



University of Connecticut
Administration and Operations Services

Environmental
Health and Safety

MS 16

K-4

Steven Courtemanche
Health Physicist
Commercial and R&D Branch
Division of Nuclear Materials Safety
Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, Pennsylvania 19406-1415

Subject: Response to letter of April 10, 2008 for additional information concerning application for amendment to license, control no. 141666

Docket: 03010576
License No.: 06-01450-47

May 15, 2008

Dear Mr. Courtemanche:

The attached document is our response to your letter requesting additional information concerning the above amendment.

Sincerely,

Chief Robert Hudd
Associate VP for Public and Environmental Safety
University of Connecticut
3102 Horsebarn Hill Road Unit 4097
Storrs, CT 06269-4097

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141 666

NMSS/RGN1 MATERIALS-002

NOANK REPLY

Subject: Response to NRC Request for additional information concerning application for amendment to license, Control No. 141666.

1.a. Please provide the Commission with the total square footage of the Noank Marine Research Laboratory and describe the type of area the facility is in.

Total square footage of the Noank Marine Research Laboratory (NMRL) is estimated at 8000 ft².

*The NMRL is located in a commercial area of Noank bordering the harbor.
[Refer to map of Noank site in Appendix-MAP]*

1b. Your letter indicates that Sung Yen Fang, Ph.D. conducted licensed activities in Rooms 201 and 202 with carbon-14 in an unsealed form. The letter also indicates that Stephen Spotte, Ph.D., used iodine-125 in an unsealed form in an unspecified room.

Please confirm whether any other isotopes were used at the facility, the time frame in which materials were used, the amount of licensed material ordered and used for experiments, and the rooms used by Dr. Spotte and any other researchers.

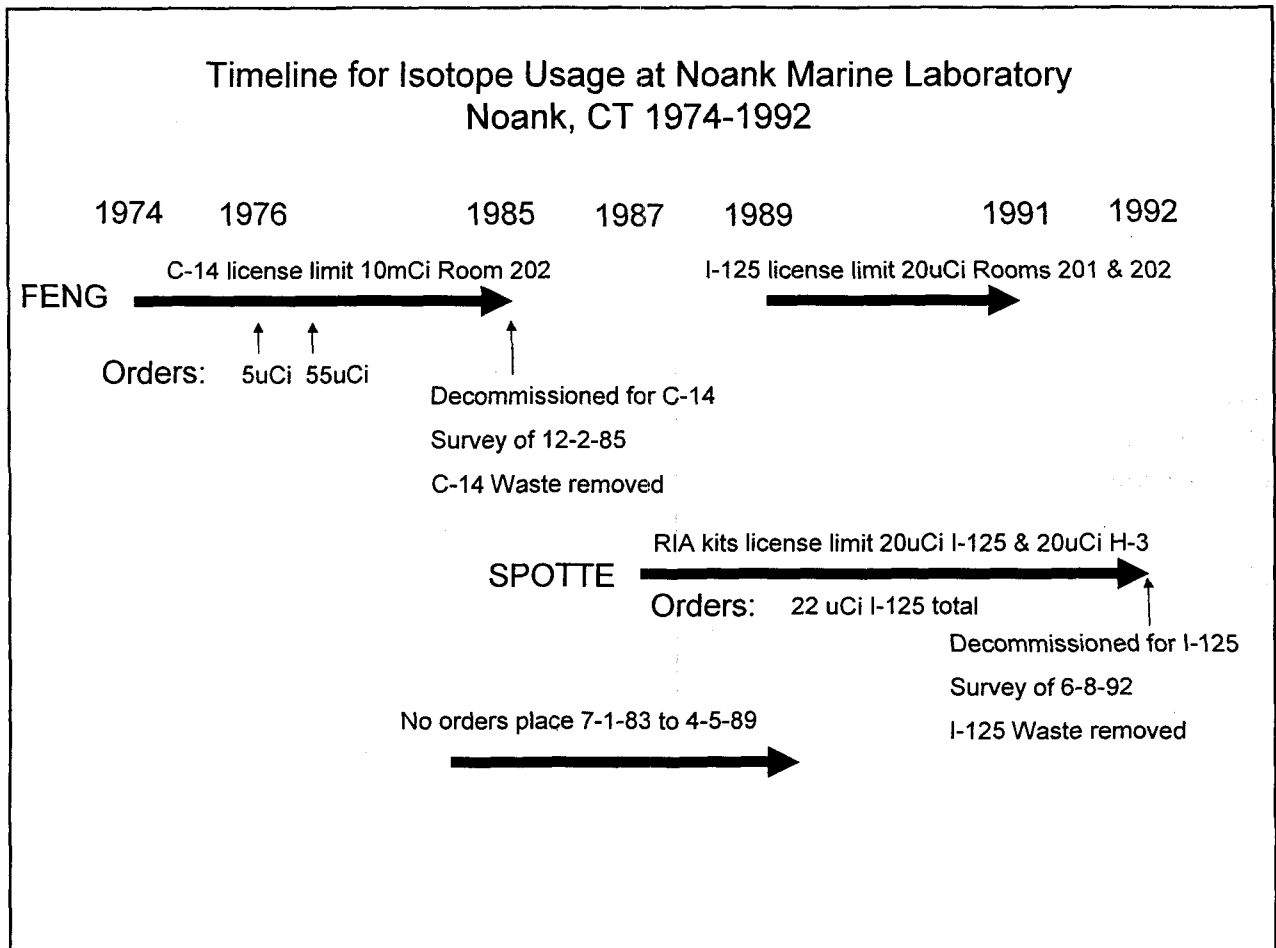
Isotope	Time frame	Quantity/Order	Investigator	Room(s)
C-14	1974-1985	5 uCi (4/26/76) 55 uCi (5/12/76)	Feng Feng	201/202
Ni-63**		30 mCi sealed sources	Feng	
I-125*	1987-1992	5 uCi (8/6/91) 5 uCi (9/3/91) 4 uCi (9/6/91) 4 uCi (10/4/91) <4 uCi (1/27/92)	Spotte	201
H-3*	1987-1992	(No usage indicated Licensed for 20 uCi)	Spotte	201
Co-60** Ra-226**	1977-1988	200uCi sealed source 25uCi sealed source	Madasci	

*RIA kits **Table of Isotope Usage at Nyank- See Timeline on page 3**

**sealed sources moved to Avery Point in 1988.

The data under Quantity/Order were based on order logs and quarterly inventories. (See Appendices SPOTTE-A, SPOTTE-B, and FENG).

Room usage: Records indicate Feng used C-14 inulin in Room 202.



Timeline for Usage of Isotopes at Noank Marine Laboratory

Summary of Records

Authorized User: Steven Spotte

Location: Noank Labs, Rooms 201/202

License Limits: 1987-1992, I-125 kits, 20 uCi maximum possession limit
July 1991- June 8, 1992 H-3 kits, 20 uCi maximum possession limit,
Room 201

Excerpts from approved protocol: [See Appendix SPOTTE-C]

I-125 use (page 6):

“I-125 –labeled compounds will be purchased in RIA kits.”

“Decant the liquid from the test tubes into the small radioactive waste container”

“I-125-cortisol (4.5 uCi)”

Page 2: “Maximum Activity on Hand” [This is total allowed activity]

H-3 20 uCi

I-125 20 uCi

Total material ordered/received: 22 uCi I-125 labeled compounds in kit form
There are no records of any H-3 orders for Noank.

Decommissioning Date: June 16, 1992 [See Appendix SPOTTE-D]

1.c. Provide the square footage of each room used for licensed activities.

Based on photographs and sketches of laboratory layout, the laboratories (Rooms 201 and 202) are estimated to encompass an area approximately 800 ft² per room for a total of 1600 ft².

1.d. Indicate whether there were any sewer disposals and/or effluent releases at the facility. Your surveys should include the sinks, drains, ductwork and areas where radionuclides may aggregate.

Sewer disposal was not permitted at Noank over the usage periods indicated. Researchers indicated in their protocols that all radioactive waste was to be placed in containers for eventual pickup and disposal by Radiation Safety. This is also consistent with the decommissioning records.

In particular, the pickup records for C-14 indicate all delivered isotope (60 uCi) was picked up in the liquid waste. [See Appendix FENG].

From page 2 of the decommissioning letter of January 21, 1986: [See Appendix FENG]

"2. All solid and liquid waste was removed from lab and disposed of according to procedure.

3. Inventory was balanced and reflects the removal and disposal of 0.1mCi of inulin C-14".

The last page of this letter states that 0.1mCi of liquid waste was picked up by the Radiation Safety Office

Our assessment is that no effluent was released to the atmosphere. C-14 inulin was considered stable. The I-125 kits were also considered stable.

Decommissioning surveys performed on January 21, 1986 (for C-14) and June 16, 1992 (for I-125) covered a number of sites of possible aggregation and all wipe tests were within background.

2. Your surveys do not appear to meet the requirements of the “Alternative Simplified Method: in NUREG-1757, Volume 2, Revision 1, Appendix B, “Consolidated Decommissioning Guidance, Characterization, Survey and Determination of Radiological Criteria.” The survey requirements are for 30 wipes per 100 square meters of laboratory space for removable contamination and 100% scan of the space for fixed contamination. Note that this method cannot be used if there is contaminated ductwork, imbedded piping, or other exceptions in the section. If the surveys submitted do not meet the above requirements, then another survey of the laboratory space will be required.

Response:

From NUREG-1757, Vol. 2 Rev.1, Section 3.3

“NRC staff considers radionuclides and exposure pathways that contribute no greater than 10 % of the dose criteria to be insignificant contributors. Because the dose criteria are performance criteria, this 10 % limit for insignificant contributors is an aggregate limitation only. That is, the sum of the dose contributions from all radionuclides and pathways considered insignificant should be no greater than 10 % of the dose criteria.”

