HERMAN & WHITEAKER, LLC

DONALD L. HERMAN, JR
GREGORY W. WHITEAKER
KENNETH C. JOHNSON†
ROBIN E. TUTTLE††
CARRIE L. DEVIER†††
SUSAN C. GOLDHAR ORNSTEIN
SARAH L. J. ACEVES††††

†Admitted in DC and VA only
††Admitted in DC, SC and FL only
†††Admitted in SC only
††††Admitted in DC only

TEL 202-600-7272
FAX 202-706-6056
3204 TOWER OAKS BLVD, STE 180
ROCKVILLE, MD 20852

July 7, 2015

Via ECFS

Ms. Marlene Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Re: ***EX PARTE* NOTICE**

Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, et al.

GN Docket No. 12-268; GN Docket No. 14-166; ET Docket No. 14-165; ET Docket No. 10-24; WT Docket No. 08-167; WT Docket No. 08-166

Dear Ms. Dortch:

On Monday, July 6, 2015, Jeffrey Craven of Thompson Coburn, LLP, representing the Nuclear Energy Institute ("NEI"), Jonathan L. Wiener of Goldberg, Godles, Wiener & Wright LLP, representing American Electric Power, Jeffrey L. Sheldon of Levine, Blaszak, Block & Boothby LLP, representing Southern Company, and the undersigned, of Herman & Whiteaker, LLC, representing Pinnacle West Capital Corp., met with Chanelle Hardy and David Strickland from Commissioner Clyburn's office.

The purpose of the meeting was to discuss concerns held by NEI and the Utilities Telecom Council as described in comments submitted in response to the FCC Notice of Proposed Rulemaking regarding wireless microphone operations[1] and as detailed in Attachment

[1] *See* Comments of the Nuclear Energy Institute and Utilities Telecom Council, ET Docket 14-165, GN Docket 14-166, GN Docket No. 12-268 (Feb. 4, 2015).

A. Specifically, the representatives raised concerns held by nuclear plants in light of the pending rulemakings regarding wireless microphones and the upcoming incentive auction[2] (collectively, the "Proceedings"), and the uncertainty regarding nuclear plants' future rights to use Telex equipment within the television bands on an unlicensed basis on frequencies below 698 MHz.[3] The representatives emphasized the special challenges nuclear plants continue to face when providing reliable communications services inside and around nuclear plants' containment buildings, and the ability of Telex equipment to provide clear, hands-free communications.

The representatives noted that, over the years, nuclear plants have investigated over 30 alternatives to Telex equipment for operation of communications equipment in other frequency bands. None of these alternatives has proven as effective as Telex equipment to nuclear plant worker safety and to safe plant operations. Until suitable alternatives can be developed and tested, the plants will need to use Telex equipment that is highly effective, reliable, reduces worker exposure to radiation and generally improves safe operation of nuclear plants. The representatives explained that because there are only 99 nuclear plants at 62 locations around the country, the plants do not comprise a large enough market for manufacturers to develop comparable equipment in other bands just for their needs. By way of example, the representatives explained that one major equipment manufacturer previously declined to discuss the development of comparable replacement equipment after learning of the small the size of this potential market.

The representatives requested that the Federal Communications Commission ("Commission") make a clear statement in the Proceedings that after the incentive auction, the plants should be permitted to operate on a non-interfering basis on any spectrum below 698 MHz. Continued operation on these frequencies would ensure nuclear plant worker protection and safe plant operations.

---

[2] *See Promoting Spectrum Access for Wireless Microphone Operations*, GN Docket No. 14-166, Order, 29 FCC Rcd 12343 (2014). *See also Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, GN Docket No. 12-268, Report and Order, 29 FCC Rcd 6567 (2014).

[3] *See* Letter from Julius Knapp and Ruth Milkman to J. Jeffrey Craven, ET Docket No. 10-24 (Oct. 1, 2010) (Granting the nuclear plants a modification of the blanket waiver provided under Revisions to Rules Authorizing the Operation of Low Power Auxiliary Stations in the 698-806 MHz Band, *Report and Order and Further Notice of Proposed Rulemaking*, 25 FCC Rcd 643 (2010), which allowed the plants additional flexibility in their use of low power auxiliary devices in the television bands, and discussed ways that nuclear plants could continue to operate Telex equipment given the changing landscape of the broadcast bands).

