MFA **M. Flom Associates, Inc. - Global Compliance Center**
3356 North San Marcos Place, Suite 107, Chandler, Arizona 85225-7176
www.mflom.com general@mflom.com (480) 926-3100, FAX: 926-3598

Transmitter Certification

of

FCC ID: RY9SKS900
Model: SKS-900

to

Federal Communications Commission

Rule Part(s) 24D, Confidentiality

Date of report: April 5, 2004

On the Behalf of the Applicant:

Space Data Corporation

At the Request of:

Space Data Corporation
460 S. Benson Lane, Suite 11-12
Chandler, AZ 85224

P.O. 20611

Attention of: Gerard J. Quenneville, Vice President Engineering
(480) 722-2100; FAX: (480) 403-0021
jerryq@spacedata.net
Bill McCullough

Supervised by: Morton Flom, P. Eng.

List of Exhibits

(FCC **Certification** (Transmitters) - Revised 9/28/98)

Applicant: Space Data Corporation

FCC ID: RY9SKS900

By Applicant:

1. Letter of Authorization		x
2. Confidentiality Request: 0.457 And 0.459		x
3. Identification Drawings, 2.1033(c)(11)		
_x_ Label		
_x_ Location of Label		
_x_ Compliance Statement		
_x_ Location of Compliance Statement		
4. Photographs, 2.1033(c)(12)		x
5. Documentation: 2.1033(c)		
(3)	User Manual	x
(9)	Tune Up Info	x
(10)	Schematic Diagram	x
(10)	Circuit Description	x
	Block Diagram	x
	Active Devices	x
6. MPE Report		x

By M.F.A. Inc.:

A. Testimonial & Statement of Certification

The Applicant has been cautioned as to the following:

15.21 **Information to the User**.

The users manual or instruction manual for an intentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

15.27(a) **Special Accessories**.

Equipment marketed to a consumer must be capable of complying with the necessary regulations in the configuration in which the equipment is marketed. Where special accessories, such as shielded cables and/or special connectors are required to enable an unintentional or intentional radiator to comply with the emission limits in this part, the equipment must be marketed with, i.e. shipped and sold with, those special accessories. However, in lieu of shipping or packaging the special accessories with the unintentional or intentional radiator, the responsible party may employ other methods of ensuring that the special accessories are provided to the consumer, without additional charge.

Information detailing any alternative method used to supply the special accessories for a grant of equipment authorization or retained in the verification records, as appropriate. The party responsible for the equipment, as detailed in § 2.909 of this chapter, shall ensure that these special accessories are provided with the equipment. The instruction manual for such devices shall include appropriate instructions on the first page of text concerned with the installation of the device that these special accessories must be used with the device. It is the responsibility of the user to use the needed special accessories supplied with the equipment.

Table of Contents

Required information per ISO/IEC Guide 25-1990, paragraph 13.2:

a) **Test Report**

b) Laboratory: M. Flom Associates, Inc.
(FCC: 31040/SIT) 3356 N. San Marcos Place, Suite 107
(Canada: IC 2044) Chandler, AZ 85225

c) Report Number: d0440002

d) Client: Space Data Corporation
460 S. Benson Lane, Suite 11-12
Chandler, AZ 85224

e) Identification: SKS-900
FCC ID: RY9SKS900

EUT Description: Narrow Band PCS

f) EUT Condition: Not required unless specified in individual tests.

g) Report Date: April 5, 2004
EUT Received: March 1, 2004

h, j, k): As indicated in individual tests.

i) Sampling method: No sampling procedure used.

l) Uncertainty: In accordance with MFA internal quality manual.

m) Supervised by:

Morton Flom, P. Eng.

n) Results: The results presented in this report relate only to the item tested.

o) Reproduction: This report must not be reproduced, except in full, without written permission from this laboratory.

List of General Information Required for Certification

In Accordance with FCC Rules and Regulations,
Volume II, Part 2 and to

24D, Confidentiality

Sub-part 2.1033

(c)(1): **Name and Address of Applicant**:

Space Data Corporation
460 S. Benson Lane, Suite 11-12
Chandler, AZ 85224

Manufacturer:

