Lucent Technologies
Bell Labs Innovations

Timco Engineering Inc.
FCC Authorized Telecommunications
Certification Body (TCB)

Lucent Technologies Inc.
67 Whippany Road
Whippany, NJ 07981

June 21, 2005

Sid Sanders - President
Timco Engineering Inc.
849 N.W. State Road 45
P.O. Box 370
Newberry, Florida 32669

Dear Mr. Sanders

In accordance with Parts 2 and 24 of the Commission's Rules and Regulations, we are submitting herewith, statements and supporting data to show compliance with the requirements of the Commission for Product Certification of the Lucent Technologies Corporation Personal Communication Services UMTS CDMA transceiver, henceforth **UCR-1900**, **FCC ID: AS5ONEBTS-14**. The **UCR-1900** is used in Lucent Technologies Corp **FLEXENT ® OneBTS** Land Station PCS systems using Code Division Multiple Access (CDMA) technology, for use in Domestic PCS Communication Services.

This application for the **UCR-1900** under **FCC ID: AS5ONEBTS-14,** is for operation in the domestic extended PCS band with a CDMA signal. The data summarized below is in the form presently used by the Commission's Radio Equipment List.

Manufacturer	**Lucent Technologies, Inc.**
Equipment Identification	**AS5ONEBTS-14**
Rules Part Number	**24 (E)**
Frequency Range	**1930-1990 MHz Complete PCS Band**
Output Power	**-24.8 to +5.2 dBm/carrier; (1-3 carriers) Varied By Software**
Frequency Tolerance	**+/- 0.05 ppm**
Emission Designator	**1M25F9W**

The **UCR-1900** is a redesign of the product previously certified under **FCC ID: AS5ONEBTS-04.** This redesign includes new signal sources and components for the frequency generating and stabilizing circuitry and per FCC rules must be refiled. The basic design of the new **UCR-1900/FCC ID: AS5ONEBTS-14** is identical to the design certified under **UCR-1900/FCC ID: AS5ONEBTS-04**. The **UCR-1900** under **FCC ID: AS5ONEBTS-14** is a transceiver designed to be operated and marketed with Lucent Technologies CDMA transmit equipment which was either Type Accepted or Product Certified in accordance with Parts 2 and 24 of the code. When utilized in normal PCS base station operation, the **UCR-1900** will be operated with a FCC Product Certified power amplifier. A post transmit suppression filter will be used when necessary to maintain performance within the parameters as previously filed with the FCC. The **UCR-1900** will undergo formal evaluation with every PCS amplifier with which it is marketed. The overall performance of the integrated equipment shall continue to be

compliant with FCC requirements. FCC Class II changes as specified in “The Code” will be used for radio changes in the future. FCC Class I permissive change evaluations will be processed for all of the integrated products. As per prior agreement with the FCC, degradations in performance shall be reported.

The **UCR-1900** is designed to transmit one, two, or three contiguous 1.25 MHz CDMA channels. The **UCR-1900**, at its output, is typically operated over the power range of -30 dBm to 0.0 dBm for each of the 1.23 MHz CDMA carriers in a single, dual, or three channel configuration. The total power is limited to +5.2 dBm per channel (+10 dBm total integrated power for 3 carriers) for each of the 1.25 MHz CDMA carriers in a single, dual, or three channel configuration and is the level for this application. The actual power level delivered by the **UCR-1900** to the transmit amplifier is under the software control of the Mobile Switching Center of the local PCS system. The output of this unit in normal base station use, is always subjected to additional signal amplification and post amplification filtering as required for spurious control prior to connection to the (J4) antenna connector. The software control only allows for adjustment in power necessary to provide the rated maximum of the co-configured transmitter

The evaluation of the "Spurious emissions at antenna terminals" (Sec. 2.1051) were made with a **kLAM/AS5ONEBTS-02 and a P2PAM/AS5ONEBTS-06** and their associated filters. The amplifiers were also used for the "Field strength of spurious radiated" (Sec. 2.1053) measurements. Wherever possible the test procedures defined in CFR 47 Part's 2(J) and 24(E) were followed. Because of the "state of the art" nature of this equipment some of the characteristics cannot be tested using the requirements in CFR 47, so for those characteristics the recommendations per **"Table 6.5.2-1 Base Station Test Model, Nominal**" from **3GPP2 C.S0010-0, December 1999,** Recommended Minimum Performance Standards for cdma2000 Spread Spectrum Base Stations was used to define the tests and evaluation criteria used in this application.

This application for **UCR-1900/FCC ID:AS5ONEBTS-14,** is for all Blocks of the PCS band. Since the application encompasses the single, dual and three carrier configurations it presents the required test data for each of those operational configurations.

The **UCR-1900/ AS5ONEBTS-14** is produced by Lucent Technologies Incorporated solely for incorporation into Lucent Technologies Inc. products.

