



**UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE**

Center for Coastal Fisheries and Habitat Research
101 Pivers Island Road
Beaufort, North Carolina 28516-9722

December 16, 2008

Mr. Dennis R. Lawyer
U.S. Nuclear Regulatory Commission
Region 1
475 Allendale Road
King of Prussia, Pennsylvania 19406-1415

J-6
MS-16

2008 DEC 23 PM 1:29
RECEIVED
REGION 1

Re. License No.: 32-00426-02
Document No.: 03005594
Control No.: 142793

Dear Mr. Lawyer:

We are responding to your email dated Monday, 15 December 2008, with the subject "Department of Commerce, Request for Additional Information Concerning Application for a License Amendment."

The Center for Coastal Fisheries and Habitat Research submits the information below, in accordance with the requests of your email to facilitate your efforts to amend our Nuclear Regulatory Commission license to a "Terminated" status for license number 32-00426-02.

Paragraph 1 Request: In your letter dated December 5, 2008, you submitted a letter dated February 28, 1988, which showed the surveys for the room where the isotope vault was previously located. Since this area does not appear to meet ALARA criteria, please submit updated surveys or describe the location within the surveys already submitted as part of your "Inspection and Decommissioning Survey", dated October 5, 2008.

Response: The areas mentioned were included in our Inspection and Decommissioning Survey of October 5, 2008. However, we have had several renovation projects in the years since then after the rooms were surveyed and cleared. Some of these spaces are now being used as office spaces. Enclosure (1) of this letter is the same as enclosure (7) of our December 5, 2008 letter.

Paragraph 2 Request: On the submitted, NRC Form 314, "Certificate of Materials," you stated that you disposed of radioactive materials by sea dumping. Disposal by sea had been phased out in 1971. Please clarify what you mean by sea dumping. Submit documentation of any sea disposal after 1971.

Response: Please pardon our error. We did not dump any radioactive materials into the sea after 1971.

Paragraph 3 Request: Please provide the latest leak test for each of your sealed

142793
NRC/NOAA MATERIALS-002



sources, including sources no longer in your possession. If you never possessed sealed sources, please make that statement. If you do not have records of some sealed sources, make the statement that none of your sealed sources leaked, or give information surrounding the conditions associated with the source.

Response: The leak tests submitted as enclosure 11 appear to be receipt surveys and not leak tests on sealed sources. The last submitted survey was in 1995.

Paragraph 4 Request: The surveys submitted in the October 5, 2008 report, "Inspection and Decommissioning Survey," were performed on the basis on carbon 14 as the only isotope. The license and you used many other materials including cadmium 109, a non-beta emitter. For the surveys conducted, you need to determine efficiencies for the other radionuclides used during the life of the license to determine if the survey measurement was acceptable.

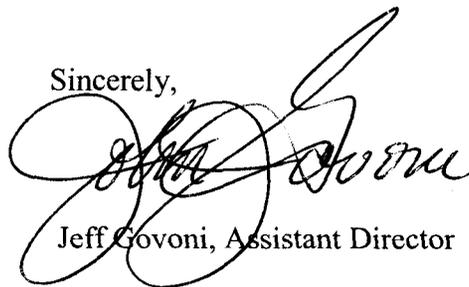
Response: Thank you for bringing this to our attention. We consulted with our Contractor, Glenn Goudy Health Physics Consultants LLC, who informed us that the instrument used, the Ludlum 14C with a Pancake probe, SN: 55162 last calibrated 6/23/08, was capable of detecting Cadmium 14 if Cadmium 14 had been present. No detections were made of any kind or type of radioactive materials or background. We are providing enclosure (2) as his letter of confirmation to the statement.

Paragraph 5 Request: The surveys submitted in the October 5, 2008 report, "Inspection and Decommissioning Survey," included surveys by direct method. In NUREG-1757, Volume 1, "Consolidated and Decommissioning Guidance, Decommissioning Process for Materials Licensees", the simplified survey procedure (Listed on page 8-2) requires a one hundred scanning of all surfaces in the area of the facility where license material was stored. It does not appear that a scan was performed, please submit the sensitivity information of that scan for the isotopes used at the facility. If a scan was not performed, please perform a scan or submit the guidance followed to release the facility.