Applicant

(c)(2): **FCC ID**: RY9SKS900

Model Number: SKS-900

(c)(3): **Instruction Manual(s):**

Please see attached exhibits

(c)(4): **Type of Emission**: 10K0F1D

(c)(5): **Frequency Range, MHz**: 901 to 941

(c)(6): **Power Rating, Watts**: 2.0

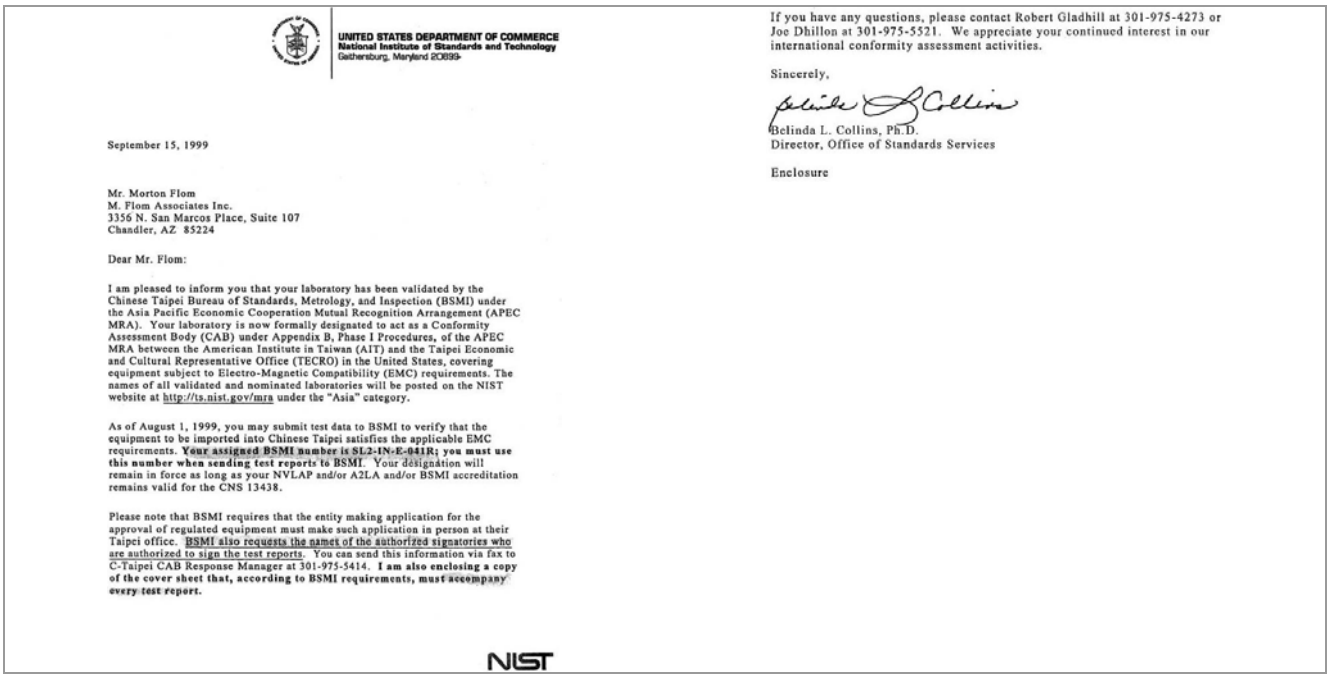
____ Switchable ____ Variable __x__ N/A

FCC Grant Note: BE - The output power is continuously variable from the value listed in this entry to 15%-20% of the value listed.

(c)(7): **Maximum Power Rating, Watts**: 190 W (per FCC MOO DA01-2132 dtd September 12, 2001)

DUT Results: Passes ___x___ Fails _____

NIST



UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899-

September 15, 1999

Mr. Morton Flom
M. Flom Associates Inc.
3356 N. San Marcos Place, Suite 107
Chandler, AZ 85224

Dear Mr. Flom:

I am pleased to inform you that your laboratory has been validated by the Chinese Taipei Bureau of Standards, Metrology, and Inspection (BSMI) under the Asia Pacific Economic Cooperation Mutual Recognition Arrangement (APEC MRA). Your laboratory is now formally designated to act as a Conformity Assessment Body (CAB) under Appendix B, Phase I Procedures, of the APEC MRA between the American Institute in Taiwan (AIT) and the Taipei Economic and Cultural Representative Office (TECRO) in the United States, covering equipment subject to Electro-Magnetic Compatibility (EMC) requirements. The names of all validated and nominated laboratories will be posted on the NIST website at http://ts.nist.gov/mra under the "Asia" category.

As of August 1, 1999, you may submit test data to BSMI to verify that the equipment to be imported into Chinese Taipei satisfies the applicable EMC requirements. **Your assigned BSMI number is SL2-IN-E-041R; you must use this number when sending test reports to BSMI.** Your designation will remain in force as long as your NVLAP and/or A2LA and/or BSMI accreditation remains valid for the CNS 13438.

Please note that BSMI requires that the entity making application for the approval of regulated equipment must make such application in person at their Taipei office. BSMI also requests the names of the authorized signatories who are authorized to sign the test reports. You can send this information via fax to C-Taipei CAB Response Manager at 301-975-5414. **I am also enclosing a copy of the cover sheet that, according to BSMI requirements, must accompany every test report.**

If you have any questions, please contact Robert Gladhill at 301-975-4273 or Joe Dhillon at 301-975-5521. We appreciate your continued interest in our international conformity assessment activities.

Sincerely,

Belinda L. Collins, Ph.D.
Director, Office of Standards Services

Enclosure

NIST

Page Number 4 of 28.

Subpart 2.1033 (continued)
(c)(8): Voltages & currents in all elements in final RF stage, including final transistor or solid-state device:

Collector Current, A	=	per manual
Collector Voltage, Vdc	=	per manual
Supply Voltage, Vdc	=	24 vdc

(c)(9): **Tune-Up Procedure**:

Please see attached exhibits

(c)(10): **Circuit Diagram/Circuit Description**:
Including description of circuitry & devices provided for determining and stabilizing frequency, for suppression of spurious radiation, for limiting modulation and limiting power.

Please see attached exhibits

(c)(11): **Label Information**:

Please see attached exhibits

(c)(12): **Photographs**:

Please see attached exhibits

(c)(13): **Digital Modulation Description**:

___ Attached Exhibits
_x_ N/A

(c)(14): **Test and Measurement Data**:

Follows

Page Number 5 of 28.

Sub-part 2.1033(c)(14): **Test and Measurement Data**

All tests and measurement data shown were performed in accordance with FCC Rules and Regulations, Volume II; Part 2, Sub-part J, Sections 2.947, 2.1033(c), 2.1041, 2.1046, 2.1047, 2.1079, 2.1051, 2.1053, 2.1055, 2.1057 and the following individual Parts:

_____ 21 – Domestic Public Fixed Radio Services
_____ 22 – Public Mobile Services
_____ 22 Subpart H - Cellular Radiotelephone Service
_____ 22.901(d) - Alternative technologies and auxiliary services
_____ 23 – International Fixed Public Radiocommunication services
_x_ 24 – Personal Communications Services
_____ 74 Subpart H - Low Power Auxiliary Stations
_____ 80 – Stations in the Maritime Services
_____ 80 Subpart E - General Technical Standards
_____ 80 Subpart F - Equipment Authorization for Compulsory Ships
_____ 80 Subpart K - Private Coast Stations and Marine Utility Stations
_____ 80 Subpart S - Compulsory Radiotelephone Installations for Small Passenger Boats
_____ 80 Subpart T - Radiotelephone Installation Required for Vessels on the Great Lakes
_____ 80 Subpart U - Radiotelephone Installations Required by the Bridge-to-Bridge Act
_____ 80 Subpart V - Emergency Position Indicating Radio Beacons (EPIRB'S)
_____ 80 Subpart W - Global Maritime Distress and Safety System (GMDSS)
_____ 80 Subpart X - Voluntary Radio Installations
_____ 87 – Aviation Services
_____ 90 – Private Land Mobile Radio Services
_____ 94 – Private Operational-Fixed Microwave Service
_____ 95 Subpart A - General Mobile Radio Service (GMRS)
_____ 95 Subpart C - Radio Control (R/C) Radio Service
_____ 95 Subpart D - Citizens Band (CB) Radio Service
_____ 95 Subpart E - Family Radio Service
_____ 95 Subpart F - Interactive Video and Data Service (IVDS)
_____ 97 - Amateur Radio Service
_____ 101 – Fixed Microwave Services

Standard Test Conditions
and
Engineering Practices

Except as noted herein, the following conditions and procedures were observed during the testing:

In accordance with ANSI C63.4-1992/2000 Draft, section 6.1.9, and unless otherwise indicated in the specific measurement results, the ambient temperature of the actual EUT was maintained within the range of 10° to 40°C (50° to 104 °F) unless the particular equipment requirements specify testing over a different temperature range. Also, unless otherwise indicated, the humidity levels were in the range of 10% to 90% relative humidity.

