QC Laboratories

# NJPDES BIOMONITORING REPORT FORM-ACUTE TOXICITY

Permit Number #: Permit Equivalent DSN: 001

Facility name: Kin-Buc Landfill

Facility address: 383 Meadow Road
Edison, NJ

Facility contact person: Glen Grieb
Phone number: 732.561.7600

Acute toxicity laboratory: QC Inc.
1205 Industrial Highway
Southampton, PA 18966

/NELAC certification number: PA166

Test Specifications:

Effluent Type: Final

Test Type: Modified static renewal (24-hour)

Test Results:

Test Start: 07/14/03 16:00 Test End: 07/18/03 14:15

Test endpoint: LC50

EC50 (%effluent): >100% 95% Confidence Interval: NA

Highest percent mortality in any top test concentration: 25.0%

Test organism: Mysid Shrimp (common name) *Mysidopsis bahia* (scientific name)

Quality Control Summary

Control Mortality (%): 0.0

Temperature maintained within 20 +/- 1 °C? Yes

Dissolved Oxygen Levels always greater than 40% saturation? Yes

Two or more concentrations exhibit a trend deviation? No

562191

Certification:

Accuracy of report certified by: _____ 7/30/03
Robert A. Martino
Laboratory Director
Date

*1205 Industrial Blvd., P.O. Box 514, Southampton, PA 18966-0514 Phone: 215-355-3900 Fax: 215-355-7231*

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Test Organism Data:

Test organism source: Aquatox, Inc.

Test Organism Acclimation:

Is the culture water and test dilution water the same, and are the culture water temperature and dilution water temperature identical? No

Mysid, Daphnids and Cladocerans:

Initial number of organisms: 150
Test organism age at start of test (days): 4 days
Culture water source: 40 Fathoms
Culture water salinity: 25 ppt
Culture water temperature: 25°C
Dilution water source: Manasquan Inlet.
Dilution water salinity upon collection: 25.0 ppt
Dilution water temperature upon collection: NA
Number of mortalities: < 5%

Test Design:

Number of effluent test concentrations: 5
Number of replicates/test concentration: 4
Number of test organisms/replicate: 5
Volume of liquid in test chambers (liters): 0.20
Flow-through bioassay exchange rate (cycles/day): NA

Effluent sampling:

Plant sampling location: Final effluent just before weir.
Effluent type: Final.
Discharge: Continuous
Effluent sample type: 24 hour composite

| Effluent Sample Collection | | | | Initial Parameters In Laboratory | | | | | Use in Toxicity Tests | | Holding Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Beginning* | | *Ending* | | *temp* | | *d.o* | *Cond* | *Chlorine* | | | *(first use)* |
| *date* | *time* | *date* | *time* | *°C* | *pHI* | *mg/L* | *umhos* | *ppm* | *date(s)* | *time(s)* | *hours* |
| 07/13/03 | 10:00 | 07/14/03 | 9:00 | 6.80 | 8.23 | 10.6 | 10000 | < 0.1 | 07/15/03 | 16:00 | 31:00 |
| 07/14/03 | 10:00 | 07/15/03 | 9:00 | 3.90 | 8.27 | 8.4 | 9920 | < 0.1 | 07/16/03 | 15:00 | 30:00 |
| 07/15/03 | 10:00 | 07/16/03 | 9:00 | 6.50 | 7.86 | 9.1 | 9920 | < 0.1 | 07/17/03 | 13:55 | 28:55 |
| 07/16/03 | 10:00 | 07/17/03 | 9:00 | 4.10 | 7.83 | 7.9 | 9850 | < 0.1 | 07/18/03 | 14:35 | 29:35 |
| | | | | | | | | | | | |

Testing location: QC Laboratories

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Effluent Sample Adjustments

Were any salinity adjustments made? Yes
If yes, specify the source of sea salts, brine or water used: Dry 40 Fathoms (biotechnical grade)

Were any pH adjustments made? Yes.

**———pH / Chlorine Adjustment———**

| Sample Used | Volume Adjusted | pH prior to Salting | Salinity ppt | pH after Salting | ml's 0.2N HCl Used | pH after Adjustment | TRC sample | Amt. STS added (mgs) | TRC after Addition |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Was the effluent sample filtered in any manner? No
If yes, please specify the mesh size:

Were any adjustments to the level of chlorine made? No.
If yes, specify the dechlorination agent used and the amount of reagent used: NA

Specify the chlorine levels prior to and after addition of the reagent: See data above.

Was an additional control included in the test containing the dechlorination agent? Yes, added to Control B.

