



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION V
1990 N. CALIFORNIA BOULEVARD
SUITE 202, WALNUT CREEK PLAZA
WALNUT CREEK, CALIFORNIA 94596

APR 28 1980

RTII
Combustion
Engineering File

✓	✓	✓
JWR	✓	CEN
JFC		HP
ABD	✓	RJS
GF		
RFH	File	✓

6100

MEMORANDUM FOR: A. Grella, Division of Fuel Facilities
and Materials Safety Inspection, IE:HQ

FROM: H.E. Book, Chief, Fuel Facility and
Materials Safety Branch, Region V

SUBJECT: INSPECTION REPORT - BEATTY, NEVADA BURIAL SITE

Enclosed is a composite inspection report covering an assist
inspection conducted on February 25 - March 7, 1980 at the
Beatty, Nevada burial site.

No apparent item of noncompliance was identified.

H.E. Book

H.E. Book, Chief
Fuel Facility and
Materials Safety Branch

Enclosure:
IE Inspection
No. 15000027/80-45

R-1

MAY 1 1980

U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION V

Report No. 80-45
Docket No. 1500027 License No. _____ Safeguards Group _____
Licensee: _____

Facility Name: Nuclear Engineering Company

Inspection at: Beatty, Nevada

Inspection conducted: February 25 - March 7, 1980

Inspectors: *R.D. Thomas* 4/23/80
JD Tom Decker, NMSS/FC/ERSS Date Signed

Approved by: *R.D. Thomas* 4/23/80
R.D. Thomas, Chief, Materials Radiological Date Signed
Protection Section

Approved By: *H.E. Book* 4/24/80
H.E. Book, Chief, Fuel Facility and Materials Date Signed
Safety Branch

Summary:

Inspection on February 25 - March 7, 1980 (Report No. 1500027/80-45)

This inspection was conducted to observe radioactive waste shipments and packaging. Vehicle placarding, packaging conditions, and labels were observed. Radiation surveys were conducted and removable radioactive contamination samples were taken on 34 shipments. This composite report details 31 shipments which were found to be in compliance with DOT/NRC regulations. Three shipments were found with apparent items of noncompliance and are reported separately in Report No. 80-46. The State of Nevada representatives were on site two days each week. No containers were opened.

Results: No items of noncompliance were identified.

DETAILS

Persons Contacted

Mr. Steve Carpenter, Site Manager, NECO
Mr. Brian Thayer, Site Assistant Manager, NECO
Mr. Jim Cruickshank, Site RSO, NECO
Mrs. Pat Thayer, Secretary, NECO

Background Information

Thirty-four trucks arrived at the disposal site during the inspection. Before being entered onto the site, each vehicle was monitored for radiation with respect to the regulatory criteria.

External surface measurements and dose rate measurements at six feet from the trailers were made with a XETEX (G-M type) survey meter, NRC No. 5780. No readings exceeding DOT limits were noted. Removable contamination wipes of approximately 300 cm² were taken on representative packages or spots on the trucks. The wipes were counted on the Eberline Mini Scaler MS-2, NRC No. 6389.

After each load was removed to the burial trench, the beds of each truck were surveyed with an appropriate survey instrument and additional wipes were taken and counted for removable contamination. Only one truck was shown to have removable contamination greater than several times background. The trailer was successfully decontaminated and released from the site.

Each load was observed as it was taken from the trucks and placed in the burial trench. Evidence of mishandled (dented or otherwise damaged) packages and possible leaking packages were of particular concern. There was no evidence of leaking packages noted during this inspection.

Report Details

1. Licensee-Shipper: Tri-State Laundries
Utica, New York
Shipment Inspected: February 25, 1980
Carrier: Tri-State Motor Transit Company
Trailer: No. 440017
Freight Bill: Not noted

Seven boxes and thirty-seven drums of radioactive LSA labeled material were shipped. Radiation survey of the vehicle showed a maximum dose rate of 25 mR/hr at the surface of the trailer and 2.5 mR/hr at 6 feet. Selective wipes of the vehicle and drums disclosed no removable radioactivity.

No items of noncompliance were identified.

2. Licensee-Shipper: Cooper Nuclear Station
Brownville, Nebraska
Shipment Inspected: February 25, 1980
Carrier: Tri-State Motor Transport
Trailer: No. 228146TS
Freight Bill: No. 334004

One cask containing fourteen drums of radioactive material was shipped. Selective wipes of the trailer and cask exterior were taken before and following unloading, revealing no removable contamination.

No items of noncompliance were identified.