Prior to testing, the EUT was tuned up in accordance with the manufacturer's alignment procedures. All external gain controls were maintained at the position of maximum and/or optimum gain throughout the testing.

Measurement results, unless otherwise noted, are worst-case measurements.

Page Number 7 of 28.

Name of Test: Carrier Output Power (Conducted)

Specification: 47 CFR 2.1046(a)

Guide: ANSI/TIA/EIA-603-1992, Paragraph 2.2.1

Test Equipment: As per attached page

Measurement Procedure

1. The EUT was connected to a resistive coaxial attenuator of normal load impedance, and the unmodulated output power was measured by means of an RF Power Meter.

2. Measurement accuracy is ±3%.

Measurement Results
(Worst case)

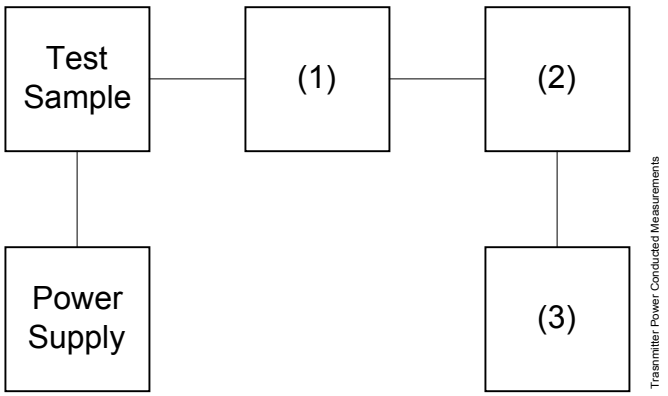
Frequency of Carrier, MHz = 940.3675
Ambient Temperature = 23°C ± 3°C

Power Setting	RF Power, Watts
High	2.0

Performed by: David E. Lee, Lab Manager

Transmitter Power Conducted Measurements

Test A. RF Power Output
Test B. Frequency Stability



	Asset	Description	s/n
(1)	**Coaxial Attenuator**		
X	i00231/2	PASTERNACK PE7021-30 (30 dB)	231 or 232
	i00122/3	NARDA 766 (10 dB)	7802 or 7802A
(2)	**Power Meters**		
X	i00020	HP 8901A Power Mode	2105A01087
(3)	**Frequency Counter**		
X	i00020	HP 8901A Frequency Mode	2105A01087

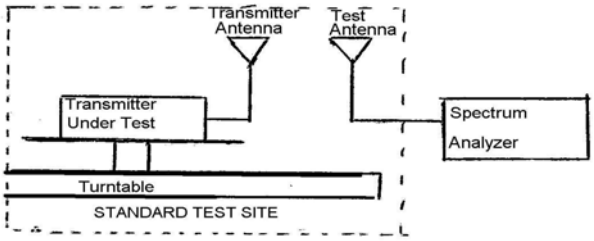
Page Number 9 of 28.

Name of Test: ERP Carrier Power (Radiated)

Specification: TIA/EIA 603A (Substitution Method)

Definition: The average radiated power of a licensed device is the equivalent power required, when delivered to a half-wave dipole or horn antenna, to produce at a distant point the same average received power as produced by the licensed device.

Method of Measurement:
a) Connect the equipment as illustrated. Place the transmitter to be tested on the turntable in the standard test site.



b) Raise and lower the test antenna from 1m to 6 m with the transmitter facing the antenna and record the highest received signal in dB as LVL.

c) Repeat step b) for seven additional readings at 45° interval positions of the turntable.

d) Replace the transmitter under test with a half-wave or horn vertically polarized antenna. The center of the antenna should be at the same location as the transmitter under test. Connect the antenna to a signal generator with a known output power and record the path loss in dB or LOSS.

e) Calculate the average radiated output power from the readings in step c) and d) by the following:

average radiated power = $10 \log_{10} \Sigma\, 10(LVL - LOSS)/10$ (dBm)

Results attached.

Results for Whip Antenna
(Vertical Antenna pointing down)

	940.3675MHz 3 Meter, dBuV/m	940.3675MHz CF, dB	940.3675MHz LVL, dbm	Path Loss, db
0°	98.71	35.68	37.00	
45°	98.73	35.68	37.00	
90°	99.81	35.68	38.10	
135°	99.29	35.68	37.60	-2.10
180°	98.87	35.68	37.20	
225°	98.10	35.68	36.40	
270°	98.92	35.68	37.20	
315°	100.02	35.68	38.30	

	940.3675MHz
Av. Radiated Power:	35.25 dbm

Results for Hemispherical Antenna
(Peak towards Receive Antenna)

	940.3675MHz 3 Meter, dBuV/m	940.3675MHz CF, dB	940.3675MHz LVL, dbm	Path Loss, db
On Axis (0°)	101.60	35.68	39.90	
Tilt Up (45°)	100.06	35.68	38.40	
Tilt Down (45°)	98.61	35.68	36.90	-2.10
Tilt Left (45°)	101.06	35.68	39.40	
Tilt Right (45°	98.40	35.68	36.70	

	940.3675MHz
Av. Radiated Power:	36.16 dbm

Page Number 11 of 28.