Response: During consultations with our Contractor, identified above, he confirmed that a one hundred scanning of all surfaces in the area of the facility where licensed materials were stored was performed. We are providing his document as Enclosure (3) for confirmation of the kind of isotopes the one hundred scan was performed for.

Your point of contact for additional information or clarification of information is Joseph Bizzell, (252) 728-8718, or joseph.bizzell@noaa

Sincerely,

A handwritten signature in black ink, appearing to read "Jeff Govoni", written over a circular scribble.

Jeff Govoni, Assistant Director

Enclosures:

(1) Room surveys that lead to room renovations;

- (2) Letter from our Contractor stating survey covered all spaces and isotopes;
- (3) Contractor provided Appendix of one hundred scan of all surfaces and isotopes.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Fisheries Science Center
Beaufort Laboratory
101 Pivers Island Road
Beaufort, North Carolina 28516

March 16, 1993

MEMORANUM FOR: Staff Ecology Division
FROM: *Susan A. Huntsman*
Susan A. Huntsman, Radiation Safety Officer
SUBJECT: ⁵⁹Fe Spill in Clean Room

A small quantity of ⁵⁹Fe was spilled on the floor of the Clean Room. The contaminated area has been covered with plastic and outlined with warning tape. The residual radioactivity will be allowed to decay through at least three half-lives (half life = 45 days), or until measured radiation level at background. The contaminated area poses no health or safety threat to individuals working in the room.

This room has been designated a radioactive area, since radioisotopes are used in the room.

Cleaned up w/ Radio waste

max on floor = 17 mR/D ~~max~~

Recheck 1/94

no excess activity measurable

Enclosure (1)





SCIENTIFIC ECOLOGY GROUP, INC.

RADIOLOGICAL ENGINEERING AND
DECOMMISSIONING SERVICES

Phone: (615) 376-8206

FAX: (615) 376-6247

August 28, 1995

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Beaufort Laboratory
101 Pivers Island Road
Beaufort, NC 28516-9722

Attention: Dr. Susan Huntsman

Subject: POST DECONTAMINATION SURVEY DATA FOR ROOM 112

Reference: P.O. No. 401 ETNF500080

Dear Dr. Huntsman:

Scientific Ecology Group, Inc. (SEG) has completed the decontamination and final survey of the floor, wall and ceiling surfaces of Room 112 at the National Marine Fisheries Service at Beaufort Laboratory. The project engineer's report is attached. The data shows the floor, wall and ceiling surfaces meet the current NRC criteria for unrestricted release. Fixed contamination above the release criteria was found in the hallway adjacent to Room 112 and in a drain line in Room 112.

This complete the authorized scope of work, except for refinishing the floor. This task will be performed by an SEG subcontractor, Willis Construction Co., at your convenience. Please call me at (615) 376-8246 if you have any questions, or if I can be of any further service.

Sincerely,

David M. Hall
Manager, Decommissioning Contract Services
Radiological Engineering and
Decommissioning Services

DMH/tko

cc: D. Neely M. Lynch (NMFS)
A. Johnson P. Jones

082895-DAT\MEMDAVE\SIGN\0650.L

P.O. Box 2530
560 Bear Creek Rd.
Oak Ridge, Tennessee 37831-2530
(615) 481-0222 Fax: (615) 482-7206

P.O. Box 2138
Carlsbad, New Mexico 88220
(505) 887-1673 Fax: (505) 885-4219

Enclosure (1)
1234 Columbia Dr. S.E.
Richland, Washington 99352
(509) 736-0626 Fax: (509) 735-3085

MEMORANDUM

TO: Dave Hall

FROM: Paul Jones *PJ*

DATE: August 21, 1995

SUBJECT: NATIONAL MARINE FISHERIES SERVICES PROJECT RESULTS

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The following is a review of the National Marine Fisheries Service Room 112 final survey:

SEG has completed the project within the technical approach defined in the original proposal.