Dilution Water:

Effluent receiving water: Raritan River.
Dilution water source: Manasquan Inlet.
If a substitute dilution water was used, had its use been approved by the NJDEP in the acute methodology questionnaire?
Collection location: By Coast Guard station, Manasquan Inlet.
Collection date(s): 07/11/03

| | 0 hour | 24 hour | 48 hour | 72 hour | 96 hour |
|---|---|---|---|---|---|
| LC50/EC50 (% effluent) | >100% | >100% | >100% | >100% | >100% |

Calculation method: No measurable acute toxicity.

Is the calculated LC50/EC50 valid according to the specifications of the method used? Yes

Miscellaneous:

Were any exposure chambers aerated during the test? No

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

Were the test organisms observed for appearance and behavior at least daily? Yes

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Additional Water Chemistry Parameters

| Sample Collection | | | | Dilution Water | | | 100% Effluent | | |
|---|---|---|---|---|---|---|---|---|---|
| Beginning | | Ending | | Alkalinity | Hardness | Ammonia | Alkalinity | Hardness | Ammonia |
| date | time | date | time | mg/L | mg/L | ppm | mg/L | mg/L | ppm |
| 07/13/03 | 10:00 | 07/14/03 | 10:00 | | NA | NA | 137.0 | NA | NA |
| 07/14/03 | 10:00 | 07/15/03 | 10:00 | | | | 124.0 | NA | NA |
| 07/15/03 | 10:00 | 07/16/03 | 10:00 | | | | 120.0 | NA | NA |
| 07/16/03 | 10:00 | 07/17/03 | 10:00 | | | | 95.0 | NA | NA |
| | | | | | | | | | |

Temperature Log

Additional Comments:

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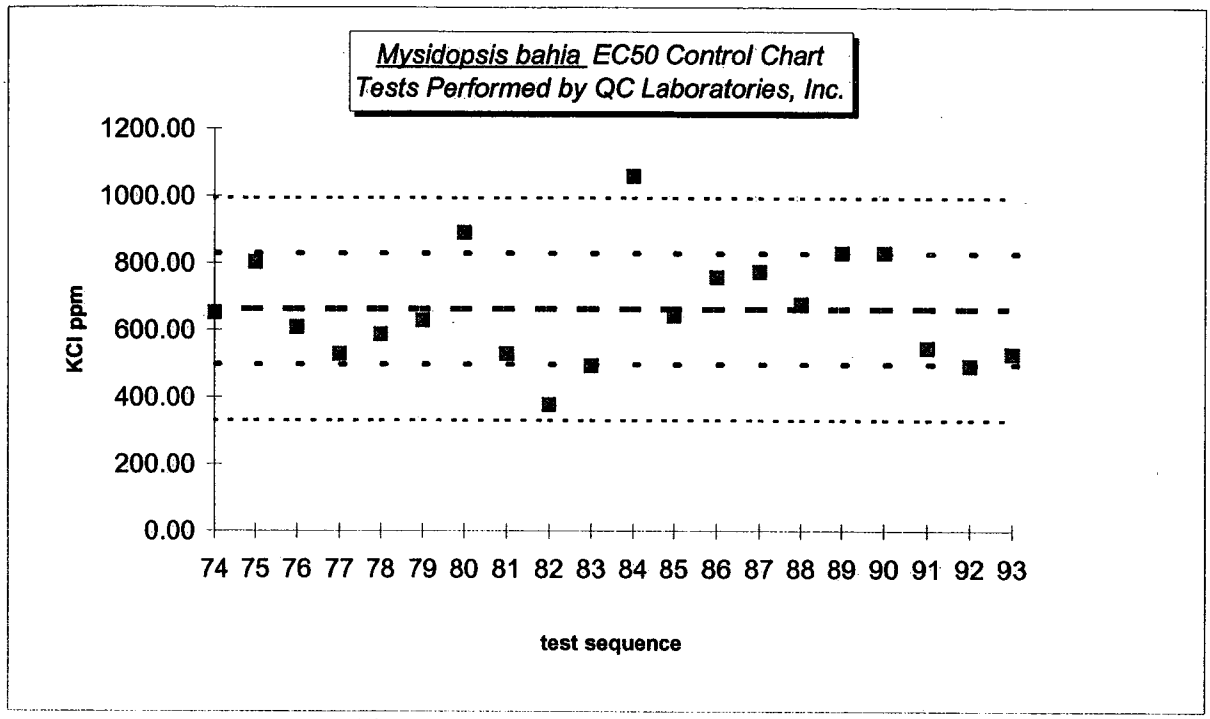


