

Office of Engineering and Technology
Experimental Licensing Branch
April 4, 2003
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Via Email (chui@fcc.gov) and Courier Service

Experimental Licensing Branch
Office of Engineering and Technology
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Attention: Mr. Carl Huie (Room 7-A361)

135ST03

Re: Supplement to Request for Special Temporary Authorization; Telex Communications, Inc.; Use of Certificated Wireless Intercom Equipment at Nuclear Facilities for Security Operations near Reactors

Mr. Huie:

This supplement follows the March 13, 2003, request for STA made on behalf of our client, **Telex Communications, Inc.**, a manufacturer and provider of high quality wireless intercom and telecommunications equipment for Part 74 Broadcast Auxiliary and Part 90 Land Mobile use. The purpose of this supplement is to submit additional technical information in order to facilitate consideration of Telex Communications' request for Special Temporary Authority on behalf of users of certain of its equipment. The March 13, 2003 STA, filed pursuant to Section 5.55(g) of the Commission Rules, was an informal application to obtain special temporary authority to permit immediate, temporary use of certain Telex wireless headsets and intercom products within operating nuclear power facilities in the continental United States.

As stated in the initial request, the circumstances justifying this STA, for a period of 180 days, are:

- Heightened security measures at United States nuclear facilities;
- Telex's supply to all existing nuclear facilities in the United States of encrypted audio wireless intercom devices;
- Devices' **inside** the facilities' shielded containment vessel or in the cooling containment area for ensuring employees' secure operations and communications

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Telex RadioCom <i>at 74</i>	BTR- 800/BTR- 700	The number of units will vary accordin g to the nuclear facility.	B5DM514/ B5DM516	470 – 608 MHz, 614 – 740 MHz in 18 MHz TX and RX bands	190kF1E	The TPO will range from 50 mW to 250 mW peak.	The ERP will be equal to or less than 50 mW and 250 mW peak.	The antenna s are zero dB or less gain.
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Equipment to be used				Desired frequency(ies)	Emission type	Transmitter power output	Effective radiated power	Antenna gain
Name of manufacturer	Model	Number of units	FCC Id					
Telex RadioCom A774	BTR600/500	The number of units will vary according to the nuclear facility.	B5DM503/B5DM505	520 – 608 MHz, 614 – 760 MHz	190kF1E	The TPO will range from 50 mW to 250 mW peak.	The ERP will be equal to or less than 50 mW and 250 mW peak.	The antennas are zero dB or less gain.
A790,74	BTR-300		B5DM510	150 – 216 MHz	U1		U1	
A774	TR825/TR800/TR700		B5DM517/ B5DM515/ B5DM515	470 – 608 MHz, 614 – 740 MHz in 18 MHz TX and RX bands				
A774	TR600/TR500		B5DM504/ B5DM506	520 – 608 MHz, 614 – 760 MHz				
A790,74	TR300		B5DM513	150 – 216 MHz	U1		U1	

Inquiries or notifications during the STA period can be directed to this office, or to Mr. Mark Gubser at Telex, who can be reached at (402) 465-7036 (telephone), (402) 467-3279 (facsimile), or mark.gubser@telex.com (email). The mailing address for Telex Communications, Inc. is 8601 East Cornhusker Highway, Lincoln, NE 68505.

The original of this STA request was filed March 13, 2003, in Pittsburgh with the requisite fee of \$50.00, payable by check of this office

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to the Commission. Should any question arise concerning this supplement to the previously-filed request, kindly notify the undersigned counsel. Your prompt review of the STA request is greatly appreciated. Action on this request is urgent, because it is necessary to Homeland Security planning and increasing the security of operations and communications at nuclear power generating facilities in the United States.