A characterization survey was performed for room 112 and surrounding areas. Results of the room 112 survey showed direct survey results of <MDA to 210,000 dpm/100cm² and removable survey results of <MDA to 2,275 dpm/100cm². The surrounding area showed direct survey results of <MDA to 31,591 dpm/100cm² and removable survey results <MDA.

The remediation of the contaminated floor in room 112 was performed using vacuum shrouded scabbling equipment. Air samples taken during remediation activities showed there was no release of airborne radioactivity. One 55 gallon drum of waste was generated during the remediation (1/3 drum of scabbling dust and 2/3 of a drum of DAW). The waste was released to Susan Huntsman, RSO of the NMFS at Beaufort, NC.

Following remediation of room 112, 1 meter grids were established on the floor and walls up to 2 meters. The room was surveyed using these grids for fixed and removable surface contamination, and exposure rate measurements. Surveys were performed in accordance with DRAFT NUREG/CR-5849.

Based upon information provided by NMFS, the only nuclide present in the project remediation area was cesium-137. The following guideline values for cesium-137 were taken from, "*Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material*", August 1987.

Nuclides	Average	Maximum	Removable
Beta-gamma emitters	5000 dpm βγ/100 cm ²	15,000 dpm βγ/100 cm ²	1000 dpm βγ/100 cm ²

A direct beta reading taken at the opening of a drain pipe penetrating from the North wall of room 112 indicated activity levels in excess of 5000 dpm/100cm², (5242 dpm/100cm² max). The drain survey was performed using a shielded G-M pancake detector. Results of the smears taken on the inside of the drain showed <MDA.

With the above exception, the results of surveys performed in room 112 for both fixed and removable contamination were below the guideline values.

Gamma dose rates in room 112 were slightly elevated, (21.7 uR/hr to 28.2uR/hr) due to the ceramic tile covering the walls of the room.

Enclosure 1 Characterization Survey Data and Map.

Enclosure 2 Termination Survey Data, Room 112 Grid Map, and Room 112 Survey Graphs

National Marine Fisheries Service
Southeast Fisheries Science Center
101 Pivers Island Rd
Beaufort, NC 28516
September 7, 1995

David J. Collins
US New Clear Regulatory Commission
101 Marietta Street, NW
Atlanta, GA 30323

Dear David,

As you requested, I am enclosing a copy of the final report from SEG on the decontamination of room 112 done on August 15-18, 1995. The original report will be maintained in the Radiation Safety Officer's permanent files (currently in room 204 of the National Marine Fisheries Laboratory, Beaufort, NC.).

Regarding the contaminated drain pipe in the wall of room 112, the SEG team obtained two measurements at the end of the pipe: one was 4,839dpm, the other 5,240dpm (for an average of 5,040). Clearly, this is not statistically different than 5,000dpm. This activity is well below the acceptable maximum (15,000 dpm) for an area not exceeding 100 cm² (the cross sectional area of the pipe is about 11cm²). There was no removable activity. Given these circumstances, and the fact that, as Cs¹³⁷, even 5240dpm would decay to below 5000dpm in 2 years, I do not believe it is necessary to remove the pipe.

There is a small spot in the hall that gave a reading of 31,590dpm/100cm², about twice the acceptable level of unremovable contamination. This spot is less than 2 inches across, (i.e., is completely covered by the GM pancake detector), and has no removable activity. It is located just outside the door of room 112, near the wall. The SEG team said they did not have time to remove it and stay within the agreed time to complete their contract (which specified only the floor of room 112). Since this spot is in a hall that is used only for access to room 112, and furthermore, is not in a heavily trafficked portion of the floor, I'm wondering if we could allow it to remain? If not, what are the guidelines for removing it ourselves?

