50-245/336/423

Northeast Utilities System

107 Selden Street, Berlin, CT 06037

Northeast Utilities Service Company
P.O. Box 270
Hartford, CT 06141-0270
(203) 665-5000

May 30, 1997

SES-97-GN-029

D10791

Mr. James Grier
Supervising Sanitary Engineer
Water Management Bureau
Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

Dear Mr. Grier:

Millstone Station
NPDES Permit No. CT0003263
Quarterly Aquatic Toxicity Monitoring Report - April 1997

Northeast Nuclear Energy Company (NNECO) is submitting the Quarterly Aquatic Toxicity Monitoring Report - April 1997 for Millstone Station's Discharge Serial Numbers (DSN) 001A, 001B, 001C, and 006. As discussed below, testing for DSN 001A was performed during the month of May. All tests conducted had either LC50>100% (DSN 006) or NOAEL>100% (DSN 001A, 001B and 001C) and were therefore acceptable with both *Mysidopsis bahia* and *Cyprinodon vareigatus* showing no toxicity.

As previously discussed with the Department, DSN 001A has not had condenser cooling water flow since November 1995. Based on an interpretation that the testing requirement was applicable only when flow was provided by the main condenser cooling water pumps, quarterly toxicity testing has not been performed since October 1995. A review of DSN 001A, for the purposes of NNECO's upcoming NPDES permit renewal application, confirms that, in addition to the flow produced by the circulating water pumps, approximately 65% of Unit 1 service water system cooling water discharges via DSN 001A. The remaining service water discharges via DSN 001A-5.

At a meeting with the Department on May 29, 1997, NNECO advised the Department that it had resumed toxicity testing in May 1997 upon discovery that its NPDES permit was subject to different interpretations. Results of this testing are included in this report. Chemistry analyses will be finished in June and the information will be submitted immediately thereafter. At the May 29, 1997 meeting, it was agreed that NNECO would continue to perform Quarterly Toxicity Testing at this discharge whenever there was flow through DSN 001A. Further, NNECO will be reviewing past submissions to the Department and will make revisions to the extent necessary consistent with the information provided in this letter,

IE25

1/1

During the toxicity sample for Unit 2 (DSN 001B), the intake samples could not be retrieved in time to complete the Surfactant or Total Suspended Solid analyses within the allowed 48 hours. After a conversation with Traci Iott (CT DEP Water Management - Toxicity Section) on April 10, 1997, a second set of chemistry samples from a grab sample were collected for only these two parameters (on April 15, 1997). By agreement, since toxicity tests with both species passed, toxicity testing was not repeated with this sample.

If there are any questions related to these results, please call Mr. Paul Jacobson, Environmental Services - Nuclear at (860) 447-1791 ext. 2335.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

S. E. Scace

Director - Nuclear Engineering Programs

Attachments

cc: DMR Processing
Water Compliance Unit
Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

Department of Environmental Protection
Lee Dunbar
Aquatic Toxicity Section
79 Elm Street
Hartford, CT 06106-5127

NRC
NRC Resident Inspectors

WATER COMPLIANCE UNIT / AQUATIC TOXICITY

AQUATIC TOXICITY MONITORING REPORT (ATMR)

PART 1

Facility Name: NU MILLSTONE (006) NPDES ID: CT0003263
Receiving Water: Niantic Bay Salinity: 28-32 ppt
Basin Code: 2000 Waterbody ID: 2000

Sample Collected On: 4/2 to 4/3/97 (date) from 1200 ~~AM~~/PM to 1100 AM/~~PM~~

I. CALCULATION OF INSTREAM WASTE CONCENTRATION (IWC)

Allocated Zone of Influence Flow Rate = ( ) = (A) 342000 gal/hr

Permitted Average Daily Flow Rate = (B) 18,000 gal/hr

Mean Flow for Previous 30 Operating Days = (C) 4074 gal/hr

Highest Daily Flow for Previous 30 Operating Days = (D) 9204 gal/hr

IWC = (B or C)* / [(B or C)* + A] X 100 = IWC 5 %

* If D/C is greater than 1.25, you must use B, otherwise you may use either.

II. DETERMINATION OF COMPLIANCE

TEST SPECIES	LC50	NOAEL	MAXIMUM DAILY TOXICITY	COMPLIANCE STATUS (PASS/FAIL)
Mysdopsis bahia	>100%	50%	acute = 15% NO KILL	PASS
			chronic = 100% NO KILL	PASS
1			acute =	
			chronic =	

STATEMENT OF ACKNOWLEDGEMENT

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Official: S. E. SCACE Title: DIRECTOR

Signature: [signature] Date: 5/30/97

WATER COMPLIANCE UNIT / AQUATIC TOXICITY

AQUATIC TOXICITY MONITORING REPORT (ATMR)

PART 1

Facility Name: MILLSTONE/NU DSN 001A NPDES ID: CT

Receiving Water: ~~Quarry to Niantic Bay~~ Hardness: --- mg/l

Basin Code: 2000 Waterbody ID: 2000

Sample Collected On: 5/18-19/97 (date) from 0600 AM/~~PM~~ to 0600 AM/~~PM~~

I. TOXICITY SCREENING TEST SUMMARY

1. CONTROL SAMPLE RESULTS

		rep1	rep2	rep3
Percent survival:	Mysidopsis bahia	100 %	100 %	100 %
	Cyprinodon variegatus ..	100 %	100 %	100 %

If less than 90% survival is recorded for one or more replicate controls, a second effluent sample must be collected and the test procedure repeated. The results for both samples should be submitted to the DEP on separate forms.

2. EFFLUENT SAMPLE RESULTS

Mean Percent Survival: (in % effluent)	Mysidopsis bahia	96 %
	Cyprinodon variegatus ...	100 %

If the mean percent survival for either or both species is less than 90%, the effluent is considered toxic and a second effluent sample must be collected and the test procedure repeated within thirty (30) days. The results for both samples should be submitted to the DEP on separate forms.

STATEMENT OF ACKNOWLEDGEMENT

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Authorized Official: S. E. SCACE Title: DIRECTOR

Signature: S. E. Scace Date: 5/30/97

WATER COMPLIANCE UNIT / AQUATIC TOXICITY

AQUATIC TOXICITY MONITORING REPORT (ATMR)

PART 1

Facility Name: MILLSTONE/MU DSN 001B NPDES ID: CT
Receiving Water: Quarry to Niantic Bay Hardness: --- mg/l
Basin Code: 2000 Waterbody ID: 2000

Sample Collected On: 4/3 to 4/4/97 (date) from 1030 AM/PM to 1130 AM/PM

I. TOXICITY SCREENING TEST SUMMARY

1. CONTROL SAMPLE RESULTS

		rep1	rep2	rep3
Percent survival:	Mysidopsis bahia.....	90 %	90 %	100 %
	Cyprinodon variegatus...	100 %	100 %	100 %

If less than 90% survival is recorded for one or more replicate controls, a second effluent sample must be collected and the test procedure repeated. The results for both samples should be submitted to the DEP on separate forms.

2. EFFLUENT SAMPLE RESULTS

Mean Percent Survival: (in % effluent)	Mysidopsis bahia.....	98 %
	Cyprinodon variegatus ...	100 %

If the mean percent survival for either or both species is less than 90%, the effluent is considered toxic and a second effluent sample must be collected and the test procedure repeated within thirty (30) days. The results for both samples should be submitted to the DEP on separate forms.