Yours very truly,

Christopher D. Imlay

Attachments

cc: Mr. Mark Gubser

RadioCom™

	BTR-300/BTR-700	BTR600/500	BTR-300	TR825/TR800/TR700	TR600/TR500	TR300
Overall						
RF Frequency Range:	470 – 608 MHz, 614 – 740 MHz in 18 MHz TX and RX bands	520 – 608 MHz, 614 – 760 MHz	150 – 216 MHz	470 – 608 MHz, 614 – 740 MHz in 18 MHz TX and RX bands	520 – 608 MHz, 614 – 760 MHz	150 – 216 MHz
Power Requirement:	100-240 VAC, 50 - 60 Hz, IEC receptacle	115 VAC, 60 Hz, 8W (230 Vac, 50Hz, Model Avail.) or 12 to 15 V AC/DC (external)	12 to 15 AC/DC (power supply included)	6 "AA" Cells Alkaline (NIMH optional)	6 "AA" Cells Alkaline (NIMH optional)	6 "AA" Cells Alkaline (NIMH optional)
Typical Battery Life Alkaline:	N/A	N/A	N/A	11 Hours (Continuous duty)/ 14 Hours (Continuous duty)/ 14 Hours (Continuous duty)	12 Hours (Continuous duty)	24 Hours (Continuous duty)
Typical Battery Life Nickel Metal Hydride (1500 mAh):	N/A	N/A	N/A	9 Hours (Continuous duty)/ 11 Hours (Continuous duty)/ 11 Hours (Continuous duty)	10 Hours (Continuous duty)	17 Hours (Continuous duty)
Current Draw:	N/A	N/A	N/A	190 mA (Push-to-Talk, A and B Talk On) 140 mA (Push-to-Talk, Talk On)	120mA	Typical 82 mA
Temp Range:	-4°F to 130°F (-20°C to 55°C)	-4°F to 130°F (-20°C to 55°C)	-4°F to 130°F (-20°C to 55°C)	-4°F to 130°F (-20°C to 55°C)	-4°F to 130°F (-20°C to 55°C)	-4°F to 130°F (-20°C to 55°C)
Dimensions:	19.0" W × 1.72" H × 14.0" D (48.3 cm × 4.4 cm × 35.6 cm)	8.25" W × 1.75" H × 11.25" D (21 cm × 4.5 cm × 28.6 cm)	15.75" W × 1.75" H × 10.5" D (40 cm × 4.5 cm × 27 cm)	3.75" W × 5.35" H × 2.02" D (9.5 cm × 13.5 cm × 5.1 cm)/ 3.75" W × 5.05" H × 1.65" D (9.5 cm × 12.8 cm × 4.2 cm)/	4.00" W × 5.875" H × 1.625" D (102 mm × 149 mm × 41 mm)	4.25" W × 4.125" H × 2.0" D (108 mm × 105 mm × 51 mm)
Weight:	7 lbs. 2 oz. (3.24 kg) / 6 lbs. 15 oz. (3.15 kg)	4 lbs. (1.8 kg)	6 lbs. 2 oz. (2.8 kg)	21 oz. (595 g) with alkaline batteries/ 15 oz. (425 g) with alkaline batteries/ 16 oz. (454 g) with alkaline batteries	22 oz. (625 g) with batteries	13.5 oz. with batteries (384 g)
Transmit Antenna:	1/2 Wave (supplied) TNC Male Connector	1/2 Wave (supplied) TNC connector on chassis	5/8 Wave (supplied) SO239 connector on chassis	1/4 Wave (supplied), Screw type	1/4 Wave Wire (attached)	1/4 Wave (attached)
Receive Antenna:	1/2 Wave (supplied) TNC Male Connector	1/2 Wave (supplied) TNC connector on chassis	5/8 Wave (supplied) SO239 connector on chassis	1/4 Wave (supplied), Screw type	1/4 Wave Wire (attached)	1/4 Wave (attached)
FCC ID:	B5DM514/ B5DM516	B5DM503/ B5DM505	B5DM510	B5DM517/ B5DM515/ B5DM515	B5DM504/ B5DM506	B5DM513