This *ex parte* notification is being filed electronically with your office pursuant to Section 1.1206 of the Commission's Rules.

Sincerely,

/s/ Sarah L. J. Aceves

Sarah L. J. Aceves
Counsel for Pinnacle Capital Corp.

CC: Chanelle Hardy
David Strickland
Louis Peraertz

ATTACHMENT A

Presentation by Nuclear Energy Institute,
Utilities Telecom Council and
Several Nuclear Plants to the
Federal Communications Commission

Eight (8) pages to follow

Presentation
by
Nuclear Energy Institute,
Utilities Telecom Council
and
Several Nuclear Plants
to the
Federal Communications Commission

July 2015

A. Overview of Issue

- Nuclear plants rely on Telex wireless headsets operating on broadcast spectrum below 698 MHz
  - Plants are heavily regulated by the Nuclear Regulatory Commission
  - Telex wireless headsets are used for critical in-plant voice communications during intricate nuclear refueling operations
  - Plants must plan and train for refueling, which occurs about every 18 months, many months or even a few years in advance

- Plants are permitted to use Telex headsets pursuant to an expanded waiver of the Part 15 rules.
  - *See*, Letter to Jeff Craven from Office of Engineering and Technology and Wireless Telecommunication Bureau, October 1, 2010, (the "NEI/UTC Waiver Letter Order"); copy attached hereto.

- Plants seek confirmation from the FCC that they will have a continuing right to use this equipment, even after a 39 month "transition" period for wireless microphones generally, because the Plants see no reasonable alternatives, or any near-term prospects, for comparable equipment designed to meet the unique needs of this limited market.

B. Nuclear Plants Rely on Telex Wireless Headsets for Worker Health & Safety

- 99 nuclear power plants, at 64 separate locations around the country, generate 20% of the nation's electricity.
- Nuclear plants use Telex wireless heads for **worker health and safety**:
  - Workers must limit their time inside containment building to meet NRC's "As Low as Reasonably Achievable" (ACLARA) exposure standard.
  - Worker efficiency requires high quality wireless communications.
  - Telex headsets allow hands-free operation, and full-duplex voice communications among in-plant personnel.
- Telex headsets work exceedingly well in the challenging plant environment:
  - Domed ceiling of containment building contributes to "multipath interference" in other frequency bands
  - Dosimeters operating largely at 910-917 MHz, as well as other wireless devices and electronic equipment must operate reliably and in very close proximity without interference. All electronic equipment must be tested for compatibility before deployment as a safety precaution.

C. No Reasonably Acceptable Alternative Equipment

- Telex equipment has not posed an interference threat to licensed services:
  - No reports of interference in twelve (12) years of operation
  - Low-power ($\leq$100 milliwatts) and 4-foot thick walls limit signals beyond plant walls
  - Testing shows signals attenuate to negligible levels within plants' security fencing

- Nuclear plant licensees have tested 29 different alternatives to the Telex equipment since 2003.
  - None of the alternatives had attributes close to Telex equipment in terms of functional capability and plant worker health and safety protection, consistent with NRC's ALARA radioactive dose standard.

  - The alternatives tested each suffered from one or more of the following deficiencies:
    - ❑ Unacceptable interference with other wireless devices essential to Nuclear plant operations
    - ❑ "Multi-path" interference from the containment building's domed ceiling
    - ❑ Inadequate coverage
    - ❑ Unacceptable voice quality
    - ❑ Insufficient capacity for multiple headsets in simultaneous use

- One major equipment manufacturer previously advised the Plants that it was not interested in developing headset equipment for the Plants because the potential market is too small.

D. Present NPRMs do not Address Long-term Use of Telex at Nuclear Plants

- June 2014 – FCC issues 2nd Report & Order in WT Docket 08-166:
  - FCC declines to expand Part 74 licensing eligibility to nuclear power plants *"at this time*."
  - FCC modifies the Waiver to provide higher power limits for headset use inside and outside plants.
  - FCC also declines to codify the NEI/UTC Waiver Letter into the Part 15 rules "*at this time, because there has been no showing that further relief is necessary prior to consideration of changes to our rules in connection with the forthcoming Notice of Proposed Rulemaking addressing wireless microphone use."* As modified, it shall continue in effect *pending the outcome of further proceedings*."
  - FCC declared "***finally, we find that operation of these devices outside at transmit levels up to 100 milliwatts would not interfere with other users in the TV bands because the locations of nuclear power plants are known, they generally are located in remote areas, and their Telex equipment operates at a relatively low power.***"

- September 2014 – FCC issues NPRMs on Wireless Microphones:
  - No mention of the nuclear plants or the NEI/UTC Waiver Letter.
  - Unclear whether wireless headsets even fit within proposed definition of "wireless microphones".