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Authorized Official: S. E. SCACE Title: DIRECTOR

Signature: S. E. Scace Date: 5/30/97

WATER COMPLIANCE UNIT / AQUATIC TOXICITY

AQUATIC TOXICITY MONITORING REPORT (ATMR)

PART 1

Facility Name: MILLSTONE/NU DSN 001C NPDES ID: CT

Receiving Water: Quarry to Niantic Bay Hardness: --- mg/l

Basin Code: 2000 Waterbody ID: 2000

Sample Collected On: 4/5/97 (date) from 0200 AM/PM to 1430 AM/PM

I. TOXICITY SCREENING TEST SUMMARY

1. CONTROL SAMPLE RESULTS

		rep1	rep2	rep3
Percent survival:	Mysidopsis bahia	100 %	100 %	100 %
	Cyprinodon variegatus..	100 %	100 %	100 %

If less than 90% survival is recorded for one or more replicate controls, a second effluent sample must be collected and the test procedure repeated. The results for both samples should be submitted to the DEP on separate forms.

2. EFFLUENT SAMPLE RESULTS

Mean Percent Survival: (in % effluent)	Mysidopsis bahia	98 %
	Cyprinodon variegatus...	100 %

If the mean percent survival for either or both species is less than 90%, the effluent is considered toxic and a second effluent sample must be collected and the test procedure repeated within thirty (30) days. The results for both samples should be submitted to the DEP on separate forms.

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Authorized Official: S. E. SCACE Title: DIRECTOR

Signature: S. E. Scace Date: 5/30/97

Aquatic Toxicity Monitoring Report
Millstone Station DSN 001B 001C and 006
April 1997

NPDES Permit No. CT0003263
Millstone Station
Northeast Nuclear Energy Company

Prepared by: Raymond O. Heller 5-28-97
Approved by: [illegible] 5/28/97

AQUATIC TOXICITY MONITORING REPORT : PART 2

Facility Name: NORTHEAST UTILITIES MILLSTONE STATION DSN 006 NPDES ID: CT0003263 Salinity: 29 ppt Test temperature: 20°C +2 Dilution Water Source: Long Island Sound (Jordan Cove - Filtered) Sample Collected On: 4/2/97(1200)- 4/3/97(1100) (date) Sample Received On: 4/3/97 (date) Test Species: *Mysidopsis bahia* Source: NUEL Stock Age: <5 days Testduration: 48 hours Beginning: 1550 (PM) On: 4/3/97 (date) End: 1656(PM) On: 4/5/97 (date)

EFFLUENT DILUTION (%)	Number Organisms Surviving					Dissolved Oxygen (mg/l)					Temperature					pH				
hour	00	24	48	72	96	00	24	48	72	96	00	24	48	72	96	00	24	48	72	96
100%-1	10	9	8			8.1	7.9	6.9			21.2	21.7	21.6			9.0	9.0	8.8		
100%-2	10	10	9			8.1	7.9	5.6			21.2	21.7	22.2			9.0	9.0	8.4		
75%-1	10	10	9			7.3	7.8	7.2			21.4	21.7	21.6			8.8	8.9	8.7		
75%-2	10	8	8			7.3	7.8	5.8			21.4	21.7	22.0			8.8	8.9	8.3		
63%-1	10	9	8			7.3	7.6	7.2			21.5	21.7	21.6			8.8	8.8	8.6		
63%-2	10	10	10			7.3	7.6	5.7			21.5	21.7	22.1			8.8	8.8	8.3		
50%-1	10	10	8			7.4	7.5	7.2			21.5	21.7	21.6			8.7	8.7	8.5		
50%-2	10	10	10			7.4	7.5	6.0			21.5	21.7	22.0			8.7	8.7	8.2		
25%-1	10	9	9			7.2	7.5	7.2			21.7	21.7	21.6			8.5	8.5	8.4		
25%-2	10	10	10			7.2	7.5	5.4			21.7	21.7	22.0			8.5	8.5	8.1		
CONTROL (0%)-1	10	10	10			7.8	7.7	7.9			21.7	21.7	21.5			8.2	8.3	8.2		
CONTROL (0%)-2	10	10	10			7.8	7.7	6.2			21.7	21.7	22.0			8.2	8.3	7.8		

LC_{50}	95% CONFIDENCE INTERVAL	NOAEL	COMPUTATIONAL METHOD
>100%		50%	

Persons conducting test: ROH

Facility Name: NORTHEAST UTILITIES MILLSTONE STATION DSN 001B NPDES ID: CT0003263 Salinity: 29 ppt Test temperature: 20°C±2 Sample Collected On:4/3/97 (1030)4/4/97(1130) date Sample Received On: 4/4/97 (date) Dilution Water Source: Long Island Sound (Jordan Cove) Test Species:*Mysidopsis bahia* Source: NUEL Stock Age: 1-5 days Test duration: 48 hours Beginning: 1310 (PM) On: 4/4/97 (date) End: 1338 (PM) On: 4/6/97 (date)

EFFLUENT DILUTION (%)	Number Organisms Surviving					Dissolved Oxygen (mg/l)					Temperature					pH				
hour	0	24	48	72	96	00	24	48	72	96	00	24	48	72	96	00	24	48	72	96
100%-1	10	10	10			8.8	8.0	7.1			21.5	21.6	21.5			8.2	8.3	8.2		
100%-2	10	10	10			8.8	8.0	5.7			21.5	21.6	21.3			8.2	8.3	7.8		
100%-3	10	10	10			8.8	8.0	5.4			21.5	21.6	21.3			8.2	8.3	7.8		
100%-4	10	10	10			8.8	8.0	5.1			21.5	21.6	21.3			8.2	8.3	7.8		
100%-5	10	9	9			8.8	8.0	4.9			21.5	21.6	21.3			8.2	8.3	7.8		
CONTROL (0%)-1	10	10	9			7.6	7.9	7.5			22.0	21.5	21.5			8.2	8.2	8.2		
CONTROL (0%)-2	10	10	9			7.6	7.9	5.1			22.0	21.5	22.5			8.2	8.2	7.8		
CONTROL (0%)-3	10	10	10			7.6	7.9	4.7			22.0	21.5	21.5			8.2	8.2	7.7		

MEAN SAMPLE SURVIVAL (%)	CONTROL SURVIVAL	1	2	3
((A+B+C+D+E) / 5) * 10 =98%		90%	90%	100%

Persons conducting test:ROH

Facility Name: NORTHEAST UTILITIES MILLSTONE STATION DSN 001B NPDES ID: CT0003263 Salinity: 29 ppt Test temperature: 20°C±2 Sample Collected On: 4/3-4/97 (1030-1130 (date) Sample Received On: 4/4/97 (date) Dilution Water Source: Long Island Sound (Jordan Cove) Test Species: *Cyprinodon variegatus* Source: Cosper Environmental Services Inc. Age: 26 days Test duration: 96 hours Beginning: 1325 (PM) On: 4/4/97 (date) End: 1334 (PM) On: 4/8/97 (date)