Frequency Response:	300 Hz - 8 KHz	300 Hz - 4.5 KHz / 300 Hz - 8 KHz	300 Hz - 5 KHz	300 Hz - 8 KHz	300 Hz - 4.5 KHz / 300 Hz - 8 KHz	300 Hz - 5 KHz
Four Wire Input:	Level Adjustable (2 Vrms typical)	N/A	N/A	N/A	N/A	N/A
Four Wire Output:	Level Adjustable (2 Vrms typical)	N/A	N/A	N/A	N/A	N/A
Telex* Intercom:	Input/Output Level Adjustable (1 Vrms typical), Line Impedance 300 Ω	Input/Output Level Adjustable (1 Vrms typical), Line Impedance 300 Ω	Input/Output Level Adjustable (1 Vrms typical), Line Impedance 300 Ω	N/A	N/A	N/A
RTS* Intercom:	Input/Output Level Adjustable (0.775 Vrms typical), Line Impedance 200 Ω	Input/Output Level Adjustable (0.775 Vrms typical), Line Impedance 200 Ω	Input/Output Level Adjustable (0.775 Vrms typical), Line Impedance 200 Ω	N/A	N/A	N/A
ClearCom* Intercom:	Input/Output Level Adjustable (1 Vrms typical), Line Impedance 200 Ω	Interface required	Input/Output Level Adjustable (1 Vrms typical), Line Impedance 200 Ω	N/A	N/A	N/A
Auxiliary Input:	Adjustable (2 Vrms typical)	Adjustable (2 Vrms typical)	2 VRMS	N/A	N/A	N/A
Auxiliary Output:	Adjustable (2 Vrms typical into 600 Ω) (at rated deviation)	Adjustable (2 Vrms typical into 600 Ω) (at rated deviation)	2 VRMS into 600 ohm load typical (at rated deviation)	N/A	N/A	N/A
Stage Announce Output:	Internally Adjustable (1 Vrms typical at rated deviation into 100 KΩ) / N/A	N/A	N/A	N/A	N/A	N/A
Stage Announce Relay:	Dry contact, rated at 1Amp, 24 V Max. / N/A	N/A	N/A	N/A	N/A	N/A
Transmitter						
Type:	Synthesized, 720 channels	Crystal Controlled, Switchable	Crystal Controlled	Synthesized, 720 channels	Crystal Controlled, Switchable	Crystal Controlled
Transmit Power:	100 mW Max. (High), 10 mW (Normal) / 50 mW Max. (High), 5 mW (Normal)	40 mW	50 mW	50 mW Max. (Auto-power reduction when close to base)	40 mW	50 mW
RF Frequency Stability:	0.005%	Crystal Controlled, 0.005%	Crystal Controlled, 0.005%	0.005%	Crystal Controlled, 0.005%	Crystal Controlled, 0.005%
Modulation:	FM, 40 KHz Deviation	F-1-E ±32 KHz deviation 62.5 K baud	FM, 3000 Hz Deviation, 115 micro-seconds Pre-emphasis	FM, 40 KHz Deviation	F-1-E ±32 KHz deviation 62.5 K baud / F3 40 KHz deviation 100 micro-seconds Pre-emphasis	FM, 3000 Hz Deviation, 115 micro-seconds Pre-emphasis
Modulation Limiter:	Peak-Responding Compressor	Internal Compressor	Internal Compressor	Peak-Responding Compressor	Internal Compressor	Internal Compressor
Modulation Frequency Range:	300 – 8000 Hz ±2 dB	300 – 4500 Hz ±2 dB 300 – 8000 Hz ±2 dB	300 – 5000 Hz ±2 dB	300 – 8000 Hz ±2 dB	300 – 4500 Hz ±2 dB	300 – 5000 Hz ±2 dB 300 – 8000 Hz ±2 dB