Name of Test: Field Strength of Spurious Radiation

Specification: 47 CFR 2.1053(a)

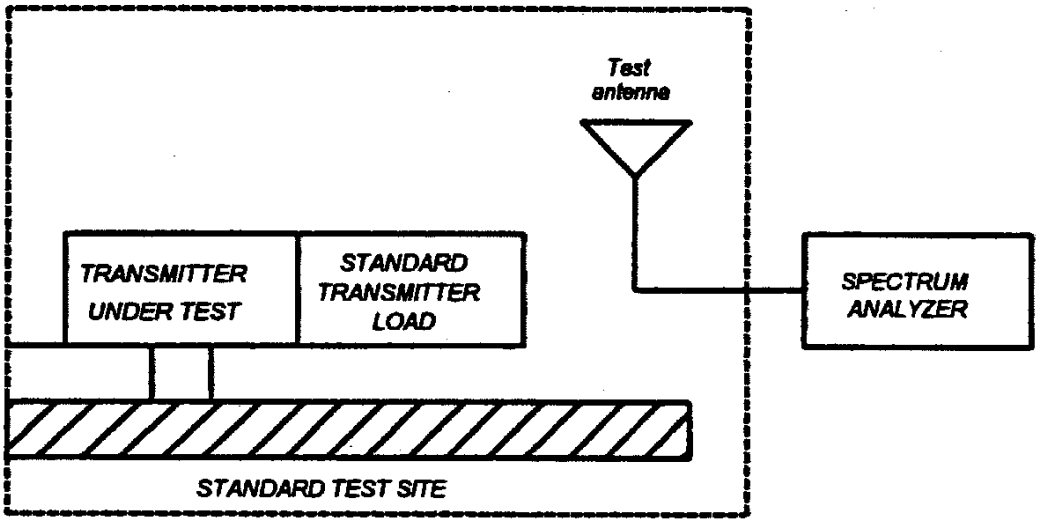
Guide: ANSI/TIA/EIA-603-1992/2001, Paragraph 1.2.12 and Table 16, 47 CFR 22.917

Measurement Procedure

Definition: Radiated spurious emissions are emissions from the equipment when transmitting into a non-radiating load on a frequency or frequencies, which are outside an occupied band, sufficient to ensure transmission of information of required quality for the class of communications desired.

Method of Measurement

A) Connect the equipment as illustrated
B) Adjust the spectrum analyzer for the following settings:
   1) Resolution Bandwidth 100 kHz (<1 GHZ), 1 MHZ (> 1GHz).
   2) Video Bandwidth ≥ 3 times Resolution Bandwidth, or 30 kHz (22.917)
   3) Sweep Speed ≤2000 Hz/second
   4) Detector Mode = Mean or Average Power
C) Place the transmitter to be tested on the turntable in the standard test site. The transmitter is transmitting into a non-radiating load, which is placed on the turntable. The RF cable to this load should be of minimum length.

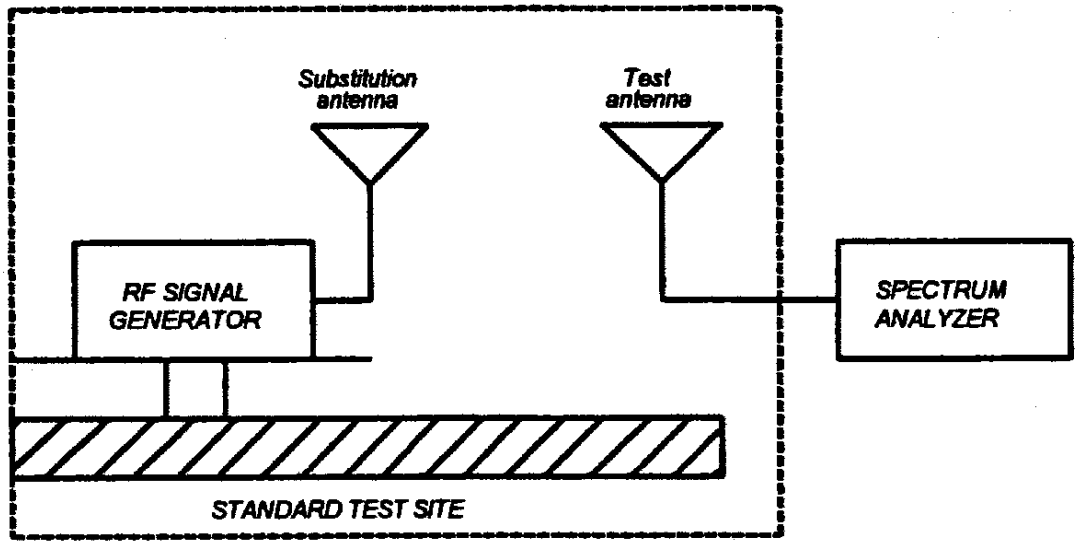


Name of Test: Field Strength of Spurious Radiation (Cont.)

D) For each spurious measurement the test antenna should be adjusted to the correct length for the frequency involved. This length may be determined from a calibration ruler supplied with the equipment. Measurements shall be made from the lowest radio frequency generated in the equipment to the tenth harmonic of the carrier, except for the region close to the carrier equal to ± the test bandwidth (see section 1.3.4.4).

E) For each spurious frequency, raise and lower the test antenna from 1 m to 4 m to obtain a maximum reading on the spectrum analyzer with the test antenna at horizontal polarity. Repeat this procedure to obtain the highest possible reading. Record this maximum reading.

F) Repeat step E) for each spurious frequency with the test antenna polarized vertically.



G) Reconnect the equipment as illustrated.

H) Keep the spectrum analyzer adjusted as in step B).

I) Remove the transmitter and replace it with a substitution antenna (the antenna should be half-wavelength for each frequency involved). The center of the substitution antenna should be approximately at the same location as the center of the transmitter. At lower frequencies, where the substitution antenna is very long, this will be impossible to achieve when the antenna is polarized vertically. In such case the lower end of the antenna should be 0.3 m above the ground.

Name of Test: Field Strength of Spurious Radiation (Cont.)

J) Feed the substitution antenna at the transmitter end with a signal generator connected to the antenna by means of a non-radiating cable. With the antennas at both ends horizontally polarized and with the signal generator tuned to a particular spurious frequency, raise and lower the test antenna to obtain a maximum reading at the spectrum analyzer. Adjust the level of the signal generator output until the previously recorded maximum reading for this set of conditions is obtained. This should be done carefully repeating the adjustment of the test antenna and generator output.

K) Repeat step J) with both antennas vertically polarized for each spurious frequency.

L) Calculate power in dBm into a reference ideal half-wave dipole antenna by reducing the readings obtained in steps J) and K) by the power loss in the cable between the generator and the antenna and further corrected for the gain of the substitution antenna used relative to an ideal half-wave dipole antenna.

M) The levels recorded in step L) are absolute levels of radiated spurious emissions in dBm. The radiated spurious emissions in dB can be calculated by the following:

Radiated spurious emissions dB =
$10\log_{10}$(TX power in watts/0.001) – the levels in step l)

NOTE: It is permissible that other antennas provided can be referenced to a dipole.

