUPERVISOR OR SENIOR TECH. INITIALS: CC

REMARKS:

AQUA SURVEY, INC.
CULTURE LABORATORY

15 Day - General Species Status Log

Species: M. bahia

Dates: 8/2/02 →

Receiving [ ] Culture [ ] Log #: H.D. 8/2/02

Initial Stock @: 250+

Test Job #: 22.338

Client: KBL

Food Type: Artemia

Date	Day Number	Temp/DO	NH_3,NO_2	pH	Sal/Hardness	Alkalinity	Mortality	Remarks/Initials
8/2	1	23.1°C / ~~0~~ 7.0	0/0	7.5	25.1ppt	88	Ø	Acclimation started Fed Artemia CC
8/3	2	21.5°C / 7.0	0/0	7.9	27.4ppt	156	Ø	Acclimation con't Fed Artemia CC
8/4	3	22.0°C / 7.0	0.25/0	8.0	29.1ppt	144	Ø	Acclimation concluded Fed artemia CC
8/5	4	22.0°C / ①	0.5/0-0.3	7.9	29.0ppt	144	Ø	Fed artemia 3x CC
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							

① Meter not working properly, DO is not correct, therefore did not record. CC

AQUA SURVEY, INC.

Culture Lab Acclimation Form

Acclimatization

[ ] No acclimatization required
[ ] Temperature acclimatization
[ ] Water acclimatization

Job #: 22.338 Test Species: M. bahia

Acclimatization Initial Parameters

Temperature: 23.1°C Salinity: 25.1ppt Type of Water: 40 Fathoms

Acclimatization Target Parameters

Temperature: 20±2 °C Salinity: 30±2ppt Type of Water: Manasquan

Acclimatization Chamber Volume (liters): 76l

Acclimatization Location: Culture Lab

Acclimatization Water Type: Manasquan

Acclimatization Water Temperature: 21.0°C

Acclimatization Commencement-Date/Time: 8/2/02 / 1500hrs

Change Over Rate (Approximately mL/Minute): 10-20ml/min

Acclimatization Conclusion - Date/Time: 8/4/02 / 1230hrs

Technician Initials/Commencement: CC

Technician Initials/Conclusion: CC

Supervisor Initials: _____

Remarks: _____

338B-0.DAT

	DateTime	Temp	SpCond	Salinity	DO Conc	pH
	M/D/Y	C	uS/cm	ppt	mg/L	
0	08/05/02 16:11:04 % OF FATAL	20.78	45624.0	29.61	6.37	8.68
1	08/05/02 16:14:49 man.	21.97	47404.0	30.89	6.63	7.91
2	08/05/02 16:16:16 6.25	21.89	47261.0	30.79	6.52	8.00
3	08/05/02 16:17:38 12.5	21.98	46804.0	30.46	6.53	8.05
4	08/05/02 16:18:48 25	21.98	46779.0	30.44	6.53	8.17
5	08/05/02 16:19:25 50	21.73	46244.0	30.05	6.58	8.29
6	08/05/02 16:20:30 100	19.16	45734.0	29.70	6.99	8.35

Project #: 338 Test type: ☑ ACUTE ☐ CHRONIC ☐ OTHER _____ Date: 8/5/02

Species: ☐ *P. promelas* ☐ *C. dubia* ☑ *M. bahia* ☐ Other _____ Day of Study: 0 Hours

OPERATIONAL RANGE: Check if OK Meter Used:

Temperature: 18 to 22 ☑ Blue ☐

Salinity: 28 to 32 ☑ Red ☑

Dissolved Oxygen: >4.0 % ☑ Green ☐

pH: 7.3 to 8.3 ☐ 6.0 to 9.0 ☑

Actions taken: _____

See deviation summary sheet ☐ Initials: JR

Mon Aug 05 16:21:18 2002

338-24.DAT

	DateTime	Temp	SpCond	Salinity	DO Conc	pH
	M/D/Y	C	uS/cm	ppt	mg/L	
0	08/06/02 10:41:23	19.31	45770.0	29.73	6.67	8.59
1	08/06/02 10:42:18	19.20	47503.0	30.98	6.31	8.02
2	08/06/02 10:42:45	19.16	47497.0	30.98	6.28	7.98
3	08/06/02 10:43:14	19.15	47459.0	30.95	6.27	8.05
4	08/06/02 10:43:35	19.13	47158.0	30.73	6.28	8.14
5	08/06/02 10:43:58	19.14	46767.0	30.45	6.29	8.31
6	08/06/02 10:44:37	19.20	45885.0	29.81	6.30	8.50

