



STATE OF
WASHINGTON

Dixy Lee Ray
Governor

DEPARTMENT OF SOCIAL AND HEALTH SERVICES

Olympia, Washington 98504

October 15, 1980

Ms. Marie Janinek
State Relations Officer
Office of State Programs
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Ms. Janinek:

This letter and its attachments constitute Washington's report for fourth quarter of the first year of the transportation contract between the state of Washington and the U.S. Nuclear Regulatory Commission. The quarter is considered to have started June 10, 1980, and ended on September 5, 1980. This report covers both contract and state funded transportation surveillance.

During this period the Transportation and Waste Management (T&WM) subunit achieved full staffing. The subunit now consists of a supervisor, two radiation health physicists, three radiation control monitors and a clerk typist. Full staffing remained complete until a radiation health physicist terminated employment from state government on September 1. The vacancy was filled by promotion of a radiation control monitor; the subsequent vacancy will be filled as soon as possible.

Coverage at the NECO site during the fourth quarter was full time. During this quarter we continued to observe violations of DOT regulations and/or license conditions of the Nuclear Engineering Company site radioactive materials license. Our site surveillance findings are outlined further in Attachment "A" of this report.

In addition to full time surveillance at the Nuclear Engineering Company site, Transportation and Waste Management staff continued to make visits and/or perform inspections at airports, shipping ports, nuclear medicine facilities, industrial radiographers, and uranium mills; the Interstate Industrial Laundry and a nuclear pharmacy were also inspected. Emphasis is still being placed on making thorough inspections and identifying potential radiological handling and/or storage problems.

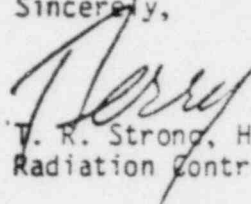
During this quarter, telephone contacts were made in order to identify additional handlers of radioactive materials. Telephone contacts continue to provide useful information in determining follow up requirements for places having questionable handling or shipping problems. Attachment "B" of this report lists the facilities contacted by phone where no follow-up inspections were made. Also, attachment "B" lists those facilities where inspections were considered necessary.

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Prior to the end of the third quarter, thermoluminescent dosimeters (TLD'S) were obtained and placed in several areas throughout the state where potential transportation type radiation problems were identified. The fourth quarter ended prior to obtaining TLD results from the U.S. Testing Company, Inc. The results should be available in time to incorporate the readings in our annual reports to you.

Sincerely,



T. R. Strong, Head
Radiation Control Section

TRS/jr

Attachments

ATTACHMENT A

SHIPMENTS RECEIVED

<u>Period</u>	<u>Total Shipments Received</u>	<u>Loads In Noncompliance</u>	<u>Total Non- Compliance Items</u>
June 9-13	21	3	3
June 16-20	11	2	3
June 23-28	12	0	0
June 30 - July 3	17	3	3
July 7-11	26	2	5
July 14-18	29	0	0
July 21-25	23	5	5
July 28 - August 1	15	3	4
August 4 - August 8	18	0	0
August 11 - August 15	18	0	0
August 18 - August 22	21	0	0
August 25 - August 29	20	0	0
September 2 - September 5	18	1	1

Waste Volumes

<u>Month</u>	<u>Cubic Feet</u>	<u>Curies</u>	<u>Source Material (Kilograms)</u>	<u>Packages</u>
June 1980	53,330.45	99.07	.121	10,243
July 1980	68,818.63	341.11	3,455.21	17,808
August 1980	65,229.94	192.47	13,248.69	24,832

SITE SURVEY RESULTS

Inspection Dates	Total Loads	Loads In Non-Comp.	Date	Company Number	Non-Compliance	Action Taken		
						Warning Letter Date	Suspension Date	Reinstatement Date
June 9-14	21	3	6-9	11	Shipper-carrier certif.	6-17		
			6-9	13	Broken weld-loose rings	6-9		
			6-13	31	Broken weld	6-17		
June 16-20	11	2	6-18	32	Excess rad. levels for YII	6-25	6-19	6-27
			6-19	33	Leaking drum - marking			
June 23-28	12	0						
June 30-July 3	17	3	6-30	5	Seals	6-30		
			7-1	5	Seals	7-1		
			7-2	5	Seals	7-2		
July 7-11	26	2	7-8	5	Labels, seals, broken weld	7-15		
			7-9	25	Inconsistent shipping papers Excessive vehicle rad reading		7-23	(permit revoked)
July 14-18	29	0						
July 21-25	23	5	7-21	17c	Defective closure		7-25	8-15
			7-21	5	Repeated violations			
			7-21	20	Loose bolt and ring	7-28		
			7-23	17c	Inconsistent shipping papers	7-23		
			7-24	3h	Rust hole - no contamination	7-28		
July 28-Aug. 1	15	3	7-28	5	Leaking drum-seals (Load enroute when 7-25 suspension)			
			7-30	34	Improperly signed certification	8-7		
			8-1	35	Improperly signed certification	8-7		
Aug. 4-8	17	0						
Aug. 11-15	18	0						
Aug. 18-22	21	0						

