STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NPDES PERMIT MODIFICATION

issued to

Permittee:

University of Connecticut
Marine Science and Technology Center
1080 Shennecossett Road
Groton, CT 06340

Attention: Jason Coite

Location Address:

Avery Point
Groton, CT 06340

Facility ID: 059-010 **Permit ID: CT0028631** **Permit Modification Expires: June 11, 2011**

This permit modification is issued in accordance with section 22a-430 of Chapter 446k, Connecticut General Statutes ("CGS"), section 22a-430-4(p)(5) of the Regulations of Connecticut State Agencies ("RCSA") adopted thereunder, as amended, and Section 402(b) of the Clean Water Act, as amended 33 USC 1251, et. seq., and pursuant to an approval dated September 26, 1973, by the Administrator of the United States Environmental Protection Agency for the State of Connecticut to administer a N.P.D.E.S. permit program.

The Commissioner of Environmental Protection ("the Commissioner") has made a final determination on this permit modification and found that the discharge will not cause pollution of the waters of the state. The Commissioner's decision is based on Application No. 200802673 for permit modification received on November 18, 2008 and the administrative record established in the processing of that application.

University of Connecticut, Marine Science and Technology Center, ("Permittee"), shall comply with all conditions of Permit No. CT0028631 issued on June 12, 2006 with the following modification:

1. Section 4, Table A, associated with DSN 001-1, is hereby replaced and superseded with the attached Table A. Table A is modified to include Aquarium Maintenance Rinse Sea Water, Seawater Bypass and Sand Filter Backflush as part of the wastewater description. In addition, Table A is also modified to include Total Residual Chlorine as a parameter to be monitored for.

2. Section 4 of the current permit is hereby amended to include the attached Table B. Table B reflects the addition of a new second wastewater discharge location (DSN 002-1) associated with aquarium maintenance rinse water at the facility.

3. Section 6(A)(3) is hereby replaced and superseded. See below:

   "(3) The Minimum Levels specified below represent the concentrations at which quantification must be achieved and verified during the chemical analyses for the parameters identified in Section 5 Tables A and B. Analyses for these parameters must include check standards within ten percent of the specified Minimum Level or calibration points equal to or less than the specified Minimum Level.

Parameter	Minimum Level
Copper	5.0 ug/L
Lead	5.0 ug/L
Zinc	20.0 ug/L
Total Residual Chlorine	20.0 ug/L"

Table A

Discharge Serial Number: DSN 001-1 | **Monitoring Location:1**

Wastewater Description: Aquarium Sea Water, Aquarium Maintenance Rinse Sea Water, Sand Filter Backflush and Seawater Bypass.

Monitoring Location Description: 15" P.V.C. Drain outside building.

Discharge is to: The Long Island Sound

PARAMETER	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			Minimum Level Test
		Average Monthly Limit	Maximum Daily Limit	Sample/Reporting Frequency [2]	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample// Reporting Frequency	Sample Type or measurement to be reported	
Aquatic Toxicity, Mysidopsis bahia[3,4] (NOAEL=100%)	%	NA	NA	NR	NA	>90% Survival Rate	Annual	Grab Sample	[5]
Aquatic Toxicity, Menidia beryllina[3,4] (NOAEL=100%)	%	NA	NA	NR	NA	>90% Survival Rate	Annual	Grab Sample	[5]
Flow, Maximum Daily[1]	gpd	NA	720,000	Daily/Monthly	Daily Flow	NA	NR	NA	
Flow, Day of Sampling[1]	gpd	NA	720,000	Monthly	Daily Flow	NA	NR	NA	
Temperature	°F	NA	NA	NR	NA	-----	Monthly	Grab Sample	
pH, Minimum	S.U.	NA	NA	NR	NA	6.0	Continuous/Monthly	Continuous	
pH, Maximum	S.U.	NA	NA	NR	NA	9.0	Continuous/Monthly	Continuous	
Zinc, Total	mg/l	NA	NA	NR	NA	-----	Annual	Grab Sample	[6]
Lead, Total	mg/l	NA	NA	NR	NA	-----	Annual	Grab Sample	[6]
Copper, Total	mg/l		NA	NR	NA	-----	Semi Annual	Grab Sample	[6]
Sulfates	mg/l	NA	NA	NR	NA	-----	Semi Annual	Grab Sample	
Nitrogen, Ammonia (Total N)	mg/l	NA	NA	NR	NA	-----	Semi Annual	Grab Sample	
Nitrogen, Nitrate (Total N)	mg/l	NA	NA	NR	NA	-----	Semi Annual	Grab Sample	
Nitrogen, Nitrite (Total N)	mg/l	NA	NA	NR	NA	-----	Semi Annual	Grab Sample	
Biochemical Oxygen Demand$_5$, (BOD_5)	mg/l	NA	NA	NR	NA	-----	Semi Annual	Grab Sample	
Total Suspended Solids (TSS)	mg/l	NA	NA	NR	NA	-----	Semi Annual	Grab Sample	
Total Residual Chlorine	mg/l	NA	NA	NR	NA	-----	Semi Annual	Grab Sample	[6]