Enclosed in this electronically transmitted online package is a copy of FCC Form 731 (Application for Equipment Authorization - Radio Frequency Devices) and the required exhibits. These exhibits contain the technical data, and the required statements and documents for Product Certification. The technical contact at Lucent Technologies, Bell Laboratories, will comply with any request for additional information should the need arise.

Sincerely,

R.J.Pillmeier
Technical Manager
Certification Test Group
Phone: 973-386-3837
email: rpillmeier@lucent.com

cc/FCC Coordinator

FCC Coordinator
Primary contact for adminstrative and technical requests.

Primary Administrative Contact
Lucent Technologies, Inc.
Room 4C-621
101 Crawfords Corner Rd
Holmdel, NJ 07733-3030 U.S.A.
Attention: Cynthia S. Donovan
Phone: (732) 949 2938
Email: csdonovan@lucent.com

Filing Engineer
W. Steve Majkowski NCE
Wireless FCC Compliance Group
Lucent Technologies, Inc.
Lab Phone: 973-386-2434
email: majkowski@lucent.com

TABLE OF CONTENTS

EXHIBITS TO BE KEPT CONFIDENTIAL

Exhibit 1: QUALIFICATION OF ENGINEERS

May 16, 2005

SECTION 2.911 (d) QUALIFICATION OF ENGINEERS

Walter Steven Majkowski is a Member of Technical Staff at Lucent Technologies Bell Laboratories. He holds a BSEE from New Jersey Institute of Technology and was trained in the FCC testing procedures. Mr Majkowski is the Lead engineer for the filing of CDMA Wireless Base station products at Lucent Technologies. Mr. Majkowski is a NARTE certified EMC engineer, Certificate number EMC-001859-NE, and has at least twenty five years of EMC design and testing experience. Mr. Majkowski is the primary filing engineer on this certification.

R.J.Pillmeier
Technical Manager
Wireless FCC Compliance Group

Exhibit 1 *continued*

SECTION 2.911 (d) CERTIFICATION OF TECHNICAL TEST DATA

I hereby certify that the technical test data are the results of tests performed or supervised by me.

Walter Steven Majkowski NCE
Member Technical Staff
Whippany Compliance Laboratory

Exhibit 2: Manufactures, FCC Identifier

SECTION 2.1033(c)(1)

Name of applicant indicating whether the applicant is the manufacturer of the equipment, a vendor other than the manufacturer (include the name of the manufacturer), a licensee or a prospective licensee.

RESPONSE:

APPLICANT: **Lucent Technologies, Inc.**
Room 4C-621
101 Crawfords Corner Rd
Holmdel, NJ 07733-3030 U.S.A.
Attention: Cynthia S. Donovan
Phone: (732) 949 2938
Email: csdonovan@lucent.com

Lucent Technologies, Incorporated will be the manufacturer of this product. The **AS5ONEBTS-14** will only be marketed under the Lucent Technologies Incorporated trademark.

SECTION 2.1033(c)(2)
Identification of equipment for which Product Certification is sought.

RESPONSE:
PCS UMTS CDMA Radio, Lucent Technologies part number BNJ27C, herewith identified as **UCR-1900** and filed under **FCC ID: AS5ONEBTS-14** is to be operated under Part 24 (E) of the FCC Rules in the **FLEXENT CDMA ONEBTS 4.0 PCS Modular Cell.**

Exhibit 3: Emission, Frequency Range, Power Range and Maximum Power

SECTION 2.1033(c)
Applications for equipment other than that operating under parts 15 and 18 of the rules shall be accompanied by a technical report containing the following information:

SECTION 2.1033(c) (4)
Type or types of emission.

RESPONSE:
The **UCR-1900, FCC ID: AS5ONEBTS-14,** is capable of providing and decoding the following type of emissions amplifying transmissions involving the following types of emissions:

1M25F9W (CDMA)

The **AS5ONEBTS-14** provides the modulation of the transmitted signal. The modulation system is fully described in **Exhibits 4, 5, 6** and **10** of this filing. Filters which are internal to the **FLEXENT CDMA ONEBTS 4.0 PCS Modular Cell** are also detailed in **Exhibits 4, 5, 6, 9** and **10.** This product is designed to be used with Lucent Technologies Corporation CDMA PCS transmitters. The performance of post amplification filters for these transmitters were consistently detailed in each specific transmitter application.

SECTION 2.1033(c) (5)
Frequency Range.

RESPONSE:
The Transmit Frequency Range of the **UCR-1900** is **1930 - 1990 MHz:**
i.e. The entire PCS band**, All blocks A, D, B, E, F and C**

SECTION 2.1033(c) (6)
Range of operating power values or specific operating power levels, and description of any means provided for variation of operating power.