EFFLUENT DILUTION (%)	Number Organisms Surviving					Dissolved Oxygen (mg/l)					Temperature					pH				
hour	0	24	48	72	96	00	24	48	72	96	00	24	48	72	96	00	24	48	72	96
100%-1	10	10	10	10	10	8.8	8.0	7.1	6.7	7.0	21.5	21.6	21.5	21.7	22.0	8.2	8.3	8.2	8.2	8.2
100%-2	10	10	10	10	10	8.8	8.0	7.1	6.7	5.6	21.5	21.6	21.5	21.7	22.0	8.2	8.3	8.2	8.2	8.2
100%-3	10	10	10	10	10	8.8	8.0	7.1	6.7	5.5	21.5	21.6	21.5	21.7	22.0	8.2	8.3	8.2	8.2	8.2
100%-4	10	10	10	10	10	8.8	8.0	7.1	6.7	5.5	21.5	21.6	21.5	21.7	22.0	8.2	8.3	8.2	8.2	8.2
100%-5	10	10	10	10	10	8.8	8.0	7.1	6.7	5.7	21.5	21.6	21.5	21.7	21.9	8.2	8.3	8.2	8.2	8.2
CONTROL (0%)-1	10	10	10	10	10	7.6	7.9	7.5	6.8	7.1	22.0	21.5	21.5	21.7	22.1	8.2	8.2	8.2	8.2	8.1
CONTROL (0%)-2	10	10	10	10	10	7.6	7.9	7.5	6.8	5.8	22.0	21.5	21.5	21.7	22.0	8.2	8.2	8.2	8.2	8.6
CONTROL (0%)-3	10	10	10	10	10	7.6	7.9	7.5	6.8	5.9	22.0	21.5	21.5	21.7	21.9	8.2	8.2	8.2	8.2	8.7

MEAN SAMPLE SURVIVAL (%)	CONTROL SURVIVAL	1	2	3
((A+B+C+D+E) / 5) * 10 =100%		100%	100%	100%

Persons conducting test: ROH

AQUATIC TOXICITY MONITORING REPORT : PART 2

Facility Name: NORTHEAST UTILITIES MILLSTONE STATION DSN 001C NPDES ID: CT0003263 Salinity: 29pt Test temperature: 20°C±2 Sample Collected On: 4/5/97 (0200-1430) (date) Sample Received On: 4/5/97 (date) Dilution Water Source: Long Island Sound (Jordan Cove) Test Species: *Mysidopsis bahia* Source: NUEL Stock Age: <5 days Test duration: 48 hours Beginning: 1607 (PM) On: 4/5/97 (date) End: 1555 (PM) On: 4/7/97 (date)

EFFLUENT DILUTION (%)	Number Organisms Surviving					Dissolved Oxygen (mg/l)					Temperature					pH				
hour	0	24	48	72	96	00	24	48	72	96	00	24	48	72	96	00	24	48	72	96
100%-1	10	10	9			9.1	7.3	7.1			22.0	21.7	21.7			8.1	8.3	8.3		
100%-2	10	10	10			9.1	7.3	6.3			22.0	21.7	21.7			8.1	8.3	7.8		
100%-3	10	10	10			9.1	7.3	6.3			22.0	21.7	21.7			8.1	8.3	7.8		
100%-4	10	10	10			9.1	7.3	6.1			22.0	21.7	21.7			8.1	8.3	7.8		
100%-5	10	10	10			9.1	7.3	6.2			22.0	21.7	21.7			8.1	8.3	7.9		
CONTROL (0%)-1	10	10	10			7.9	7.5	6.8			21.5	21.5	21.7			8.2	8.2	8.2		
CONTROL (0%)-2	10	10	10			7.9	7.5	5.9			21.5	21.5	21.7			8.2	8.2	7.8		
CONTROL (0%)-3	10	10	10			7.9	7.5	6.0			21.5	21.5	21.7			8.2	8.2	7.8		

MEAN SAMPLE SURVIVAL (%)	CONTROL SURVIVAL	1	2	3
((A+B+C+D+E) / 5) * 10 =98%		100%	100%	100%

Persons conducting test: ROH

Facility Name: NORTHEAST UTILITIES MILLSTONE STATION DSN 001C NPDES ID: CT0003263 Salinity: 29 pt Test temperature: 20°C±2 Sample Collected On: 4/5/97 (0200-1430) date) Sample Received On: 4/5/97 (date) Dilution Water Source: Long Island Sound (Jordan Cove) Test Species: *Cyprinodon variegatus* Source: Cosper Environmental Services Inc. Age: 27 days Test duration: 96 hours Beginning: 1616 (PM) On: 4/5/97 (date) End: 1610 (PM) On: 4/9/97 (date)

EFFLUENT DILUTION (%)	Number Organisms Surviving					Dissolved Oxygen (mg/l)					Temperature					pH				
hour	0	24	48	72	96	00	24	48	72	96	00	24	48	72	96	00	24	48	72	96
100%-1	10	10	10	10	10	9.1	7.3	7.1	6.6	6.7	22.0	21.7	21.7	22.0	22.0	8.1	8.3	8.3	8.2	8.0
100%-2	10	10	10	10	10	9.1	7.3	7.1	6.6	5.5	22.0	21.7	21.7	22.0	22.2	8.1	8.3	8.3	8.2	7.8
100%-3	10	10	10	10	10	9.1	7.3	7.1	6.6	5.6	22.0	21.7	21.7	22.0	22.1	8.1	8.3	8.3	8.2	7.8
100%-4	10	10	10	10	10	9.1	7.3	7.1	6.6	5.6	22.0	21.7	21.7	22.0	22.2	8.1	8.3	8.3	8.2	7.8
100%-5	10	10	10	10	10	9.1	7.3	7.1	6.6	5.6	22.0	21.7	21.7	22.0	22.2	8.1	8.3	8.3	8.2	7.8
CONTROL (0%)-1	10	10	10	10	10	7.9	7.5	6.8	7.1	6.9	21.5	21.5	21.7	22.1	22.1	8.2	8.2	8.2	8.1	8.0
CONTROL (0%)-2	10	10	10	10	10	7.9	7.5	6.8	7.1	5.9	21.5	21.5	21.7	22.1	22.2	8.2	8.2	8.2	8.1	7.8
CONTROL (0%)-3	10	10	10	10	10	7.9	7.5	6.8	7.1	5.8	21.5	21.5	21.7	22.1	22.2	8.2	8.2	8.2	8.1	7.8

MEAN SAMPLE SURVIVAL (%)	CONTROL SURVIVAL	1	2	3
((A+B+C+D+E) / 5) * 10 =100%		100%	100%	100%

Persons conducting test: ROH

AQUATIC TOXICITY MONITORING REPORT : PART 2

Facility Name: NORTHEAST UTILITIES MILLSTONE STATION DSN 001A NPDES ID:CT0003263 Salinity: 28 ppt Test temperature: 20°C±2 Sample Collected On: 5/18/97-5/19/97 (0600-0600) (date) Sample Received On: 5/19/97 (date) Dilution Water Source:Long Island Sound (JordanCove) Test Species:*Mysidopsis bahia* Source: NUEL Stock Age:1-5 days

Test duration:48 hours Beginning: 1002 (AM) On: 5 /19/97 (date) End: 1012 (AM) On: 5/21/97 (date)