Project #: 338 Test type: ☑ ACUTE ☐ CHRONIC ☐ OTHER _____ Date: 8-6-02

Species: ☐ *P. promelas* ☐ *C. dubia* ☑ *M. bahia* ☐ Other _____ Day of Study: 24h

OPERATIONAL RANGE: Check if OK Meter Used:

Temperature: 18 to 22 ☑ Blue ☐

Salinity: 28 to 32 ☑ Red ☐

Dissolved Oxygen: >4 0 ☑ Green ☑

pH: 7.3 to 8.3 ☐ 6.0 to 9.0 ☑

Actions taken: _____

See deviation summary sheet ☐ Initials: JC

Tue Aug 06 10:56:50 2002

338B-48.DAT

	DateTime	Temp	SpCond	Salinity	DO Conc	pH
	M/D/Y	C	uS/cm	ppt	mg/L	
0	08/07/02 09:14:03	19.52	46836.0	30.50	5.99	8.38
1	08/07/02 09:15:59	19.36	47970.0	31.32	5.90	7.70
2	08/07/02 09:17:16	19.31	47807.0	31.21	6.00	7.75
3	08/07/02 09:18:17	19.29	47697.0	31.13	6.04	7.80
4	08/07/02 09:19:15	19.28	47443.0	30.94	6.11	7.92
5	08/07/02 09:19:53	19.30	47000.0	30.62	6.04	8.05
6	08/07/02 09:20:45	19.41	46101.0	29.97	5.87	8.22

Project #: 22-338 Test type: ☑ ACUTE ☐ CHRONIC ☐ OTHER _____ Date: 8/7/02

Species: ☐ *P. promelas* ☐ *C. dubia* ☑ *M. bahia* ☐ Other _____ Day of Study: 48hr

OPERATIONAL RANGE:

		Check if OK
Temperature:	18 to 22	☑
Salinity:	28 to 32	☑
Dissolved Oxygen:	>4.0	☑
pH:	7.3 to 8.3 ☐ 6.0 to 9.0	☑

Meter Used:
Blue ☐
Red ☑
Green ☐

Actions taken: _____

See deviation summary sheet ☐

Initials: KW

Wed Aug 07 09:55:28 2002

338B-72.DAT

	DateTime	Temp	SpCond	Salinity	DO Conc	pH
	M/D/Y	C	uS/cm	ppt	mg/L	
0	08/08/02 09:08:45	20.89	46133.0	29.98	6.57	8.19
1	08/08/02 09:09:01	20.84	46761.0	30.44	6.45	7.86
2	08/08/02 09:09:12	20.82	46635.0	30.35	6.51	7.78
3	08/08/02 09:09:32	20.81	46571.0	30.30	6.65	7.81
4	08/08/02 09:09:44	20.81	46288.0	30.09	6.73	7.89
5	08/08/02 09:09:56	20.81	45775.0	29.72	6.81	8.01
6	08/08/02 09:10:12	20.87	44965.0	29.14	6.86	8.17

Project #: 338 Test type: ☑ ACUTE ☐ CHRONIC ☐ OTHER _____ Date: 8/8/02

Species: ☐ *P. promelas* ☐ *C. dubia* ☑ *M. bahia* ☐ Other _____ Day of Study: 72 Hours

OPERATIONAL RANGE: Check if OK Meter Used:

Temperature: 18 to 22 ☑ Blue ☐

Salinity: 28 to 32 ☑ Red ☑

Dissolved Oxygen: >4 0% ☑ Green ☐

pH: 7.3 to 8.3 ☐ 6.0 to 9.0 ☑

Actions taken: _____

See deviation summary sheet ☐ Initials: JR

Thu Aug 08 09:26:47 2002

338B-96.DAT

	DateTime	Temp	SpCond	Salinity	DO Conc	pH
	M/D/Y	C	uS/cm	ppt	mg/L	
0	08/09/02 09:11:12	20.28	46124.0	29.98	5.88	8.31
1	08/09/02 09:11:36	20.23	46630.0	30.35	5.92	7.97
2	08/09/02 09:11:56	20.17	46613.0	30.33	6.05	7.94
3	08/09/02 09:12:11	20.15	46469.0	30.23	6.14	7.98
4	08/09/02 09:12:27	20.13	46258.0	30.08	6.22	8.07
5	08/09/02 09:12:44	20.12	45853.0	29.78	6.27	8.21
6	08/09/02 09:13:00	20.17	45071.0	29.22	6.29	8.37