1) 10% of the applicable dose criteria is 10% of 25 mrem/y = 2.5 mrem/y .

2) The source of any dose to the public from residual activity would be from C-14. The factor converting contamination (uCi/cm²) to dose rate for this low energy beta emitter in the RESRAD code is zero and the dose to the public under the assumption of residual contamination of the Noank facility from a total of 60 microcuries of C-14 used over eleven years of licensure is zero and would therefore be of no consequence.

3) The exposure pathway from C-14 is insignificant and may be eliminated from further consideration. Therefore, no further sampling is necessary.

Dose Estimate to the public from unsealed sources:

The only records (based on approved research protocols, inventory records and decommissioning records) of unsealed source use at Noank are for I-125 (in kit form) and C-14 inulin in microcurie amounts (total of 60 uCi over a period of eleven years). Although one investigator was licensed for H-3 there are no records of any H-3 orders or inventory entries. Assuming that the I-125 (T_{1/2}= 60d) would have decayed over sixteen years (1992-2008), there is no radiation dose to the public from I-125.

Supplemental Information

History of the Noank site: [see Appendix-HISTORY]

The building was built as an engine factory at the turn of the century. Later it housed a velvet-making mill. In 1938, it replaced the state lobster hatchery which was destroyed

in the '38 hurricane. The University of Connecticut used it as a marine laboratory concentrating on lobsters and blue fish research from 1955 to 1998, when a new research complex was completed at Avery Point. The building was turned over to the Connecticut Department of Agriculture in 1999. It was then turned over to the Town of Groton Connecticut for use as a shellfish hatchery in 2006.

The laboratories designated as 201 and 202 were commissioned and decommissioned depending on the requirements of the investigators. Some investigators were licensed at Noank and Avery Point. Over time, the investigators transitioned to Avery Point. The last recorded usage of isotope at Noank was in 1992.

University of Connecticut Reply to NRC

Docket No. 03010576

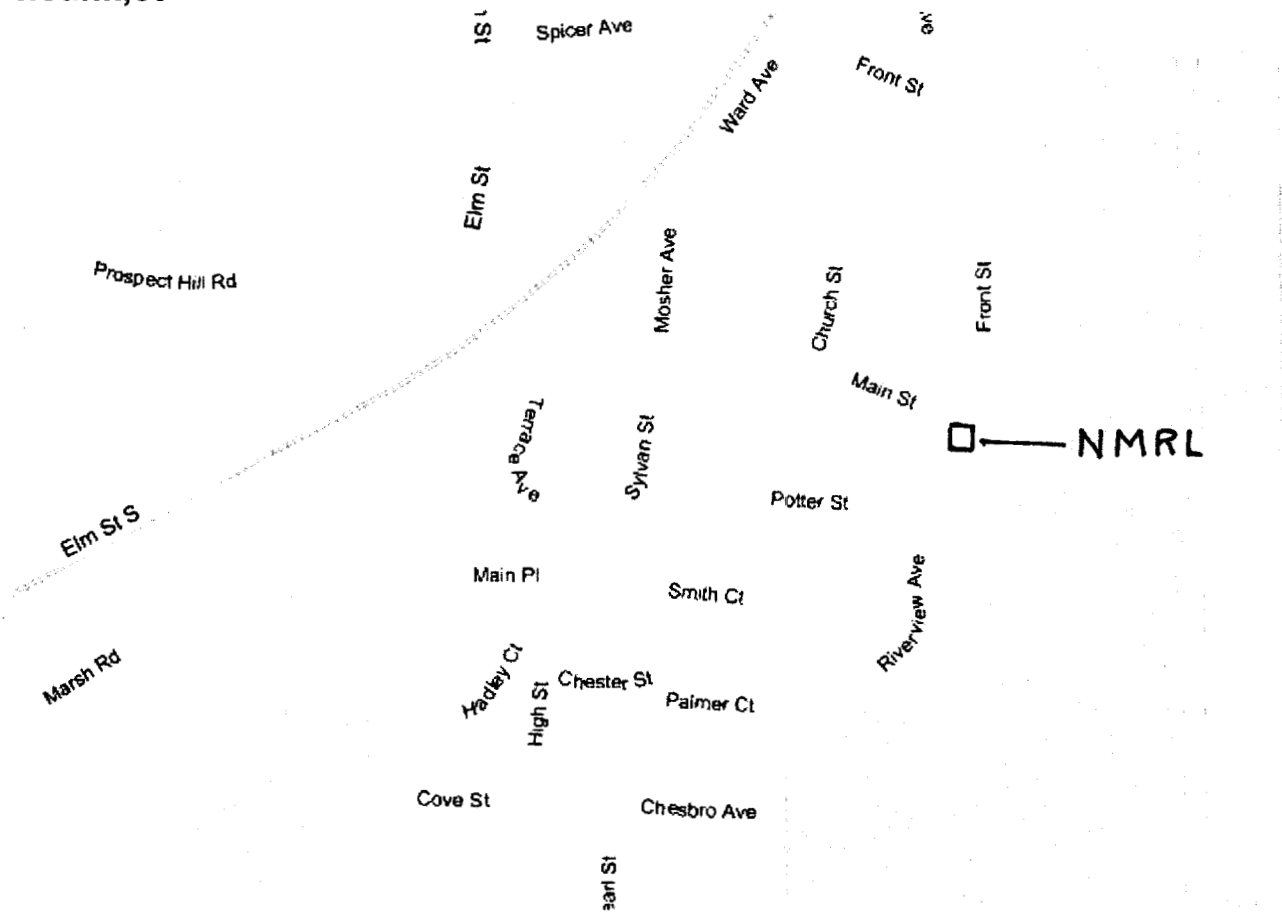
Control No. 141666

APPENDIX MAP

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MAP RESULTS

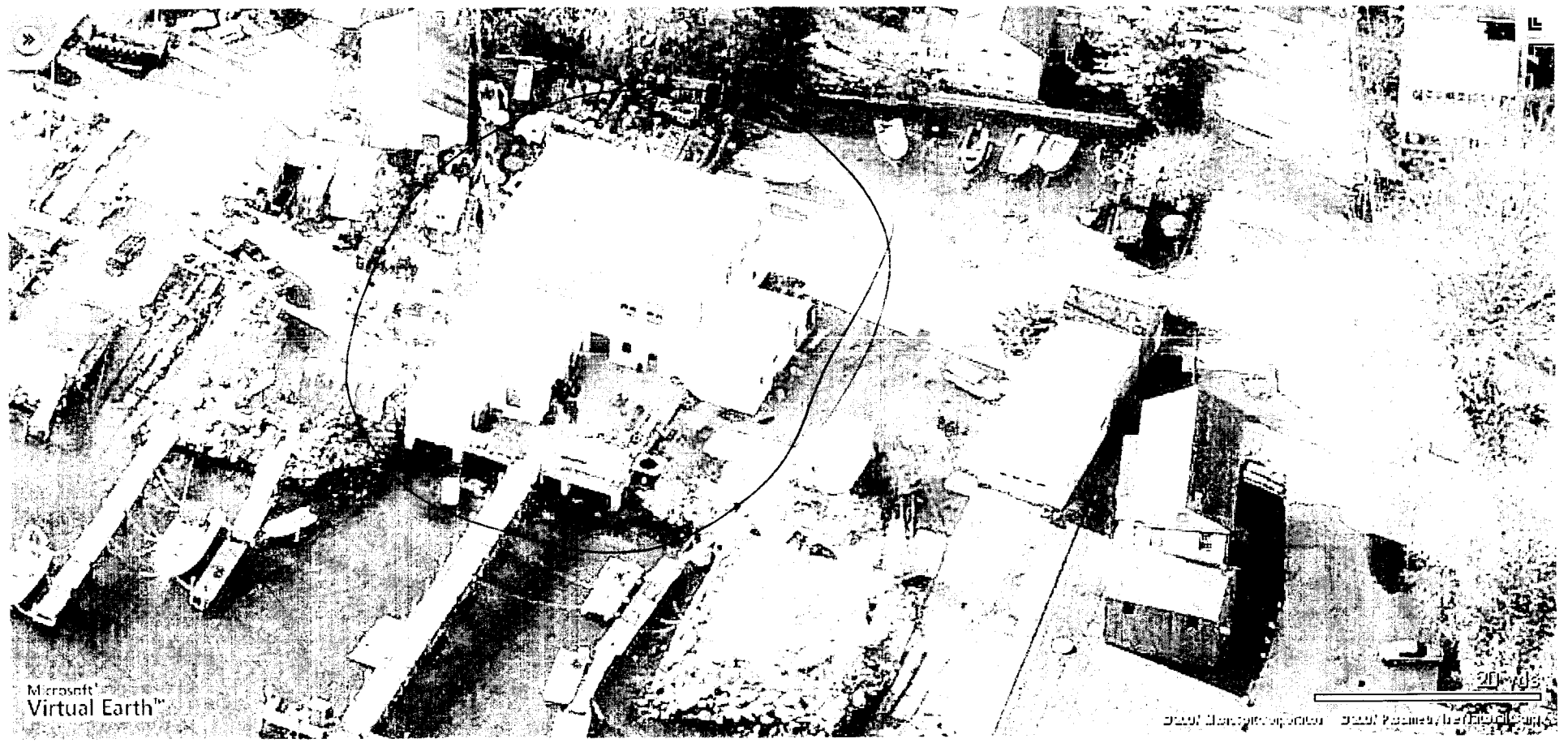
noank,ct



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maps tips

MAPS



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University of Connecticut Reply to NRC

Docket No. 03010576

Control No. 141666

APPENDIX SPOTTE-A

isotope rec'd log.

