

Proposal to Eliminate Dual Regulation of Emergency Diesel Generator Tanks at Nuclear Power Stations

Issue

In 1988, to avoid duplicate regulation under EPA's Part 280 underground storage tank ("UST") rules and the NRC's 10 C.F.R. Part 50, Appendix A regulatory program, EPA deferred regulating underground emergency diesel generator ("EDG") tanks at nuclear power stations under the Part 280 UST rules. 40 C.F.R. § 280.10(c)(3)). EPA reserved the option of bringing those tanks within the Part 280 universe if further study showed the NRC controls were inadequate or incomplete (*see* 53 Fed. Reg. 37082, 37113 (Sept. 23, 1988)), though in the 19 years since the deferral, EPA has not proposed bringing the EDG tanks into the universe of EPA-regulated USTs. The same issue now arises in the SPCC program because in 2002 EPA amended 40 C.F.R. § 112.1(d)(2)&(4) to exclude from SPCC regulation the tanks, connected underground piping, underground ancillary equipment, and containment systems that are subject to all technical requirements of Part 280 or a State program approved under Part 281. Because the underground EDG tanks are not subject to all Part 280 (or approved state program) technical requirements, they did not qualify for the exclusion despite the fact that these tanks are fully regulated by the existing NRC regulatory program. *See* 67 Fed. Reg. 47042, 47064 (July 17, 2002). Since the rationale for the SPCC exclusion for Part 280 USTs was to avoid dual regulation, EPA should defer to the NRC program to avoid dual regulation of the EDG tanks by EPA and the NRC.

Principal Impact of SPCC Program on EDG Tanks

Under the SPCC program, regulated facilities must prepare a spill prevention and countermeasures ("SPCC") plan aimed at preventing the discharge of oil into surface waters and must comply with specific substantive management and design requirements in the rules. The most costly requirements applicable to both new and existing tanks include:

- Providing appropriate containment and/or diversionary structures or equipment to prevent a discharge into surface waters (EPA describes this requirement as "general containment") (40 C.F.R. § 112.7(c)), or, alternatively, make a determination that such containment is not practicable, conduct periodic integrity testing of the tank, periodic integrity testing or leak testing of the valves and piping, prepare an oil spill contingency plan that complies with 40 C.F.R. Part 109, prepare a written commitment of manpower, equipment, and materials required to expeditiously control and remove any quantity of discharged oil (40 C.F.R. § 112.7(d)); and
- Providing bulk storage secondary containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation and ensure that diked areas are sufficiently impervious to contain discharged oil. 40 C.F.R. § 112.8(c)(2). If bulk storage secondary containment is impracticable, the alternative described above also applies to this requirement. 40 C.F.R. § 112.7(d).

Most EDG tanks do not meet one or both of these requirements. Achieving compliance may involve a major design change that could trigger an NRC license amendment proceeding. *See* 10 C.F.R. § 50.59.

NRC Program

Nuclear facility emergency generators fall under the NRC's definition of nuclear safety-related structures, systems, and components and are subject to the highest level of quality control and regulation under NRC's rules (10 C.F.R. Part 50). Specific requirements are implemented through NRC operating licenses, NRC regulatory guides (*e.g.*, NRC Regulatory Guide 1.137 "Fuel-Oil Systems for Standby Diesel Generators"), ASME Code Section XI Article IWD-5000 "System Pressure Tests," and in many cases, state regulations (*see, e.g.*, 6 NYCRR Part 613 "Handling and Storage of Petroleum"). Although these NRC regulations, licenses, and other guidance focus on the specific designs and intricacies of nuclear facility emergency generator systems, including corrosion protection, from the standpoint of their

safety-related function, the environmental goals of the SPCC program are achieved by the NRC program because the loss of oil from EDG tanks could lead to a full shut-down of the nuclear generating station.