| Date | test number | LC50 ppm | MEAN | UCL 2SD | LCL 2SD | UCL 1SD | LCL 1SD |
|---|---|---|---|---|---|---|---|
| 6/3/2002 | 74 | 652.90 | | | | | |
| 6/25/2002 | 75 | 803.83 | | | | | |
| 7/16/2002 | 76 | 609.19 | | | | | |
| 8/13/2002 | 77 | 530.33 | | | | | |
| 8/28/2002 | 78 | 588.44 | | | | | |
| 9/24/2002 | 79 | 630.67 | | | | | |
| 10/7/2002 | 80 | 891.91 | | | | | |
| 10/22/2002 | 81 | 530.33 | | | | | |
| 12/4/2002 | 82 | 378.93 | | | | | |
| 1/13/2003 | 83 | 495.71 | | | | | |
| 1/21/2003 | 84 | 1060.66 | | | | | |
| 2/18/2003 | 85 | 644.93 | | | | | |
| 3/11/2003 | 86 | 759.67 | | | | | |
| 3/25/2003 | 87 | 776.45 | | | | | |
| 4/16/2003 | 88 | 680.16 | | | | | |
| 4/30/2003 | 89 | 832.18 | | | | | |
| 5/13/2003 | 90 | 832.18 | | | | | |
| 5/28/2003 | 91 | 549.03 | | | | | |
| 6/16/2003 | 92 | 494.82 | | | | | |
| 4/14/2003 | 93 | 530.33 | 663.63 | 995.39 | 331.88 | 829.51 | 497.75 |
| | CV | 25.0% | | | | | |

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# Acute Test Information

Study Number: R1062287

Client: U.S. Filter

Protocol: NJ

Water Bath/Incubator: 2

Date Initiated: 7-14-03

Time Initiated: 1600

Date Terminated: 7-18-03

Time Terminated: 1415

Test Duration: *24-hour* *48-hour* *72-hour* *96-hour* *Other:*

Test Type: *6-hour static renewal* *24-hour static renewal* *static-no renewal*

*flow-through/dilutor used:* *other:*

Test Material: *Effluent* *Receiving Water* *Non Contact/Contact Cooling Water*

*Pure Compound:* *SRT Solution / Lot #:*

*Other:*

Dilution Water: *Receiving Waters:* *Synthetic / Lot #:*

Salt Added to Effluent: *Y* *N* Test Salinity: 26ppt

Brand of Artificial Salts Used: *40-Fathoms* *Other:*

Test Volume(ml's): *15* *25* *50* *100* *200* *250* *500* *1000* *other:*

Number of Replicates: *2* *4* *5* *10* *other:* Number of Organisms / Replicate: *5* *10* *other:*

Test Temperature (°C): *20* *22* *25* *other:*

Test Species: *Pimephales promelas* *Mysidsopsis bahia* *Cyprinodon variegatus*

*Daphnia pulex* *Ceriodaphnia dubia* *other:*

Source: *In house* *Commercial Supplier:* AQUATOX

Lot Number: MYAQ071003 Age at test initiation: 4 days Age range: 24hrs

Original Number of Organisms Acclimated:

Acclimation Initiated:
*Date:* 7/11/03 *Time:* 1000 *Ti °C:* 22.6 *pHi* 8.36 *D.O.i* 8.1 *Sal.i* 24.1ppt

Acclimation Terminated:
*Date:* 7/14/03 *Time:* 1500 *Tf °C:* 20.1 *pHf* 8.14 *D.O.f* 7.9 *Sal.f* 25.0ppt

Time Organisms remained in 100% Dilution Water: % Dead:

Time Organisms Added to Test Chambers:

Comments

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7/24/03
DATE

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QC Laboratories

## MORTALITY/BEHAVIORAL OBSERVATIONS INVERTEBRATE TESTS

Study Number: 8/1062287

OBSERVATION TIME FROM T=0

| REP | CONC (%) | 0 hours alive | 0 hours obs | 24 hours alive | 24 hours obs | 48 hours alive | 48 hours obs | 72 hours alive | 72 hours obs | 96 hours alive | 96 hours obs |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1A | Control | 5 | N | 5 | N | 5 | N | 5 | N | 5 | N |
| 1B | | | | | | | | | | | |
| 1C | | | | | | | | | | | |
| 1D | | | | | | | | | | | |
| 2A | 10 fathoms | | | | | | | | | | |
| 2B | | | | | | | | | | | |
| 2C | | | | | | | | | | | |
| 2D | | | | | | | | | | | |
| 3A | 20 | | | | | | | | | | |
| 3B | | | | | | | | 4 | ID | 4 | ID |
| 3C | | | | | | | | 5 | N | 5 | N |
| 3D | | | | | | | | | | | |
| 4A | 40 | | | | | | | | | | |
| 4B | | | | | | | | | | | |
| 4C | | | | | | | | | | | |
| 4D | | | | | | | | | | | |
| 5A | 60 | | | | | | | | | | |
| 5B | | | | | | | | | | | |
| 5C | | | | | | | | | | | |
| 5D | | | | | | | | | | | |
| 6A | 80 | | | | | | | | | | |
| 6B | | | | | | | | 3 | 2D | 3 | 2D |
| 6C | | | | | | | | 3 | 2D | 3 | 2D |
| 6D | | | | | | | | 5 | N | 4 | ID |
| 7A | 100 | | | | | | | 4 | ID | 4 | ID |
| 7B | | | | | | | | 4 | ID | 4 | ID |
| 7C | | | | | | | | 5 | N | 4 | ID |
| 7D | | | | | | | | 4 | 10 | 3 | 2D |
| Signature | | [illegible] | | [illegible] | | [illegible] | | AB | | AB | |
| Date | | 7-14-03 | | 7-15-03 | | 7-16-03 | | 7-17-03 | | 7-18-03 | |
| Renewal Time | | 1600 | | 1500 | | 1355 | | 1435 | | 1415 | |