EFFLUENT DILUTION (%)	Number Organisms Surviving					Dissolved Oxygen (mg/l)					Temperature					pH				
hour	0	24	48	72	96	00	24	48	72	96	00	24	48	72	96	00	24	48	72	96
45%-1	10	9	9			6.2	7.4	6.8			20.0	21.1	20.9			8.1	8.0	8.1		
45%-2	10	10	10			6.2	7.4	6.6			20.0	21.1	20.7			8.1	8.0	7.8		
45%-3	10	10	10			6.2	7.4	6.5			20.0	21.1	20.8			8.1	8.0	7.8		
45%-4	10	9	9			6.2	7.4	7.2			20.0	21.1	20.7			8.1	8.0	7.8		
45%-5	10	10	10			6.2	7.4	7.0			20.0	21.1	20.8			8.1	8.0	7.9		
CONTROL (0%)-1	10	10	10			6.2	7.6	7.9			21.2	20.8	20.8			8.2	8.0	7.9		
CONTROL (0%)-2	10	10	10			6.2	7.6	6.4			21.2	20.8	20.9			8.2	8.0	7.9		
CONTROL (0%)-3	10	10	10			6.2	7.6	6.7			21.2	20.8	20.8			8.2	8.0	7.9		

MEAN SAMPLE SURVIVAL (%)	CONTROL SURVIVAL	1	2	3
((A+B+C+D+E) / 5) * 10 =96%		100%	100%	100%

Persons conducting test: ROH DPC

Facility Name: NORTHEAST UTILITIES MILLSTONE STATION DSN 001A NPDES ID: CT0003263 Salinity: 28 ppt Test temperature: 20°C±2 Sample Collected On: 5/18/97-5/19/97 (0600-0600) (date) Sample Received On: 5/19/97 (date) Dilution Water Source: Long Island Sound (Jordan Cove) Test Species: *Cyprinodon variegatus* Source: NUEL Stock Age: 18-25 days Test duration: 96 hours Beginning: 0852 (AM) On: 5/19/97 (date) End: 1012 (AM) On: 5/23/97 (date)

EFFLUENT DILUTION (%)	Number Organisms Surviving					Dissolved Oxygen (mg/l)					Temperature					pH				
hour	0	24	48	72	96	00	24	48	72	96	00	24	48	72	96	00	24	48	72	96
45%-1	10	10	10	10	10	6.2	7.4	6.8	7.0	7.7	20.0	21.1	20.9	20.5	21.0	8.1	8.0	8.1	8.1	8.1
45%-2	10	10	10	10	10	6.2	7.4	6.8	7.0	6.6	20.0	21.1	20.9	20.5	20.3	8.1	8.0	8.1	8.1	7.8
45%-3	10	10	10	10	10	6.2	7.4	6.8	7.0	6.8	20.0	21.1	20.9	20.5	20.3	8.1	8.0	8.1	8.1	7.9
45%-4	10	10	10	10	10	6.2	7.4	6.8	7.0	6.6	20.0	21.1	20.9	20.5	20.2	8.1	8.0	8.1	8.1	7.9
45%-5	10	10	10	10	10	6.2	7.4	6.8	7.0	6.4	20.0	21.1	20.9	20.5	20.2	8.1	8.0	8.1	8.1	7.8
CONTROL (0%)-1	10	10	10	10	10	6.2	7.6	7.9	8.1	7.6	21.2	20.8	20.8	20.6	20.9	8.2	8.0	7.9	8.0	8.1
CONTROL (0%)-2	10	10	10	10	10	6.2	7.6	7.9	8.1	5.5	21.2	20.8	20.8	20.6	20.3	8.2	8.0	7.9	8.0	7.6
CONTROL (0%)-3	10	10	10	10	10	6.2	7.6	7.9	8.1	5.2	21.2	20.8	20.8	20.6	20.3	8.2	8.0	7.9	8.0	7.7

MEAN SAMPLE SURVIVAL (%)	CONTROL SURVIVAL	1	2	3
((A+B+C+D+E) / 5) * 10 =100%		100%	100%	100%

Persons conducting test: ROH JMV

Reference Toxicant Results

SPECIES	*DATE*	*TOXICANT*	*SOURCE*	*LC50*
Mysidopsis bahia	3-31-97 4-7-97 4-15-97 5-19-97	Sodium Dodecyl Sulfate	Fisher Sci.	14.9 ppm (12.9-17.2) 8.6 ppm (5.0-14.7) 16.4 ppm (13.3-23.4) 14.41 ppm (10.41-19.94)
Cyprinodon variegatus	3-31-97 5-19-97	Sodium Dodecyl Sulfate	Fisher Sci.	4.9 ppm (4.0-6.0) 7.75 ppm (6.0-10.0)

Comments

Statement of Acknowledgement

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the testing protocol described in EPA 600/4-85/013 and Sections 22a-430-3 and 22a-430-4 of the Regulations of Connecticut State Agencies except as noted above. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

Authorized Official:Milan Keser

Title: Manager - Northeast Utilities Environmental Laboratory

Signature: Milan Keser

Date: 5/28/97

Aquatic Toxicity Monitoring Report: Part 3

Facility Name: Millstone DSN: 001B NPDES: CT0003263

Unit 2 Discharge Work Order: 97-0424

Sample Collected On: 04/04/97 Sample Received On: 04/07/97

Chemical Analysis Data

The sample collected for use in toxicity tests run to determine compliance with NPDES permit limits or conditions must be analyzed for the parameters listed below. Enter the results of these analyses in the space provided and attached this form to the ATMR and transmit to DEP using the mailing labels provided.

Report Date: MAy 13, 1997

Parameter	Code	Concentration Effluent	Concentration Intake	Date Analyzed
Total Copper	01042-028	<20 ug/l	<20 ug/l	05/09/97
Total Lead	01051-028	<10 ug/l	<10 ug/l	05/09/97
Total Nickel	01067-028	<10 ug/l	<10 ug/l	05/09/97
Total Zinc	01092-028	<10 ug/l	20 ug/l	05/09/97
NH3	00610-019	<0.02 mg/l	<0.02 mg/l	04/11/97
Total Suspended Solids	00530-019	12.8 mg/l	----- mg/l	04/11/97
Surfactants***	38260-019	1.5 mg/l	---- mg/l	04/04/97
Total Oil & Grease	70030-019	<0.5 mg/l	<0.5 mg/l	04/28/97
Free Available Chlorine**	C0030-028	0.04 ug/l	ug/l	04/04/97
Total Residual Chlorine**	50060-028	0.04 ug/l	ug/l	04/04/97
Free Available Chlorine*	C0030-028	ug/l	ug/l	
pH		8.2 S. U.	---- S. U.	04/04/97

***Analyzed by Envirolab Inc.

* Analyzed at site

** Analyzed by N.U.E.L.

Method: The samples were analyzed following procedures outlined in EPA Publication 600/4-79-020 as follows: Total Suspended Solids: Method 160.2, Oil & Grease: Method 413, Metals: Method 200-7, Surfactant: Method 425.1 Ammonia: Method 350.3, TRO: Method 330.5.

Madhu Shah, Laboratory Supervisor

Mass Certification - MA-071

Conn Cerification - PH-0520

Aquatic Toxicity Monitoring Report: Part 3

Facility Name: Millstone Unit 2 DSN: 001B NPDES: General
Discharge Work Order: 97-0467

Sample Collected On: 04/15/97 Sample Received On: 04/16/97

Chemical Analysis Data

The sample collected for use in toxicity tests run to determine compliance with NPDES permit limits or conditions must be analyzed for the parameters listed below. Enter the results of these analyses in the space provided and attached this form to the ATMR and transmit to DEP using the mailing labels provided.