3. Licensee-Shipper: Babcock & Wilcox Company
Leechburg, Pennsylvania
Shipment Inspected: February 25, 1980
Carrier: Tri-State Motor Transport
Trailer: No. 340795
Freight Bill: No. 335341

The shipment contained seven wooden crates of plutonium contaminated general waste. Wipes were taken of the trailer and representative box. No removable contamination was discovered.

No items of noncompliance were identified.

4. Licensee Shipper: DORF Institute-Walter Reed Medical Center
Silver Spring, Maryland
Shipment Inspected: February 26, 1980
Carrier: Tri-State Motor Transport
Trailer: No. 440581
Freight Bill: No. 333975

Twenty-four drums and four wooden boxes of radioactive LSA material were included in this shipment. Swipes of the trailer and drum revealed no removable contamination.

No items of noncompliance were identified.

5. Licensee-Shipper: Allied Chemical Corporation
Metropolis, Illinois ✓
Shipment Inspected: February 26, 1980
Carrier: Tri-State Motor Transport
Trailer: No. 440545
Freight Bill: No. 335322

Shipment of radioactive LSA drums and vehicle surveyed for removable contamination with negative results.

No items of noncompliance were identified.

6. Licensee-Shipper: DORF Institute, Walter Reed Medical Center
Silver Spring, Maryland
Shipment Inspected: February 26, 1980
Carrier: Tri-State Motor Transport
Trailer: No. 440697
Freight Bill: No. 333976

Twenty-three drums and four boxes of radioactive LSA material were included in the shipment. Results of wipe surveys revealed no removable contamination.

No items of noncompliance were identified.

7. Licensee-Shipper: Jersey Central Power & Light Company
Toms River, New Jersey
Shipment Inspected: February 26, 1980
Carrier: Tri-State Motor Transport
Trailer: No. 340592
Freight Bill: No. 335332

The shipment consisted of wooden boxes on a flatbed trailer. No removable contamination was found from wipe survey.

No items of noncompliance were identified.

8. Licensee-Shipper: Duane Arnold Power Plant
Palo, Iowa ✓
Shipment Inspected: February 26, 1980
Carrier: Tri-State Motor Transport
Trailer: No. 232234
Freight Bill: No. 333979

The shipment consisted of two large wooden crates. Wipe surveys for removable contamination on either the trailer or boxes were negative.

No items of noncompliance were identified.

9. Licensee-Shipper: Cooper Nuclear Station
 Brownsville, Nebraska
 Shipment Inspected: February 27, 1980
 Carrier: Tri-State Motor Transport
 Trailer: No. 156901
 Freight Bill: No. 335330

Twenty-one drums and six crates of radioactive material were shipped in a wooden-sided trailer. Surveys revealed no removable contamination.

No items of noncompliance were identified.

10. Licensee-Shipper: General Electric Company
 Wilmington, North Carolina
 Shipment Inspected: February 28, 1980
 Carrier: Tri-State Motor Transit
 Trailer: No. 544115
 Freight Bill: No. 335339

The shipment contained forty boxes of LSA material contaminated with radioactive uranium dioxide. Wipes revealed no removable contamination.

No items of noncompliance were identified.

11. Licensee-Shipper: S. W. Shattuck Chemical Company
 Denver, Colorado
 Shipment Inspected: February 28, 1980
 Carrier: Tri-State Motor Transit
 Trailer: No. 440325
 Freight Bill: No. 335104

This trailer load of thirty-seven containers of depleted uranium was found to have been contaminated. Wipe surveys revealed removable contamination of about five times background. The trailer was successfully decontaminated by NECO personnel to less than twice background and released from the site. No contamination limits were exceeded.

No items of noncompliance were identified.

12. Licensee-Shipper: Thomas Gray Associates, Inc.
 Orange, California
 Shipment Inspected: February 28, 1980
 Carrier: Thomas Gray Associates
 Trailer: License No. 1046084 Calif.
 Freight Bill: Not given, shipper's number 016

This shipment was comprized of sixty-eight drums of biological and industrial waste. Wipes revealed no evidence of removable contamination.

No items of noncompliance were identified.

13. Licensee-Shipper: AWC Inc.
Compton, California
Shipment Inspected: February 28, 1980
Carrier: NASA
Trailer: R-200Z
Freight Bill: C-11

One hundred five packages of radioactive LSA material were in this shipment. No removable contamination was found. Radiation survey of the vehicle showed a maximum of 2.5 mR/hr at the surface and less than 1 mR/hr at 6 feet.

No items of noncompliance were identified.