1991

DATE	RELEASE #	VENDOR	LIC. INVEST.	ISOTOPE	DELIVERY	REC'D	COMMENTS
8/6	S49		Spotte	.005 mCi RIA Kit I125	8/7m ok	✓	not billed to UCONN
8/6	S50 - 126508	NEN	Marcus	.25 mCi P32	8/7 ok	✓	
8/8	S51 - 126507	A/S	Pilar	.050 mCi C14	approx 8/16 ok	✓	
8/8	S52 - 133214	NEN	Basu	.25 mCi P32	8/12 ok	✓	
8/9	replacement shipment	A/S	Nowak	1 mCi? S35	8/12 ok	✓	
8/9	S53 - 126541	A/S	Nowak	.25 mCi P32	8/12 ok	✓	
8/12	S54 - 136443	NEN	Chovnick	1 mCi P32	8/13 ok	✓	
8/12	S55 - 126534	NEN	Kendall	.25 mCi S35	8/14 ok	✓	
8/13	S56 - 126506	ICN	Lucas-Lenard	5 mCi S35	8/14 ok	✓	
8/13	S57 - 126539	NEN	Simon	.25 mCi S35	8/14 ok	✓	
8/14	S58 - 126542	A/S	Gallo	2 mCi I125	9/5 ok	✓	
8/14	S59 - 140211	NEN	Fournier	.25 mCi H3	8/21 hold etc	✓	call Wanda x 0530 to p/u
8/14	S60 - 126545	NEN	Khairallah	.5 mCi P32	8/16 ok	✓	
8/15	S61 - 126548	A/S	Talbot	.5 mCi S35	8/19 ok	✓	duplicate ship. ordered - pay missing - no change replacement sent 8/21 N/C
8/16	S62 - 126551	NEN	Renfro	2 mCi P32	8/19 ok	✓	call Patrick
8/16	S63 - 126948	NEN	Freaka	1 mCi P32 100 mCi H3	8/20 hold hold	✓	replacement for 1/30 N/C
8/21	Q90 - 38775	A/S	Laufer	5 mCi H3		✓	4635 Tony p/u
8/22	S64 - 126564	NEN	Marcus	.5 mCi P32	8/23 hold ok	✓	N/C sample
8/22	S65 - sample	ICN	Kendall	1 mCi S35	ok	✓	N/C sample
8/22	S66 - sample	ICN	Lenard	1 mCi S35	ok	✓	
8/23	S18 - standing	NEN	Jansen	2 mCi P32	8/23 ok	✓	
8/23	S67 - 126567	A/S	Jansen	.25 mCi S35	8/26 ok	✓	
8/26	S68 - 136451	NEN	Chovnick	.50 775 mCi H3	8/29 ok	✓	
8/27	S69 - 126569	A/S	Crain	.005 mCi H3	9/11 ok	✓	
8/27	S70 - 126574	NEN	Hightower	.25 mCi S35	8/28 ok	✓	
8/27	S71 - 139081	NEN	Freaka	.5 mCi P32	8/29 hold	✓	call Patrick x 1814
8/28	S72 - 126578	NEN	Khairallah	.1 mCi I125	8/30 ok	✓	
8/30	S73 - 136456	ICN	Berg	5 mCi P32	9/3 ok	✓	

1991

DATE	RELEASE #	VENDOR	LIC. INVEST.	ISOTOPE	DELIVERY	REC'D	COMMENTS
9/3	518 ^{standing} 140922	NEN	Jansen	2mCi P32	9/4 ok	✓	
9/3	540 ^{standing} 141151	NEN	Simon	.25mCi S35	9/5 ok	✓	
9/3	574-126594	NEN	Mauri	.25mCi S35	9/4 ok	✓	
9/3	575-		Spotte	^{1005mCi} RIA KIT I-125	8/28 ok	✓	not billed ✓ to UConn
9/3	576-126585	A/S	Covault	1mCi P32	9/4 ok	✓	not shipment not billed
9/4	577-126599	NEN	Benson	1mCi S35	9/5 ok	✓	del. TLS 285
9/5	578-136462	NEN	Chounick	1mCi P32	9/6 ok	✓	
9/5	579-129049	NEN	Velleman	.5mCi P32	9/9 ok	✓	
9/6	580-		Spotte	^{.004mCi} RIA KIT I-125	9/11 ok	✓	not billed to UConn
9/6	581-157685	NEN	Kendall	1mCi S-35	9/10 ok	✓	
9/11	582-139905	NEN	Covault	.5mCi P32	9/12 ok	✓	
9/11	583-139911	NEN	Simon	.25mCi S35	9/12 ok	✓	
9/11	584-139904	NEN	Khairallah	.25mCi P32	9/12 ok	✓	
9/12	585-139922	NEN	Jansen	2.0mCi P32	9/13 ok	✓	
9/12	586-133321	NEN	Basu	.25mCi P32	9/16 ^{hold} ok	✓	x3965
9/13	587-139096	NEN	Freate	1mCi P32	9/16 ^{hold} ok	✓	cell Patr. ch x1814
9/17	588-139934	NEN	Khairallah	.1mCi I125	9/25 ok	✓	
9/17	589-134834	A/S	Geary	.5mCi C14	9/28 ok	✓	
9/17	590 ^{added on 2 quest.}	-	Laufen	5mCi H3	9/18 ok		Laufen hasn't ret. my calls so no delivery
9/19	591-139954	NEN	Kendall	.5mCi S35	9/20 ok	✓	
9/19	592-139971	NEN	Jansen	2.0mCi P-32	9/20 ok	✓	
9/23	593-139972	ICN	Talbot	.25mCi P32	9/24 ok	✓	
9/23	594-139960	ICN	Knecht	.25mCi P32	9/24 ok	✓	
9/23	595-136469	NEN	Chounick	1mCi P32	9/24 ok	✓	
9/25	596-139721	NEN	Jansen	2mCi P32	9/27 ok	✓	
9/27	597-139706	ICN	Crivello	.25mCi P32	9/27 ok	✓	
9/26	598-139939	A/S	Covault	1mCi P32	9/27 ok	✓	
9/27	599						

1991

DATE	RELEASE #	VENDOR	LIC. INVEST.	ISOTOPE	DELIVERY	REC'D	COMMENTS
9/27	S40-141151	NEN	Simon	.25mCi P32	10/3 ok	✓	Put on next quarter inventory
9/27	S99-139713	NEN	Khairallah	.5mCi P32	9/30 ok	✓	
10/2	T01-139747	NEN	Jansen	2mCi P32	10/4 ok	✓	
10/2	T02-139746	NEN	Corauit	.5mCi S35	10/3 ok	✓	
10/3	T03-139748	NEN	Rentro	2mCi P32	10/8 ok	✓	
10/3	T04-136471	NEN	Chounick	1mCi P32	10/4 ok	✓	
10/4	T05-139753	NEN	Corauit	.5mCi P32	10/7 ok	✓	
10/4	T06-139753	NEN	Corauit	.25mCi P32	10/7 ok	✓	
10/4	T07-		Spotte	.004mCi RIA Kit	10/9 ok	✓	
10/8	T08-138994	NEN	Freake	1.25mCi P32	10/9 ok	✓	HOLD Will pick up.
10/8	T09-sample	ICN	N. Clark	1mCi C45	10/9? ok	✓	
10/8	T60-139755	ICN	Knecht	.5mCi P32	10/9 ok	✓	
10/10	T01-139780	NEN	Jansen	1mCi P32	10/11 ok	✓	
10/10	T11-139782	NEN	Jansen	1mCi P32	10/11 ok	✓	
10/11	T12-139765	ICN	Hightower	5mCi S35	10/15 ok	✓	Del. to T25277
10/11	T13-149211	A/S	Nowak	.25mCi P32	10/14 ok	✓	replacement 12/9/91
10/11	T14-149209	NEN	Kendall	2mCi S35	10/14 ok	✓	
10/14	T15-149210	NEN	Khairallah	.25mCi S35	10/15 ok	✓	
10/14	T16-146222	ICN	Rother	.15mCi C14	1-2 wks ok	✓	
10/15	T01-139747	NEN	Jansen	2mCi P32	10/18 ok	✓	
10/15	T17-139727	ICN	Strausbaugh	.5mCi P32	10/16 ok	✓	
10/15	T18-136482	NEN	Chornick	1.0mCi P32	10/16 ok	✓	
10/16	T19-149218	NEN	Kendall	1mCi S35	10/17 ok	✓	
10/17	T20-175347	NEN	Velleman	.5mCi P32	10/21 ok	✓	
10/18	T21-126	NEN	Gogarten	.25mCi S35	10/21 ok	✓	
10/21	T22-149219	NEN	MARCUS	.5mCi P32	10/22 ok	✓	
10/21	T23-157103	NEN	FREAKIE	1mCi S35 100mCi H3	10/23 HOLD	✓	CALL FRED TO PICK UP
10/21	T24-149230	NEN	MAURI	.25mCi S35	10/22 ok	✓	

