

IOWA STATE UNIVERSITY  
OF SCIENCE AND TECHNOLOGY

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Nuclear Engineering Program  
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February 28, 1996

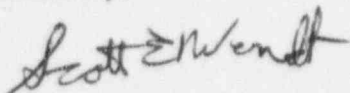
Mrs. Gloria M. Bennington  
Spent Fuel Project Office  
OWFN-6, F-1  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Dear Mrs. Bennington:

Please find enclosed information requesting an extension to our original route approval in accordance with 10 CFR Part 73, for the shipment of irradiated fuel elements. This approval will expire April 20, 1996.

If you have any questions or correspondence regarding this request, please do not hesitate to contact me at the address or phone number above or my direct number 515-294-0539. Your immediate attention to this request is respectfully requested. Thank you for your cooperation.

Sincerely,



Scott Wendt, Reactor Manager  
Nuclear Engineering Program  
Mechanical Engineering Department

SEW:bs

enclosures

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Irradiated Fuel Route

Iowa State University

To

Savannah River Site

August 1996

This is a request to extend our previous route survey for shipment of irradiated HEU reactor fuel plates from the UTR-10 reactor here at Iowa State University. This shipment will be made by Iowa State University on our Facility License No. R-59.

The proposed shipments consist of irradiated HEU fuel plates. The details of this shipment will be provided under separate covers as required per 10 CFR 73.37 prior to the shipment.

Iowa State University will assume responsibility as the shipper using the route as approved. Iowa State University will make arrangements to acquire armed escorts per 10 CFR 73.37 through the heavily populated areas as identified.

## SHIPMENT INFORMATION

### I. Cargo Description

1. Quantity and Type of Fuel
  - a. Total Fuel Plates - 150
  - b. Total Curies -  $3 \times 10^8$  Ci
  - c. Total Decay Heat -  $< 0.03$  W
  - d. Total Weight U plus Pu - 3475.4 g

2. Cask Identification

BMI - 1      ID#: USA/5957/B( ) F

3. Loaded Weights

Trailer - 15,000 lbs  
Truck - 21,000 lbs  
Cask - 23,600 lbs

### II. Anticipated Schedule

1. Number of Shipments - Two
2. Approximate Duration of Complete Transfer

One day to receive and process cask.  
One day to load and ship cask.

3. Proposed Shipment Schedule

First shipment in early August 1996.  
Second to follow as soon as possible, to be determined by availability of BMI cask.

### III. Route

1. Origin and Destination

- a. Origin: Iowa State University  
Nuclear Engineering Laboratory  
Ames, Iowa 50011
- b. Destination: D.O.E Savannah River Site  
Aiken, South Carolina

## 2. Proposed Routing

### ROUTE MILEAGE SUMMARY IOWA STATE UNIVERSITY, AMES, IA TO DOE SAVANNAH RIVER PLANT, SC

STATE	WAYPOINT/INSTRUCTION	ROAD	DIR	TOWARDS	MILES TO NEXT WAYPOINT	CUMULATIVE MILES
IA	DEPART IA STATE UNIV.	BISSELL	S	AMES	.2	0
IA	GO TOWARDS AMES	UNION	W	AMES	.2	.2
IA	CONTINUE TO AMES	SHELDON	S	AMES	.2	.4
IA	TO AMES	LINCOLN WAY	E	AMES	2	.6
IA	CONTINUE SOUTH	DUFF	S	NEVADA	1	2.6
IA	AT US-30 GO EAST	US-30	E	NEVADA	2	3.6
IA	TO I-35 CONTINUE SOUTH	I-35	S	DES MOINES	25	5.6
IA	TURN ON I-80 EAST	I-80	E	DAVENPORT	152	30.6
IA	I-280 EAST TO IL LINE	I-280	E	MOLINE	10	183
IA	STATE MILEAGE SUBTOTAL				193	
IL	FROM IL LINE	I-280	E	WARNER	8	193
IL	AT I-74 TURN	I-74	SE	PEORIA	82	201
IL	AT PEORIA TAKE I-474	I-474	SE	CREVE	13	283
IL	TAKE I-74 EAST	I-74	E	NORMAL	29	296
IL	TAKE I-55 SOUTHEAST	I-55	SE	SHIRLEY	6	325
IL	TAKE I-74 SOUTHEAST	I-74	SE	STALEYS	46	331
IL	TAKE I-57 SOUTHWEST	I-57	SW	GOREVILLE	193	377
IL	TAKE I-24 TO KY LINE	I-24	SE	METROPOLIS	38	570
IL	STATE MILEAGE SUBTOTAL				415	
KY	KY LINE E/S TO TN LINE	I-24	SE	OAK GROVE	93	608
KY	STATE MILEAGE SUBTOTAL				93	
TN	TN LINE TO I-75 TO GA LINE	I-24	SE	EAST RIDGE	185	701
TN	STATE MILEAGE SUBTOTAL				185	
GA	GA LINE STAY ON I-75	I-75	SE	SMYRNA	92	886
GA	AT I-285 GO EAST	I-285	E	DEKAULB	25	978
GA	TAKE I-20 TO SC	I-20	E	BELVEDERE	134	1003
GA	STATE MILEAGE SUBTOTAL				246	
SC	STAY ON I-20 TO SC-19	I-20	NE	AIKEN	13	1137
SC	SC-19 TO DOE SRP	SC-19	S	NEW ELLENTON	16	1150
SC	STATE MILEAGE SUBTOTAL				34	
ROUTE TOTAL						1166

3. Location of Planned Stopovers, Food and Fuel Stops

Finalized, once route is approved.

4. Carrier

Our Carrier, Tri-State Motor Transit Company, has assured us they will transport these irradiated reactor fuel plates over the route as approved.

IV. Heavily Populated Areas Requiring Armed Escort

The urbanized areas anticipated on route are as follows:

1. Des Moines, IA
2. Davenport, IA
3. Moline, IL
4. Peoria, IL
5. Nashville, TN
6. Atlanta, GA

V. Communications Capabilities

Tri-State Motor Transit Company has a 24 hour number which will receive 2 hour check calls from the transport while shipment is in transit.