SITE SURVEY RESULTS

Inspection Dates	Total Loads	Loads In Non-Comp.	Date	Company Number	Non-Compliance	Action Taken		
						Warning Letter Date	Suspension Date	Reir.statement Date
Aug. 25-29	20	0						
Sept. 2-5	18	1	9-5	20	Loose bolt	9-5		

BROKERS AND COMPANIES

Company Number

1	AWC, Inc. (broker) for 1(a)
1a	Aerojet Ordance
2	Burroughs Wellcome (broker for 2a)
2a	University of Kentucky
3	Nuclear Engineering Company (broker for 3a-3i)
3a	Michael Reese Hospital & Medical Center
3b	Amersham
3c	Abbott Labs
3d	Upjohn Company
3e	William Beaumont Hospital
3f	University of Toledo
3g	Lafayette Clinic
3h	Exxon
3i	Research Triangle Institute
4	Smith, Kline & French Labs, Inc.
5	Radiac Research
6	Nebraska Public Power (Cooper Nuclear)
7a	Southwest Nuclear Company
7b	Southwest Nuclear Company, Eastern Division
8	Nuclear Diagnostic Labs
9	Wyoming Mineral Corporation
10	University of Montana
11	University of Minnesota
12	Teledyne Isotopes
13	TMI - Metro Edison

Company Number

14	Northern States Power ..
15	NEN
16	VA Medical Center, Nashville
17a	Commonwealth Edison, Quad Cities
17b	Commonwealth Edison, Zion
17c	Commonwealth Edison, Dresden
18	Three M Company
19	Ralph Baltzo & Associates
20	Atomic Disposal
20a	Honeywell, Inc.
21	(Bio Science Lab) Thomas Gray & Associates
22	Vermont Yankee
23	EAD Metallurgical, Inc.
24	Nuclear Sources & Services
25	ICN, CA
26	Department of Army
26a	Defense Depot, Ogden, Utah
26b	Letterman Army Institute
27	GE Medical Systems Division
28	University of Illinois, Urbana
29	State University of New York at Buffalo
30	National Jewish Hospital
31	International Clinical Labs
32	Department of the Interior U.S.G.S.
33	Trojan
34	North Carolina State University
35	University of Iowa

ATTACHMENT B

Facilities Visited/Inspected

1. N.W. Radiopharmaceuticals, Seattle
2. Boeing Company, Seattle
3. Dawn Mining, Ford
4. Western Nuclear, Wellpinit
5. Pittsburg Testing, Spokane
6. Pittsburg Testing, Seattle
7. Exxon Nuclear, Richland
8. Welk Brothers, Spokane
9. W.S.U., Pullman
10. Quali Cast, Centralia
11. Budinger and Associates, Spokane
12. Department of Emergency Services, Olympia
13. Airport Drayage, Seattle

Items of Non Compliance:

- | | |
|--|---|
| 1. Budinger and Associates | Radioactive (sealed source) material not secure from unauthorized removal during transport. |
| 2. Welk Brothers | Shippers' certification not consistently signed. |
| 3. Pittsburg Testing Labs
Spokane and Seattle | Contrary to 49CFR 172.403 All packages being shipped for disposal are labeled yellow III. |

Hospitals Inspected

The Nuclear Medicine departments of the hospitals listed 1 through 12 below were inspected.

1. Radiology Associates, Spokane
2. St. Elizabeth's Hospital, Yakima
3. Walla Walla General Hospital, Walla Walla
4. Virginia Mason Hospital, Seattle
5. Northwest Hospital, Seattle
6. Allenmore Hospital, Tacoma
7. Deaconess, Spokane
8. Providence, Seattle
9. Ballard, Seattle
10. Rockwood Clinic, Spokane
11. Holy Family, Spokane
12. Sacred Heart, Spokane

Telephone Contracts: No visits made.

1. St Peter's Hospital, Olympia
2. Centralia General, Centralia
3. Riverton Hospital, Riverton
4. Holy Family, Spokane
5. Sacred Heart, Spokane

The following items of non-compliance were observed during our inspection. All deficiencies were corrected prior to the writing of this report.

- | | |
|--------------------|--|
| 1. Rockwood Clinic | 1. No disposal records |
| 2. Holy Family. | 1. Shipping containers not DOT 7A. Testing scheduled with results to be forwarded to DSHS. |

- | | | |
|---------------------------------|----|--|
| | | 2. Proper shipping name absent from shipping papers. |
| 3. Sacred Heart | | 1. Incorrect value of T.I. on shipping papers |
| 4. Walla Walla General Hospital | 1. | No shipping papers for transport of waste to permanent decay area. |
| 5. Ballard Hospital | 1. | Disposal records inadequate. |

Airlines Inspected

Surveillance Visits

1. Hughes Air West 3
 - a. Two yellow II packages surveyed.
 - #1 .01Ci I131 3' .4 mr/hr T.I. of .4 A.B. #26656884
 - #2. .009CiI131, 3' .5 mr/hr T.I. of A.B. #28959895

2. TWA 2
 - a. 5 packages
 1. I131 .001 Ci YII T.I. - .1
 - 2 99Mo 4.0 Ci YIII
 - 3 99Mo 4.0 Ci YIII
 - 4 99Mo 4.0 Ci YIII
 - 5 99Mo 4.0 Ci YIII

Total T.I. 5.5

3. Eastern 4
 - a. 6 packages surveyed
 - 4 packages 99Mo 9.5 Ci total and T.I. Total of 9.8

4. Flying Tigers 2
5. Alaska Air 1

Area, vehicle and package surveys at Flying Tigers and Alaska Air were accomplished as appropriate.