Report Date: May 13, 1997

Parameter	Code	Concentration Effluent		Concentration Intake		Date Analyzed
Total Copper	01042-028		ug/l		ug/l	
Total Lead	01051-028		ug/l		ug/l	
Total Nickel	01067-028		ug/l		ug/l	
Total Zinc	01092-028		ug/l		ug/l	
NH3	00610-019		mg/l		mg/l	
Total Suspended Solids	00530-019	21.2	mg/l	15.2	mg/l	04/18/97
Surfactants***	38260-019	0.02	mg/l	0.02	mg/l	04/18/97
Total Oil & Grease	70030-019		mg/l		mg/l	
Free Available Chlorine**	C0030-028		ug/l		ug/l	
Total Residual Chlorine*	50060-028		ug/l		ug/l	
Free Available Chlorine*	C0030-028		ug/l		ug/l	
pH			S. U.		S. U.	

* Analyzed at site
** Analyzed by N.U.E.L.

Method: The samples were analyzed following procedures outlined in EPA Publication 600/4-79-020 as follows: Total Suspended Solids: Method 160.2, Oil & Grease: Method 413, Metals: Method 200-7, Surfactant: Method 425.1 Ammonia: Method 350.3, TRC: Method 330.5.

Madhu Shah, Laboratory Supervisor

Mass Certification - MA-071
Conn Cerification - PH-0520

Aquatic Toxicity Monitoring Report: Part 3

Facility Name: Millstone DSN: 001C NPDES: CT0003263
Unit 3 Discharge Work Order: 97-0423

Sample Collected On: 04/05/97 Sample Received On: 04/07/97

Chemical Analysis Data

The sample collected for use in toxicity tests run to determine compliance with NPDES permit limits or conditions must be analyzed for the parameters listed below. Enter the results of these analyses in the space provided and attached this form to the ATMR and transmit to DEP using the mailing labels provided.

Report Date: May 13, 1997

Parameter	Code	Concentration Effluent	Concentration Intake	Date Analyzed
Total Copper	01042-028	<20 ug/l	<20 ug/l	05/09/97
Total Lead	01051-028	<10 ug/l	<10 ug/l	05/09/97
Total Nickel	01067-028	<10 ug/l	<10 ug/l	05/09/97
Total Zinc	010927-028	<10 ug/l	19 ug/l	05/09/97
NH3	00610-019	<0.02 mg/l	<0.02 mg/l	04/11/97
Total Suspended Solids	00530-019	15.2 mg/l	25.1 mg/l	04/11/97
Surfactants	38260-019	0.02 mg/l	0.02 mg/l	04/07/97
Total Oil & Grease	70030-019	<0.5 mg/l	<0.5 mg/l	04/28/97
Free Available Chlorine*	C0030-028	0.10 ug/l	---- ug/l	04/05/97
Free Residual Chlorine**	50060-028	0.02 ug/l	0.09 ug/l	04/05/97
Total Available Chlorine**	C0030-028	0.05 mg/l	0.09 mg/l	04/05/97
pH**		8.1 S.U.	8.2 S.U.	04/05/97

* Analyzed at site
** Analyzed by N.U.E.L.

Method: The samples were analyzed following procedures outlined in EPA Publication 600/4-79-020 as follows: Total Suspended Solids: Method 160.2, Oil & Grease: Method 413, Metals: Method 200-7, Surfactant: Method 425.1 Ammonia: Method 350.3, TRO: Method 330.5.

Madhu Shah, Laboratory Supervisor

Mass Certification - MA-071
Conn Cerification - PH-0520

Aquatic Toxicity Monitoring Report: Part 3

Facility Name: Millstone Unit 3 DSN: 006 NPDES: General

Storm Drain Work Order:

Sample Collected On: 04/03/97 Sample Received On: 04/04/97

Chemical Analysis Data

The sample collected for use in toxicity tests run to determine compliance with NPDES permit limits or conditions must be analyzed for the parameters listed below. Enter the results of these analyses in the space provided and attached this form to the ATMR and transmit to DEP using the mailing labels provided.

Report Date: May 13, 1997

Parameter	Code	Concentration	Mass	Date Analyzed
Total Suspended Solids	019	0.6 mg/l	kg/d	04/04/97
Total Oil & Grease	019	<0.5 mg/l		04/07/97
pH**	012	7.6 SU	kg/d	04/03/97
Total Copper	001	<0.02 mg/l		05/09/97
Total Lead	001	<0.10 mg/l	kg/d	05/09/97
Total Nickel	001	<0.05 mg/l	kg/d	05/09/97
Total Zinc	019	0.10 mg/l	kg/d	05/09/97
Total Residual Chlorine*	019	0.05 mg/l	kg/d	04/03/97
Total Residual Chlorine**	019	0.04 mg/l		04/03/97
Ammonia as N	019	<0.02 mg/l		04/11/97
MBAS	606	0.02 mg/l		04/04/97
Flow	609	gpd		

* Analyzed at site

** Analyzed by N.U.E.L.

Method: The samples were analyzed following procedures outlined in EPA Publication 600/4-79-020 as follows: Total Suspended Solids: Method 160.2, Oil & Grease: Method 413, Metals: Method 200-7, Surfactant: Method 425.1 Ammonia: Method 350.3, TRO: Method 330.5.