Table Footnotes and Remarks:

Footnotes:
Note: All analysis shall be on the same sample.
[1] For this parameter the Permittee shall maintain at the facility a record of the total flow for each day of discharge and shall report the Maximum Daily Flow for each sampling month.
[2] The first entry in this column is the 'Sample Frequency'. If this entry is not followed by a 'Reporting Frequency' and the 'Sample Frequency' is more frequent than monthly then the 'Reporting Frequency' is monthly. If the 'Sample frequency' is specified as monthly, or less frequent, then the 'Reporting Frequency' is the same as the 'Sample Frequency'
[3] A table indicating tank group, tank use, volume and flow rate, pi/operator and experimental description for the sample day will be attached to the ATMR.
[4] The Results of the Toxicity Tests are recorded in % survival based on criteria in Section 6(B) of this permit.
[5] See Section 6(B).
[6] See Section 6(A).

Remarks:
1. The Permittee shall record and report the maximum and minimum pH values for each month. All daily pH results shall be kept on-site.
2. The Permittee shall not discharge any wastewaters associated with floor washing to the Long Island Sound. This wastewater shall be collected and discharged to the sanitary sewer.

Table B

Discharge Serial Number: DSN 002-1 | **Monitoring Location:1**

Wastewater Description: Aquarium Sea Water, Aquarium Maintenance Rinse Sea Water.

Monitoring Location Description: Effluent pipe discharging directly to the Long Island Sound.

Discharge is to: The Long Island Sound

PARAMETER	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			Minimum Level Test
		Average Monthly Limit	Maximum Daily Limit	Sample/Reporting Frequency [2]	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample// Reporting Frequency	Sample Type or measurement to be reported	
Aquatic Toxicity, Mysidopsis bahia [3,4] (NOAEL=100%)	%	NA	NA	NR	NA	>90% Survival Rate	Annual	Grab Sample	5
Aquatic Toxicity, Menidia beryllina[3,4] (NOAEL=100%)	%	NA	NA	NR	NA	>90% Survival Rate	Annual	Grab Sample	5
Flow, Maximum Daily[1]	gpd	NA	54,600	Daily/Monthly	Daily Flow	NA	NR	NA	
Flow, Day of Sampling[1]	gpd	NA	54,600	Monthly	Daily Flow	NA	NR	NA	
Temperature	°F	NA	NA	NR	NA	-----	Monthly	Grab Sample	
pH	S.U	NA	NA	NR	NA	6.0 – 9.0	Monthly	Grab Sample	
Zinc, Total	mg/l	NA	NA	NR	NA	-----	Annual	Grab Sample	6
Lead, Total	mg/l	NA	NA	NR	NA	-----	Annual	Grab Sample	6
Copper, Total	mg/l		NA	NR	NA	-----	Twice per Year[7]	Grab Sample	6
Sulfates	mg/l	NA	NA	NR	NA	-----	Twice per Year[7]	Grab Sample	
Nitrogen, Ammonia (Total N)	mg/l	NA	NA	NR	NA	-----	Twice per Year[7]	Grab Sample	

Nitrogen, Nitrate (Total N)	mg/l	NA	NA	NR	NA	-----	Twice per Year[7]	Grab Sample	
Nitrogen, Nitrite (Total N)	mg/l	NA	NA	NR	NA	-----	Twice per Year[7]	Grab Sample	
Biochemical Oxygen Demand$_5$, (BOD_5)	mg/l	NA	NA	NR	NA	-----	Twice per Year[7]	Grab Sample	
Total Suspended Solids (TSS)	mg/l	NA	NA	NR	NA	-----	Twice per Year[7]	Grab Sample	

Footnotes:

Note: All analysis shall be on the same sample.