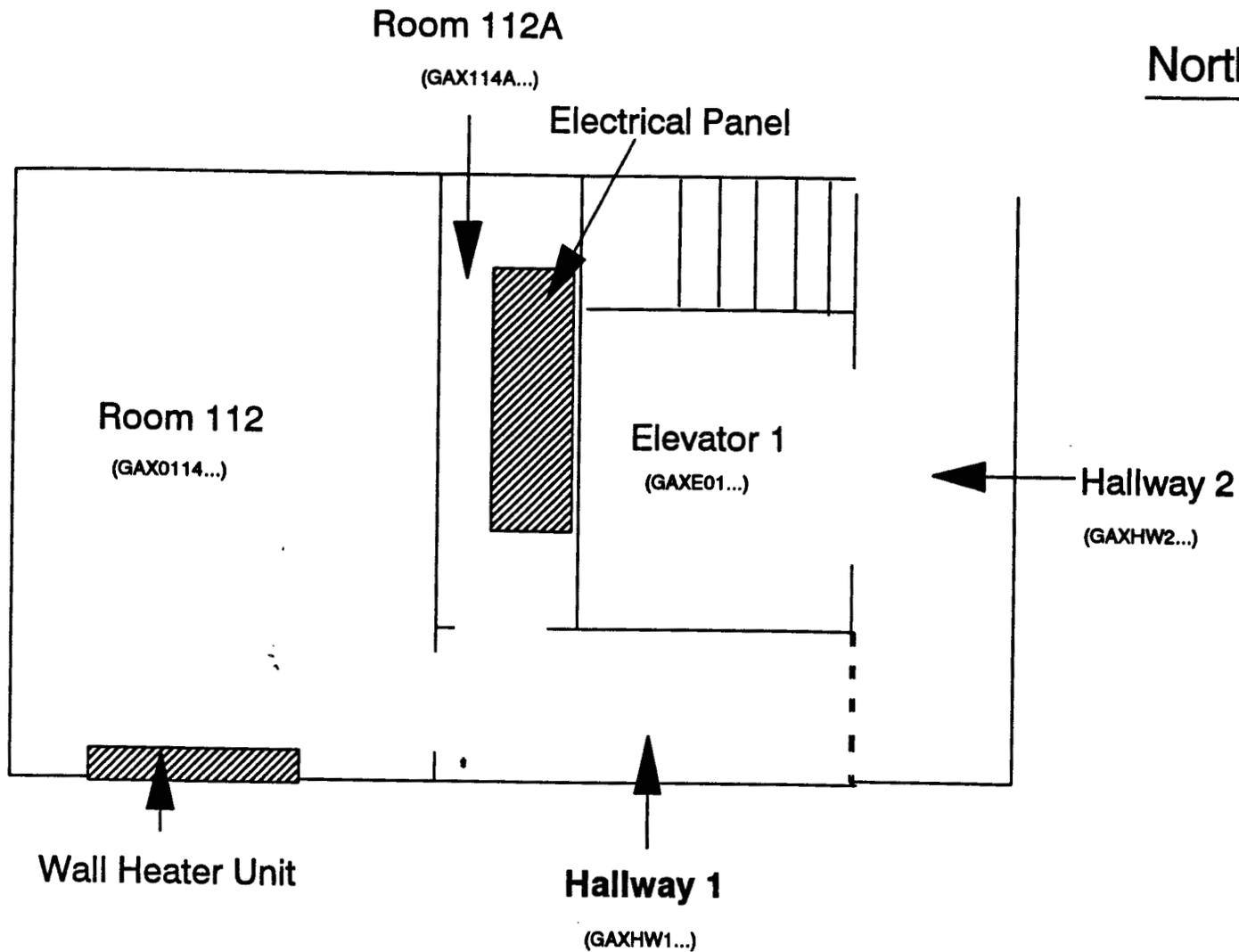
As usual, I appreciate your advice.

