

To Exelon Experimental License Application

A. Background

Communication inside and around a nuclear reactor is a great challenge, not only because the walls can range in width from 4 inches to 4 feet of concrete and the built-in shielding of the reactor dome tends to serve as a deflector of certain wireless communications, but also because the need for reliable and effective communication is so critical. Under Nuclear Regulatory Commission (NRC) rules, AmerGen Energy Company (AmerGen) has the regulatory and licensing obligation to "make every reasonable effort to maintain exposure to radiation as far below NRC-established dose limits as is practical... (See 10C.F.R. §20.1003 et seq.) in order to protect plant workers from harmful doses of radiation (e.g., while they perform safety and maintenance operations in and around AmerGen Nuclear Stations).

As set forth more thoroughly in the Consensus Plan between the Nuclear Energy Institute (NEI), the Utilities Telecom Council (UTC) and leading broadcaster organizations (Broadcasters) (attached hereto), the commercial nuclear industry's use of Telex wireless intercom equipment (the Equipment) serves the in objectives of effective communication and facilitating protection of workers from unhealthy levels of radiation by providing communications features (wireless, hands-free, full duplex/multi-user, reliable, no "call drops," no background noise, no inadvertent actuation, uninterrupted voice transmission, ease of use, and durability) that permit plant workers to efficiently conduct routine maintenance as well as activities required to be performed in an "outage" [when used (irradiated) fuel is replaced with fresh (non-irradiated) fuel and the used fuel is carefully moved to storage facilities]. That is, the Equipment directly contributes to the protection of the health and safety of plant workers, as efficiencies gained from its use limit nuclear plant workers' occupational exposure.

B. Consensus Plan Provisions

The terms and conditions under which the plants may continue to use the Equipment are set forth in the Consensus Plan.

Under the Consensus Plan, EGC is obliged to coordinate use of the Equipment outdoors and to report within 6 months of the grant of each experimental license, and every 12 months thereafter, on the plants' use of the Equipment. In addition, NEI and UTC are required to update the Broadcasters on efforts to identify or develop equipment that operates in Part 90, or other frequencies, for which plants are eligible, and which is capable of satisfying the plants' communication and safety needs.

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C. Proposed Experiments

AmerGen intends to conduct experiments using the Equipment through which they will establish a series of situational communications objectives within and around the plant and track the operating performance benchmarks for each objective. As alternative equipment becomes available, the plants will conduct tests of such prospective equipment against the benchmarks established using the Equipment.

The specific objectives to be accomplished:

1. Prioritization of the operating features of the Equipment in order to inform our Request for Proposal (RFP) on replacement equipment.
2. Establishing performance benchmarks and power matrix in order to inform our RFP.
3. Evaluating new entrants against the priorities and benchmarks established using the Equipment.
4. Creation of best practices generally for communicating in and around AmerGen Nuclear Power Stations, both with the Equipment and other equipment and methods.
5. Of particular interest is the simultaneous operation in many of the plants of the Equipment and the electronic dosimeters, most of which operate at 900MHz. Electronic dosimeters are worn by many plant employees while they participate in operations involving exposure to radiation. The dosimeter device measures the dose in real time and transmits the readings back to the communications control center, which is also the venue from which the safety experts communicate, via the Equipment, with the plant employees. In fact, it is often the case that the communication via the Equipment is to instruct the plant worker to move one way or another, in order to avoid areas where the dosimeter indicates there exists high doses of radiation.

While the simultaneous use of the Equipment with the 900 MHz dosimeter devices has not caused interference to either device (or, worse, caused one or both to shut down), the experiment will allow AmerGen to test other equipment operating at the 900MHz band to evaluate whether it can operate simultaneously with the dosimeter device. It will be important to experiment on the best practices for such simultaneous operation and to determine, as best one can, how far apart on the spectrum chart these often simultaneous transmissions must be, in order to avoid interference/shut-down.

Exhibit 2

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The program of experimentation contemplated herein has a reasonable promise of contributing to the development, extension, expansion or utilization of the radio frequency because there has not previously been a full study of best communications practices inside and around AmerGen Nuclear Power Stations. This fact, together with the NRC mandates and the compelling desire to protect plant workers from unhealthy doses of radiation, will also contribute to the development of alternative equipment that is capable of operating under Part 90 and meeting AmerGen's safety and communications needs.

As such, these experiments will facilitate AmerGen's efforts to fulfill the intentions of the Consensus Plan for AmerGen Nuclear Power Stations to cease use of the equipment no later than February 2009.