Test Equipment:

	Asset	Description	s/n	Cycle (Per ANSI C63.4-1992/2000 Draft, 10.1.4)	Last Cal
Transducer					
	i00088	EMCO 3109-B 25MHz-300MHz	2336	12 mo.	Sep-03
X	i00089	Aprel 2001 200MHz-1GHz	001500	12 mo.	Sep-03
X	i00103	EMCO 3115 1GHz-18GHz	9208-3925	12 mo.	Jan-03
Amplifier					
X	i00028	HP 8449A	2749A00121	12 mo.	May-03
Spectrum Analyzer					
X	i00029	HP 8563E	3213A00104	12 mo.	May-03
X	i00033	HP 85462A	3625A00357	12 mo.	Aug-03
Substitution Generator					
X	i00067	HP 8920A Communication TS	3345U01242	12 mo.	Oct-03
	i00207	HP 8753D Network Analyzer	3410A08514	12 mo.	Jul-03

Microphone, Antenna Port, and Cabling

Microphone _____ Cable Length _____ Meters
Antenna Port Terminated _____ Load _____ Antenna Gain _____
All Ports Terminated by Load _____ Peripheral _____

Name of Test: Field Strength of Spurious Radiation

g0430057: 2004-Mar-23 Tue 09:04:00
STATE: 2:High Power Ambient Temperature: 23°C ± 3°C

Frequency Tuned, MHz	Frequency Emission, MHz	ERP, dBm	ERP, dBc
940.367500	1880.735000	-42.20	≤ -86.9
940.367500	2821.102500	-37.00	≤ -86.9
940.367500	3761.470000	-44.70	≤ -86.9
940.367500	4701.837500	-45.90	≤ -86.9
940.367500	5642.205000	-47.00	≤ -86.9
940.367500	6582.552500	-26.30	≤ -86.9
940.367500	7522.920000	-43.20	≤ -86.9
940.367500	8463.287500	-39.10	≤ -86.9
940.367500	9403.655000	-46.10	≤ -86.9

Performed by: David E. Lee, Lab Manager

Name of Test: Emission Masks (Occupied Bandwidth)

Specification: 47 CFR 2.1049(c)(1)

Guide: ANSI/TIA/EIA-603-1992, Paragraph 2.2.11

Test Equipment: As per previous page

Measurement Procedure

1. The EUT and test equipment were set up as shown on the following page, with the Spectrum Analyzer connected.

2. For EUTs supporting audio modulation, the audio signal generator was adjusted to the frequency of maximum response and with output level set for ±2.5/±1.25 kHz deviation (or 50% modulation). With level constant, the signal level was increased 16 dB.

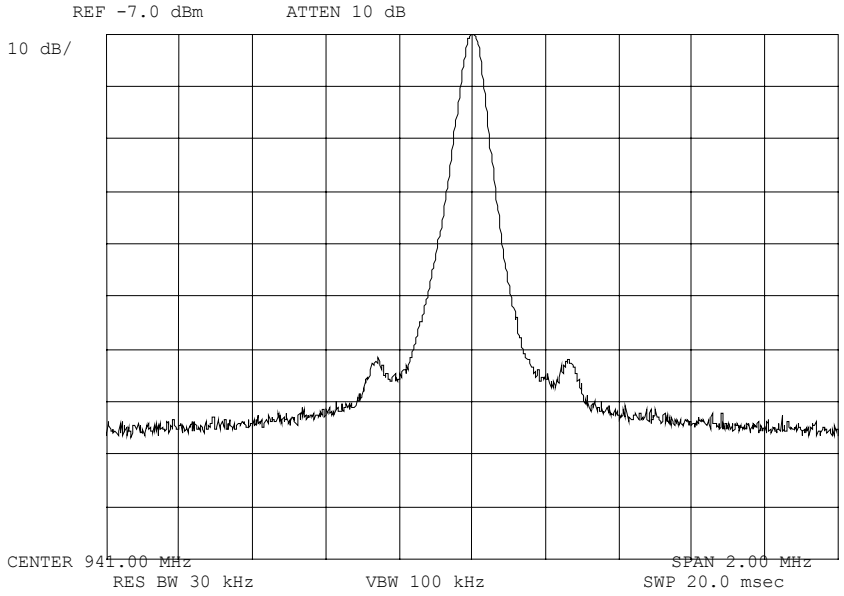
3. For EUTs supporting digital modulation, the digital modulation mode was operated to its maximum extent.

4. The Occupied Bandwidth was measured with the Spectrum Analyzer controls set as shown on the test results.

5. Measurement Results: Attached

Page Number 16 of 28.

Name of Test: Emission Masks (Occupied Bandwidth)
g0430050: 2004-Mar-22 Mon 10:24:00
State: 2:High Power Ambient Temperature: 23°C ± 3°C