Sincerely,

Susan A. Huntsman
Radiation Safety Officer

Enclosure (4)

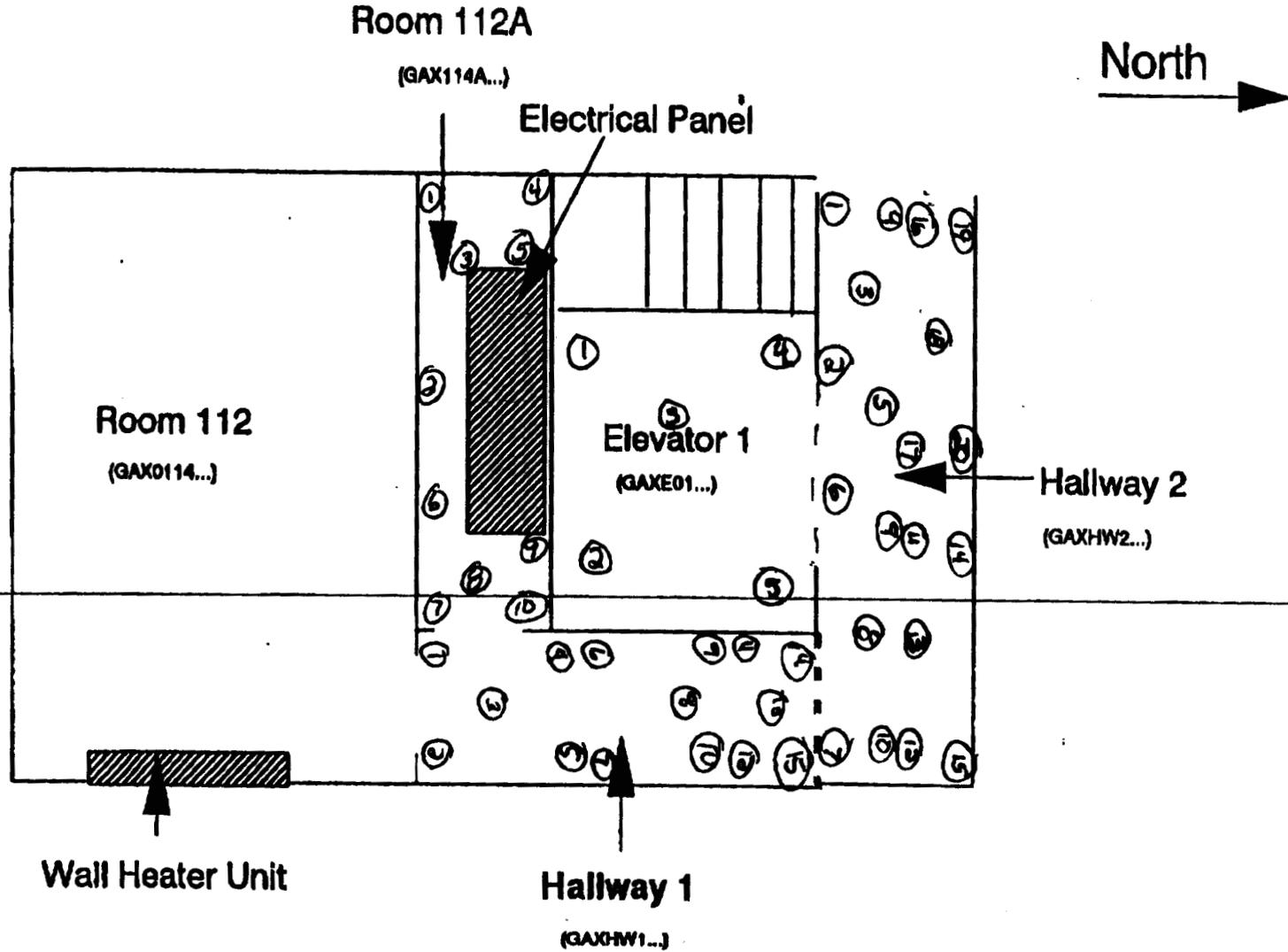
Ecology Wing Room 112 Characterization Areas



Enclosure (H)

Ecology Wing Room 112 Characterization Areas

Enclosure (1)



Called Dave Collins on August 18, 1995 to determine if we can go ahead with the floor replacement before getting the final report from SEG. He, in consultation with Doug Collins said that it would be ok. He asked me to send him a floor plan of the building with the vault room identified for his records which I did.

