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

### Region I

Report No. 40-2940/80-03	
Docket No. 40-2940	
License No. SUC-346 Priority	Category
Licensee: N. L. Industries Inc.	
1130 Central Avenue	
Albany, New York 12205	
Facility Name: Shipment	
Inspection at: Beatty, Nevada	
Inspection conducted: April 9, 1980	
Inspectors: See attached report cover sheet	The state of the s
	date signed
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Approved by: See attached report cover sheet	date signed

## Inspection Summar":

See attached report cover sheet

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

#### -REGION V

Report No. 80-47	
Docket No. 15000027 License No.	Safeguards Group
Licensee:	
Facility Name: Nuclear Engineering Company	
Inspection at: Beatty, Nevada	
Inspection Conducted: April 9, 1980	
Inspectors: P. R. Zurakowski, Radiation Specialist	28 Apr 80
P. R. Zurakowski, Radiation Specialist	Date Signed
	Date Signed
	Date Signed
Approved by: Dellowas	4/29/So
R. D., Thomas, Chief, Materials Radiolog	.,,
Approved By: A.E. Book Protection Section	7/30/00
H. E. Book, Chief, Fuel Facilities & Ma Safety Branch	iterials Date Signed
Summary: Inspection on April 9, 1980, (Report No. 15000027/8	20-4.7)

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As part of the inspection conducted during April 7-11, 1980, the inspection of a shipment of 67 drums containing uranium turnings in a cutting oil is detailed in this report. No representative of the State of Nevada or of the DOT were on site at the time of this inspection. No containers were opened.

Result: Two apparent items of noncompliance with DOT / NRC requirements were observed. See paragraphs 2 & 7.

It appears that DOT and the State of New York are the appropriate organizations to take enforcement actions.

#### DETAILS

#### Persons Contacted

1. Mr. Steve Carpenter, Site Manager, NECO

2. Mr. Jim Cruickshank, Site RSO, NECO

 Mr. John Vaden, Supervisor, Radiological Health, Nevada State Division of Health

4. Mr. Brian Thayer, Site Assistant Manager, NECO

#### Background

As part of the inspection conducted on April 7-11, 1980, the inspection of a shipment arriving at NECO, Beatty, on April 9, 1980 is documented in this report.

#### Inspection

Licensee-Shipper: NL Nuclear Division, Albany, N.Y.

Snipment Inspected: April 9, 1980

Carrier: NL Nuclear Division, Albany, N.Y.

Trailer No.: 71517

Shipping Notice No.: 11921

- 1. The load consisted of 67 55-gallon drums of depleted uranium turnings in cutting oil. This was an exclusive use shipment (See Enclosure A). A radiation survey of the vehicle showed a maximum dose rate of 2.0 mr/hr at the surface of the trailer. The trailer door was sealed on arrival. Wooden braces were used to prevent the load from shifting in transit. In addition, a plastic (covered with cardboard or plywood) lining was used to cover the bed of the enclosed trailer to prevent contamination. It was this lining that prevented leakage from the trailer (see paragraph 2). Each drum was labeled with the letters LSA, weight and number of the package.
- 2. Drum No. 40 was observed to be setting in a pool of oily liquid (≈12qt.). A wipe of the drum disclosed a reading of 100 DPM per 300cm Beta-Gamma activity. The pool of liquid did not penetrate through the trailer bed because the bed was covered with a plastic and cardboard lining. Three other drums were wiped and found to have a small amount of removable contamination. (Drum #15, 175 DPM/300cm², Drum #18, 205 DPM/300cm² and Drum #25 660 DPM/300cm² Beta-Gamma activity). A currently calibrated Eberline MS-2 miniscaler was used to count the wipes. The leaking drum is a violation of DOT Regulation 173.392(C)(1).
- 3. The NECO Site Manager notified John Vaden of the State of Nevada that a shipment containing a leaking drum had been received. Prior to the discovery of the leaking drum, the trailer was parked at the NECO unloading dock. After the leaking drum was discovered, all unloading operations stopped pending instructions from the State of Nevada. The trailer remained at the unloading dock during this period of time. It was John Vaden's instructions to repackage the

leaking drum into an 85 gallon recovery drum with absorbent material and reload it onto the trailer. The repackaged drum and the remaining 43 drums on the trailer were to be returned to the shipper (leave the State of Nevada). He also stated that until further notice no other shipment from NL Nuclear Division will be accepted for burial at the NECO Beatty Site. He therefore ordered another NL truck, waiting at the gate to be unloaded, to be returned to the shipper without opening the trailer.

- 4. One of the truck drivers then called his dispatcher for orders.

