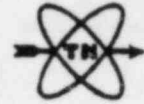


PDR

TRANSNUCLEAR, INC.

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July 8, 1985

XSNM02140

Mr. Neal Moore
Nuclear Regulatory Commission
Office of International Programs
Washington DC 20555

Re: XSNM02140
(NUK-446)

Dear Mr. Moore:

As agreed in the May 10, 1985 meeting, enclosed is a revised checklist,
submitted by Studsvik for our application referenced above.

Sincerely,

Barbara A. Hannett
Traffic Coordinator

Encl: As stated above

cc (with enclosure): N. Martin/DOE
R. de la Barre/DOS

BAH/jh

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PDR XPORT
XSNM-2140 PDR

STUDSVIK ENERGITEKNIK AB

CHECKLIST FOR USE IN REVIEW OF REQUESTS FOR HEU TO DETERMINE
TECHNICAL AND ECONOMIC JUSTIFICATION

1. Name of reactor and facility R2, Studsvik Energiteknik AB
2. Location Studsvik, Sweden
(Postal address: S-611 82 Nyköping)
3. Quantity of uranium requested (kg U) 35.088 kg
4. Enrichment in the isotope U-235 93.3%
5. Quantity of uranium requested (kg U-235) 32.737 kg
6. Type of fuel element and form of uranium MTR/UA1
7. Current reactor power level (MW th) 50
8. Duty factor, average burnup 95% / 55-59%
- 9a. Current core loading (kg U-235) 8.8 ±0.5 kg
- 9b. Amount of fuel per element (kg U-235) 0.250 kg
- 9c. Number of elements in core 46 + 6 control rods
- 9d. Average core life 16 days
- 9e. Active core dimensions 8 x 10 pos.
616 x 648 x 640 mm
- 9f. Neutron flux 4×10^{14} n/cm²/s
10. Annual fuel useage (kg U-235) 27 kg
11. Annual spare fuel requirement, if any (kg U-235) 4.5 kg
12. Plans to increase, decrease reactor power level NO/NO
13. Estimated annual supply of current fuel request one time-1987
14. Required manufacturer's working stock, if any, included in this request (kg U 235) -
15. Fabrication loss, if any, included in this request (kg U-235) -
16. Names of converter and fabricator of fuel NUKEM - NUKEM/CERCA
17. Location NUKEM: Hanau, FRG. CERCA: Romans, France
18. Inventory June 1, 1985
- 18a. Quantity of scrap U-235, useable, non-usable (kg U-235) -
- 18b. Quantity of fabricated unirradiated stored fuel available (kg U-235) 30.2 kg
- 18c. Quantity of unirradiated non-fabricated stored fuel (which will be available from fabrication planned or in process) (kg U-235) 29.5 kg
- 18d. Amount of spent fuel stored About 20 kg in the form of spent fuel at ICPP(Idaho)/Savannah R. awaiting reprocessing and 30 elements at Studsvik ready for shipment

19. Date at which current inventory, including a, b, c will be expended September 1987
20. Date current requested fuel will be needed at reactor July 1987
21. Date current requested fuel will be needed by convertor and fabricator September 1986
- 22a. Time taken for shipment from USA to convertor/fabricator 1 - 2 months
- 22b. Lead time for ordering in USA April - June, 1986
23. Date at which current requested fuel will be expended i.e. when a further HEU supply will be needed at reactor September 1988
24. Dates at which reactor could be converted to 45% fuel; to 20% fuel, including time required for licensing procedure Gradually introducing 20% fuel during 1987-1988. Licensing 1986.
25. History and dates of previous HEU supplies by the U.S. All fuel from the U.S. since 1961. 19 to 20 deliveries in 23 years.
26. Amount of fuel of U.S.-origin previously consumed during operation of reactor 1961-1968 approx. 10 kg/year. 1968-1983 approx. 17kg/ Estimated total: 340 kg U-235
27. Status of cooperation between reactor operator and Argonne National Laboratory in reduced enrichment program (RERTR) work on core calculations and effects of 20% fuel Cooperative work on core calculations and effects of 20% fuel.
28. Status of agreement between reactor operator and ANL to reduce enrichment First 4 demonstration 20% elements delivered. Burnup started on two. Three additional demo elements expected late 1985.
29. Status of cooperation between reactor operator and IAEA reduced enrichment program Participating in IAEA meetings on RERTR program

NOTE: Prior to obtaining USG approval an update of the inventory may be required

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