No instances of non-compliance were observed.

Inspections

Boeing Company - Seattle

Inspection Findings

Shipping and receiving records were reviewed during the inspection conducted on June 18, 1980, and appeared to be adequate. Major carriers involved in shipping to and from Boeing were noted for transportation and waste records.

Personnel exposure records revealed typical personnel exposure to be minimal or not in excess of 30 mR/hr per year.

During a tour of multiple areas, handling of radioactive materials and waste was observed and appeared to be adequate.

The following recommendations were made to William Morgan, Chief, Radiation Health Protection.

1. The Waste Storage area is adequate, but could be improved by increased cleanliness and storage practices.
2. New and reconditioned drums should be stored in a weather protected area to prevent rusting and/or unnecessary deterioration.
3. Unless stored waste in liquid form is to be solidified, liquid should be absorbed and disposed of prior to December 31, 1980. All of Boeing's liquid waste was disposed of prior to the ending of this quarter.
4. Regarding receipt of materials - posters and/or written materials should be provided for dock personnel to further educate them to the significance of the transportation index on labels.

Washington State University - Pullman, July 29, 1980

Inspection Findings

1. No weekend deliveries. Once when RAM was delivered on Saturday the material was taken to the police station in Pullman.
2. Approximately 250 people receive and wear film badges. Film badge records indicate no excessive radiation exposures being received. In fact, 10% of the recommended quarterly limit is rarely exceeded.
3. No receipt of yellow II or III shipments during this quarter.

6. Transfer of waste to private burial ground is in a University van across property owned by the University.
7. Radioactive waste destined for the Nuclear Engineering Company, Richland, Washington, is compacted by a University operated compactor. Transported to Richland in University owned rehvle approximately every six months.
8. Most RAM is shipped by Cascade Air to the Pullman Airport and then by local delivery service to the University.

Accompaniment Inspections

On July 28, 1980, while at the Nuclear Engineering Company, Richland, Washington, Tony Ferguson, of the Transportation and Waste Management Sub-unit had an opportunity to meet and discuss transportation problems with U.S. DOT inspectors Jim Shuler, Bill DeLapp and Frank Punch. On July 28, inspection schedules were arranged for the next day making it possible for Mr. Ferguson to accompany Mr. Shuler during the performance of three inspections in the Richland area. The inspections were mainly for the purpose of determining the adequacy of shipping records and shipping procedures being employed. Areas of concern and/or review included the following:

1. Certification for use of radioactive material (RAM)
2. Placarding of areas using RAM
3. Reviewing shipment forms
4. Identifying carriers
5. Package inspection procedures

All of the above were accomplished by direct examination. A camera was used to record discrepancies and outstanding examples of record keeping. No action was taken by DOT personnel during the inspections, but the client was told that an official letter would be sent from DOT regarding inspection findings.

Airport Drayage Company
Seattle-Tacoma International Airport

On August 17, 1980, an inspection was conducted at Airport Drayage against activities authorized in WAC 402-21-100 (Intrastate Transportation of Radioactive Materials). This section of the Washington Administrative Code issues a general license to any common or contract carrier to transport and store radioactive material in the regular course of their carriage for another or storage incident thereto, provided the transportation and storage is in accordance with applicable requirements of the regulations, appropriate to the mode of transport, of the United States Department of Transportation insofar as such regulations relate to the loading and storage of packages, placarding of the transporting vehicle and incident reporting. As a result of the August 17 inspection, it appeared that certain activities were not conducted in full compliance with the requirements of the Washington State Rules and Regulations for Radiation Protection.

SUMMARY OF VIOLATIONS

PURSUANT TO WAC 402-21-100

1. 49 CFR 173.393(j)(4) states in part that any normally occupied position of the car or vehicle must not exceed 2 millirem per hour.

Contrary to the above, the Airport Drayage vehicle containing a radioactive shipment at 8:30 a.m. on August 17, 1980, was found to have radiation readings within the driver's position of 8.0 to 8.5 millirem per hour.

2. 49 CFR 172.504(a) states in part that each motor vehicle containing any quantity of a hazardous material must be placarded on each end and each side with the type of placards specified.

Contrary to the above, the Airport Drayage vehicle noted above did not have a placard affixed to the front end of the vehicle.

3. 49 CFR 172.556 specifies the exact appearance of radioactive placards (square-on-point).

Contrary to the above, the Airport Drayage vehicle noted above did not bear placards meeting these specifications.

The State gave Airport Drayage Company 30 days to correct the above deficiencies. The State received adequate corrective procedures from Airport Drayage within the 30 day time frame. We will continue our surveillance of Airport Drayage over the coming months to determine their continued compliance with state and federal transportation regulations.