14. Licensee-Shipper: Allied Chemical Co.
Metropolis, Illinois
Shipment Inspected: February 29, 1980
Carrier: Tri-State Motor Transit
Trailer: No. 440629
Freight Bill: No. 335324

The shipment consisted of sixty drums of radioactive LSA material. Radiation survey of the vehicle showed a maximum of 2.5 mR/hr at the surface and less than 1 mR/hr at 6 feet. Swipes revealed no evidence of removable contamination.

No items of noncompliance were identified.

15. Licensee-Shipper: General Electric Company
Wilmington, North Carolina
Shipment Inspected: February 29, 1980
Carrier: Tri-State Motor Transit Company
Trailer: No. 232244
Freight Bill: No. 335340

The shipment consisted of forty wooden boxes containing material contaminated with uranium dioxide. Radiation surveys showed less than one mR/hr at the surface of the vehicle. Wipes showed no evidence of contamination.

No items of noncompliance were identified.

16. Licensee-Shipper: DC Cook Reactor
 Bridgeman, Michigan ✓
 Shipment Inspected: March 3, 1980
 Carrier: Tri-State Motor Transit
 Trailer: No. 232244
 Freight Bill: No. 333993

The shipment consisted of two large boxes of radioactive material. Radiation survey of the vehicle showed a maximum dose rate at the surface of 3.5 mR/hr and less than 1 mR/hr at 6 feet from the surface. No removal contamination was found from wipe survey.

No items of noncompliance were identified.

17. Licensee-Shipper: DC Cook Power Plant
 Bridgeman, Michigan ✓
 Shipment Inspected: March 3, 1980
 Carrier: Tri-State Motor Transit
 Trailer: No. 232105
 Freight Bill: No. 333991

The shipment consisted of two large boxes containing spent fuel racks. Radiation surveys of the vehicle showed a maximum dose rate of 2 mR/hr at the surface and less than 1 mR/hr at 6 feet. Wipe tests revealed no removable contamination.

No items of noncompliance were identified.

18. Licensee-Shipper: Cooper Nuclear Station
 Brownsville, Nebraska
 Shipment Inspected: March 3, 1980
 Carrier: Tri-State Motor Transit
 Trailer: No. 228146
 Freight Bill: No. 335681

The shipment consisted of a cask containing fourteen drums of radioactive material. Radiation survey of the outside of the cask showed a maximum dose rate of one mR/hr at the surface and less than 1 mR/hr at 6 feet. Wipe samples showed no removable contamination.

No items of noncompliance were identified.

19. Licensee-Shipper: DC Cook Power Plant
 Bridgeman, Michigan ✓
 Shipment Inspected: March 3, 1980
 Carrier: Tri-State Motor Transit
 Trailer: No. 331078
 Freight Bill: No. 2-000152

The shipment consisted of two large wooden boxes of radioactive LSA material. Radiation survey of the vehicle showed a maximum dose rate of 4 mR/hr at the surface and 1.5 mR/hr at 6 feet. Wipe samples showed no removable contamination.

No items of noncompliance were identified.

20. Licensee-Shipper: Combustion Engineering Co. ✓
 Hematite, Missouri
 Shipment Inspected: March 3, 1980
 Carrier: Tri-State Motor Transit
 Trailer: No. 440440
 Freight Bill: No. 335355

The shipment consisted of sixty-nine drums and seven boxes of radioactive material. Radiation survey of the vehicle showed a dose rate of less than 1 mR/hr at the surface. Wipes revealed no surface contamination.

No items of noncompliance were identified.

21. Licensee-Shipper: Allied Chemical Co. ✓
 Metropolis, Illinois
 Shipment Inspected: March 3, 1980
 Carrier: Tri-State Motor Transit
 Trailer: No. 440308
 Freight Bill: No. 335323

The shipment consisted of sixty drums of radioactive waste. Radiation survey of the vehicle showed a maximum dose rate of 4 mR/hr at the surface and less than 1 mR/hr at 6 feet. No removable contamination was found on the trailer or representative drum.

No items of noncompliance were identified.

22. Licensee-Shipper: Allied Chemical Co. ✓
 Metropolis, Illinois
 Shipment Inspected: March 3, 1980
 Carrier: Tri-State Motor Transit
 Trailer: No. 440322
 Freight Bill: No. 335325

The shipment consisted of sixty drums of radioactive waste. Radiation survey of the vehicle showed a maximum dose rate of 4 mR/hr at the surface and less than 1 mR/hr at 6 feet. No removable contamination was found on the trailer or representative drum.

No items of noncompliance were identified.