Aug 31. pointed out to Don that the old vault room no longer has a room number and the number that had been used to designate it (112) is now assigned to the seawater room. We decided to restore this number to the old vault room to avoid any future confusion as to which room was decontaminated.

Enclosure (4)



Hess → to station file
UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southeast Fisheries Center
Beaufort Laboratory
Beaufort, NC 28516
February 28, 1988

U.S. Nuclear Regulatory Commission
Region II
ATTN: Mr. Earl Wright
101 Marietta Street, N.W.
Atlanta, Georgia 30323

Dear Mr. Wright:

SUBJECT: DECONTAMINATION PROCEDURE (REFERENCE MAIL CONTROL NUMBER: 220449)

Enclosed is a drawing of the radioactive spots on the floor of the room where the isotope vault was previously located. Also, the readings obtained with a GSM-10 survey meter are included. As we discussed on the phone, I have secured the room and will wait until I hear from you to proceed with the decontamination procedure.

Sincerely Yours,

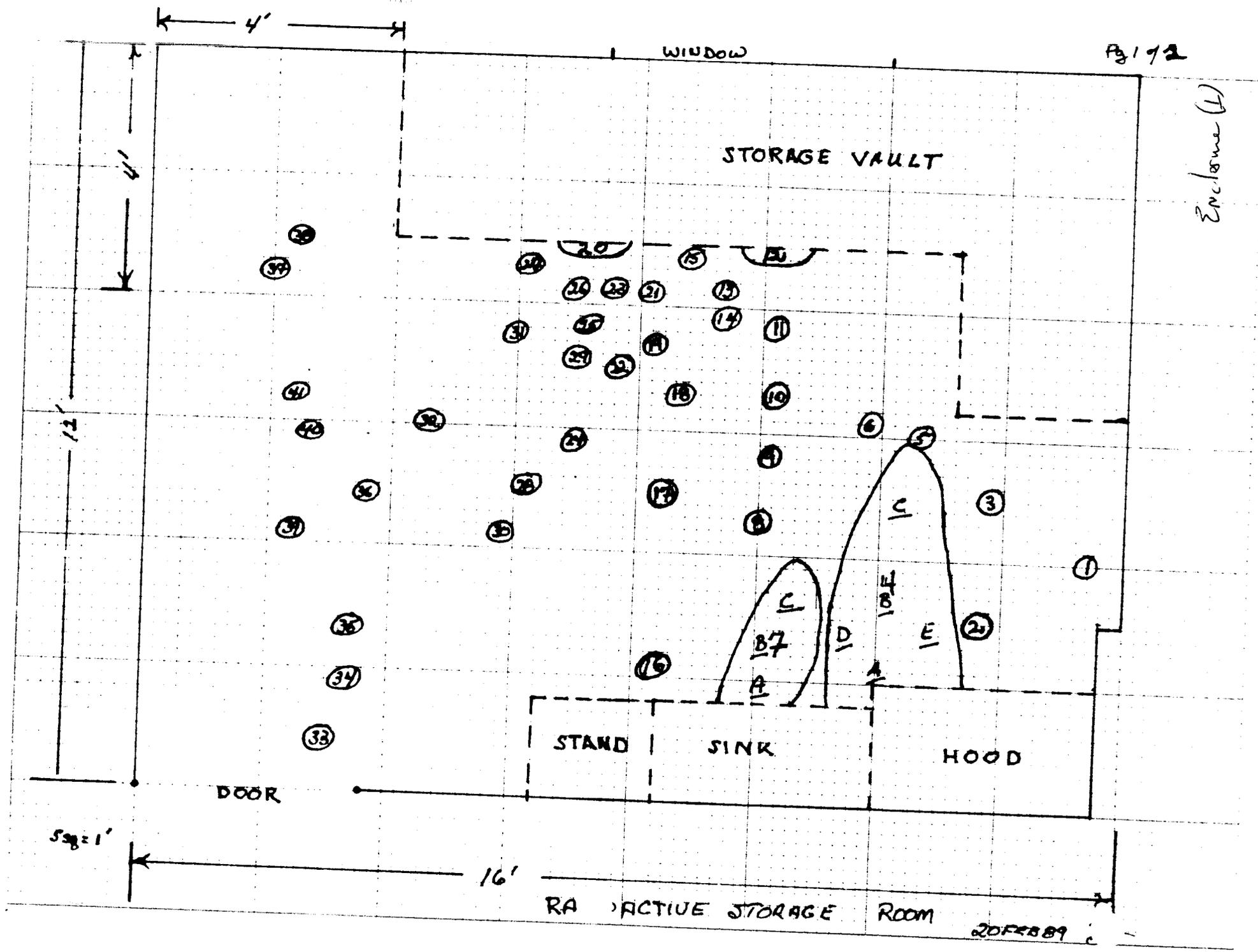
Linda C. Clements
Radiation Safety Officer