Observations:

D *Dead: no appendage movement*
F *Fed*
C *Cannibalized*
I *Immobile*

Comments:

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7/24/03
DATE

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# Physical/Chemical Parameters Sheet

Study Number: 8J1062287 Kinbuc

Incubator:

**T=0/24 Hrs**

| % | | temp °C | do mg/l | pH units | Sal ppt | con (x100) umhos |
|---|---|---|---|---|---|---|
| control | initial | 20.1 | 6.5 | 7.70 | 24.2 | 380 |
| | final | 20.1 | 7.3 | 7.90 | 24.6 | 385 |
| 40 fath. | initial | 20.2 | 7.8 | 8.26 | 25.0 | 390 |
| | final | 20.1 | 7.5 | 8.17 | 25.0 | 391 |
| 20 | initial | 20.2 | 7.6 | 8.14 | 24.2 | 379 |
| | final | 20.1 | 7.4 | 8.07 | 24.8 | 387 |
| 40 | initial | 20.3 | 7.7 | 8.34 | 24.3 | 382 |
| | final | 20.2 | 7.6 | 8.14 | 24.8 | 387 |
| 60 | initial | 20.4 | 7.9 | 8.46 | 24.1 | 379 |
| | final | 20.2 | 7.7 | 8.22 | 25.0 | 389 |
| 80 | initial | 20.6 | 8.1 | 8.51 | 24.4 | 383 |
| | final | 20.7 | 7.0 | 8.34 | 24.7 | 386 |
| 100 | initial | 20.1 | 8.2 | 8.71 | 24.2 | 380 |
| | final | 20.2 | 7.5 | 8.50 | 24.6 | 385 |
| | initial | | | | | |
| | final | | | | | |
| Initials | | MW i | MW f | comments | | |
| Date | | 7-14-03 | 7-15-03 | CT030/CT027 | | |
| Time | | 1624 | 1500 | | | |

**T=24/48 Hrs**

| % | | temp °C | do mg/l | pH units | Sal ppt | con (x100) umhos |
|---|---|---|---|---|---|---|
| control | initial | 20.7 | 7.1 | 7.78 | 24.2 | 380 |
| | final | 20.8 | 5.6 | 7.67 | 24.2 | 381 |
| 40 fath. | initial | 20.8 | 7.9 | 8.29 | 24.6 | 387 |
| | final | 20.7 | 5.8 | 7.89 | 24.9 | 391 |
| 20 | initial | 20.9 | 7.6 | 8.23 | 24.9 | 390 |
| | final | 20.7 | 5.8 | 7.79 | 24.5 | 388 |
| 40 | initial | 20.8 | 7.9 | 8.47 | 25.0 | 392 |
| | final | 20.8 | 5.8 | 8.02 | 25.2 | 395 |
| 60 | initial | 20.9 | 8.2 | 8.74 | 25.3 | 397 |
| | final | 20.8 | 5.4 | 8.07 | 24.6 | 385 |
| 80 | initial | 20.7 | 8.6 | 8.86 | 25.6 | 400 |
| | final | 20.7 | 5.6 | 8.20 | 25.4 | 397 |
| 100 | initial | 20.6 | 8.9 | 8.95 | 25.8 | 403 |
| | final | 20.7 | 5.7 | 8.50 | 25.8 | 403 |
| | initial | | | | | |
| | final | | | | | |
| Initials | | MW/KW i | MW f | comments | | |
| Date | | 7-15-03 | 7-16-03 | CT030/CT030 | | |
| Time | | 1503 | 1445 | | | |