Microphone Audio Input:	30 ohms – 3500 ohms	30 ohms – 3500 ohms	30 ohms – 3000 ohms	30 ohms – 3500 ohms	30 ohms – 3500 ohms	30 ohms – 3500 ohms
Microphone Input Sensitivity:	9 mV	2 mV	2 mV Dynamic, 4 mV Electret	7 mV	2 mV	2 mV Dynamic, 4 mV Electret
Radiated Harmonics & Spurious:	Exceeds FCC specifications	-45 dBC	-45 dBC, Exceeds FCC Specifications	Exceeds FCC specifications	-45 dBC	-45 dBC, Exceeds FCC Specifications
FCC Acceptance:	Type accepted under FCC Part 74	Type accepted under FCC Part 74	Under Parts 90 and 74	Type accepted under FCC Part 74	Type accepted under FCC Part 74	Under Parts 90 and 74
Receiver						
Type:	Dual Conversion Superhetrodyne, Synthesized, FM, 720 channels	Single Conversion Superhetrodyne, FM	Dual Conversion Superhetrodyne, FM	Two, Dual Conversion Superhetrodyne, Synthesized, FM, 712 channels/ Dual Conversion Superhetrodyne, Synthesized, FM, 720 channels/ Dual Conversion Superhetrodyne, Synthesized, FM, 720 channels	Single Conversion Superhetrodyne, FM	Dual Conversion Superhetrodyne, FM
RF Sensitivity:	<0.8 µV for 12 dB SINAD	<0.7 µV for 12 dB SINAD	Less than 0.5 µV for 12 dB SINAD	<0.8 µV for 12 dB SINAD/ <0.7 µV for 12 dB SINAD/ <0.7 µV for 12 dB SINAD	<0.7 µV for 12 dB SINAD	Less than 0.5 µV for 12 dB SINAD
Squelch Threshold:	20 dB SINAD (About 1.0 µV)	3.0 µV / 1.5 µV	20 dB Quieting 90 dB	20 dB SINAD (About 1.0 µV) 95 dB	3.0 µV / 1.5 µV 55 dB/63 dB	20 dB Quieting 90 dB
Signal-to-Noise Ratio:	95 dB	55 dB / 63 dB	90 dB	95 dB	55 dB/63 dB	90 dB
IF Selectivity:	3 dB at 230 KHz	3 dB at 230 KHz / 3 dB at 150 KHz (Ceramic Filter)	3 dB at 30 KHz (4 pole Monolithic Filters)	3 dB at 230 KHz	3 dB at 230 KHz / 3 dB at 150 KHz (Ceramic Filter)	3 dB at 30 KHz (Ceramic Filters)
Image Rejection:	70 dB or better	70 dB or better	65 dB or better	70 dB or better	70 dB or better	70 dB or better
Squelch Quieting:	95 dB	67 dB / 65 dB	90 dB	95 dB	67 dB / 65 dB	90 dB
RF Frequency Stability:	0.005%	Crystal Controlled, 0.005%	Crystal Controlled, 0.005%	0.005%	Crystal Controlled, 0.005%	Crystal Controlled, 0.005%
Distortion:	<1% at full deviation	<3.5% / <1.5% at Rated Output	Less than 1% at Rated Output	<1% at full deviation	<3.5% / <1% at Rated Output	Less than 1% at Rated Output
Local Headset Output:	40 mW output into 600 Ω (1% Distortion)	32 mW into 600 ohms	N/A	40 mW output into 600 Ω (1% Distortion)	32 mW into 600 ohms	32 mW into 600 ohms
FCC Acceptance:	Notification under FCC Part 15	Notification under FCC Part 15	Notification under FCC Part 15	Notification under FCC Part 15	Notification under FCC Part 15	Notification under FCC Part 15