1992

E	RELEASE #	VENDOR	LIC. INVST.	ISOTOPE	DELIVERY	REC'D	COMMENTS
1/17	U05 - 149549	ICN	Talbot	.25 mCi P32	1/23 ok	✓	
1/22	788 - 118935	Inestar	Marresh	1 mCi I125	2/3 hold	✓	cancel ✓
1/22	U03 - 118962	ICN	Marresh	.012 mCi I125	2/24 ok	✓	
1/22	U03 - 118962	ICN	Marresh	.064 mCi I125	2/24 ok	✓	
1/22	U04 - 118961	ICN	Marresh	.015 mCi I125	2/24 ok	✓	
1/22	U06 - 149593	N&N	Crain	.005 mCi H3	1/24 ok	✓	
1/23	U07 - 149597	N&N	Khairallah	.25 mCi S35	1/24 ok	✓	
1/23	U08 - 150159	Chemsgo	Basu	5 mCi H3	2/11 ok	✓	
1/23	U09 - 150187	N&N	Basu	.25 mCi P32	1/24 ok	✓	
1/24	U10 - 149599	ICN	Knecht	.5 mCi P32	1/28 ok	✓	
1/27	U11 - 149592	A/S	Strausbaugh	.5 mCi P32	1/28 ok	✓	
1/27	U12 - 22231	PO	Spotte	<.004 mCi I-125	1/30	✓	
1/28	U13 - 149488	N&N	Corralt	.5 mCi P32	1/29 ok	✓	
1/28	U14 - 157157	N&N	Freaker	1 mCi P32	1/29 hold	✓	Call Patrick X1814
1/29	U15 - 143014	N&N	Knecht	.25 mCi S35	1/30 ok	✓	
1/29	U16 - 118949	Inestar	Marresh	mCi I125	2/10 hold	✓	Call Catherine 5323
1/29	U16 - 118949	Inestar	Marresh	3 mCi I125	2/24 hold	✓	5323
1/29	U17 - 143018	ICN	Knecht	1 mCi P32	1/30 ok	✓	
1/30	U18 - 134966	A/S	Rock	2 mCi Cr-51 5 mCi H3	1/31 ok	✓	
1/31	U19 - 143031	N&N	Khairallah	.1 mCi I-125	2/4 ok	✓	
2/3	U20 - 143030	N&N	Simon	.25 mCi S35	2/5 ok	✓	
2/4	U21 - 175385	A/S	Silbart	.01 mCi C14	2/10 ok	✓	
2/4	U22 - 143036	ICN	Nowak	.25 mCi P32	2/5 ok	✓	
2/5	U23		Spotte	10 mCi I125			CANCELLED
2/6	U24 - 143037	ICN	Lucas-Lenard	5 mCi S35	2/7 ok	✓	
2/6	U25 - 143068	N&N	Holsinger	1 mCi P32	2/7 ok	✓	
2/7	U26 - 143051	N&N	Hightower	.25 mCi S35	2/11 ok	✓	
2/10	U27 - 143073	N&N	Benson	1 mCi S35	2/10 ok	✓	
2/10	U28 - 118950	ICN	Marresh	.015 mCi non-radi controls	2/10 hold	✓	Call Catherine 5323

University of Connecticut Reply to NRC

Docket No. 03010576

Control No. 141666

APPENDIX SPOTTE-B

RADIATION SAFETY OFFICE U-97
486-3613

TO: S. SPOTTE U-17 MARINE SCIENCE MAIN BLDG
OFFICE # 201
FROM: RSO
RE: QUARTERLY INVENTORY OF RADIONUCLIDES
DATE: 07/24/90

PLEASE RETURN YOUR DATA FROM 04/01/90 - 06/30/90.

LICENSED RADIONUCLIDES PER PERMIT 049

NUCLIDE MAXIMUM ACTIVITY ESTIMATED ACTIVITY
 ON HAND (mCi) PURCHASED /YEAR

I-125 0.020 1.000

DURING THE QUARTER ENDING 03/31/90 OUR RECORDS REFLECT THE
FOLLOWING ACTIVITY

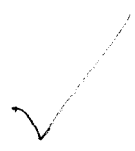
NUCLIDE PREVIOUS AMOUNT DECAY WASTE LIQUID OTHER BALANCE
 BALANCE RECEIVED LOSS CAN EXPLAIN
 mCi mCi mCi mCi mCi mCi mCi

I-125 0.000 0.000

ORDERS: I-125
 (mCi)

Still correct as of 08 Aug 1990.

RADIATION SAFETY OFFICE U-97
486-3613



TO: S. SPOTTE U-17 MARINE SCIENCE MAIN BLDG
OFFICE # 201

FROM: RSO

RE: QUARTERLY INVENTORY OF RADIONUCLIDES

DATE: 10/08/90

PLEASE RETURN YOUR DATA FROM 07/01/90 - 09/30/90.

LICENSED RADIONUCLIDES PER PERMIT 049

NUCLIDE	MAXIMUM ACTIVITY ON HAND (mCi)	ESTIMATED ACTIVITY PURCHASED /YEAR
I-125	0.020	1.000

DURING THE QUARTER ENDING 09/30/90 OUR RECORDS REFLECT THE FOLLOWING ACTIVITY

NUCLIDE	PREVIOUS BALANCE mCi	AMOUNT RECEIVED mCi	DECAY LOSS mCi	WASTE CAN mCi	LIQUID mCi	OTHER EXPLAIN mCi	BALANCE mCi
I-125	0.000	0.000					0 ✓

ORDERS: I-125
(mCi)

10/18/90 Previous Balance mCi Amount Received mCi
I-125 0.000 0.000

C

RADIATION SAFETY OFFICE U-97
486-3613

TO: S. SPOTTE U-17 MARINE SCIENCE MAIN BLDG
OFFICE # 201
FROM: RSO
RE: QUARTERLY INVENTORY OF RADIONUCLIDES
DATE: 01/15/91

PLEASE RETURN YOUR DATA FROM 10/01/90 - 12/31/90.

LICENSED RADIONUCLIDES PER PERMIT 049

NUCLIDE	MAXIMUM ACTIVITY ON HAND (mCi)	ESTIMATED ACTIVITY PURCHASED /YEAR
---------	-----------------------------------	---------------------------------------

I-125	0.020	1.000
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DURING THE QUARTER ENDING 12/31/90 OUR RECORDS REFLECT THE FOLLOWING ACTIVITY

NUCLIDE	PREVIOUS BALANCE mCi	AMOUNT RECEIVED mCi	DECAY LOSS mCi	WASTE CAN mCi	LIQUID mCi	OTHER EXPLAIN mCi	BALANCE mCi
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I-125	0.000	0.000					
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ORDERS: I-125 (mCi)

01/25/91	Previous Balance mCi	Amount Received mCi
I-125	0.000	0.000

RADIATION SAFETY OFFICE U-97
486-3613

TO: S. SPOTTE U-17 MARINE SCIENCE MAIN BLDG
OFFICE # 201
FROM: RSO
RE: QUARTERLY INVENTORY OF RADIONUCLIDES
DATE: 04/03/91

PLEASE RETURN YOUR DATA FROM 01/01/91 - 03/31/91

LICENSED RADIONUCLIDES PER PERMIT 049

 NUCLIDE MAXIMUM ACTIVITY ESTIMATED ACTIVITY
 ON HAND (mCi) PURCHASED /YEAR

I-125 0.020 1.000

DURING THE QUARTER ENDING 03/31/91 OUR RECORDS REFLECT THE
 FOLLOWING ACTIVITY

 NUCLIDE PREVIOUS AMOUNT DECAY WASTE LIQUID OTHER BALANCE
 BALANCE RECEIVED LOSS CAN EXPLAIN
 mCi mCi mCi mCi mCi mCi

I-125 0.000 0.000

ORDERS: I-125
 (mCi)

04/10/91

Previous Balance
mCi

Amount received
mCi

I-125

0.000

0.000

C

RADIATION SAFETY OFFICE U-97
486-3613

TO: S. SPOTTE U-17 MARINE SCIENCE MAIN BLDG
OFFICE # 201
FROM: RSO
RE: QUARTERLY INVENTORY OF RADIONUCLIDES
DATE: 07/08/91

PLEASE RETURN YOUR DATA FROM 04/01/91 - 06/30/91

LICENSED RADIONUCLIDES PER PERMIT 049

NUCLIDE MAXIMUM ACTIVITY ESTIMATED ACTIVITY
 ON HAND (mCi) PURCHASED /YEAR

I-125 0.020 1.000

DURING THE QUARTER ENDING 06/30/91 OUR RECORDS REFLECT THE
FOLLOWING ACTIVITY

NUCLIDE PREVIOUS AMOUNT DECAY WASTE LIQUID OTHER BALANCE
 BALANCE RECEIVED LOSS CAN EXPLAIN
 mCi mCi mCi mCi mCi mCi

✓ I-125 0.000 0.000

ORDERS: I-125
 (mCi)

Pat Bubucis

C

RADIATION SAFETY OFFICE U-97
486-3613

TO: S. SPOTTE U-17 MARINE SCIENCE MAIN BLDG TEL; 5720202
NOANK OFFICE # 201 5728526

FROM: RSO

RE: QUARTERLY INVENTORY OF RADIONUCLIDES

DATE: 10/02/91

PLEASE RETURN YOUR DATA FROM 07/01/91 - 09/30/91

LICENSED RADIONUCLIDES PER PERMIT 049

NUCLIDE	MAXIMUM ACTIVITY ON HAND (mCi)	ESTIMATED ACTIVITY PURCHASED /YEAR
I-125	0.020	1.000
H-3	0.020	1.000

DURING THE QUARTER ENDING 09/30/91 OUR RECORDS REFLECT THE FOLLOWING ACTIVITY

NUCLIDE	PREVIOUS BALANCE mCi	AMOUNT RECEIVED mCi	DECAY LOSS mCi	WASTE CAN mCi	LIQUID mCi	OTHER EXPLAIN mCi	BALANCE mCi
I-125	0.000	0.014					
ORDERS:		I-125 (mCi)					
08/06/91 S49		0.005	0.003	0.002			0
08/28/91 S75		0.005 0.004	0.001	0.003			0
09/06/91 S80		0.004	0.001	0.003			0

C

RADIATION SAFETY OFFICE U-97
486-3613

TO: S. SPOTTE U-17 MARINE SCIENCE MAIN BLDG TEL; 5720202
NOANK OFFICE # 201 5728526
FROM: RSO
RE: QUARTERLY INVENTORY OF RADIONUCLIDES
DATE: 01/08/92