Enclosure (1)



Fig 172

Enclosure (1)



20 FEB 89

Spot number	mrh at 1cm	mrh at 1 meter	Spot number	mrh at 1cm	mrh at 1 meter
1	0.18	13 kg	20	0.7	
2	0.6	18 kg	21	14.0	
3	2.0	13 kg	22	0.5	
4 A	6.0	18 kg	23	1.3	
B	0.3	0.03	24	0.8	
C	4.0	0.03	25	4.0	
D	0.08	0.07	26	0.8	
E	0.4	0.04	27	0.3	
5	0.11	0.02	28	2.0	
6	0.4	0.04	29	1.1	
7 A	0.15	0.04	30	0.6	
B	0.3	0.05	31	1.4	
C	0.07	0.04	32	4.0	
8	0.4	0.05	33	0.5	
9	18.0	0.04	34	4.0	
10	1.0	0.03	35	1.0	
11	0.14	0.02	36	1.3	
12	0.12	0.04	37	0.1	
13	0.2	0.02	38	1.5	
14	3.0	0.02	39	6.0	
15	0.6	0.03	40	3.0	
16	2.0	0.03	41	2.0	
17	8.0	0.04			
18	0.3	0.03			
19	0.3	0.03			

Measurements with GSM-11
 Survey meter by C. Brant
 and Bowen
 Enchsme (4) 2/22/89

Glenn H. Goudy
Health Physics Consultants, LLC
2471 Birkenhead Dr.
Charleston, SC 29414

December 15, 2008

National Oceanographic Atmospheric Association
National Ocean Services
Attention: Joseph Bizzell
101 Pivers Island Road
Beaufort, NC 28516-9722

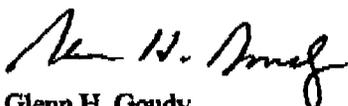
Dear Mr. Bizzell,

As per your request for an explanation of the survey report sent regarding the decommissioning survey for the Beaufort Facility, the survey did include surveys of all areas of the facility using a Ludlum 14C with a Pancake probe, SN:155162, last calibrated 6/23/08. The statement regarding the use of a Geiger counter was not put into the body of the report since the request was for survey to determine if any residual contamination was present. Upon arrival to the facility I was informed that the facility had been renovated prior to the request for a decommissioning survey. The renovations included replacement of floor, painting of all walls, in some instances replacement of counter tops and structural reconfiguration. The survey of each room indicated that all readings were found to be less than 0.1 mR/hr. The survey of the facility utilizing the Geiger counter covered the entire room not just spot checks. This included walls, hoods, counter tops, refrigerators, and sinks. No contamination was found in any of the rooms surveyed.

The survey also included utilizing a Wallac Scintillation counter to determine if any residual contamination was present. The settings for the scintillation counter during counting of the samples were set at the largest window opening setting possible. The window opening used was a setting of 5 to 1024. As you indicated on the phone that at one time the isotope Cadmium 109 was utilized at this facility but it is not on the current license. The scintillation counter would have shown any residual contamination present for all materials listed on the license that is the subject of the decommissioning.