**T=48/72 Hrs**

| % | | temp °C | do mg/l | pH units | Sal ppt | con (x100) umhos |
|---|---|---|---|---|---|---|
| Control | initial | 21.0 | 6.9 | 7.75 | 24.0 | 379 |
| | final | 20.2 | 5.3 | 7.63 | 24.5 | 385 |
| 40 fath. | initial | 21.0 | 7.7 | 8.28 | 24.6 | 387 |
| | final | 19.8 | 5.8 | 7.88 | 25.0 | 391 |
| 20 | initial | 21.0 | 7.6 | 8.19 | 24.8 | 389 |
| | final | 19.8 | 5.9 | 7.81 | 24.6 | 386 |
| 40 | initial | 21.0 | 7.7 | 8.42 | 25.1 | 393 |
| | final | 19.8 | 5.8 | 7.99 | 25.4 | 397 |
| 60 | initial | 21.0 | 7.7 | 8.64 | 25.4 | 396 |
| | final | 19.9 | 5.8 | 8.07 | 25.3 | 396 |
| 80 | initial | 21.0 | 7.8 | 8.83 | 25.4 | 396 |
| | final | 20.1 | 6.1 | 8.22 | 25.9 | 405 |
| 100 | initial | 21.2 | 8.0 | 8.92 | 25.4 | 396 |
| | final | 20.0 | 6.1 | 8.37 | 26.1 | 407 |
| | initial | | | | | |
| | final | | | | | |
| Initials | | MW i | KW f | comments | | |
| Date | | 7-16-03 | 7/17/03 | CT027/CT027 | | |
| Time | | 1447 | ~~CT027~~ 1633 | | | |

**T=72/96 Hrs**

| % | | temp °C | do mg/l | pH units | Sal ppt | con (x100) umhos |
|---|---|---|---|---|---|---|
| Control | initial | 21.0 | 7.6 | 7.88 | 24.4 | 383 |
| | final | 20.1 | 5.7 | 7.67 | 24.6 | 386 |
| 40 fath. | initial | 21.0 | 8.1 | 8.29 | 24.0 | 378 |
| | final | 20.1 | 5.8 | 7.93 | 25.0 | 392 |
| 20 | initial | 21.0 | 7.6 | 8.11 | 24.6 | 386 |
| | final | 20.0 | 6.0 | 7.78 | 25.0 | 393 |
| 40 | initial | 21.0 | 7.9 | 8.34 | 24.7 | 388 |
| | final | 20.1 | 5.5 | 7.89 | 25.3 | 395 |
| 60 | initial | 21.0 | 8.1 | 8.57 | 24.8 | 389 |
| | final | 19.9 | 5.7 | 8.04 | 25.5 | 398 |
| 80 | initial | 21.0 | 7.8 | 8.66 | 25.2 | 394 |
| | final | 19.9 | 6.0 | 8.16 | 25.6 | 399 |
| 100 | initial | 21.0 | 8.2 | 8.83 | 25.1 | 393 |
| | final | 19.9 | 6.0 | 8.28 | 26.0 | 405 |
| | initial | | | | | |
| | final | | | | | |
| Initials | | KW i | KW f | comments | | |
| Date | | 7/17/03 | 7/18/03 | CT027/CT030 | | |
| Time | | ~~CT027~~ 1639 | 1453 | | | |

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7/24/03
DATE

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QC Laboratories

# AQUATIC TOXICOLOGY LABORATORY
# CHAIN OF CUSTODY

Study Number: L1062287 Facility Name or Code: U.S. Filter

Test Type: ☑Acute ☐Chronic ☐Sediment ☐Pure Compound ☐Other

Sample Number*: ☑D001 ☐D002 ☐D003 ☐E001 ☐E002 ☐E003 ☐E004 ☐E005 ☐E006

If whole sample is comprised of splits, will the splits be homogenized prior to use: Splits to be homogenized:
(note: if split, assign A, B, C...to sample number---add Z if samples are homogenized.)

Description of Sample: ☑Effluent ☐Non-Contact Cooling Water ☐Contact Cooling Water
☑Dilution Waters ☐Groundwater/pump and treat ☐Other:

Location of Sampling: ☐Final (post treatment) ☐Final-Prechlorinated ☐Final-Chlorinated ☐Outfall Outlet
☐Receiving Waters_____ ☐Other:

Sample type: ☐Grab ☐24 Hour Composite ☐_____Hour Composite
☐Time Proportional ☐Flow Proportional ☐Refrigerated/Iced in Field

Sample Collection:

| Date/Time Initiated: | Date/Time Terminated: |
|---|---|
| | |

Was sampler chain-of-custody seal intact at sample retrieval: ☐Yes ☐No

Volume of Sample: _____ Liters / Gallons Container Type: ☐FDA Grade Plastic ☐Glass ☐Stainless Steel