PLEASE RETURN YOUR DATA FROM 10/01/91 - 12/31/91

LICENSED RADIONUCLIDES PER PERMIT 049

NUCLIDE	MAXIMUM ACTIVITY ON HAND (mCi)	ESTIMATED ACTIVITY PURCHASED /YEAR
I-125	0.020	1.000
H-3	0.020	1.000

DURING THE QUARTER ENDING 12/31/91 OUR RECORDS REFLECT THE
FOLLOWING ACTIVITY

NUCLIDE	PREVIOUS BALANCE mCi	AMOUNT RECEIVED mCi	DECAY LOSS mCi	WASTE CAN mCi	LIQUID mCi	OTHER EXPLAIN mCi	BALANCE mCi
I-125	0.000	0.004					

ORDERS:		I-125 (mCi)					
10/08/91 T07		0.004	0.003	0.001			0

Pat Lubricis
13 Jan 92

RADIATION SAFETY OFFICE U-97
486-3613

TO: S. SPOTTE U-17 MARINE SCIENCE MAIN BLDG TEL; 5720202
NOANK OFFICE # 201 5728526

FROM: RSO

RE: QUARTERLY INVENTORY OF RADIONUCLIDES

DATE: 04/02/92

PLEASE RETURN YOUR DATA FROM 01/01/92 - 03/31/92

LICENSED RADIONUCLIDES PER PERMIT 049

NUCLIDE	MAXIMUM ACTIVITY ON HAND (mCi)	ESTIMATED ACTIVITY PURCHASED /YEAR
---------	-----------------------------------	---------------------------------------

I-125	0.020	1.000
H-3	0.020	1.000

DURING THE QUARTER ENDING 03/31/92 OUR RECORDS REFLECT THE FOLLOWING ACTIVITY

NUCLIDE	PREVIOUS BALANCE mCi	AMOUNT RECEIVED mCi	DECAY LOSS mCi	WASTE CAN mCi	LIQUID mCi	OTHER EXPLAIN mCi	BALANCE mCi
I-125	0.000	0.004	0.002	0.002			0.000
H-3	0.000	0.000					

ORDERS:	I-125 (mCi)	H-3 (mCi)
---------	----------------	--------------

01/27/92_U12	PO22231	0.004
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C

RADIATION SAFETY OFFICE U-97
486-3613

TO: S. SPOTTE U-17 MARINE SCIENCE MAIN BLDG TEL; 5720202
NOANK OFFICE # 201 5728526
FROM: RSO
RE: QUARTERLY INVENTORY OF RADIONUCLIDES
DATE: 07/01/92

PLEASE RETURN YOUR DATA FROM 04/01/92 - 06/30/92

LICENSED RADIONUCLIDES PER PERMIT 049

NUCLIDE	MAXIMUM ACTIVITY ON HAND (mCi)	ESTIMATED ACTIVITY PURCHASED /YEAR
I-125	0.020	1.000
H-3	0.020	1.000

DURING THE QUARTER ENDING 06/30/92 OUR RECORDS REFLECT THE FOLLOWING ACTIVITY

NUCLIDE	PREVIOUS BALANCE mCi	AMOUNT RECEIVED mCi	DECAY LOSS mCi	WASTE CAN mCi	LIQUID mCi	OTHER EXPLAIN mCi	BALANCE mCi
I-125	0.000	0.000					
H-3	0.000	0.000					∅

ORDERS:	I-125 (mCi)	H-3 (mCi)
	∅	∅

Balance on hand = ∅ mCi

Laboratory deactivated 8 June 92.

University of Connecticut Reply to NRC

Docket No. 03010576
Control No. 141666

APPENDIX FENG

FEB 20 1975

University of Connecticut
 QUARTERLY ISOTOPE INVENTORY
 Amount on Hand January 1975

Investigator's Name S. Y. FENG Date Feb. 19 197⁵
 Department Marine Research Lab. Room No. & Bldg. Noank
 AEC License No. Used 06-01450-31

ISOTOPE INVENTORY

Isotope	Chemical Form	Amount on Hand (Millicuries)
<i>None</i>	<i>None</i>	<i>None</i>

RADIOACTIVE WASTE DISPOSAL ESTIMATES

Please give an estimate of quantities of waste disposed in the period
 October 1974-January 1975

Isotope	METHOD OF DISPOSAL						
	* Solid Dry (mc)	* Animal Carcasses (mc)	* Liquid (mc)	Liquid (Sewer) (mc)	Gas (To Air) (mc)	Holding (mc)	+ Other (mc)

* Picked up by Radioactive Waste Disposal

Return to:

+ Explain fully (use other side if necessary).

Radiation Safety Office
 U-133

University of Connecticut
QUARTERLY ISOTOPE INVENTORY

Activity on Hand **AUG 1 1976**

Investigator S. V. Frens Date July 29, 76
 Department Marine Research Lab. Room No. & Bldg. Research Lab Room 202

Note: Give below the total activity (in millicuries) of each radioisotope that you have presently on hand. Do not distinguish between latches or chemical form and give only one entry for each isotope.

ISOTOPE	ACTIVITY ON HAND (mCi)
H-3	
C-14	
Na-22	0.027 mCi
P-32	
S-35	
Cl-36	
Ca-45	
Cr-51	
Co-60	
Ni-63	
Cd-109	
I-125	
Cs-137	
W-181	
Au-195	
Other:	
Other:	

RADIOACTIVE WASTE DISPOSAL ESTIMATES
 Estimate of disposal in the period **MAY 1 1976 - JUL 31 1976**

METHOD OF DISPOSAL

(mCi) Isotope	*Solid Dry	*Animal Carcasses	*Liquid	Liquid (Sewer)	Gas (To Air)	Holding	+Other
<u>Na-22</u>	0.002	0.026					

*Picked up by Radioactive Waste Disposal
 +Explain fully (use other side if necessary)

Return To: Radiation Safety Office
 U-97

2 1976

Investigator: Sung Yen Feng Max. Amt. on Hand: 10.0 mCi
Lab Location: Noank Marine Research Laboratory Max. Amt. Ordered: 5.0 mCi
Department: Marine Sciences Institute License Expiration: March 31, 1977
Phone Ext.: 446-1020, Ext 211

DATE	VENDOR	AMOUNT AND FORM	RELEASE NUMBER	DATE RECEIVED	AMOUNT ON HAND
/26/76	C-14	Dr. Koontz gave him .005 mCi Inulin (Carboxyl- ¹⁴ C)		4/26/76	.005 mCi
'12/76	NEN	.050 mCi Inulin-carboxyl ¹⁴ C (aq)	C50-31640		.055 mCi

University of Connecticut

RADIATION SAFETY OFFICE

Protocol Review Sheet

OFFICE OF
APR 28 1976

Responsible Investigator Dr Sung Yen Fang

Department Marine Sciences Institute

Presently Licensed at University of Connecticut: yes () no

Nuclide Requested ¹⁴C Maximum Amount 10 mCi

TRAINING: adequate () inadequate

FACILITIES: adequate () inadequate

WASTE DISPOSAL PROCEDURES

(a) Solid adequate () inadequate

(b) Liquid adequate *see comments* () inadequate

TYPE OF WORK PROPOSED: () routine () nonroutine

Special Hazards NONE

COMMENTS:

All water being used will be absorbed in Speedi-dri or similar material and disposed of in a radioactive waste container. The crabs will be sacrificed within 48 hours of injection. Transportation of samples between ~~base~~ the main campus & island will be limited to unopened specimens ~~and~~ or quantities of less than 1mCi at a time.

APPROVAL RECOMMENDED yes no ()

Date 4/27/76 Reviewed By Barry Keilly

Approved

Not Approved

Date 5-12-76 Committee Member [Signature]

MAY 13 1976

RADIATION SAFETY OFFICE U-97
486-3613

TO: S. Y. Feng AVERY POINT BRANCH-MARINE RESEARCH LAB, 446-1020
FROM: F. HARSHAW, RSO
RE: FINAL INVENTORY OF RADIOISOTOPES
DATE: 11/26/85

PLEASE PLACE IN YOUR RADIATION SAFETY NOTEBOOK FOR REFERENCE.

LICENSED ISOTOPE(S) PER PERMIT 75-072:

ISOTOPE	MAXIMUM ACTIVITY ON HAND (mCi)	MAXIMUM ACTIVITY PURCHASED/TIME	MAXIMUM ACTIVITY PURCHASED/YEAR
C-14	10.000	5.000	10.000

DURING THE PERIOD ENDING 11/26/85 OUR RECORDS REFLECT THE FOLLOWING ACTIVITY:

ISOTOPE	PREVIOUS BALANCE mCi	AMOUNT RECEIVED mCi	DECAY LOSS mCi	WASTE LIQUID CAN mCi	OTHER LIQUID mCi	OTHER EXPLAIN mCi	BALANCE mCi
C-14	0.10	0	0	0	0.10**	0	0

* DENOTES SEALED SOURCE

** PICKED UP BY RADIATION SAFETY OFFICE

COMMENTS:

AS PER NOTE OF 9/16/83, NO RADIOISOTOPE WORK HAS BEEN DONE FOR THE PAST SEVERAL YEARS.


THE
UNIVERSITY OF
CONNECTICUT

Environmental Health Agency
Box 11-97, 606 Gilbert
Storrs, Connecticut 06269

FILE

January 21, 1986

Dr. S. Y. Feng
Marine Research Lab
Noank, Connecticut 06340

Dear Dr. Feng:

This is to confirm that on November 26, 1985, your laboratory was surveyed and found to be free of contamination. All solid and liquid waste has been removed from lab and disposed of and all radioactive signs have been taken down.

Sincerely,

Frances Harshaw
Director, Radiation Safety

FH:p





**THE
UNIVERSITY OF
CONNECTICUT**

Environmental Health & Safety
Box U-97, 606 Gilbert Road
Storrs, Connecticut 06268

December 2, 1985

From: Denny Galloway

Denny Galloway

Subject: Dr. Sung Yen Feng's lab decommissioning

On November 26, 1985 Dr. Sung Yen Feng's lab was decommissioned. Please note the following.