A more immediate risk of plant shutdown would arise if the EDG tanks are required to install secondary containment to comply with the SPCC standards. According to an assessment of impacts of SPCC requirements on nuclear EDG tanks prepared by the Argonne National Laboratory, retrofitting secondary containment “would likely require excavation and removal and replacement of existing components with double-walled tanks and piping.” Argonne National Laboratory, *Assessment of the Potential Costs and Energy Impacts of Spill Prevention, Control, and Countermeasure Requirements for Nuclear Power Plant Emergency Diesel Generator Tanks*, p.7 (May 2006). The report observes “that NRC operating license conditions and nuclear safety considerations would require the plants to be taken off-line and placed in a cold-shutdown condition for virtually the entire duration of the EDG fuel system work,” a period likely to extend for several months. *Ibid.*

Performance History

In response to a question on the performance history of the EDG tanks, the industry surveyed its membership in 2007 to determine whether there have been oil discharges to surface waters from these tanks during the past ten years. Eighteen utility companies responded – more than 90% of nuclear generation capacity nationwide – and the data identified only one discharge as described in EPA’s SPCC rules (*see* 40 C.F.R. § 112.1(b)) from a tank that we would propose to exclude from SPCC regulation. The total volume of oil discharged from that tank was 50 gallons. Other EDG tanks reported discharges of oil – in some cases the volume discharged was significantly greater than 50 gallons – but those tanks were all aboveground and would not be covered by the proposed exclusion from SPCC regulation.

EPA’s own observation of the EDG tanks confirmed that they are soundly managed under NRC regulation. In July 2005, EPA staff visited the North Anna nuclear power station in Virginia and indicated that management of the tanks appeared to be equivalent to compliance with SPCC regulation. If that is so, there should be no need for a second layer of regulation administered by EPA. To be sure, the SPCC regulations do in fact contemplate deviations from EPA rules where alternatives are environmentally equivalent. 40 C.F.R. § 112.7(a)(2). But apart from the added paperwork burdens on certifying professional engineers to justify deviations, this option is not a solution to duplicate regulation because the rule expressly prohibits environmentally equivalent deviations from the containment requirements. *Ibid.*

EPA Precedents for Avoiding Dual Regulation

EPA has historically recognized the waste and inefficiency of dual federal agency regulation. *See, e.g.*, EPA UST deferral of EDG tank regulation to NRC, 53 Fed. Reg. at 37113; EPA low-level mixed waste regulation conditionally excluding such wastes from RCRA regulation and placing primary jurisdiction of such wastes with the NRC, 66 Fed. Reg. 27217 (May 16, 2001). Regulation of EDG UST systems at nuclear power generation facilities is best addressed (and *already is* addressed) by the NRC with obvious success given the outstanding discharge history from these tanks. If EPA is concerned that deferring to the NRC would set a dangerous precedent, that precedent was set nearly 20 years ago when EPA deferred to the NRC in refraining from regulating these tanks under the Part 280 UST program. Indeed, EPA threatened to apply the UST rules or develop a separate set of standards for these tanks if further study indicated that “the NRC regulations are not adequate or are not as complete as the UST regulations.” 53 Fed. Reg. at 37113 Obviously, EPA has had no reason to depart from its 1988 precedent that the NRC program achieves equivalent results as the Part 280 UST program. If, as EPA concluded in 2002, underground tanks covered by Part 280 do not warrant SPCC regulation, (*see* 40 C.F.R. § 112.1(d)(2)(i); 67 Fed. Reg. at 47064), why should EPA now seek to regulate tanks with no history of mismanagement that are fully regulated under a program that EPA has regarded for nearly two decades as equivalent to the Part 280 program?

Recommendation

Consistent with existing EPA precedents, EPA should amend its rules to exclude these tanks from Part 112 (other than referencing them on emergency response diagrams at facilities otherwise regulated by the SPCC program). Such an amendment would be inserted at the end of 40 C.F.R § 112.1(d) and would read:

(7) Any storage tank system that is part of an emergency generator system at a nuclear power generation facility regulated by the Nuclear Regulatory Commission under 10 CFR part 50, appendix A, except that such tank must be marked on the facility diagram as provided in § 112.7(a)(3) if the facility is otherwise subject to this part.

At a minimum, the proposed rule should afford the public an opportunity to comment on the option of deferring to the NRC and excluding the underground EDG tanks from SPCC regulation.