  One of the NL Executives told him to stay at the site while they appealed the order by telephone. The appeal failed and the truck drivers were again ordered to leave. The Inspector overheard one truck driver telling the other that they had been ordered by the company to go to Baker, California.
- 5. It was noted by the Inspector that one part of the State Certification was not signed (see Enclosure A-2). However, the DOT Certification was signed.
- 6. It was noted by the Inspector that the Radioactive Waste Shipment and Disposal Form referred to U-238 in solid oxide form. However, John Vaden in his conversation with NL Executives got the impression that the drums contained depleted uranium turnings in solidified (packed with absorbent) cutting oil. This apparent discrepancy could not be checked by the Inspector. However, discussions with John Vaden and NECO personnel left the inspector with the impression that the drums contained metallic depleted uranium turnings in partially solidified (or possibly unsolidified) cutting oil.
- 7. The vehicle was not properly placarded as a "Radioactive" shipment as required by 49 CFR 173.392(c)(7). The placard on the front of the trailer was missing. The truck driver stated that he had placed one on the front of the trailer but bad weather in the "Rockies" had caused it to come off. Some tape remnents were noted by the inspector to be on the trailer where the driver said he had put the placard.
- 8. Before both trucks left the NECO site, the Assistant Site Manager supplied them with the needed placards.

EXCLUSIVE USE OF VEHICLE

SHIPPING NOTICE

Enclosure A-1

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#### CERTIFICATION

THIS IS TO CERTIFY THAT I HAVE READ AND UNDERSTAND THE REQUIREMENTS OF LICENSE #13-11-0043-02 SSUED TO NUCLEAR ENGINEERING COMPANY (NECO) BY THE NEVADA DEPARTMENT OF HUMAN RESOURCES FOR THE RECEIPT AND DISPOSAL OF RADIO-ACTIVE MATERIALS AT BEATTY, NEVADA, AS DESCRIBED IN PARAGRAPHS 5.1.1.3; 5.1.1.4; 5.1.1.5; 5.1.1.6 and 5.4.6.1 OF THE NECO SITE OPERATIONS MANUAL, AND I FURTHER CERTIFY THAT THE MATERIALS IN THIS SHIPMENT ARE IN CONFORMITY WITH THOSE REQUIREMENTS:

NL INDUSTRIES

COMPANY

FIGURE OF MEMBERS

AUTHORIZED SIGNATURE

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RADIDACTIVE WASTE SHIPMENT & DISPOSAL FORM  RUCLEAR ENGINEERING CONTPANY, INC.  EXECUTIVE OFFICE: (502) 426-7160  P.O. BOX 7246 • LOUISVILLE, KENTUCKY 40207  Illinois Office: (815) 454-2624  California Office: (415) 932-4800	PROPER SHIPPING NAME & HAZARD CLASS
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PHONE:  SHIPMENT NO: 1 EL-C	8	Р.О. ВОХ					
CARRIER: NL 2.20		NO. 2798					
TOTAL QUANTITY	1	PROPER S					
	Radioactiv	Radioactive Device, N.O.S.					

RADIOACTIVE WASTE SHIPMENT & DISPOSAL FORM NUCLEAR ENGINEERING COMPANY, INC.

**EXECUTIVE OFFICE: (502) 425-7160** 

PROPER SHIPPING NAME & HAZARD CLASS

(PER 49 CFR 172.101)

P.O. BOX 7246 . LOUISVILLE, KENTUCKY 40207

Illinois Office: (815) 454-2624 California Office: (415) 932-4800

NO. 27987

Radioactive Material, Fissile, N.O.S.

- Radioactive Material

- Radioactive Material

CP.O. Box 578 -Beatty, NV 83003 (702) 553-2203

D P.O. Box 638 Richland, WA 99352 (509) 377-2411

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TOTAL WE SHT

IN POUNTS

				Radioactive Material, Low Specific Activity, N.O.S Radioactive Material											-	
			BESTA	Radioactive Material, N.O.S. — Radioactive Material											-	
		•		Radioactive Material, Limited Quantity, N.O.S Radioactive Material												4
				Radioactive Material, Special Form, N.O.S Radioactive Material											_	
				-11												
(1)	(2)	1 0	1	(5)	(6)	(7)	(8)	(9)		10)	T (11)	(12)	(13)		(14)	-
ttem No.	Cubic Faet	(3) Weight (Pounds)	Physical Form	Chemical Form	Radionuclide	Special Nuclear Material (Grams)	Source Material (Kilograms)	Activity Curies Millicuries	Radiati	on Levels R/HR 3 Feet	Transport Group	Transport Index	Lated	,	Fiss le Cass	T.
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62	1	736	1	Oil	1	1		1	1.6	0.2	11	1.2	Radioactive -		11	1
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		1											Radioactive ~ .		1	1
	52.5	4245		TOTALS			32	14								

THIS IS TO CERTIFY THAT THE ABOVE NAMED MATERIALS ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED AND LABELED AND ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO APPLICABLE REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION.

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THIS IS TO CERTIFY THAT ARTICLES ARE IN COMPLIANCE WITH ALL REGULATIONS APPLICABLE DESIGNATED DISPOSAL SITE

Authorized Signature