1. Technicians survey indicates there is no fixed or removable contamination.
2. All solid and liquid waste was removed from lab and disposed of according to procedure.
3. Inventory was balanced and reflects the removal and disposal of 0.1 mCi of inulin. ^{C-14}
4. All radioactive signs/postings have been taken down or removed.
5. Dr. Feng's records have been put in the Investigators inactive file.



University of Connecticut

RADIATION SAFETY COMMITTEE
RADIOISOTOPE USAGE PERMIT

The permittee is granted permission by the Radiation Safety Committee to receive, possess, and use the radioactive materials specified here under the conditions of this permit, the regulations of the U.S. Nuclear Regulatory Commission, the Laws of the State of Connecticut, standard safe radiation safety practices, and the regulations of the University of Connecticut as stated in the Procedures for Radiation Protection.

PERMITTEE Sung Yen Feng PERMIT NUMBER 75-072

LOCATION OF USAGE, BUILDING Noank Marine Research Lab ROOMS 202

EXPIRATION DATE March 31, 1977

Isotope	Maximum Activity To Be On Hand (mCi)	Maximum Activity To Be Purchased At One Time	Maximum Activity To Be Purchased In One Year
C-14	10.0	5.0	10.0

Conditions on isotope use (in addition to the conditions stated on the Application Protocol signed by the permittee dated April 22, 1976.

Date May 4, 1976

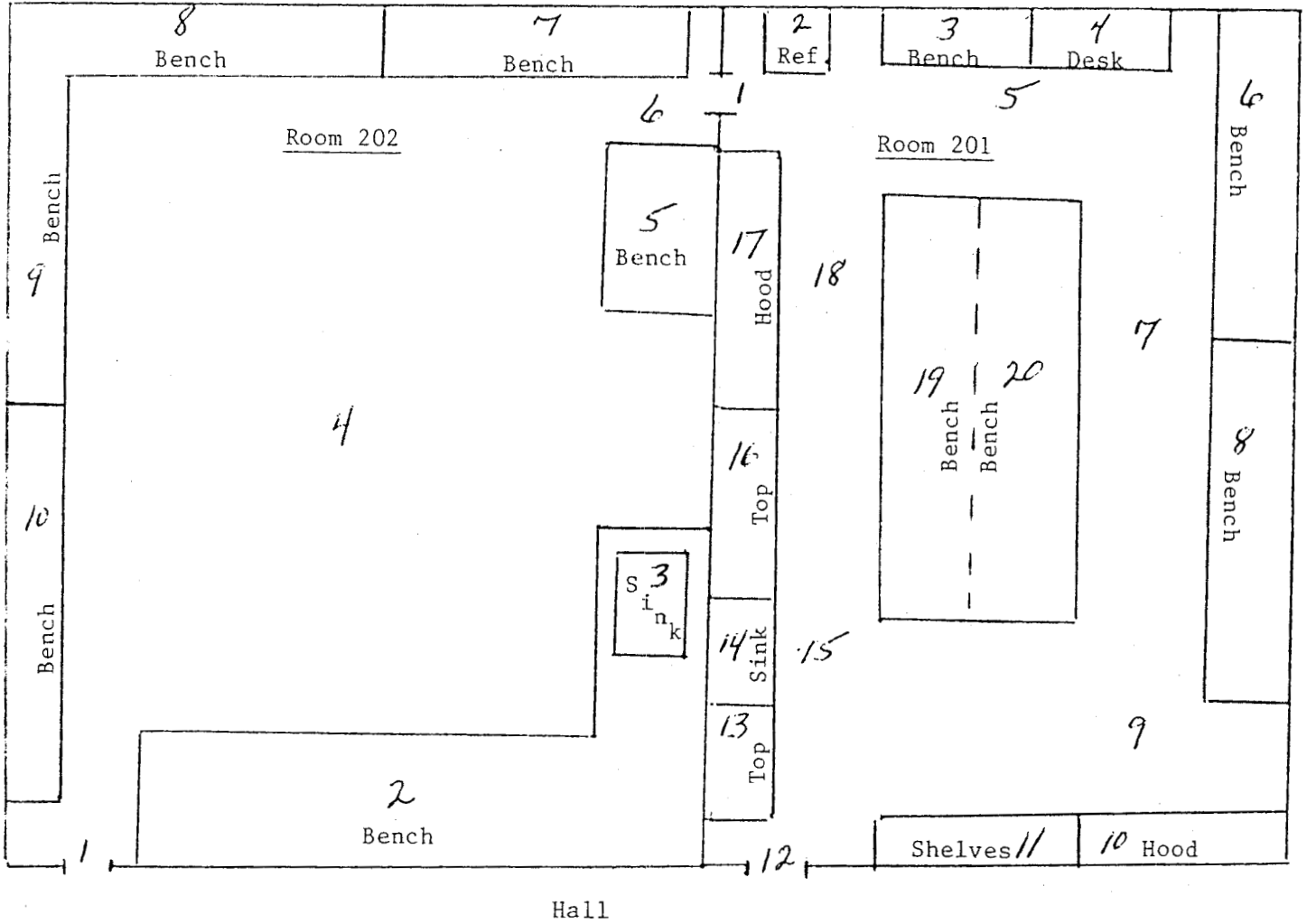
Signed *Bonnie Kelly*
Chairman of Radiation Safety Committee
or Radiation Safety Officer

DIAGRAM OF SURVEYED AREA

INVESTIGATOR: Dr. Feng

LOCATION: Noank Marine Research

Rooms #201 and #202



1785

UNIVERSITY OF CONNECTICUT
RADIATION SAFETY OFFICE U-97
WIPE TEST REPORT FORM

PURPOSE: LAB CLEAN OUT, DR. SUNG YEN FENG

LOCATION: NOANK BLDG. MARINE SCIENCE DATE: 12-2-85

ISOTOPE: ¹⁴C PHYSICAL & CHEMICAL FORM: INULIN

ACTIVITY: _____ mCi PROCEDURE: WIPE TEST

WIPE TEST RESULTS

SAMPLE NO.	LOCATION	COUNTS	TIME MIN	CPM	%EFF	BKG CPM	COUNTS ABOVE BKG.	DPM
1.	FRIDGE TOP		5	31	.95	52	∅	
2.	" SIDES		↓	44	↓	↓	∅	
3.	" DOOR HANDLE & SEAL			44			∅	
4.	FREEZER			52			∅	
5.	FRIDGE RACKS			51			∅	
6.	INSIDE DOOR			46			∅	
7.	DOOR HANDLE			45			∅	
8.	FLOOR			38			∅	
9.	WHITE HOOD			41			∅	
10.	GREEN HOOD			40			∅	
11.	CTR LAB BENCH			44			∅	
12.	DESK			48			∅	
13.	WORK BENCH NEXT TO FRIDGE			45			∅	
14.	WORK BENCH BELOW AIRCOWD. TOWER			45			∅	
15.	CTR LAB BENCH			48			∅	
16.								

PERMISSIBLE LIMIT <100 dpm/100 per sq.cm. for active laboratories.

University of Connecticut Reply to NRC

Docket No. 03010576

Control No. 141666

APPENDIX SPOTTE-C

VI. PROPOSED RESEARCH

Outline proposed research with details on the procedure for handling each radionuclide. Include such items as maximum activity to be handled at one time, activity per animal, etc. Elaborate on methods of containing potential releases to air or water. Use additional sheet if necessary.

Radionuclide: ^3H

^3H -labelled compounds will be purchased in radioimmunoassay kits (or kit components). Body fluids of fishes, e.g., serum samples, will be added to test tubes provided in radioimmunoassay (RIA) kits for analysis of antibiotics and various blood components. One to three kits will be kept on hand at any time. As an example, serum cortisol RIA kits manufactured by ICN contain a vial of 12 mL cortisol- ^3H , anticortisol, cortisol standards, charcoal dextran solution, and assay buffer. Add 0.5 mL cortisol standard or diluted sample to each tube, incubate at 98°C for 10 minutes, then cool to room temperature. Add 0.1 mL antiserum to each tube, then 0.1 mL cortisol- ^3H , mix, and incubate at 4°C for 1 hour. Add 0.2 mL charcoal dextran

Radionuclide: _____

solution and let sit at 4°C for 20 minutes. Centrifuge at 25000 rpm for 15 minutes, decant supernatant into scintillation cocktail and count for 2 minutes in a beta counter. Seal the tubes and dispose of them in a radioactive waste container provided by the radiation safety office.

Kits generally contain 0.6 to 1.2 uCi ^3H per kit of 100 assays.

We will call the radiation safety officer in Storrs to be sure we comply with all rules and regulations regarding transportation of radioactive samples to and from Avery Point.

Radionuclide: ^{125}I

^{125}I -labelled compounds will be purchased in RIA kits. Body fluids of fishes, e.g., serum samples, will be added to test tubes provided in the kits for analysis of antibiotics and various blood components. One to three kits will be kept on hand at any time. As an example, serum cortisol kits manufactured by Cambridge Medical Diagnostics contain a vial of 105 mL ^{125}I cortisol (4.5 uCi), serum cortisol standards, and 100 test tubes coated with cortisol antiserum. Add 10 uL test serum or cortisol standard to each tube, then add 1000 uL ^{125}I -cortisol. Vortex and incubate for 45 minutes at 37°C. Decant the liquid from the test tubes into a small radioactive waste container. Count the radioactivity in a gamma counter. Dispose of tubes in

Radionuclide: _____

a radioactive waste container provided by the radiation safety office.

VI. PROPOSED RESEARCH

Outline proposed research with details on the procedure for handling each radionuclide. Include such items as maximum activity to be handled at one time, activity per animal, etc. Elaborate on methods of containing potential releases to air or water. Use additional sheet if necessary.