[1] For this parameter the Permittee shall maintain at the facility a record of the total flow for each day of discharge and shall report the Maximum Daily Flow for each sampling month.

[2] The first entry in this column is the 'Sample Frequency'. If this entry is not followed by a 'Reporting Frequency' and the 'Sample Frequency' is more frequent than monthly then the 'Reporting Frequency' is monthly. If the 'Sample frequency' is specified as monthly, or less frequent, then the 'Reporting Frequency' is the same as the 'Sample Frequency'

[3] A table indicating tank group, tank use, volume and flow rate, pi/operator and experimental description for the sample day will be attached to the ATMR.

[4] The Results of the Toxicity Tests are recorded in % survival based on criteria in Section 6(B) of this permit.

[5] See Section 6(B).

[6] See Section 6(A).

[7] "Twice per Year", in the context of this sampling frequency, means the sample must be collected in the moths of July and October. If there is no discharge during either of these sampling months, the Permittee shall sample during the next month when discharge exists and submit the results in the monthly DMR. The Permittee shall always indicate, on each monthly DMR, whether this alternative sampling requirement has been triggered.

Remarks:

1. The Permittee shall record and report the maximum and minimum pH values for each month. All daily pH results shall be kept on-site.
2. The Permittee shall not discharge any wastewaters associated with floor washing to the Long Island Sound. This wastewater shall be collected and discharged to the sanitary sewer.
3. The Permittee shall conduct semi-annual discharge monitoring during dry weather conditions only. Dry weather conditions are defined as times when the discharge is not commingled with precipitation, snow melt or ice melt.

The Commissioner hereby authorizes the Permittee to discharge in accordance with the provisions of this permit modification, Permit No. CT0028631, the above referenced application, and all approvals issued by the Commissioner or the Commissioner's authorized agent for the discharges and/or activities authorized by, or associated with, this permit.

The Commissioner reserves the right to make appropriate revisions to the permit in order to establish any appropriate effluent limitations, schedules of compliance, or other provisions that may be authorized under the Clean Water Act or the Connecticut General Statutes or regulations adopted thereunder, as amended. The permit as modified under this paragraph may also contain any other requirements of the Clean Water Act or Connecticut General Statutes or regulations adopted thereunder which are then applicable.

All other terms and conditions of Permit No. CT0028631 issued on June 12, 2006 shall continue in full force and effect.

This modification is hereby issued on July 30, 2010.

Amey W. Marrella
Commissioner

AM/EMW
Permit No. CT0028631
Sent RRR

DATA TRACKING AND TECHNICAL FACT SHEET

Permittee: University of Connecticut, Marine Sciences and Technology Center

PERMIT, ADDRESS, AND FACILITY DATA

PERMIT #: CT0028631 *APPLICATION #: 200802673* *FACILITY ID. 059-010*

Mailing Address:						***Location Address:***					
Street:	*1080 Shennecossett Road*					***Street:***	*1080 Shennecossett Road*				
City:	*Groton*	***ST:***	***CT***	***Zip:***	*06340*	***City:***	*Groton*	***ST:***	***CT***	***Zip:***	*06340*
Contact Name:	*Jason Coite*					*DMR Contact*	*Jason Coite*				
Phone No.:	*(860) 486-9305*					***Phone No.:***	*(860) 486-9305*				

PERMIT INFORMATION

DURATION *5 YEAR _X_* *10 YEAR ___* *30 YEAR _____*

TYPE *New __* *Reissuance __* *Modification _X_*

CATEGORIZATION *POINT (X)* *NON-POINT ( )* *GIS # __*

NPDES (X) *PRETREAT ()* *GROUND WATER(UIC) ( )* *GROUND WATER (OTHER) ( )*

NPDES MAJOR (MA) _____
NPDES SIGNIFICANT MINOR or PRETREAT SIU (SI) _____
NPDES or PRETREATMENT MINOR (MI) ___X___

PRETREAT SIGNIFICANT INDUS USER (SIU) _____
PRETREAT CATEGORICAL (CIU) _____
Note: If it's a CIU then check off SIU

POLLUTION PREVENTION MANDATE __ ENVIRONMENTAL EQUITY ISSUE _____

COMPLIANCE ISSUES

COMPLIANCE SCHEDULE *YES* *NO _X_*

POLLUTION PREVENTION ___ TREATMENT REQUIREMENT____WATER CONSERVATION

WATER QUALITY REQUIREMENT __ *REMEDIATION __* *OTHER _____*

IS THE PERMITTEE SUBJECT TO A PENDING ENFORCEMENT ACTION? NO_X__ YES __

OWNERSHIP CODE

Private __ *Federal __* *State _X_* *Municipal (town only) __* *Other public ____*

DEP STAFF ENGINEER *Ewa Wozniak*

PERMIT FEES

Discharge Code	***DSN***	***Annual Fee***
1060000	*001-1*	*$525*

A Permit Modification fee of $750.00 was submitted by the Permittee.