23. Licensee-Shipper: University of New Mexico
 Alburg, New Mexico
 Advanced Technology Laboratories
 Baltimore, Maryland
- Shipment Inspected: March 3, 1980
 Carrier: Delta Lines
 Trailer: No. 42-2753
 Freight Bill: No. 4679202

The shipment consisted of seventy-two drums shipped in one unit of a three-trailer rig. Radiation survey showed a maximum dose rate of less than 1 mR/hr at the surface. Wipe surveys showed no removable contamination on the trailer or representative drum.

No items of noncompliance were identified.

24. Licensee-Shipper: Commonwealth Edison (Quad Cities) ✓
 Cordova, Illinois
- Shipment Inspected: March 4, 1980
 Carrier: Hitman
 Trailer: No. 72231
 Freight Bill: No. 1072

This shipment consisted of a large rectangular cask containing eighteen drums of radioactive LSA material. Radiation survey of the vehicle showed a maximum dose rate of 44 mR/hr at the surface of the shield and 5.5 mR/hr at 6 feet. Wipe surveys showed no evidence of removable contamination.

No items of noncompliance were identified.

25. Licensee-Shipper: DC Cook NPP ✓
 Bridgeman, Michigan
- Shipment Inspected: March 4, 1980
 Carrier: HOME Transportation Company
 Trailer: No. 331174
 Freight Bill: No. 2-000153

The shipment consisted of two large wooden boxes of radioactive LSA material. Radiation survey of the vehicle showed a maximum dose rate at the surface of the boxes of 4 mR/hr and less than 1 mR/hr at 6 feet. Wipe surveys showed no evidence of removable contamination.

No items of noncompliance were identified.

26. Licensee-Shipper: Aladdin Industries
Nashville, Tennessee
Shipment Inspected: March 4, 1980
Carrier: Wells Fargo Inc.
Trailer: No. 59783
Freight Bill: No. 27586 (Shippers No.)

The shipment consisted of seventy-five drums of solid thorium. Radiation surveys of the vehicle showed a maximum dose rate of less than 1 mR/hr at the surface. No removable contamination was found.

No items of noncompliance were identified.

27. Licensee-Shipper: Velsicol Chemical Corp.
Chicago, Illinois
Shipment Inspected: March 5, 1980
Carrier: Velsicol Chemical Corp.
Trailer: No. T488
Freight Bill: No. 3557-2

The shipment consisted of nine drums of radioactive LSA material. Radiation surveys of the vehicle showed a maximum dose rate of less than 1 mR/hr at the surface. No removable contamination was found.

No items of noncompliance were identified.

28. Licensee-Shipper: Mare Island Naval Shipyard
Mare Island, California
Shipment Inspected: March 5, 1980
Carrier: Tri-State Motor Transit
Trailer: No. 228131
Freight Bill: No. 335925

The shipment consisted of a single container of radioactive waste shielded by a rectangular cask. Radiation surveys of the vehicle showed a maximum dose rate of 11 mR/hr at the surface of the cask and 3 mR/hr at 6 feet. Wipe surveys showed no removable contamination.

No items of noncompliance were identified.

29. Licensee-Shipper: Mare Island Naval Shipyard
Mare Island, California
Shipment Inspected: March 5, 1980
Carrier: Tri-State Motor Transit
Trailer: No. 228126
Freight Bill: No. 335927

The shipment consisted of a large cylinder containing radioactive material shielded by a cylindrical cask. Radiation surveys showed a maximum dose rate of 48 mR/hr at the surface of the cask and 3.5 mR/hr at 6 feet. Wipe samples of the cask showed no removable contamination.

No items of noncompliance were identified.

30. Licensee-Shipper: Lacrosse BWR
 Genoa, Wisconsin ✓
 Shipment Inspected: March 5, 1980
 Carrier: Hitman Nuclear Corp.
 Trailer: No. 72234
 Freight Bill: No. 33862

The shipment consisted of a cask and cask liner containing dewatered ion-exchange resins. Radiation surveys showed a maximum dose rate of 30 mR/hr on the surface of the cask and 3.6 mR/hr at 6 feet. Wipes of the cask revealed no removable contamination.

No items of noncompliance were identified.

31. Licensee-Shipper: Babcock and Wilcox Co.
 Leechburg, Pennsylvania
 Shipment Inspected: March 7, 1980
 Carrier: Tri-State Motor Transit
 Trailer: No. 440720
 Freight Bill: No. 335721

The shipment consisted of seventy-eight drums of radioactive LSA material. Radiation surveys of the vehicle showed a maximum dose rate of 1.4 mR/hr at the surface and less than 1 mR/hr at 6 feet. No removable contamination was detected.

No items of noncompliance were identified.