Project #: 338 Test type: ☑ ACUTE ☐ CHRONIC ☐ OTHER _____ Date: 8/9/02

Species: ☐ *P. promelas* ☐ *C. dubia* ☑ *M. bahia* ☐ Other _____ Day of Study: 96 Hours

OPERATIONAL RANGE: Check if OK Meter Used:

Temperature: 18 to 22 ☑ Blue ☐

Salinity: 28 to 32 ☑ Red ☐

Dissolved Oxygen: >4 0 % ☑ Green ☑

pH: 7.3 to 8.3 ☐ 6.0 to 9.0 ☑

Actions taken: _____

See deviation summary sheet ☐ Initials: JR

Fri Aug 09 09:36:08 2002

QUALITY CARRIERS, INC. 3802 CORPOREX PARK DRIVE, SUITE 200 TAMPA, FL 33619 | SCAC-QLYC

DRIVER 1: Nick Holowka	DRIVER NO.: NH0004
DRIVER 2: James R Johnson	DRIVER NO.: JJ0036
DRIVER 3:	DRIVER NO.:
TRAILER/CHASSIS NUMBER: 5609	CONTAINER NUMBER:

ORDER NUMBER: 5 5 6 2 1 0 6 6

SHIPPER NAME/CITY/STATE: ATLANTIC OCEAN
100 SHRIMP BLVD
POINT PLEASANT, NJ

CONSIGNEE NAME/CITY/STATE: AQUA SURVEY INC
499 POINT BREEZE RD
FLEMINGTON, NJ

TRACTOR NUMBER
LOAD 52383
UNLOAD Q1065
LINEHAUL Q1065
RELAY 1
RELAY 2
RELAY 3

Q	HM	COMMODITY AND HAZARDOUS MATERIAL DESCRIPTION (MUST AGREE WITH DESCRIPTION ON SHIPPING ORDER)	QUANTITY	TARE	GROSS	NET	TEMP
1		Sea Water	5,700			45000	

IN CASE OF LEAK, SPILL, FIRE OR OTHER EMERGENCY, CALL TOLL FREE
QUALITY CARRIERS 24 HOUR EMERGENCY RESPONSE HOT LINE 800-759-8265

COMPLETE AS REQUIRED: INTRANSIT HEAT ○ TRAILER STEAMING ○ TRAILER CLEANING ○ DEAD HEAD MILES _____
CANCELLED SHIPMENT ○ REJECTED SHIPMENT ○ RECONSIGNED SHIPMENT ○ TOLLS $ _____ US ● CAN ○

LOADING INFORMATION (MILITARY TIME):
APPOINTMENT: DT _____ TIME _____
ARRIVAL TIME: DT 8-4 TIME _____
START TIME: DT _____ TIME _____
FINISH TIME: DT _____ TIME _____
DEPART TIME: DT 8-4 TIME _____

UNLOADING INFORMATION (MILITARY TIME):
APPOINTMENT: DT 8-5-02 TIME 09:00
ARRIVAL TIME: DT 8-5-02 TIME 09:15
START TIME: DT [illegible] TIME 09:40
FINISH TIME: DT [illegible] TIME 11:20
DEPART TIME: DT 8-5-02 TIME 11:30

SHIPPER BILL OF LADING NUMBER

I HAVE CHECKED THE DOCUMENTS FOR THIS SHIPMENT AND VERIFY THAT THERE IS ADEQUATE STORAGE ROOM TO RECEIVE THIS SHIPMENT AND CONNECTION HAS BEEN MADE TO THE PROPER STORAGE FACILITY

LATE PICKUP REASON:
SHIPPER ○ DISPATCH ○ EQUIPMENT ○
DRIVER ○ WEATHER/ROAD CONDITIONS ○
PUMP ● COMPRESSOR ○ BLOWER ○
VACUUM ○ NOZZLE ○ SPOTTED TRL ○
RAIL TRANSFER ○ SCALE $ _____ US ○ CAN ○
HOSE 2" _____ FT 3" 100 FT 4" _____ FT

LATE DELIVERY REASON:
SHIPPER ○ DISPATCH ○ EQUIPMENT ○
DRIVER ○ WEATHER/ROAD CONDITIONS ○
PUMP ○ COMPRESSOR ○ BLOWER ○
VACUUM ○ NOZZLE ○ SPOTTED TRL ○
RAIL TRANSFER ○ SCALE $ _____ US ○ CAN ○
HOSE 2" _____ FT 3" _____ FT 4" _____ FT

CONSIGNEE SIGNATURE

REASON FOR LOADING DELAY:
PUMP Load 5 Hoses

REASON FOR UNLOADING DELAY:
Late 15 MIN
ON Left Side Front
Emergency Valves 2 1/2
I fix it Break
Finish upload product
Unload rate 1 Hour 15 min