Madhu Shah, Laboratory Supervisor

Mass Certification - MA-071

Conn Cerification - PH-0520

MILLSTONE STATION / UNIT 1

MONTHLY WATER QUALITY DATA SUMMARY / DISCHARGE SERIAL NUMBER 001A

= 1 MAR 97/0000 - 31 MAR 97/2345
ITION INTERVAL = MINUTES 00-15 OF EACH HOUR

NGE	FLOW RANGE MAX	FLOW RANGE MIN	FLOW RANGE AVG	CIRC PUMP MAX	CIRC PUMP MIN	MAX TEMP	MIN TEMP	AVG TEMP	SDEV TEMP	MAX DEL T	MIN DEL T	AVG DEL T	SDEV DEL T	MAX HL	MIN HL	AVG HL	SD HL	MRC HL
7.8	12	12	12	0	0	41.7	41.2	41.4	0.1	3.0	2.7	2.8	0.1	17.8	16.3	17.0	0.4	0.8
7.8	12	12	12	0	0	42.1	41.1	41.6	0.3	3.0	2.7	2.9	0.1	18.1	16.2	17.2	0.5	1.8
7.8	12	12	12	0	0	41.6	41.2	41.5	0.1	3.1	2.7	2.9	0.1	18.4	16.3	17.6	0.6	1.0
7.8	24	12	12	0	0	42.2	41.0	41.3	0.3	4.0	2.7	3.0	0.3	37.1	16.1	19.0	4.4	19.2
7.9	12	12	12	0	0	41.6	41.1	41.4	0.2	3.1	2.8	3.0	0.1	18.7	16.7	17.9	0.5	-1.1
7.8	13	12	12	0	0	42.9	41.5	42.1	0.5	3.0	2.7	2.9	0.1	18.9	15.9	17.4	0.6	-1.7
7.8	12	12	12	0	0	42.2	41.0	41.4	0.3	3.0	2.5	2.8	0.1	18.2	15.0	17.0	0.8	1.4
7.8	12	12	12	0	0	41.7	41.2	41.4	0.2	3.1	2.8	2.9	0.1	18.4	16.6	17.5	0.5	1.0
7.8	12	12	12	0	0	41.7	40.9	41.2	0.3	3.3	2.7	3.0	0.2	20.0	16.0	17.8	1.1	-1.8
7.8	12	12	12	0	0	41.7	40.8	41.2	0.3	3.1	1.6	2.8	0.6	18.7	9.7	15.8	3.3	-8.2
7.8	12	12	12	0	0	42.1	41.2	41.6	0.3	3.1	2.4	2.9	0.2	18.7	14.6	17.2	1.0	-2.3
7.8	12	12	12	0	0	42.2	41.2	41.6	0.3	3.2	2.4	2.9	0.2	19.5	14.5	17.4	1.2	2.0
7.7	24	12	12	0	0	41.4	40.2	40.8	0.3	3.3	2.6	2.9	0.2	38.9	15.8	18.0	4.5	20.7
7.8	12	12	12	0	0	41.8	40.6	40.8	0.1	3.2	2.9	3.0	0.1	19.5	17.2	18.1	0.6	1.4
7.7	12	12	12	0	0	41.7	40.9	41.3	0.3	3.1	2.6	2.9	0.1	18.6	14.9	17.2	0.8	-1.4
7.7	14	12	12	0	0	41.4	40.4	40.8	0.3	3.3	2.7	3.1	0.2	21.8	16.1	18.6	1.1	3.6
7.8	12	12	12	0	0	41.3	40.2	40.7	0.3	3.7	2.7	3.1	0.3	22.1	16.0	18.8	1.6	-2.1
7.8	12	12	12	0	0	41.4	40.5	41.1	0.3	3.2	2.4	2.8	0.2	18.8	14.7	17.0	1.4	1.2
7.8	12	12	12	0	0	41.6	41.0	41.3	0.2	3.1	2.6	2.9	0.2	18.6	13.5	17.2	1.3	1.6
7.8	24	12	12	0	0	41.4	41.0	41.2	0.1	3.1	2.9	3.0	0.1	34.5	17.2	18.6	3.4	-16.6
7.7	12	12	12	0	0	42.3	41.0	41.5	0.5	3.5	2.4	2.9	0.3	21.0	14.5	17.3	1.9	-3.2
7.8	12	12	12	0	0	42.3	41.7	42.0	0.2	2.9	2.7	2.8	0.1	17.5	16.1	16.7	0.4	-1.1
7.8	12	12	12	0	0	41.9	40.8	41.4	0.4	3.3	2.5	2.8	0.2	19.7	15.2	17.0	1.1	2.2
7.8	12	12	12	0	0	41.7	40.3	41.1	0.4	3.2	1.8	2.5	0.4	16.9	11.0	14.8	2.4	-2.6
7.8	12	12	12	0	0	41.6	40.9	41.3	0.2	2.7	2.1	2.3	0.1	16.0	12.8	14.0	0.8	1.7
7.8	14	12	12	0	0	42.5	41.4	42.1	0.3	2.3	1.9	2.1	0.1	15.8	11.5	12.8	0.9	-3.0
7.9	12	11	12	0	0	42.6	41.5	41.9	0.4	2.1	1.3	1.9	0.3	12.8	8.1	11.3	1.6	-2.8
7.8	0	0	0	0	0	46.5	41.8	43.9	1.5	5.2	1.7	3.3	1.1	0.1	0.0	0.0	0.0	-0.1
7.9	0	0	0	0	0	47.0	42.3	44.3	1.9	6.1	0.9	3.4	1.8	0.0	0.0	0.0	0.0	0.0
7.9	12	12	12	0	0	43.0	43.0	43.0	0.0	6.1	0.9	3.4	1.8	0.0	0.0	0.0	0.0	0.0
7.9	12	12	12	0	0	43.0	43.0	43.0	0.0	6.1	0.9	3.4	1.8	0.0	0.0	0.0	0.0	0.0
7.7	24	0	11	0	0	47.0	40.2	41.6	0.9	6.1	0.9	2.8	0.6	38.9	0.0	15.5	4.9	20.7

LOWEST AND HIGHEST PH AT DISCHARGE STRUCTURE (PH UNITS)
= LOWEST AND HIGHEST FLOW FROM DISCHARGE STRUCTURE (10**3 GAL/MIN)
= LOWEST AND HIGHEST NUMBER OF CIRC PUMPS OPERATING
= MAXIMUM TEMPERATURE AT DISCHARGE STRUCTURE (DEG F)
= MINIMUM TEMPERATURE AT DISCHARGE STRUCTURE (DEG F)
= AVERAGE TEMPERATURE AT DISCHARGE STRUCTURE (DEG F)
= STANDARD DEVIATION OF TEMPERATURE AT DISCHARGE STRUCTURE (DEG F)
= MAXIMUM TEMPERATURE INCREASE BETWEEN INTAKE AND DISCHARGE (DEG F)
= MINIMUM TEMPERATURE INCREASE BETWEEN INTAKE AND DISCHARGE (DEG F)
= AVERAGE TEMPERATURE INCREASE BETWEEN INTAKE AND DISCHARGE (DEG F)
T = STANDARD DEVIATION OF TEMPERATURE INCREASE BETWEEN INTAKE AND DISCHARGE (DEG F)
MAXIMUM HEAT LOAD OF DISCHARGE WATER (10**6 BTU/HR)
MINIMUM HEAT LOAD OF DISCHARGE WATER (10**6 BTU/HR)
AVERAGE HEAT LOAD OF DISCHARGE WATER (10**6 BTU/HR)
TANDARD DEVIATION OF HEAT LOAD OF DISCHARGE WATER (10**6 BTU/HR)
MAXIMUM RATE OF CHANGE OF HEAT LOAD (HL FOR QUARTER HOUR T MINUS HL FOR QUARTER HOUR T-1/QUARTER HOUR) (10**6 BTU/HR**2)
S MISSING OR INSUFFICIENT DATA (LESS THAN 12 HRS/DAY OF VALID HOURLY DATA; LESS THAN 360 HRS/MONTH OF VALID HOURLY DATA)

MILLSTONE STATION / UNIT 2

MONTHLY WATER QUALITY DATA SUMMARY / DISCHARGE SERIAL NUMBER 0018

DATA PERIOD = 1 MAR 97/0000 - 31 MAR 97/2345
DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR

DAY	PH RANGE	FLOW RANGE			CIRC PUMP		MAX TEMP	MIN TEMP	AVG TEMP	SDEV TEMP	MAX DEL T	MIN DEL T	AVG DEL T	SDEV DEL T	MAX HL	MIN HL	AVG HL	SD HL
		MAX	MIN	AVG	MAX	MIN												
1	6.8- 7.8	274	12	159	2	0	42.3	40.1	41.1	0.8	2.7	0.4	1.2	0.9	175.8	11.5	48.5	28.
2	6.8- 7.9	274	274	274	2	2	40.9	39.9	40.5	0.3	0.7	0.4	0.5	0.1	89.7	52.7	71.4	9.
3	6.8- 7.9	286	274	277	2	2	40.6	39.9	40.3	0.2	0.6	0.2	0.5	0.1	81.8	35.6	65.5	12.
4	6.8- 7.9	286	24	275	2	0	40.4	39.6	40.1	0.3	0.6	0.1	0.4	0.1	93.1	5.8	60.5	17.
5	7.9- 7.9	24	24	24	0	0	42.1	40.9	41.8	0.7	2.2	1.2	2.0	0.7	39.1	15.2	24.5	8
6	8.0- 7.9	24	24	24	0	0	43.0	41.4	42.2	0.5	1.9	1.1	1.6	0.1	22.4	16.1	19.2	1.
7	8.0- 7.9	24	24	24	0	0	42.7	41.2	41.6	0.3	2.0	1.5	1.7	0.2	24.3	17.7	20.9	1.
8	7.9- 7.9	24	24	24	0	0	41.8	41.3	41.5	0.2	1.8	1.9	1.7	0.1	21.6	17.9	20.0	1.
9	8.0- 7.8	24	24	24	0	0	41.7	41.0	41.3	0.2	1.9	0.8	1.6	0.2	22.5	10.0	19.3	2.
10	7.9- 7.8	24	24	24	0	0	41.8	40.8	41.3	0.3	2.4	1.6	1.8	0.2	28.9	18.6	22.1	2.
11	7.9- 7.8	24	24	24	0	0	42.4	41.3	41.7	0.3	1.9	1.4	1.7	0.1	23.0	16.7	20.4	1.
12	8.0- 7.9	24	24	24	0	0	42.1	41.2	41.7	0.2	1.9	1.2	1.7	0.2	23.1	14.1	20.7	2.
13	8.0- 7.8	286	24	171	2	0	41.4	38.9	40.1	0.7	1.7	0.2	1.0	0.5	120.0	7.1	57.6	40.
14	7.9- 7.8	24	24	24	0	0	41.2	40.5	40.8	0.2	1.8	1.4	1.6	0.1	22.2	16.9	19.2	1.
15	7.9- 7.8	24	24	24	0	0	41.8	41.0	41.4	0.3	2.0	1.6	1.8	0.1	23.6	19.4	21.2	1.
16	7.9- 7.8	24	24	24	0	0	41.4	40.6	40.9	0.2	1.9	1.4	1.6	0.1	22.3	16.8	19.7	1.
17	7.9- 7.8	153	24	35	1	0	41.3	38.9	40.7	0.4	2.0	0.6	1.5	0.3	47.8	13.2	21.1	6.
18	7.9- 7.8	286	24	163	2	0	41.5	38.4	40.4	0.8	1.7	0.3	0.9	0.5	128.2	10.1	61.4	39.
19	7.9- 7.8	24	24	24	0	0	42.7	40.9	41.6	0.5	3.3	1.5	2.0	0.6	39.0	18.2	23.6	7.
20	7.9- 7.8	24	24	24	0	0	41.6	40.7	41.2	0.3	2.1	0.9	1.6	0.3	24.9	11.2	18.7	4.
21	8.0- 7.8	24	24	24	0	0	42.4	40.8	41.5	0.5	2.0	1.3	1.8	0.2	23.7	15.1	18.7	1.
22	7.9- 7.8	111	24	28	0	0	42.5	41.7	42.0	0.2	2.0	1.4	1.7	0.1	84.3	17.4	22.6	13.
23	8.0- 7.8	561	285	418	4	2	41.0	38.7	40.3	0.3	0.8	0.2	0.4	0.1	227.4	13.5	100.7	63.
24	8.0- 7.8	286	272	282	2	1	41.1	39.4	40.3	0.3	1.1	0.2	0.8	0.3	151.0	26.9	70.5	39.
25	8.0- 7.8	279	270	274	2	1	41.1	40.2	40.6	0.2	0.7	0.1	0.4	0.1	92.2	19.3	60.2	20.
26	8.0- 7.8	274	271	274	2	1	42.3	40.9	41.7	0.4	0.7	0.3	0.8	0.1	90.2	36.4	64.7	14.
27	8.0- 7.8	274	271	274	2	1	42.4	40.9	41.6	0.5	0.6	0.2	0.4	0.1	87.8	22.0	60.5	15.
28	8.0- 7.9	274	273	274	2	1	43.1	41.4	42.1	0.6	0.8	0.2	0.5	0.1	109.5	28.7	72.4	19.
29	8.0- 7.9	274	273	274	2	1	43.3	42.0	42.5	0.4	0.8	0.0	0.4	0.1	84.5	0.0	57.3	20.
30	8.0- 8.0	286	286	286	2	2	41.0	41.9	42.2	0.5	1.0	0.0	0.5	0.6	283.8	0.0	77.4	91.
31	8.0- 8.0	286	286	286	2	2	41.9	41.2	41.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
MON	8.0- 7.8	561	12	142	4	0	43.3	38.9	41.2	0.8	3.3	0.0	1.2	0.7	283.8	0.0	40.5	34.

PH RANGE = LOWEST AND HIGHEST PH AT DISCHARGE STRUCTURE (PH UNITS)
FLOW RANGE = LOWEST AND HIGHEST FLOW FROM DISCHARGE STRUCTURE (10**3 GAL/MIN)
CIRC PUMP = LOWEST AND HIGHEST NUMBER OF CIRC PUMPS OPERATING
MAX TEMP = MAXIMUM TEMPERATURE AT DISCHARGE STRUCTURE (DEG F)
MIN TEMP = MINIMUM TEMPERATURE AT DISCHARGE STRUCTURE (DEG F)
AVG TEMP = AVERAGE TEMPERATURE AT DISCHARGE STRUCTURE (DEG F)
SDEV TEMP = STANDARD DEVIATION OF TEMPERATURE AT DISCHARGE STRUCTURE (DEG F)
MAX DEL T = MAXIMUM TEMPERATURE INCREASE BETWEEN INTAKE AND DISCHARGE (DEG F)
MIN DEL T = MINIMUM TEMPERATURE INCREASE BETWEEN INTAKE AND DISCHARGE (DEG F)
AVG DEL T = AVERAGE TEMPERATURE INCREASE BETWEEN INTAKE AND DISCHARGE (DEG F)
SDEV DEL T = STANDARD DEVIATION OF TEMPERATURE INCREASE BETWEEN INTAKE AND DISCHARGE (DEG F)
MAX HL = MAXIMUM HEAT LOAD OF DISCHARGE WATER (10**6 BTU/HR)
MIN HL = MINIMUM HEAT LOAD OF DISCHARGE WATER (10**6 BTU/HR)
AVG HL = AVERAGE HEAT LOAD OF DISCHARGE WATER (10**6 BTU/HR)
SD HL = STANDARD DEVIATION OF HEAT LOAD OF DISCHARGE WATER (10**6 BTU/HR)
MRC HL = MAXIMUM RATE OF CHANGE OF HEAT LOAD (HL FOR QUARTER HOUR T MINUS HL FOR QUARTER HOUR T-1/QUARTER HOUR) (10**6 B
**** MEANS MISSING OR INSUFFICIENT DATA (LESS THAN 12 HRS/DAY OF VALID HOURLY DATA) LESS THAN 360 HRS/MONTH OF VALID HOU