Storage and Transport Conditions: ☐Iced/Cooler Temp. (°C) upon collection: _____
☐Field Collected/Transported to Lab ☐Overnight Courier

| Relinquished by Sampler: | Date | Time | Received By: | Date | Time |
|---|---|---|---|---|---|
| | | | Mon Jabt | 7-11-03 | 1400 |
| Relinquished by: | Date | Time | Received By: | Date | Time |
| | | | | | |
| Relinquished by: | Date | Time | Received By: | Date | Time |
| | | | | | |

Condition of Sample upon Receipt: ☑Contained ☑Accepted ☐Compromised / Explain below ☐Rejected / Explain below

Sample Refrigerated (date/time/sig.):

## Sample Data and Use

| Initial Sample Data | | | | | Dates used in Toxicity Test | | Sample | Sample Terminated | |
|---|---|---|---|---|---|---|---|---|---|
| temp (°C) | pH | D.O. (mg/L) | Cond. | TRC (ppm) | Date(s) | Time(s) | Split ID | Date | Time |
| 20.6 | 785 | 7.9 | 38150 | <0.1 | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Sample Manipulations: ☐Salted

☐Aerated/Due to: ☐Supersaturation ☐D.O. < 40% of Sat. / final D.O. after aeration:_____mg/L

☐Dechlorinated _____mgs anhydrous sodium thiosulfate used per liter (show math on below)

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Sample number identification is formed by taking study number+sample number+split letter, i.e., 1234-E001A

QC Laboratories

# AQUATIC TOXICOLOGY LABORATORY
# CHAIN OF CUSTODY

Study Number: L1062287 Facility Name or Code: U.S. Filter

Test Type: ☑Acute ☐Chronic ☐Sediment ☐Pure Compound ☐Other

Sample Number*: ☐D001 ☐D002 ☐D003 ☑E001 ☐E002 ☐E003 ☐E004 ☐E005 ☐E006

If whole sample is comprised of splits, will the splits be homogenized prior to use: Splits to be homogenized:
(note: if split, assign A, B, C...to sample number---add Z if samples are homogenized.)

Description of Sample: ☑Effluent ☐Non-Contact Cooling Water ☐Contact Cooling Water ☐Dilution Waters ☐Groundwater/pump and treat ☐Other:

Location of Sampling: ☑Final (post treatment) ☐Final-Prechlorinated ☐Final-Chlorinated ☐Outfall Outlet ☐Receiving Waters_____ ☐Other:

Sample type: ☐Grab ☑24 Hour Composite ☐_____Hour Composite ☐Time Proportional ☐Flow Proportional ☐Refrigerated/Iced in Field

Sample Collection:

| Date/Time Initiated: | Date/Time Terminated: |
|---|---|
| 7/13/03 1000 | 7/14/03 0900 |

Was sampler chain-of-custody seal intact at sample retrieval: ☑Yes ☐No

Volume of Sample: 2½ Liters / Gallons Container Type: ☑EPA Grade Plastic ☐Glass ☐Stainless Steel

Storage and Transport Conditions: ☑Iced/Cooler ☑Field Collected/Transported to Lab Temp. (°C) upon collection: 19.2 ☐Overnight Courier

| Relinquished by Sampler: | Date | Time | Received By: | Date | Time |
|---|---|---|---|---|---|
| [signature] | 7/14/03 | 1600 | Andrea Smith | 7-14-03 | 1600 |
| Relinquished by: | Date | Time | Received By: | Date | Time |
| | | | | | |
| Relinquished by: | Date | Time | Received By: | Date | Time |
| | | | | | |

Condition of Sample upon Receipt: ☑Contained ☑Accepted ☐Compromised / Explain below ☐Rejected / Explain below

Sample Refrigerated (date/time/sig.):

## Sample Data and Use

| Initial Sample Data | | | | | Dates used in Toxicity Test | | Sample | Sample Terminated | |
|---|---|---|---|---|---|---|---|---|---|
| temp (°C) | pH | D.O. (mg/L) | Cond. | TRC (ppm) | Date(s) | Time(s) | Split ID | Date | Time |
| 6.8 | 8.23 | 10.6 | 10,000 | 6.1 | 7-14-03 | 1600 | | 7-15-03 | 800 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Sample Manipulations: ☑Salted

☐Aerated/Due to: ☐Supersaturation ☐D.O. < 40% of Sat. / final D.O. after aeration:_____mg/L

☐Dechlorinated _____mgs anhydrous sodium thiosulfate used per liter (show math on below)

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Sample number identification is formed by taking study number+sample number+split letter, i.e., 1234-E001A

QC Laboratories

# AQUATIC TOXICOLOGY LABORATORY
# CHAIN OF CUSTODY

Study Number: L1062287 Facility Name or Code: U.S. Filter

Test Type: ☑Acute ☐Chronic ☐Sediment ☐Pure Compound ☐Other

Sample Number*: ☐D001 ☐D002 ☐D003 ☐E001 ☑E002 ☐E003 ☐E004 ☐E005 ☐E006

If whole sample is comprised of splits, will the splits be homogenized prior to use: Splits to be homogenized:
(note: If split, assign A, B, C...to sample number---add Z if samples are homogenized.)