- Because the Plants now have some uncertainty as to their rights to use Telex equipment following adoption of new rules for wireless microphones, and in particular beyond the 39 month transition period, they ask the FCC to confirm that the NEI/UTC Waiver Letter Order will continue in effect, and/or to amend the Part 15 and 74 rules to effectively codify the Waiver Letter Order.

E. Relief Requested in Rulemaking Proceeding

- Codify the NEI/UTC Waiver Letter Order, thereby allowing the Plants to use Telex wireless headsets on the current and former television band frequencies (698 MHz and below) without regard to distance separations, indoors only.
  - Operation on a Part 15, non-interference basis, will allow the Plants to adjust operations only as needed to avoid interference, which is not anticipated in any event.
  - Nuclear plants represent a truly unique operating environment

- As suggested by the Commission in the R&O and Further Notice, make the Plants eligible for licensing under Part 74 for outdoor operation in compliance with Part 74 wireless microphone rules.
  - The option to secure Part 74 licensing would give the Plants greater flexibility to use their Telex equipment in outdoor applications at their facilities, such as when carrying fuel rods from containment to storage locations.

- This modest relief -- NEI/UTC Waiver Letter Order for indoor use, and Part 74 eligibility largely for outdoor use -- would enable the Plants to continue to meet their mission-critical communications requirements, reduce worker dose and increase overall plant safety.

Proposed textual additions in support of requested relief:

1. Add the following subsection (f) to the new Section 15.238 as proposed in the FNPRM in WT Docket No. 08-166, 25 FCC Rcd 643 (2010).

§ 15.238 Operation in the bands 54-72 MHz, 76-88 MHz, 174-216 MHz, 470-608 MHz and 614-698 MHz.

* * *

(f) Notwithstanding any other provision of this Section, wireless audio devices may be used at a nuclear power plant on any frequencies in the 54-72 MHz, 76-88 MHz, 174-216 MHz, 470-608 MHz and 614-698 MHz bands for two-way voice communications in support of plant operations, subject to the following terms and conditions:

(1) The unmodulated carrier power at the antenna input may not exceed 100 mW.
(2) Such devices shall only be operated within buildings that are inside the security perimeter of the nuclear power plant.
(3) Such devices may operate on any frequencies in these bands on a non-interference basis to licensed co-channel facilities.

2. Add the following definition to Section 74.801:

§74.801 Definitions

*** * ***

Nuclear power plant. A nuclear power plant is a facility authorized by the Nuclear Regulatory Commission to generate electricity through the use of nuclear power.

3. Add the following subsection (7) to Section 74.832(a):

§74.832 Licensing requirements and procedures.

(a) A license authorizing operation of one or more low power auxiliary stations will be issued only to the following:

* * *

(7) The operator of a nuclear power plant for use solely within the plant's outer security perimeter.

F. Requested Relief is in the Public Interest

- Relief for Nuclear Plants is in the public interest:
  - Use of the Telex equipment promotes worker safety because it reduces the number of workers that must be exposed to radiation, as well as the duration of those exposures, thus helping the plants meet the NRC's ALARA requirements for protecting workers
  - Use of the Telex equipment advances safe plant operations by providing clear, reliable communications which reduce the number of accidents
  - **12 years of *indoor and outdoor use* with ZERO reports of interference demonstrates that the nuclear plants' use of Telex equipment does not interfere with any FCC licensees**

- Unique factual circumstances warrant grant of relief:
  - Protection of worker public health and safety requires use of communications equipment produced only by Telex
  - Indoor only use, under Part 15, at up to 100 mW, on an intermittent basis, together with fortress-like construction of the plants, on geography that represents 5/1000 of 1% of the U.S. land mass, makes **virtually impossible interference with other FCC licensees**
  - Outdoor use only when co-channel separation and other technical requirements can be met.
  - Use is conditioned on non-interference, in any event.
  - Plants have tested 29 potential alternatives; none compare with Telex equipment in mastering the challenging environment of nuclear buildings