



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
SUPPORTING AN EXEMPTION TO FACILITY OPERATING LICENSE NO. DPC-34

PUBLIC SERVICE COMPANY OF COLORADO  
FORT ST. VRAIN NUCLEAR GENERATING STATION

DOCKET NO. 50-267

1.0 INTRODUCTION

By letter dated November 9, 1990, the Public Service Company of Colorado (PSC or the licensee) requested an exemption from 10 CFR Part 55 pertaining to the use of a simulation facility. Additionally, the NRC proposes additional related exemptions from 10 CFR Part 55 pertaining to operator requalifications. Fort St. Vrain Nuclear Generating Station (FSV) was permanently shut down on August 18, 1989. A possession only license was issued by the NRC on May 21, 1991, prohibiting PSC from operating the reactor.

2.0 DISCUSSION AND EVALUATION

The licensee's proposed action includes an exemption from 10 CFR 55.45(b), 55.33(a)(2), 55.59(a)(2), and 55.59(c)(3) to the extent that these regulations require the use of a simulation facility in implementing operating tests and on-the-job training. Additionally, the NRC's proposed action includes an exemption from 10 CFR 55.59(a)(2), (c)(2), (c)(3), and (c)(4) to the extent that these regulations apply to requalification requirements specific to power operations of a nuclear facility.

The request for an exemption from the requirements for a simulation facility and from the requirements of requalification training related to power operation of operating power reactors is based on (1) the cessation of power operations at FSV, and (2) the issuance of a possession only license on May 21, 1991, prohibiting operation of the FSV reactor.

The requirements of 10 CFR Part 55 for a simulation facility are designed for operating power reactors. There are no plant-referenced simulator devices that reflect the current partially defueled and permanently shutdown condition of FSV. Likewise, the requalification requirements of 10 CFR 55.59 are designed for the complex operations associated with an operating plant from start-up through full-power operation. With FSV in a partially defueled and permanently shutdown condition and prohibited from operation, the facility is in a static condition with little or no change in day-to-day operating activities. The knowledge required of operators in a shutdown condition is far less than that required for an operating facility.

One-third of the spent fuel has been removed from the core and placed in the spent fuel storage wells. Boron poisoned defueling elements (without fuel) have been inserted in locations where fueled elements have been removed. The removal of one-third of the fuel, the additional boron in the defueling elements, and the TS restriction on control rod removal adequately protect the reactor from accidental criticality and prevent planned critical operations. Therefore, design basis accidents associated with an operating plant from start-up through full-power operation are no longer credible. Credible accidents for a nuclear facility in the permanently shutdown and partially defueled condition as For: St. Vrain are all associated with a loss of spent fuel well cooling or with fuel handling.

The NRC has examined the licensee's proposed exemption and has determined that the exemption does not affect the risk of facility accidents since the plant is in a partially defueled and permanently shutdown condition. With the reactor vessel partially defueled and the licensee not licensed to resume power operation at FSV, design-basis accidents associated with an operating plant from start-up through full-power operation are no longer credible.

In the shutdown condition of the plant, the principal operator activity will be to complete the defueling of the reactor and to monitor the spent fuel storage well to assure the continued safe storage of special nuclear material so that the public health and safety is not compromised. This exemption would enable the licensee to continue to train its operators for their principal activities without a simulation facility and without expending excessive resources and time training personnel for unrelated power activities. The remaining requalification training to be accomplished without a simulation facility ensures protection of the public health and safety and is appropriate to the partially defueled condition of the plant.

The NRC staff has further determined that requiring a simulation facility at FSV and requiring the licensee to adhere to requalification standards geared to an operating power reactor while FSV is in a permanently shutdown status would not significantly enhance or increase the needed capabilities of licensed operators at FSV.

Thus, on the basis of this evaluation, the NRC concludes that the exemption from the requirements for a simulation facility and from requalification training specific to power operations of operating power reactors is acceptable. The NRC also concludes that the exemption will not adversely affect the public health and safety.

### 3.0 STATE CONSULTATION

The NRC staff reviewed the licensee's request without consultation with representatives of the State of Colorado.

### 4.0 ENVIRONMENTAL CONSIDERATION

Because the normal design-basis accidents of an operating power reactor are no longer credible in the partially defueled condition of FSV, and because the operator activities at FSV have been greatly reduced in conformance with the possession only license, this exemption will not adversely affect the environ-

ment. The continued requalification training without the use of a simulation facility will not increase the amounts or change the types of any effluents that may be released offsite, and there will be no significant increase in individual or cumulative radiation exposure.

#### 5.0 CONCLUSION

The staff has concluded on the basis of the considerations discussed above that (1) there is reasonable assurance that the health and safety of the public will not be endangered by exempting the requirement to use a simulation facility and from the requirements to train personnel for power operation-related topics, (2) the remaining requalification training program will be conducted in accordance with the Commission's regulations, and (3) the issuance of the exemption will not be inimical to the common defense and security or to the health and safety of the public.

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Dated: November 27, 1991