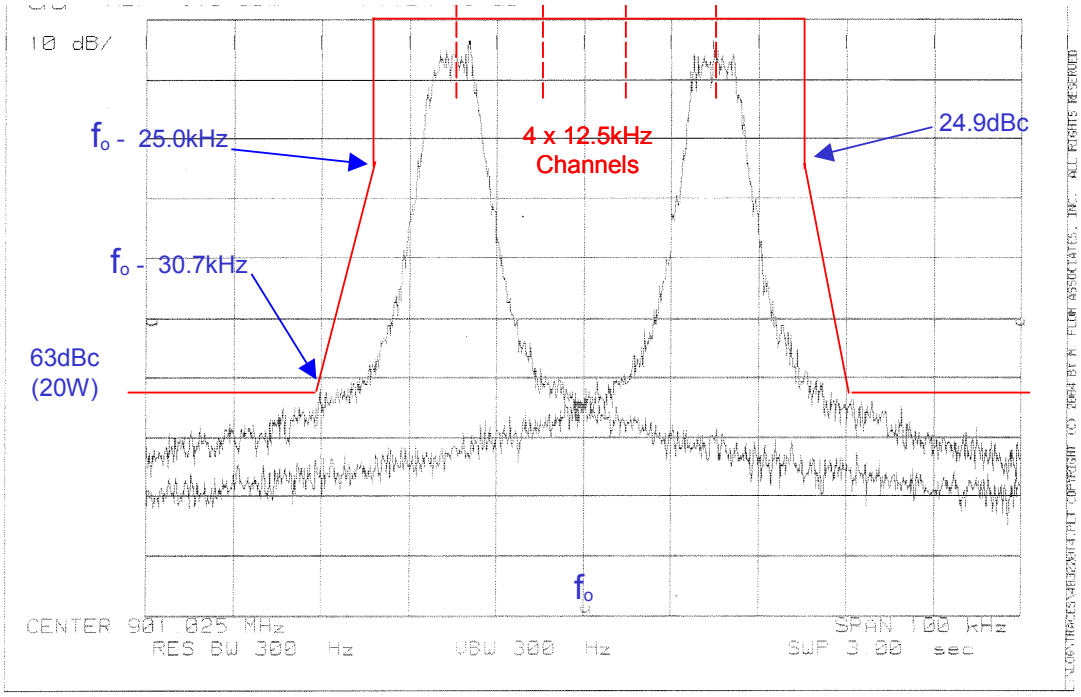


Power: HIGH
Modulation: 6400 4FSK GAUSS
WIDE BAND NOISE

Performed by: David E. Lee, Lab Manager

Page Number 17 of 28.

Name of Test: Emission Masks (Occupied Bandwidth)
g0430047: 2004-Mar-22 Mon 10:11:00
State: 2:High Power Ambient Temperature: 23°C ± 3°C



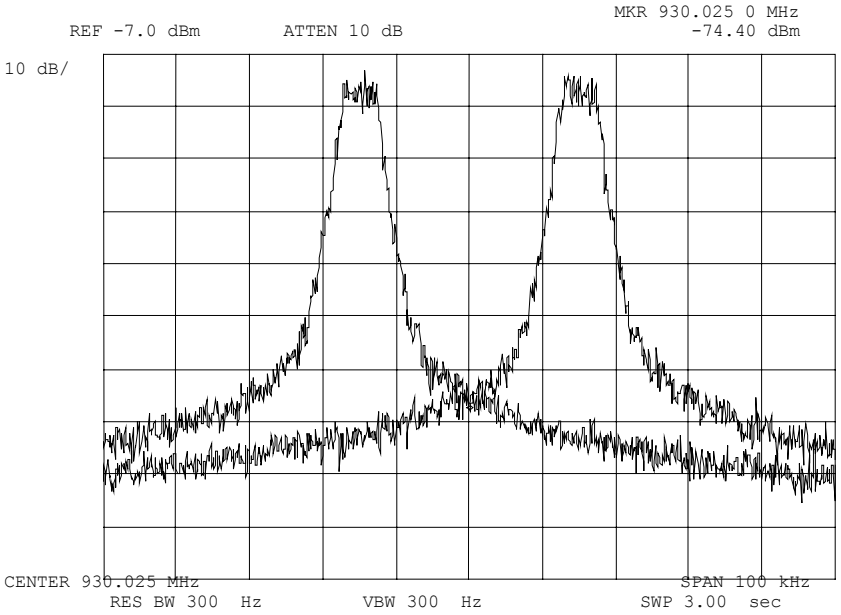
Power: HIGH
Modulation: 6400 4FSK GAUSSIAN FILTER

Proposed channel plan uses one of 4 carriers for each 50kHz channel allocation. Sky Sites in different locations may use channels in the same 50kHz allocation without interference to other Part 24D users or each other.

BOTH CHANNELS OF A CHANNEL ALLOCATION
(Example of Mask for 50kHz Channels with 2W + 10dBi antenna gain)

Performed by: David E. Lee, Lab Manager

Name of Test: Emission Masks (Occupied Bandwidth)
g0430044: 2004-Mar-22 Mon 09:34:00
State: 2:High Power Ambient Temperature: 23°C ± 3°C

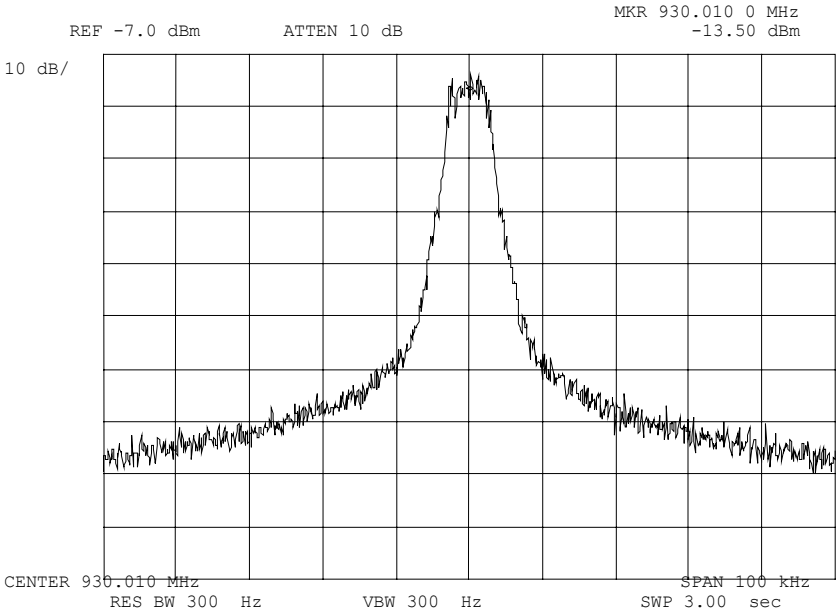


Power: HIGH
Modulation: 6400 4FSK GAUSSIAN FILTER
FREQUENCIES 1 & 4 OF LOWEST
930MHz CHANNEL ALLOCATION

Performed by: David E. Lee, Lab Manager

Page Number 19 of 28.

