



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

February 24, 2017

Ms. Carol Fischer  
Corporate Trade Compliance Specialist  
Curtiss-Wright Electro-Mechanical Corporation  
1000 Wright Way  
Cheswick, PA 15024

SUBJECT: JURISDICTION OF STEAM GENERATOR NOZZLE DAMS

Dear Ms. Fischer:

On January 3, 2017, the U.S. Nuclear Regulatory Commission (NRC or the Commission) received your letter requesting a reconsideration of the Office of International Programs' (OIP) previous jurisdiction determination that the export of Steam Generator (SG) nozzle dams is controlled by the NRC. After careful consideration of the points raised in your request, and in consultation with the relevant Executive Branch agencies, it has been determined that SG nozzle dams continue to fall under the NRC's export licensing jurisdiction. This determination is based on the following analysis:

1. Especially Designed or Prepared: It is the view of the NRC that SG nozzle dams are unique to nuclear use. Specifically, they are manufactured to be installed into the steam generator inlet and outlet nozzles, according to individual steam generator specifications. We did not identify any non-nuclear uses for nozzle dams. Therefore, the NRC characterizes SG nozzle dams as being especially designed or prepared (EDP) for a nuclear end use. The NRC is responsible for licensing the export of components classified as EDP for nuclear end-use. The Department of Commerce is responsible for licensing the export of dual-use commodities.
2. "Normal" Operations: Your letter states that, because SG nozzle dams are not within or directly attached to a nuclear reactor, they do not fall under the definition of "nuclear reactor equipment" in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 110, Appendix A; which describes equipment that "normally" comes in contact with the primary coolant. It is the view of the NRC that the normal operation of a plant includes all of the operating modes of a pressurized water reactor during a cycle; including power operation, startup, hot standby, hot shutdown, cold shutdown, and refueling. While the nozzle dams are not used during all modes of operation, they are designed and used such that they *normally* come into direct contact with primary coolant during refueling. Additionally, it is the view of NRC technical staff that off-normal conditions at a reactor are transient conditions; and not a planned shutdown for refueling.
3. Proliferation Significance: Your letter states that SG nozzle dams pose no risk from a proliferation standpoint, as they do not directly contribute to the proliferation of nuclear weapons or a nuclear explosive device. SG nozzle dams are designed so that plants can refuel the reactor and perform steam generator maintenance at the same time, thus reducing the outage time.

The reactor must stay covered with water while refueling (for cooling and shielding) while the steam generators need to be drained to perform maintenance. Without the nozzle dams, plants would have to perform these activities in serial.

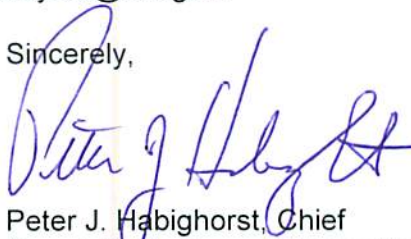
If one were to operate a reactor for the purposes of producing special nuclear material to be used in a nuclear weapon, or other nuclear explosive devices, a proliferator may want to maximize their production. Since they can only produce special nuclear material while the reactor is operating, they would likely want to minimize the number of days the reactor is shutdown. By using the nozzle dams, the reactor could save between 5 days and 2 weeks on refueling, thereby increasing its production through gained operation time that it would have otherwise been shut down.

Section 109b of the Atomic Energy Act of 1954, as amended, authorizes the Commission to determine which component parts of production facilities and utilization facilities are relevant from an export control perspective because of their significance for nuclear explosive purposes. The NRC deems SG nozzle dams to be significant from an export control perspective. They are an important component of a production or utilization facility and directly contribute to efficient re-fueling and maintenance operations.

Based on the above analysis, the NRC has determined that the export of SG nozzle dams falls under the NRC's licensing jurisdiction in 10 CFR Part 110, Appendix A, number 11. NRC staff recognizes that this determination will result in a commercial disadvantage for Curtiss-Wright. Licensing officers within OIP will be happy to discuss the process for requesting the expedited review of export license applications.

Should you have any questions, or wish to discuss the matter further, please feel free to contact me at 301-287-9241, or e-mail, [Peter.Habighorst@nrc.gov](mailto:Peter.Habighorst@nrc.gov). Also, you may contact Ms. Lauren Mayros at 301-287-9088, or e-mail, [Lauren.Mayros@nrc.gov](mailto:Lauren.Mayros@nrc.gov).

Sincerely,



Peter J. Habighorst, Chief  
Export Controls and Nonproliferation Branch  
Office of International Programs  
U.S. Nuclear Regulatory Commission