RESPONSE:
The **UCR-1900** has a maximum power output at its terminals of 0.0033 Watts (5.2 dBm) for a single carrier, 0.0066 Watts (8.2 dBm) for two carriers (5.2 dBm per carrier), and a maximum power output of 0.010 Watts (+10.0 dBm) for three carriers (5.2 dBm per carrier). The steady state range of power adjustment at the output is 30 dB. The minimum power is therefore 30 dB below (-24.8 dBm) the 5.2 dBm maximum for a single carrier across the PCS down-link Band (**1930 - 1990** MHz). When operated with a Lucent Technologies transmit power amplifier, the overall integrated transmitter will maintain its rated output power with an accuracy of +2 / -4 dB. The power is under continuous software control.

Exhibit 3: *continued*

SECTION 2.1033(c) (7)
Maximum power rating as defined in the applicable part of the rules.

RESPONSE:
The **UCR-1900/AS5ONEBTS-14** has a maximum power output at its terminals of 0.0033 Watts (5.2 dBm) for a single carrier, 0.0066 Watts (8.2 dBm) for two carriers (5.2 dBm per carrier), and a maximum power output of 0.010 Watts (+10.0 dBm) for three carriers (5.2 dBm per carrier)..

Exhibit 4: Active Circuit Devices Drive Levels and Circuit description

SECTION 2.1033(c) (8)
The dc voltages applied to and dc currents into the several elements of the final radio frequency amplifying device for normal operation over the power range.

RESPONSE: Please see Exhibit 4 in the confidential section for the Active Device Drive Levels. Confidential status has been requested for this information.

SECTION 2.1033(c)(10)

A schematic diagram and a description of all circuitry and devices provided for determining and stabilizing frequency, for suppression of spurious radiation, for limiting modulation, and for limiting power.

RESPONSE: Please see Exhibit 4 in the confidential section for the description of circuitry and devices for the **UCR-1900/ AS5ONEBTS-14 and** Exhibits 8 and 9 for information on the circuitry used to determine and stabilize frequency, for suppression of spurious radiation and for limiting modulation.

Exhibit 5: Complete Circuit Diagrams

SECTION 2.1033(c) (10)

Complete circuit diagrams.
Please see: Exhibit 5 in the Confidential section.

RESPONSE: Attached in the confidential section are the schematic diagrams for the **UCR-1900/ AS5ONEBTS-14.** Confidential status has been requested for this information.

Exhibit 6: Instruction Book

SECTION 2.1033(c) (3)

A copy of the installation and operating instructions to be furnished the user. A draft copy of the instructions may be submitted if the actual document is not available. The actual document shall be furnished to the FCC when it becomes available.

RESPONSE: There is not a specific instruction book for the **UCR-1900/ AS5ONEBTS-14**.

The "**FLEXENT ® CDMA Cellular 850 and PCS CDMA Modular Cell**, Operation, Administration, and Maintenance" manual is included in the confidential section. Confidential status has been requested for these materials. The general description of the **UCR-1900** and the specific cabinet in which it is mounted is in Chapter 1 of this document.

Please see: Exhibit 6a in the Confidential section.

Exhibit 7: Tune up Proceedures

SECTION 2.1033(c) (9)

Tune-up procedure over the power range, or at specific operating power levels.

RESPONSE: Please see: Exhibit 7a in the Confidential section.

Exhibit 8: Circuitry for Determining Frequency

SECTION 2.1033(c) (10)

A schematic diagram and a description of all circuitry and devices provided for determining and stabilizing frequency, for suppression of spurious radiation, for limiting modulation, and for limiting power.

RESPONSE: Please see: Exhibit 8 in the Confidential section.

Exhibit 9: Circuitry for the Suppression of Spurious

SECTION 2.1033(c) (10)

A schematic diagram and a description of all circuitry and devices provided for determining and stabilizing frequency, for suppression of spurious radiation, for limiting modulation, and for limiting power.

RESPONSE: Please see: Exhibit 9 in the Confidential section.
A schematic diagram and a description of all circuitry and devices for suppression of spurious radiation are described in Exhibit 9 for which confidential status has been requested.

Exhibit 10: Description of Modulation System

SECTION 2.1033(c) (13)

For equipment employing digital modulation techniques, a detailed description of the modulation system to be used, including response characteristics of any filters provided, and a description of the modulating wavetrain, shall be submitted for the maximum rated conditions under which the equipment will be operated.

RESPONSE:
The UMTS CDMA Radio (PCS) (UCR) employs Code Division Multiple Access (CDMA) modulation techniques. The modulation descriptions are specified by IS95, IS97 and **3GPP2 C.S0010-0, December 1999,** Recommended Minimum Performance Standards for cdma2000 Spread Spectrum Base Stations. The CDMA Radio Frequency and digital board (BNJ27) circuits control the functions of UCR. Descriptions of these circuits are included in the Block diagrams and submittal of Schematics, for which confidential status has been requested.