Radionuclide: ^3H _____

^3H -labelled compounds will be purchased in radioimmunoassay kits (or kit components). Body fluids of fishes, e.g., serum samples, will be added to test tubes provided in radioimmunoassay (RIA) kits for analysis of antibiotics and various blood components. One to three kits will be kept on hand at any time. As an example, serum cortisol RIA kits manufactured by ICN contain a vial of 12 mL cortisol- ^3H , anticortisol, cortisol standards, charcoal dextran solution, and assay buffer. Add 0.5 mL cortisol standard or diluted sample to each tube, incubate at 98°C for 10 minutes, then cool to room temperature. Add 0.1 mL antiserum to each tube, then 0.1 mL cortisol- ^3H , mix, and incubate at 4°C for 1 hour. Add 0.2 mL charcoal dextran

Radionuclide: _____

solution and let sit at 4°C for 20 minutes. Centrifuge at 25000 rpm for 15 minutes, decant supernatant into scintillation cocktail and count for 2 minutes in a beta counter. Seal the tubes and dispose of them in a radioactive waste container provided by the radiation safety office.

Kits generally contain 0.6 to 1.2 uCi ^3H per kit of 100 assays.

We will call the radiation safety officer in Storrs to be sure we comply with all rules and regulations regarding transportation of radioactive samples to and from Avery Point.

Radionuclide: ^{125}I _____

^{125}I -labelled compounds will be purchased in RIA kits. Body fluids of fishes, e.g., serum samples, will be added to test tubes provided in the kits for analysis of antibiotics and various blood components. One to three kits will be kept on hand at any time. As an example, serum cortisol kits manufactured by Cambridge Medical Diagnostics contain a vial of 105 mL ^{125}I cortisol (4.5 uCi), serum cortisol standards, and 100 test tubes coated with cortisol antiserum. Add 10 uL test serum or cortisol standard to each tube, then add 1000 uL ^{125}I -cortisol. Vortex and incubate for 45 minutes at 37°C. Decant the liquid from the test tubes into a small radioactive waste container. Count the radioactivity in a gamma counter. Dispose of tubes in

Radionuclide: _____

a radioactive waste container provided by the radiation safety office.

University of Connecticut Reply to NRC

Docket No. 03010576
Control No. 141666

APPENDIX SPOTTE-D



Environmental Health and Safety
Box U-97, Room 219
189 Auditorium Road
Storrs, CT 06269-3097
(203) 486-3613
FAX (203) 486-1106

DATE: June 16, 1992

TO: Dr. Stephen Spotte
Noank Marine Research Lab

FROM: Edward L. Wilds, Jr. *EW*
Radiation Safety Manager

SUBJECT: LABORATORY DEACTIVATION

This is to document that the Marine Science Lab at Noank, CT was smeared and surveyed on June 8, 1992 and found to be free and clear of contamination.

This laboratory is hereby placed on inactive status. You are reminded that the use and storage of radioactive materials in this area is prohibited until it is reactivated. Notify Radiation Safety, U-Box 97, when you wish to be placed on an active status.

/1

cc:



Send letter and file
EW

UNIVERSITY OF CONNECTICUT
ENVIRONMENTAL HEALTH AND SAFETY

INACTIVE LABORATORY CHECKOFF SHEET

LICENSED INVESTIGATOR: J Spittle EXT. _____
LOCATION: Moore MSC DATE: 8 June 92

YES	DATE	INITIALS	
✓	8 June 92	MS	Radioactive material transferred to : <u>Waste</u> and laboratory balance zero.
✓	8 June 92	MS	Laboratory surveyed: no contamination
✓	8 June 92	MS	All radioactive waste picked up by RSO
—	*	—	All radioactive signs removed by RSO
✓	8 June 92	MS	All movable equipment surveyed and certified free of contamination.
✓	June 16, 1992	JSP	Letter sent to Licensed Investigator and copy placed in file.

*
→ To be removed by PI

ENTER B,C,D,L,P, OR R: BATCH

ROUNDOFF ID: I125
FIRST SAMPLE # = 121
LAST SAMPLE # = 146
UNLIMITED USE? N
LIMIT = 1
CATALOG I125? Y

D DESCRIPTION
125 I125

TYPE TIME TERM. PCT LCR
AW DATA 1.00 MIN

SD: KEV-L KEV-H PCT? LCR? CALCULATION
125 10 75 NO NO C=(U-61)/.78

ENTER B,C,D,L,P, OR R: RESUME

FIRST/LAST # PROT. STDS? STD-STATUS DATE STD STORED
121 146 1 I125 N

D DESCRIPTION
125 I125

TYPE TIME TERM. PCT LCR
AW DATA 1.00 MIN

SD: KEV-L KEV-H PCT? LCR? CALCULATION
125 10 75 NO NO C=(U-61)/.78

DATE BATCH COUNTED ISOTOPE
6/09/92 12:44 I125

	S/N	TIME	CPM	%DEV	C=
2:45	121	1.00	58	26.3	-3.846
2:46	122	1.00	46	29.5	-19.231
2:47	123	1.00	50	28.3	-14.103
2:48	124	1.00	46	29.5	-19.231
2:49	125	1.00	49	28.6	-15.385
2:50	126	1.00	55	27.0	-7.692
2:51	127	1.00	55	27.0	-7.692
2:53	128	1.00	54	27.2	-8.974
2:54	129	1.00	62	25.4	1.282
2:55	130	1.00	51	28.0	-12.821
2:56	131	1.00	47	29.2	-17.949
2:57	132	1.00	57	26.5	-5.128
2:58	133	1.00	44	30.2	-21.755
2:59	134	1.00	47	29.7	-17.848

13:02	136	1.00	48	29.9	-16.667
13:03	137	1.00	46	29.5	-19.231
13:04	138	1.00	45	29.8	-20.513
13:05	139	1.00	55	27.0	-7.692
13:06	140	1.00	61	25.6	0.000
13:07	141	1.00	55	27.0	-7.692
13:	142	1.00	58	26.3	-3.846
13:10	143	1.00	43	30.5	-23.077
13:11	144	1.00	54	27.2	-8.974
13:12	145	1.00	46	29.5	-19.231
13:13	146	1.00	53	27.5	-10.256

PURGE COMPLETE

University of Connecticut Reply to NRC

Docket No. 03010576

Control No. 141666

APPENDIX HISTORY

June 27, 1999

First a Hatchery, Now Hope for Oysters

By SAM LIBBY

THE state is establishing a shellfish hatchery in the Noank section of Groton in an attempt to save Connecticut's indigenous stocks of oysters and an economically significant industry.

Two parasites, harmful to oysters but not to humans, have virtually destroyed Chesapeake Bay's oyster industry and have infected Connecticut's most productive oyster grounds, reducing the catch and harming the state's \$50 million industry. The state hopes the hatchery can produce oysters resistant to the parasites

"The initial focus of the hatchery will be on the production of oyster seed that are disease resistant," said John H. Volk, director of the State Department of Agriculture's Bureau of Aquaculture. "The oyster seed will be made available to municipal shellfish commissions and small oyster industries that have been hard hit by the devastation of the MSX and Dermo oyster parasites."

The hatchery will breed and grow oysters that have demonstrated resistance to the two parasites and that have evolved to thrive in the particular conditions of the state's different estuaries and inshore waters that produce natural growths of oysters, Mr. Volk said.

Dermo is caused by a single-cell protozoan called *Perkinsus marinus* and is the slower acting of the two, taking up to three years to kill an infected oyster. Its name was derived from a fungus previously thought to be the cause of the oyster disease. MSX (for multinucleated sphere X), caused by the protozoan *Haplosporidium nelsoni*, kills within three to six weeks. Because oysters take three to five years to reach marketable size, either parasite can wipe out the market.

"A useful strain of oysters must not only be resistant, but locally adaptable," said James Markow, an owner of Aeros Cultured Oyster Company. The company operates a shellfish hatchery in Shirley, N.Y., and has worked with the Groton Shellfish Commission for the past seven years on a variety of oyster propagation projects.

"Something that might work in one place, all year might not work there the next year," Mr. Markow said. "With aquaculture you've got to always adjust."

MSX was first detected in Long Island Sound in 1985. Production fell from over 243,000 bushels in 1984 to 69,721 bushels in 1987, says Dr. Inke Sunila, a state shellfish pathologist.

In 1992, MSX returned to Long Island Sound. In that year, about 900,000 bushels of oysters were harvested in Connecticut waters with a wholesale value of about \$42 million. By 1994 only about 600,000 bushels of oysters were harvested in state waters with a wholesale value of about \$32 million.

In 1996 Dermo spread to Long Island Sound, but no known mortality associated with Dermo has occurred in Long Island Sound, Dr. Sunila said.

At the state hatchery, oysters will be grown from microscopic swimming larvae to the size of a pin head by feeding them a special blend of marine algae, said Karen Rivara, president and an owner of Aero. They are then moved to an oyster nursery where they are placed in nutrient-rich water pumped from the adjacent estuary.

The juvenile oysters are held in mesh-bottomed containers that protect them and provide a constant flow of water. When large enough, the oysters are placed in cages, which resemble lobster pots, and placed in the waters of Fishers Island Sound, where they will continue to grow until ready for market.

Aero will contribute \$65,000 in nursery and other equipment and also the use of the George Billo, a 1905 oyster harvest boat. Under its contract with the Groton Shellfish Commission, Aero will then have access to about half the seed oysters that the hatchery produces in its first year (about 2 1/2 million seeds).

The plan for the hatchery's first year of aquaculture calls for the production of five million seed oysters. About 1 1/2 million of the oyster seeds will be turned over to the Groton Shellfish Commission, which conceived and is implementing the plan for the hatchery. The shellfish commission will run the hatchery in cooperation with the aquaculture division and private businesses and it will use the oyster seeds for recreational oyster programs. One million seeds will be sold to other commercial oyster companies.