Distributed by:

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TELEX COMMUNICATIONS, INC.

FRN 0008-6079-39

SUPPLEMENT TO

STA REQUEST

EXHIBIT A

Nuclear Power Plants Operating in the United States

Name	Location		Number of Units
	County	State	
Browns Ferry		Alabama	3 (2 operating)
Joseph M. Farley	Houston	Dothan, Alabama	2
Palo Verde	Maricopa	Wintersburg, Arizona	3
Arkansas Nuclear One	Pope	Arkansas	2
Diablo Canyon	San Luis Obispo	California	2
San Onofre	San Diego	San Clemente, California	3 (2 operating)
Millstone		Waterford, Connecticut	3 (2 operating)
Crystal River	Citrus	Florida	1
St. Lucie		Ft. Pierce, Florida	1
Turkey Point	Dade	Miami, Florida	2
Edwin I. Hatch		Baxley, Georgia	1
Vogtle	Burke	Augusta, Georgia	1
Braidwood	Will	Illinois	2
Byron	Ogle	Illinois	2
Clinton		Clinton, Illinois	1

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Name	Location		Number of Units
	County	State	
Dresden	Grundy	Morris, Illinois	2
LaSalle County	LaSalle	Illinois	2
Quad Cities		Davenport, Rock Island, Moline, East Moline, Illinois	2
Duane Arnold		Palo, Iowa	1
Wolf Creek		Burlington, Kansas	1
River Bend		West Feliciana Parish, Baton Rouge, Louisiana	1
Waterford		St. Charles Parish, Taft, Louisiana	1
Calvert Cliffs		Lusby, Maryland	2
Pilgrim	Plymouth	Plymouth, Massachusetts	1
Donald C. Cook	Berrion	Michigan	2
Enrico Fermi		Detroit, Michigan	1
Palisades		South Haven, Michigan	1
Monticello	Sherburne and Wright	Monticello, Minnesota	1
Prairie Island		Red Wing, Minnesota	2

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Grand Gulf	Claiborne	Vicksburg, Mississippi	1
Name	Location		Number of Units
	County	State	
Callaway	Callaway	Missouri	1
Cooper Station		Brownville, Nebraska	1
Fort Calhoun		Omaha, Nebraska	1
Seabrook		Portsmouth, New Hampshire	1
Hope Creek		Lower Alloways Creek Township, New Jersey	1
Oyster Creek		Forked River, New Jersey	1
Salem		Salem, New Jersey	2
Fitzpatrick		Oswego, New York	1
Indian Point	Westchester	Buchanan, New York	2
Nine Mile Point		Oswego, New York	2
Robert E. Ginna		Rochester, New York	1
Brunswick	Brunswick	North Carolina	2
McGuire		near Charlotte, North Carolina	2

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EXHIBIT A

Shearon-Harris	Wake	near Raleigh, North Carolina	1
Davis-Besse		Oak Harbor, Ohio	1
Perry	Lake	near Cleveland, Ohio	1
Name	Location		Number of Units
	County	State	
Beaver Valley Power Station		western Pennsylvania	2
Limerick	Montgomery	near Philadelphia, Pennsylvania	2
Peach Bottom		Pennsylvania	2
Susquehanna	Luzerne	near Allentown, Pennsylvania	2
Three Mile Island		near Harrisburg, Pennsylvania	1
Catawba		north-central South Carolina	1
Oconee		near Greenville, South Carolina	3
H.B. Robinson		near Hartsville, South Carolina	1
Virgil C. Summer	Fairfield	near Jenkinsville, South Carolina	1
Sequoyah		near Chattanooga, Tennessee	2

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STA REQUEST

EXHIBIT A

Watts Bar		between Chattanooga and Knoxville, Tennessee	1
Comanche Peak	Somervell	Texas	2
South Texas Project		near Houston, Texas	2
Name	Location		Number of Units
	County	State	
Vermont Yankee	Windham	Vernon, Vermont	1
North Anna	Louisa	Virginia	2
Surry	Surry	near Williamsburg, Virginia	2
Columbia	Benton	Washington	1
Kewaunee		Carlton, Wisconsin	1
Point Beach		near Two Rivers and Manitowoc, Wisconsin	2