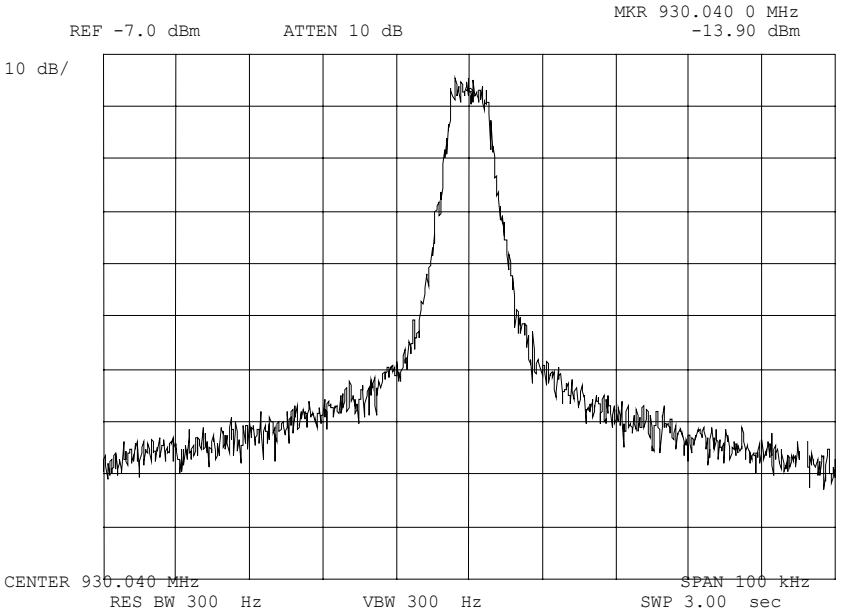
Name of Test: Emission Masks (Occupied Bandwidth)
g0430041: 2004-Mar-22 Mon 09:27:00
State: 2:High Power Ambient Temperature: 23°C ± 3°C



Power: HIGH
Modulation: 6400 4FSK GAUSS
FREQUENCY 1 OF LOWEST 930MHz
CHANNEL ALLOCATION

Performed by: David E. Lee, Lab Manager

Name of Test: Emission Masks (Occupied Bandwidth)
g0430043: 2004-Mar-22 Mon 09:30:00
State: 2:High Power Ambient Temperature: 23°C ± 3°C

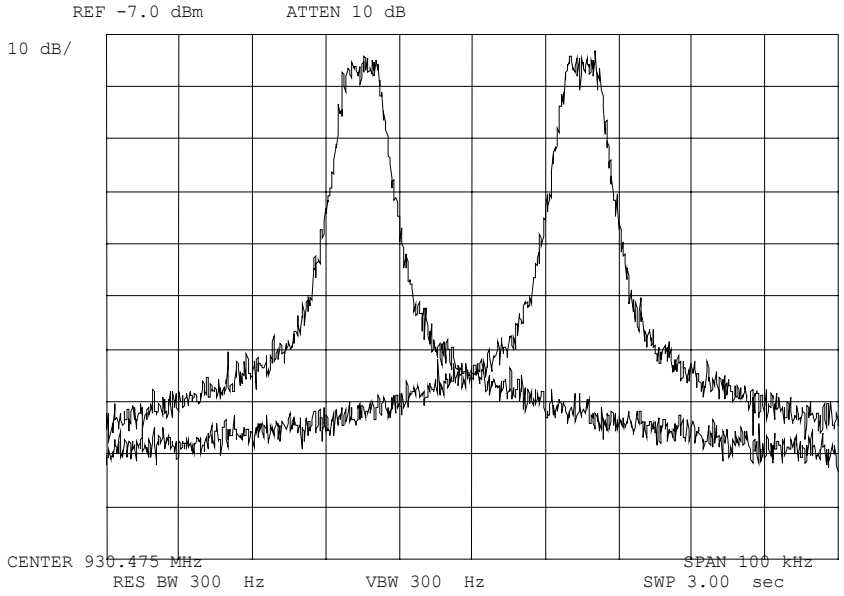


Power: HIGH
Modulation: 6400 4FSK GAUSSIAN FILTER
FREQUENCY 4 OF LOWEST 930MHz
CHANNEL ALLOCATION

Performed by: David E. Lee, Lab Manager

Page Number 21 of 28.

Name of Test: Emission Masks (Occupied Bandwidth)
g0430045: 2004-Mar-22 Mon 09:53:00
State: 2:High Power Ambient Temperature: 23°C ± 3°C

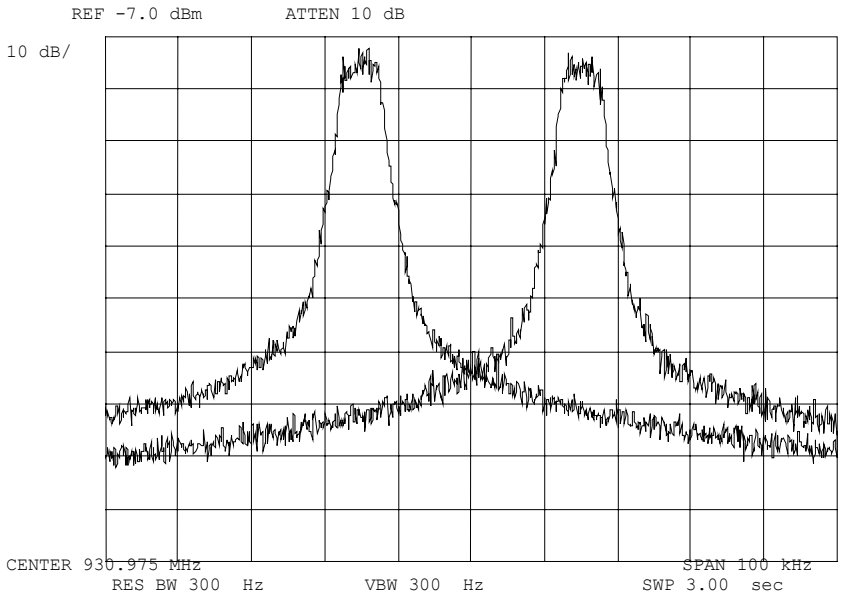


Power: HIGH
Modulation: 6400 4FSK GAUSSIAN FILTER
FREQUENCIES 1 & 4 OF MIDDLE
930MHz CHANNEL ALLOCATION

Performed by: David E. Lee, Lab Manager

Page Number 22 of 28.