Description of Sample: ☑Effluent ☐Non-Contact Cooling Water ☐Contact Cooling Water ☐Dilution Waters ☐Groundwater/pump and treat ☐Other:

Location of Sampling: ☑Final (post treatment) ☐Final-Prechlorinated ☐Final-Chlorinated ☐Outfall Outlet ☐Receiving Waters_____ ☐Other:

Sample type: ☐Grab ☑24 Hour Composite ☐_____Hour Composite ☐Time Proportional ☐Flow Proportional ☐Refrigerated/Iced in Field

Sample Collection:

| Date/Time Initiated: | Date/Time Terminated: |
|---|---|
| 7/14/03 1000 | 7/15/03 0900 |

Was sampler chain-of-custody seal intact at sample retrieval: ☑Yes ☐No

Volume of Sample: 2½ Liters (Gallons) Container Type: ☑FDA Grade Plastic ☐Glass ☐Stainless Steel

Storage and Transport Conditions: ☑Iced/Cooler ☑Field Collected/Transported to Lab ☐Overnight Courier Temp. (°C) upon collection: 18.8

| Relinquished by Sampler: | Date | Time | Received By: | Date | Time |
|---|---|---|---|---|---|
| [signature] | 7/15/03 | 1420 | Andrea Smith | 7-15-03 | 1420 |
| Relinquished by: | Date | Time | Received By: | Date | Time |
| | | | | | |
| Relinquished by: | Date | Time | Received By: | Date | Time |
| | | | | | |

Condition of Sample upon Receipt: ☑Contained ☑Accepted ☐Compromised / Explain below ☐Rejected / Explain below

Sample Refrigerated (date/time/sig.):

## Sample Data and Use

| Initial Sample Data | | | | | Dates used in Toxicity Test | | Sample | Sample Terminated | |
|---|---|---|---|---|---|---|---|---|---|
| temp (°C) | pH | D.O. (mg/L) | Cond. | TRC (ppm) | Date(s) | Time(s) | Split ID | Date | Time |
| 3.9 | 8.27 | 8.4 | 9920 9.92 | <0.1 | 7-15-03 | 1500 | | 7-16-03 | 800 |
| [redacted] | | | | | | | | | |

Sample Manipulations: ☑Sealed

☐Aerated/Due to: ☐Supersaturation ☐D.O. < 40% of Sat. / final D.O. after aeration:_____mg/L

☐Dechlorinated _____mgs anhydrous sodium thiosulfate used per liter (show math on below)

1205 Industrial Blvd., P.O. Box 514, Southampton, PA 18966-0514 Phone: 215-355-3900 Fax: 215-355-7231

Sample number identification is formed by taking study number+sample number+split letter, i.e., 1234-E001A

QC Laboratories

# AQUATIC TOXICOLOGY LABORATORY
# CHAIN OF CUSTODY

Study Number: L062287 Facility Name or Code: U.S. Filter

Test Type: ☑Acute ☐Chronic ☐Sediment ☐Pure Compound ☐Other

Sample Number*: ☐D001 ☐D002 ☐D003 ☐E001 ☐E002 ☑E003 ☐E004 ☐E005 ☐E006

If whole sample is comprised of splits, will the splits be homogenized prior to use: Splits to be homogenized:
(note: If split, assign A, B, C...to sample number---add Z if samples are homogenized.)

Description of Sample: ☑Effluent ☐Non-Contact Cooling Water ☐Contact Cooling Water ☐Dilution Waters ☐Groundwater/pump and treat ☐Other:

Location of Sampling: ☑Final (post treatment) ☐Final-Prechlorinated ☐Final-Chlorinated ☐Outfall Outlet ☐Receiving Waters_____ ☐Other:

Sample type: ☐Grab ☑24 Hour Composite ☐_____Hour Composite ☐Time Proportional ☐Flow Proportional ☐Refrigerated/Iced in Field

Sample Collection:

| Date/Time Initiated: | Date/Time Terminated: |
|---|---|
| 7/15/03 1000 | 7/16/03 0900 |

Was sampler chain-of-custody seal intact at sample retrieval: ☐Yes ☐No

Volume of Sample: 2½ Liters / Gallons Container Type: ☑FDA Grade Plastic ☐Glass ☐Stainless Steel