FOR NPDES DISCHARGES

Drainage basin Code: 2000 *Present/Future Water Quality Standard: SC/SB*

NATURE OF BUSINESS GENERATING DISCHARGE

DSN 001-1 consists of aquarium seawater used for biological oceanography research, aquarium maintenance sea water, sand filter backwash, and seawater bypass.

DSN 002-1 consists of aquarium sea water, aquarium maintenance rinse sea water.

PROCESS AND TREATMENT DESCRIPTION (by DSN)

DSN 001-1 and DSN 002-1: Treatment is not necessary for these discharges.

RESOURCES USED TO DRAFT PERMIT

__ *Federal Effluent Limitation Guideline 40 CFR*
name of category

__ *Performance Standards*

__ *Federal Development Document*
name of category

__ *Treatability Manual*

X *Department File Information*

X *Connecticut Water Quality Standards*

__ *Anti-degradation Policy*

X *Coastal Management Consistency Review Form*

__ *Other - Explain*

BASIS FOR LIMITATIONS, STANDARDS OR CONDITIONS

X *Case-by-Case Determination (See Other Comments)*
DSN 001-1 & DSN 002-1: pH, temperature, total copper, sulfates, total suspended solids

X *In order to meet in-stream water quality (See General Comments)*

GENERAL COMMENTS

The discharge consists of aquarium seawater used solely for the holding of live marine organisms such as microalgae, plankton, vertebrate and invertebrates for marine biology research. Laboratory studies conducted within the facility deal primarily in the area of biological oceanography with topics such as growth, recruitment, competition and behavioral observation. The nature of the work is non-polluting and non-invasive, which does not involve chemical input or chemical manipulation of the discharge water stream. Hence, there is no need to include water quality based discharge limitations in this permit. A monitoring requirement is included in this permit for temperature, pH, zinc, lead, copper, sulfates, ammonia, nitrates, nitrites, total suspended solids and Biochemical Oxygen Demand$_5$ (BOD_5) consistent with the Connecticut Water Quality Standards and Criteria. The discharge is not anticipated to have any significant impact on water quality.

OTHER COMMENTS

This permit contains pH and aquatic toxicity effluent limitations consistent with a Case-by-Case Determination using the criteria of Best Professional Judgement as noted above.

On November 18, 2008 the Department received a permit modification application from the Permittee (UConn) requesting to have an additional discharge outlet (DSN 002-1) as well as additional wastewater types (DSN 001-1) incorporated into the discharge permit. Upon review of this request, it was noted that the Permittee was considering using potable water to clean its laboratory floors and then have this wastewater be discharged to the Long Island Sound through DSN 001-1 and also DSN 002-1. The Department did not allow UConn to discharge this type of floor wash wastewater through internal floor drains. Internal floor drains are a concern to the Department because they could allow for chemicals to be discharged to surface water. This was relayed to the UConn contact person via a telephone conference conducted on November 20, 2009.

As a result of this November 20, 2009 telephone conference, UConn decided to use potable water to clean the floors. However, their wastewaters would be contained, kept out of the floor drain system, collected by using mops, and vacuums and discharged to the sanitary sewer in accordance with the General permit for Discharges of Miscellaneous Sewer Compatible Wastewater.

Flow monitoring for DSN 002-1 will be conducted using a flow meter. An instantaneous flow rate, with a flow meter, will be taken once per day or every time the flow rate is physically changed. The total flow will be calculated using the instantaneous flow rate over the duration that the flow was unaltered.

Anti-degradation does not apply to this permit modification because there has been no change in the discharge volume or constituent concentrations for DSN 001-1. In addition, DSN 002-1 discharge water will not cause an anti-degradation of the Long Island Sound because that discharge does not have any chemical addition. It is simply a flow through system. Therefore, constituent concentrations for DSN 002-1 are unchanged from what is already in the Long Island Sound. Also, the proposed discharge will not result in a significant change in the water quality of the Long Island Sound and the designated uses for the Long Island Sound will be protected.