If I can provide you with additional information or be of further assistance please feel free to contact me at 843-270-6588.

Sincerely,



Glenn H. Goudy
Health Physics Consultants, LLC

Enclosure (2)

SCINTILLATION COUNTER WINDOW SETTINGS

5" 1024 FOR PURPOSES OF DETERMINING PRESENCE OF CONTAMINATION

Appendix 1 Isotopes

Number	Name	Window	Half-life	Number	Name	Window	Half-life
1	H3	5 350	12.43y	39	K40	5 1010	1.26E9y
2	I125	5 550	60d	40	K42	5 1024	12.36h
3	C14	5 660	5730y	41	K43	5 980	22.4h
4	S35	5 750	87.4d	42	Kr85	5 890	10.73y
5	Ca45	5 750	164d	43	La140	5 1023	40.27h
6	P32	5 1010	14.3d	44	Lu176	5 950	3.7h
7	Ag110	5 850	249.8d	45	Lu177	5 840	6.7d
8	Ag111	5 940	7.5d	46	Mo99	5 980	66.2h
9	As74	5 1010	17.7d	47	Na22	5 850	2.6y
10	As76	5 1024	26.5h	48	Na24	5 1010	15.02h
11	Au198	5 930	2.696d	49	Nb95	5 660	35d
12	Au199	5 830	3.13d	50	Ni63	5 530	100y
13	Ba140	5 940	12.8d	51	Os193	5 1010	31h
14	Br82	5 900	36h	52	P33	5 750	25d
15	Ca47	5 1023	4.54d	53	Pb210	5 520	21y
16	Cd115	5 1010	44.6d	54	Pm147	5 750	2.623y
17	Ce141	5 870	32.5d	55	Pr142	5 1023	19.2h
18	Ce144	5 770	284.3d	56	Rb86	5 1010	18.7d
19	Cl36	5 900	3.07E5y	57	Ru103	5 725	39.26d
20	Co57	100 750	271.7d	58	Ru106	5 500	369d
21	Co58	5 900	70.8d	59	Sb122	5 1023	2.8d
22	Co60	5 770	5.27y	60	Sb124	5 1024	60.2d
23	Cr51	5 770	27.8d	61	Sb125	5 870	2.77y
24	Cs134	5 870	2.06y	62	Sc46	5 790	83.3d
25	Cs137	5 940	30.17y	63	Sc47	5 870	3.43d
26	Cu64	5 870	12.9h	64	Sr89	5 1010	50.5d
27	Eu152	5 1023	13.3y	65	Sr90	5 850	28.6y
28	Eu154	5 1010	16y	66	Tb160	5 900	72.3d
29	Eu155	5 750	1.81y	67	Tc99	5 660	2.13E5y
30	Fe55	5 750	2.69y	68	Tl204	5 900	3.78y
31	Fe59	5 980	44.6d	69	Tm170	5 930	128.6d
32	Ga72	5 1024	14.1h	70	W185	5 820	75.1d
33	Ge77	5 1000	11.3h	71	Xe133	5 790	5.25d
34	Hg203	5 720	46.57d	72	Y90	5 1023	64.1h
35	I130	5 1010	12.3h	73	Y91	5 1010	58.5d
36	I131	5 870	8.04d	74	Zn65	5 780	243.6d
37	I132	5 1023	2.3h	75	Zr95	5 900	64d
38	Ir192	5 890	74d				

RADIATION SURVEY PERFORMED WITH A

Lucifer 14C w/AMNURK PHM SW 155782. Calibrated

6/23/08

37

Enclosure (3)



FAX

TO: Joseph Bizzell

FROM: Glenn Gandy

FAX#: 202-834-0809

SUBJECT: NRC Request

DATE: 12/11/08

PAGE(S): 3



COMMENTS:

Enclosure (3)