The hatchery plan calls for the formation of new partnerships with other private shellfish businesses, other municipal shellfish commissions and marine educational and vocational agencies, said the Groton Shellfish Commissioner Neil Brown. The plan calls for the inclusion of businesses, educational programs, and shellfish commissions that can benefit from the association with the hatchery and can, in turn, benefit the hatchery, Mr. Brown said.

"Finding a solution to Dermo and MSX will not be a one-shot deal," said Mr. Markow. "These parasites will come back in slightly different form. It will not be as much of a problem in Long Island Sound as it is in the Chesapeake, because Long Island Sound has great flushing and colder water.

"It takes two to three years to grow an oyster to market size the old-fashioned way," Mr. Markow added. "Along comes a disease that wipes you out just as you're ready to harvest. With a hatchery/nursery we figure we can get them out in one and a half years. The faster you grow out, not only is it faster to market, but you're cutting your exposure to risk."

The long-term mission of the hatchery will be to assist the state's existing aquaculture businesses and help incubate new aquaculture businesses just as the state Agricultural Experiment Station assists and incubates Connecticut agricultural businesses, Mr. Volk said.

"An important mission of the hatchery will be education and training," said Stephen Jones, a maritime writer and Groton Shellfish Commissioner. "Students from the Regional Vocational Aquaculture School in Bridgeport, the Sound School in New Haven, and Project Oceanology will work in all parts of the hatchery operation," said Mr. Jones, a professor at UConn and the hatchery's education coordinator.

"The intent of the education and training program will be to give these young people the experience and ability to establish new aquaculture businesses or to find employment in existing aquaculture businesses."

After the hatchery fulfills its first mission of producing stocks of MSX and Dermo resistant oysters, it will be used for the cultivation of other shellfish stocks such as scallops, Mr. Volk said.

In the 19th century, scallops were harvested by recreational and commercial shell fishermen off Stonington, Clinton Harbor, and in the Niantic River. Scallops became scarce and have just been re-introduced in Clinton Harbor. Although there is limited recreational scalloping in the Niantic River,

commercial scalloping no longer exists in Connecticut.

The idea of the hatchery began when the Groton Shellfish Commissioner, Roger Sherman, and the Commission chairman, Ronald Chappell, learned that the two-storied, brick building near the mouth of the Mystic River was about to be sold. The building had been used by UConn as a research laboratory focused on lobsters and blue fish from 1955 until 1998, when a new complex was built for the university's maritime expansion program at Avery Point Campus.

The brick building had been built as an engine factory at the turn of the century when Noank was still a fishing and ship-building village. Later, it housed a velvet-making mill. Following the hurricane of 1938, it replaced the state lobster hatchery, which had been situated about half a mile down the Mystic River and had been washed away by the storm, Mr. Jones said.

The thing that is unusual about the Groton Shellfish Commission, said Mr. Volk, is the institutional memory of its members. Many of the shellfish commissioners are watermen who are retired from private industry. They have the experience of their professions as well as the continuity of experience from their many years as shellfish commissioners, he said.

UConn initially wanted \$500,000 to transfer ownership of the property to the state aquaculture division. But State Representative Lenny Winkler, a Republican of Groton, worked with Thomas Q. Callahan, an associate vice president at UConn, and the State Department of Agriculture Commissioner Shirley C. Ferris, who is also a UConn trustee, to agree to transfer the property to the state aquaculture division for free. UConn's compensation has yet to be determined, Mr. Winkler said.

"Right now all hatchery shellfish stocks are coming from out-of-state," Mr. Winkler said. "There's no need for this. There was no need to sell the property and there was no need for one state agency to pay another state agency to do something so beneficial."



Town of Groton, Connecticut

Meeting Agenda

45 Fort Hill Road
Groton, CT 06340-4394
Town Clerk (860)441-6640
Town Manager (860)441-6630

Representative Town Meeting

Moderator Rita Schmidt

Representatives Joe Baril, Tom Barnhart, Lori Bartnik, Alicia Bauer, Genevieve Cerf, Michael Collins, Syma Ebbin, Peter Fairbank, Robert Garcia, Patrice Granatosky, Dolores Harrell, Debra Jenkins, Carole McCarthy, Kevin McMahon, Richard Metayer, David Miner, Deborah Monteiro, James Moulding, Scott Newsome, Nora Patterson, Deborah Peruzzotti, Joy Plunket, Robert Post, Kevin Power, Don Pratt, Mary-Ellen Schefers, Eleanor Scussel, Jack Sebastian, Jennifer Smuts, Eleanor Steere, Fritz Stein, Joan Steinfeld, Irma Streeter, Mark Svencer, Patti Thunberg, Cheryl Tilney, Kevin Trejo, Tom Vivirito, Robert Walker Sr, and John Wheeler.

Wednesday, October 11, 2006

7:30 PM

Senior Center

Regular Meeting

- A. ROLL CALL
- B. MOMENT OF SILENCE AND SALUTE TO THE FLAG
- C. APPROVAL OF MINUTES OF SEPTEMBER 13, 2006
- D. CITIZENS' PETITIONS
- E. RECEPTION OF COMMUNICATIONS
 - 1. Budget Discussion with Board of Education
 - 2. Revaluation Update by Tyler/CLT
- F. REPORT OF THE TOWN MANAGER:
 - 1. Financial report
 - 2. Monthly briefing
- G. LIAISON REPORTS
 - 1. Town Council - Rep. Monteiro
 - 2. Economic Development Commission - Rep. Cerf
 - 3. Town Council/Board of Education/RTM Liaison Committee - Rep. Patterson
 - 4. Permanent School Building Committee - Rep. Miner
 - 5. P.B.F.D. Consolidation Review Committee - Reps. Baril & Steinfeld
 - 6. Shellfish Task Force - Rep. Ebbin
- H. COMMITTEE REPORTS
 - 1. FINANCE
 - a. Chairman's notes on the business of the Town - Chairman Granatosky
 - 2. COMMUNITY & ECONOMIC DEVELOPMENT

a. Chairman's notes on the business of the Town - Chairman Vivirito

2006-0229 Noank Hatchery Property Deed Acceptance

RESOLUTION ACCEPTING THE CONVEYANCE OF A HATCHERY BUILDING AND GROUNDS

WHEREAS, the State of Connecticut, Department of Agriculture, has surrendered its ownership of the former research facility known as the Noank Hatchery and has caused that parcel of land and any structures thereon to be deeded to the Town of Groton, and

WHEREAS, Connecticut Public Act Number 05-279 provides as follows:

The town of Groton shall make a portion of said parcel of land, including the building or buildings thereon, available to the town of Groton Shellfish Commission for aquaculture purposes and may lease all or a portion of said parcel of land and building or buildings for aquaculture or environmental purposes. If the Town of Groton

- (1) Does not use said parcel for said purposes;
 - (2) Does not retain ownership of all of said parcel; or
 - (3) Leases all or any portion of said parcel for any other purposes,
- the parcel shall revert to the state of Connecticut.

And WHEREAS, the acquisition of this property has been favorably reviewed by the Groton Planning Commission, and

WHEREAS, the Town Council has avidly sought this conveyance for a number of years for the objective of ensuring sustained local production of high quality shellfish, and for educational and other aquaculture or environmental purposes, and

WHEREAS, it is intended for the Town to promptly lease the premises to a shellfish cooperative, except for a portion reserved to the Groton Shellfish Commission, and for the Town henceforth to comply with all the provisions of Public Act 05-279 cited above, now therefore be it

RESOLVED, that the Town of Groton accepts the conveyance of said property, authorizes the payment of costs of \$2,800.00 as specified in the act of conveyance, and directs that, when the original deed is received from the state, the deed shall be recorded in the land records of Groton

Refer to RTM.

Legislative History

8/15/2006	Town Council Committee of the Whole	Recommended for a Resolution	
8/15/2006	Town Council	Deleted from Referral List - Action to be taken	
8/15/2006	Town Council	Adopted and Referred	Representative Town Meeting
9/13/2006	Representative Town Meeting	Referred	RTM Community & Economic De

3. EDUCATION

a. Chairman's notes on the business of the Town - Chairman Patterson

4. HEALTH & SOCIAL SERVICES

a. Chairman's notes on the business of the Town - Chairman Wheeler

5. RECREATION

a. Chairman's notes on the business of the Town- Chairman Power

6. PUBLIC SAFETY

a. Chairman's notes on the business of the Town - Chairman Pratt

7. PUBLIC WORKS

a. Chairman's notes on the business of the Town - Chairman Collins

2006-0234 Police Station Reroofing

RESOLUTION TRANSFERRING CIP FUNDS FOR POLICE STATION ROOFING

WHEREAS, there is an approved CIP project from FYE 2006 for the partial re-roofing of the Town Police Station, and

WHEREAS, current construction bids and estimates show that more than \$8,000 in additional funds will be necessary for the project, and

WHEREAS, there are unused funds in another CIP appropriation for related work, now therefore be it

RESOLVED, that the Town Council approves a transfer of \$10,000 from Capital Improvement Project 50105 5542 to Capital Improvement Project 50105 5512.

Refer to R.T.M. under Rule 6.5.3

Legislative History

8/17/2006	Mayor	Referred	Town Council Committee of the W
9/12/2006	Town Council Committee of the Whole	Recommended for a Resolution	
<i>Director of Public Works Gary Schneider noted that there are two sections of roof at the Police Station that need to be replaced due to age and security concerns. He requested a transfer of excess funds from another Capital Improvement Project.</i>			
9/12/2006	Town Council Committee of the Whole	Recommended for a Resolution	
9/19/2006	Town Council	Deleted from Referral List - Action to be taken	
9/19/2006	Town Council	Adopted and referred under Rule 6.5.3	Representative Town Meeting
9/20/2006	Representative Town Meeting	Referred under Rule 6.5.3	RTM Public Works Committee

8. RULES & PROCEDURES

a. Chairman's notes on the business of the Town - Chairman Stein

I. OTHER BUSINESS

J. ADJOURNMENT