MILLSTONE STATION / UNIT 3

MONTHLY WATER QUALITY DATA SUMMARY / DISCHARGE SERIAL NUMBER 001C

ID = 1 MAR 97/0000 - 31 MAR 97/2145
SITION INTERVAL = MINUTES 00-15 OF EACH HOUR

NGE	FLOW RANGE MAX	MIN	AVG	CIRC PUMP MAX	MIN	MAX TEMP	MIN TEMP	AVG TEMP	SDEV TEMP	MAX DEL T	MIN DEL T	AVG DEL T	SDEV DEL T	MAX HL	MIN HL	AVG HL	SD HL	MAX HL
8.1	486	30	334	3	0	40.7	39.5	39.9	0.5	1.1	0.0	0.2	0.4	15.8	0.0	4.0	5.9	-11.4
8.1	35	30	30	0	0	41.2	40.5	40.7	0.2	1.1	0.4	0.8	0.1	15.9	8.4	12.0	2.2	-5.3
8.1	30	30	30	0	0	41.3	40.5	40.8	0.1	1.4	0.8	1.0	0.1	21.0	12.6	15.1	2.1	-5.8
8.1	30	30	30	0	0	40.8	40.4	40.6	0.1	1.3	0.7	1.0	0.2	20.2	10.7	14.3	2.7	6.9
8.1	30	30	30	0	0	40.9	40.6	40.7	0.1	1.2	0.8	0.9	0.1	18.4	11.7	13.9	1.6	3.7
8.1	30	30	30	0	0	41.1	40.8	41.4	0.5	1.1	0.6	0.8	0.1	16.7	9.4	12.1	1.7	4.4
8.0	30	30	30	0	0	41.3	40.3	40.7	0.2	1.1	0.4	0.9	0.2	17.2	6.0	13.6	2.7	6.6
8.0	334	30	207	2	0	40.7	39.5	40.0	0.5	1.0	0.0	0.0	0.4	15.5	0.0	4.4	6.7	-10.3
8.0	30	30	30	0	0	41.0	40.3	40.7	0.2	1.3	0.4	1.0	0.2	19.6	2.1	14.0	3.6	-10.6
8.1	30	30	30	0	0	40.9	40.2	40.5	0.2	1.3	0.8	1.0	0.1	18.5	12.5	15.6	1.8	3.9
8.1	30	30	30	0	0	41.3	40.7	41.0	0.2	1.1	0.9	0.9	0.1	16.7	8.2	13.9	1.8	7.7
8.0	30	30	30	0	0	41.9	40.7	41.0	0.3	1.7	0.4	1.0	0.3	24.9	6.2	15.6	3.8	-18.6
8.1	30	30	30	0	0	40.8	39.9	40.3	0.3	1.7	0.7	1.	0.2	25.9	10.7	17.5	3.5	-8.5
8.1	30	30	30	0	0	40.5	40.1	40.3	0.1	1.6	0.7	1.	0.2	24.2	11.1	15.9	3.1	-8.3
8.1	486	30	309	3	0	40.1	38.8	39.7	0.4	1.1	0.0	0.	0.4	16.5	0.0	6.6	9.5	18.7
8.0	30	30	30	0	0	41.2	40.4	40.8	0.2	1.3	0.6	1.	0.2	21.8	8.4	14.0	4.3	12.3
8.1	30	30	30	0	0	40.9	40.2	40.6	0.2	1.6	1.1	1.	0.2	26.5	16.1	21.0	2.9	-8.3
7.9	30	30	30	0	0	41.2	40.0	40.5	0.3	1.5	0.7	1.	0.2	22.4	10.9	15.0	3.2	-8.1
8.1	30	30	30	0	0	40.8	40.4	40.6	0.1	1.2	0.7	0.9	0.1	17.4	11.1	13.9	1.9	-5.3
8.1	30	30	30	0	0	41.3	40.4	40.6	0.2	1.6	0.7	0.9	0.2	21.9	10.3	13.8	3.1	-12.5
8.1	334	30	65	2	0	41.8	40.1	40.9	0.5	1.4	0.0	0.8	0.3	163.1	0.0	19.9	30.8	-160.1
8.1	334	334	334	2	2	40.4	40.0	40.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8.1	334	334	334	2	2	40.4	39.6	39.9	0.2	0.5	0.6	0.1	0.1	80.0	0.0	11.5	21.7	60.5
8.1	334	334	334	2	2	40.3	39.3	39.8	0.3	0.5	0.0	0.1	0.1	78.5	0.0	14.0	23.1	-78.8
8.1	334	30	209	2	0	40.8	39.7	40.1	0.3	0.2	0.0	0.0	0.1	25.0	0.0	1.6	5.3	-25.0
8.1	30	30	30	0	0	42.3	41.2	41.9	0.4	1.6	0.3	0.7	0.3	23.4	4.2	10.0	2.8	-14.9
8.1	30	30	30	0	0	42.3	41.3	41.8	0.3	1.1	0.0	0.7	0.3	16.5	0.0	9.8	5.2	8.7
8.1	30	30	30	0	0	42.9	41.9	42.3	0.4	1.1	0.1	0.7	0.3	16.1	1.9	10.7	4.4	7.4
8.1	638	30	233	4	0	43.2	41.3	42.1	0.6	1.0	0.0	0.2	0.2	14.9	0.0	2.3	5.0	-14.9
8.1	30	30	30	0	0	43.1	42.1	42.5	0.3	1.5	0.3	0.6	0.4	22.1	5.0	9.6	5.5	-18.2
8.1	30	30	30	0	0	43.2	42.6	42.9	0.1	1.3	0.8	1.1	0.1	18.8	12.3	16.4	2.0	-2.1
7.9	638	30	102	4	0	43.2	38.8	40.8	0.9	2.3	0.0	0.7	0.8	163.1	0.0	12.4	10.3	-160.1

OWEST AND HIGHEST PH AT DISCHARGE STRUCTURE (PH UNITS)
LOWEST AND HIGHEST FLOW FROM DISCHARGE STRUCTURE (10**3 GAL/MIN)
LOWEST AND HIGHEST NUMBER OF CIRC PUMPS OPERATING
MAXIMUM TEMPERATURE AT DISCHARGE STRUCTURE (DEG F)
MINIMUM TEMPERATURE AT DISCHARGE STRUCTURE (DEG F)
VERAGE TEMPERATURE AT DISCHARGE STRUCTURE (DEG F)
= STANDARD DEVIATION OF TEMPERATURE AT DISCHARGE STRUCTURE (DEG F)
= MAXIMUM TEMPERATURE INCREASE BETWEEN INTAKE AND DISCHARGE (DEG F)
= MINIMUM TEMPERATURE INCREASE BETWEEN INTAKE AND DISCHARGE (DEG F)
= AVERAGE TEMPERATURE INCREASE BETWEEN INTAKE AND DISCHARGE (DEG F)
T = STANDARD DEVIATION OF TEMPERATURE INCREASE BETWEEN INTAKE AND DISCHARGE (DEG F)
AXIMUM HEAT LOAD OF DISCHARGE WATER (10**6 BTU/HR)
INIMUM HEAT LOAD OF DISCHARGE WATER (10**6 BTU/HR)
VERAGE HEAT LOAD OF DISCHARGE WATER (10**6 BTU/HR)
ANDARD DEVIATION OF HEAT LOAD OF DISCHARGE WATER (10**6 BTU/HR)
AXIMUM RATE OF CHANGE OF HEAT LOAD (HL FOR QUARTER HOUR T MINUS HL FOR QUARTER HOUR T-1/QUARTER HOUR) (10**6 BTU/HR**2)
MISSING OR INSUFFICIENT DATA (LESS THAN 12 HRS/DAY OF VALID HOURLY DATA/ LESS THAN 360 HRS/MONTH OF VALID HOURLY DATA)