Storage and Transport Conditions: ☑Iced/Cooler ☑Field Collected/Transported to Lab Temp. (°C) upon collection: 18.0 ☐Overnight Courier

| Relinquished by Sampler: | Date | Time | Received By: | Date | Time |
|---|---|---|---|---|---|
| [signature] | 7/16/03 | 1420 | Andrea Smith | 7-16-03 | 1420 |
| Relinquished by: | Date | Time | Received By: | Date | Time |
| | | | | | |
| Relinquished by: | Date | Time | Received By: | Date | Time |
| | | | | | |

Condition of Sample upon Receipt: ☑Contained ☑Accepted ☐Compromised / Explain below ☐Rejected / Explain below

Sample Refrigerated (date/time/sig.):

## Sample Data and Use

| Initial Sample Data | | | | | Dates used in Toxicity Test | | Sample | Sample Terminated | |
|---|---|---|---|---|---|---|---|---|---|
| temp (°C) | pH | D.O. (mg/L) | Cond. | TRC (ppm) | Date(s) | Time(s) | Split ID | Date | Time |
| 6.5 | 7.86 | 9.1 | 9620 | 20.1 | 7-16-03 | 1355 | | 7-17-03 | 8:00 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Sample Manipulations: ☐Settled

☐Aerated/Due to: ☐Supersaturation ☐D.O. < 40% of Sat. / final D.O. after aeration:_____mg/L

☐Dechlorinated _____mgs anhydrous sodium thiosulfate used per liter (show math on below)

1205 Industrial Blvd., P.O. Box 514, Southampton, PA 18966-0514 Phone: 215-355-3900 Fax: 215-355-7231

Sample number identification is formed by taking study number+sample number+split letter, i.e., 1234-E001A

QC Laboratories

# AQUATIC TOXICOLOGY LABORATORY
# CHAIN OF CUSTODY

Study Number: L1062287 Facility Name or Code: U.S. Filter

Test Type: ☑Acute ☐Chronic ☐Sediment ☐Pure Compound ☐Other

Sample Number*: ☐D001 ☐D002 ☐D003 ☐E001 ☐E002 ☐E003 ☑E004 ☐E005 ☐E006

If whole sample is comprised of splits, will the splits be homogenized prior to use: Splits to be homogenized:
(note: if split, assign A, B, C...to sample number---add Z if samples are homogenized.)

Description of Sample: ☑Effluent ☐Non-Contact Cooling Water ☐Contact Cooling Water ☐Dilution Waters ☐Groundwater/pump and treat ☐Other:

Location of Sampling: ☑Final (post treatment) ☐Final-Prechlorinated ☐Final-Chlorinated ☐Outfall Outlet ☐Receiving Waters_____ ☐Other:

Sample type: ☐Grab ☑24 Hour Composite ☐_____Hour Composite ☐Time Proportional ☐Flow Proportional ☐Refrigerated/Iced in Field

Sample Collection:

| Date/Time Initiated: | Date/Time Terminated: |
|---|---|
| 7/16/03 1000 | 7/17/03 0900 |

Was sampler chain-of-custody seal intact at sample retrieval: ☑Yes ☐No

Volume of Sample: 2½ Liters / Gallons Container Type: ☑EDA Grade Plastic ☐Glass ☐Stainless Steel

Storage and Transport Conditions: ☑Iced/Cooler ☑Field Collected/Transported to Lab Temp. (°C) upon collection: 18.4 ☐Overnight Courier

| Relinquished by Sampler: | Date | Time | Received By: | Date | Time |
|---|---|---|---|---|---|
| [signature] | 7/17/03 | 1430 | Andrea Smith | 7-17-03 | 1430 |
| Relinquished by: | Date | Time | Received By: | Date | Time |
| | | | | | |
| Relinquished by: | Date | Time | Received By: | Date | Time |
| | | | | | |

Condition of Sample upon Receipt: ☑Contained ☑Accepted ☐Compromised / Explain below ☐Rejected / Explain below

Sample Refrigerated (date/time/sig.):

## Sample Data and Use

| Initial Sample Data | | | | | Dates used in Toxicity Test | | Sample Split ID | Sample Terminated | |
|---|---|---|---|---|---|---|---|---|---|
| temp (°C) | pH | D.O. (mg/L) | Cond. | TRC (ppm) | Date(s) | Time(s) | | Date | Time |
| 4.1 | 7.83 | 7.9 | 9850 9.85 | 6.1 | 7-17-03 | 1435 | | 7-18-03 | 800 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Sample Manipulations: ☐Salted

☐Aerated/Due to: ☐Supersaturation ☐D.O. < 40% of Sat. / final D.O. after aeration:_____mg/L

☐Dechlorinated _____mgs anhydrous sodium thiosulfate used per liter (show math on below)

1205 Industrial Blvd., P.O. Box 514, Southampton, PA 18966-0514 Phone: 215-355-3900 Fax: 215-355-7231

Sample number identification is formed by taking study number+sample number+split letter, i.e., 1234-E001A