CONSIGNEE YOU ARE RESPONSIBLE FOR UNLOADING ALL CONTENTS ASSIGNED TO YOU BY SHIPPER

- ● ALL PRODUCT WAS RECEIVED IN GOOD ORDER
- ● NO RETAIN - ALL PRODUCT WAS REMOVED FROM THE TRAILER
- ○ LESS THAN 5 GALLONS RETAIN AND NO PRODUCT IS VISABLE ON TRAILER WALLS
- ○ MORE THAN 5 GALLONS RETAIN REMAIN IN THE TRAILER APPROX _____ GAL REMAIN
- ○ TRAILER WAS NOT INSPECTED POSSIBLE RETAIN

SHIPPER'S SIGNATURE | CONSIGNEE'S SIGNATURE

I acknowledge that the current rate for the specific load referenced in this delivery receipt may be higher or lower than the compensation percentage indicated in my contractor agreement. I have been advised of and understand the rate for this specific movement and indicate my acceptance by my initials below. Further, I understand that this document becomes an addendum to my independent contractor agreement.

Initials _____ Date _____

MAN8-5-0.DAT

	DateTime	Temp	SpCond	Salinity	DO Conc	pH
	M/D/Y	C	uS/cm	ppt	mg/L	
0	08/05/02 15:11:17	25.25	47036.0	30.57	6.62	7.97

Page of

ASI, INC.
SAMPLE RECEIVING FORM

Client: VARIOUS
Job #: VARIOUS
Shipped Via: QUALITY CARRIERS
# of Shipping Containers: 1
Type of Shipping Container: tanker
Custody Seal: Present __ Absent ✓ Broken __
Condition of Shipping Containers: Acceptable ✓ Unacceptable __

	ASI #	Sample ID	Type of Container	Number of Containers	Condition of Samples †	Temp. °C	Ice +	Type of Sample *
1.	2021719	MANASQUAN	tanker	1	A	25.3	N	W
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								

NOTES: (Discrepancies Between Sample Label and COC Record).

OPENED/ RECEIVED BY:	DATE/ TIME:
1. Tom Price	8/5/02 1600
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9. Mon Aug 05 15:12:07 2002	
10.	

* S= Soil SD= Sediment

† A= Acceptable U= Unusable or Contaminated

+ I= Ice B= Blue Ice

ASI 22-338

Job #:

Client: KIN BUC CANEL FILL

Facility Location:

Discharge #:

Contact:

Phone #:

Sample Collection Point: FINAL EFF JUST BEFORE WIER

Test Type: Acute ✓ Chronic ___ Diluent Only ___ Other: ___

Dilution Collection Location: MANASQUAN INLET OFF 3rd AVE

Shipping Information: To: ASI

From: KBL

Shipment Method/ Special Instructions: ASI AUTO

Collection/ Sample Key: C= Composite; G= Grab; SD= Sediment; E= Effluent; D= Diluent; S= Soil; SL= Sludge; T= Tissue

ASI #	Collected By: Name (Print)/ Date*/ Time*	Collection/ Sample Type	Sample Volume	Relinquished By: Signature/ Date/ Time	Received By: Signature/ Date/ Time	Relinquished By: Signature/ Date/ Time	Received By: Signature/ Date/ Time
2021714	M. SWENSON 8-4-02 1100 8-5-02 1000	C/E	4L	8-5-02 1530	8/5/02 1530		
~~2021731~~ 2021730	M. SWENSON 8-5-02 1100 8-6-02 1000	C/E	4L	8-6-02 1330	8/6/02 1330		
2021741	M. SWENSON 8-6-02 1100 8-7-02 1000	C/E	4L	8-7-02 1530	Kelly Wischmer 8/7/02 1530		
2021743	J. Clemens 8-7-02 1100 8-8-02 1000	C/E	4L	Jeff Clem 8-8-02 1200	Tom Dolce 8/8/02 1235		

* Please Write Date and Time Sample Collection Started and Date and Time Sample Collection Ended

ASI # ②	Ice +	Temp. °C	Signature/ Date/ Time	Notes:
~~2021731~~	I	4.5	8-6-02 1330	
2021741	I	4.1	8-5-02 1530	② 2021730
2021741	I	3.6	8-7-02 1530	
2021743	I	4.5	Jeff Clem 8-8-02 1200	

FOR INTERNAL USE ONLY

+
I= Ice
D= Dry Ice
B= Blue Ice
N= None