Name of Test: Emission Masks (Occupied Bandwidth)
g0430046: 2004-Mar-22 Mon 10:02:00
State: 2:High Power Ambient Temperature: 23°C ± 3°C



Power: HIGH
Modulation: 6400 4FSK GAUSSIAN FILTER
FREQUENCIES 1 & 4 OF HIGHEST
930MHz CHANNEL ALLOCATION

Performed by: David E. Lee, Lab Manager

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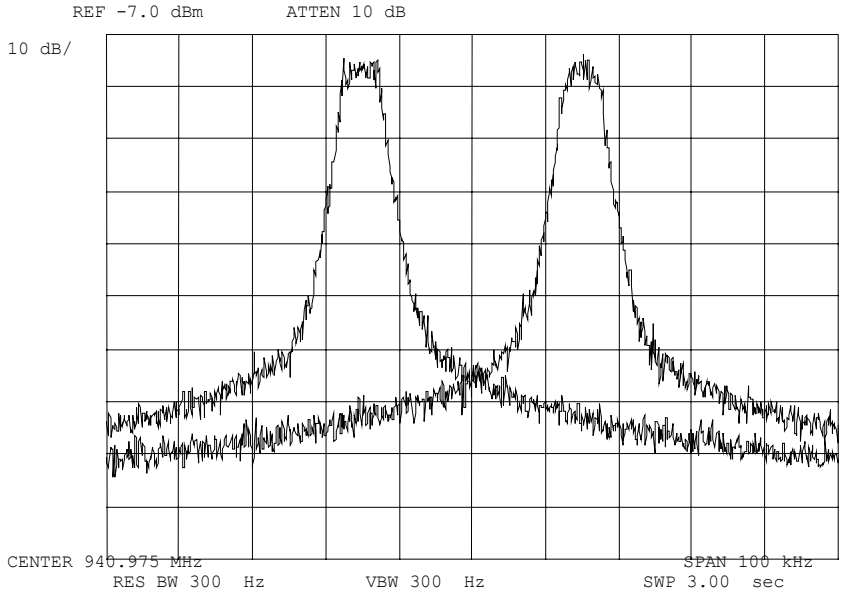
Name of Test: Emission Masks (Occupied Bandwidth)
g0430049: 2004-Mar-22 Mon 10:17:00
State: 2:High Power Ambient Temperature: 23°C ± 3°C



Power: HIGH
Modulation: 6400 4FSK GAUSSIAN FILTER
FREQUENCIES 1 & 2 OF 940MHz
CHANNEL ALLOCATION

Performed by: David E. Lee, Lab Manager

Name of Test: Frequency Stability (Temperature Variation)

Specification: 47 CFR 2.1055(a)(1)

Guide: ANSI/TIA/EIA-603-1992, Paragraph 2.2.2

Test Conditions: As Indicated

Test Equipment: As per previous page

Measurement Procedure

1. The EUT and test equipment were set up as shown on the following page.

2. With all power removed, the temperature was decreased to -30°C and permitted to stabilize for three hours. Power was applied and the maximum change in frequency was noted within one minute.

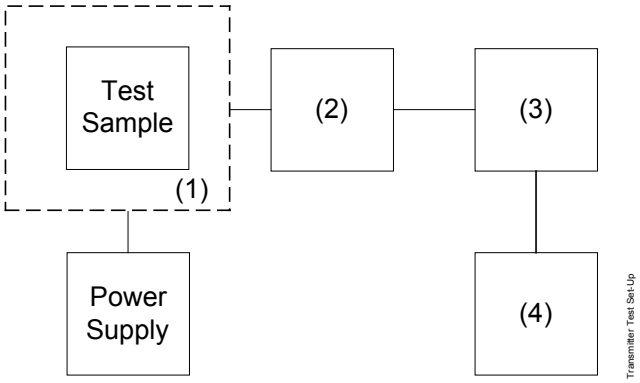
3. With power OFF, the temperature was raised in 10°C steps. The sample was permitted to stabilize at each step for at least one-half hour. Power was applied and the maximum frequency change was noted within one minute.

4. The temperature tests were performed for the worst case.

5. Measurement Results: Attached

Transmitter Test Set-Up

Frequency Stability: Temperature Variation
Frequency Stability: Voltage Variation



	Asset	Description	s/n
(1) **Temperature, Humidity, Vibration**			
X	i00027	Tenney Temp. Chamber	9083-765-234
(2) **Coaxial Attenuator**			
X	i00231/2	PASTERNACK PE7021-30 (30 dB)	231 or 232
	i00122/3	NARDA 766 (10 dB)	7802 or 7802A
(3) **RF Power**			
X	i00067	HP 8920A Communications TS	3345U01242
(4) **Frequency Counter**			
X	i00067	HP 8920A Communications TS	3345U01242

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Name of Test: Frequency Stability (Temperature Variation)

Ambient Temperature: 23°C ± 3°C

Temperature, °C	Frequency	Offset (Hz)	Offset (ppm)	Notes
-30	940.367450	50	0.053	
-20	940.367460	40	0.043	
-10	940.367471	29	0.031	
0	940.367457	43	0.046	
10	940.367475	25	0.027	
20	940.367497	3	0.003	
25	940.367474	26	0.028	Ambient
30	940.367461	39	0.041	
40	940.367478	22	0.023	
50	940.367465	35	0.037	

Performed by: David E. Lee, Lab Manager

Name of Test: Frequency Stability (Voltage Variation)

Specification: 47 CFR 2.1055(d)(1)

Guide: ANSI/TIA/EIA-603-1992, Paragraph 2.2.2

Test Equipment: As per previous page

Measurement Procedure

1. The EUT was placed in a temperature chamber at 25±5°C and connected as for "Frequency Stability - Temperature Variation" test.

2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.

3. The variation in frequency was measured for the worst case.

Results: Frequency Stability (Voltage Variation)

State: Ambient Temperature: 23°C ± 3°C

% of STV	Voltage	Frequency, MHz
100%	24.0	940.367474
85%	20.4	940.367474
BEP	12.2	940.367474

Performed by: David E. Lee, Lab Manager

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Name of Test: Necessary Bandwidth and Emission Bandwidth

Specification: 47 CFR 2.202(g)

Modulation = 11K0F3E

Necessary Bandwidth Calculation:

Maximum Modulation (M), kHz		2.5
Maximum Deviation (D), kHz	=	2.5
Constant Factor (K)	=	1
Necessary Bandwidth (B_N), kHz	=	(2xM)+(2xDxK)
	=	10.0

Performed by: David E. Lee, Lab Manager

END OF TEST REPORT

Testimonial
and
Statement of Certification

This is to Certify:

1. **That** the application was prepared either by, or under the direct supervision of, the undersigned.

2. **That** the technical data supplied with the application was taken under my direction and supervision.

3. **That** the data was obtained on representative units, randomly selected.

4. **That**, to the best of my knowledge and belief, the facts set forth in the application and accompanying technical data are true and correct.

Certifying Engineer: Morton Flom, P. Eng.