

VAC = 138 VAC, 60 Hz

Decoder Data Channel Test

STATION KAAA\_AM TRANSMIT LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:

UNITED STATES

AT 1:27 PM

ON FEB 15, 2013

EFFECTIVE

UNTIL 1:42 PM.

MESSAGE FROM KAAA\_AM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND TRANSMITTED

AT 13:28

ON FEB 15, 2013

BY KAAA\_AM.

EAS PROTOCOL TEXT:

ZCZC-PEP-EAN-000000+0015-0462127-KAAA\_AM -

PRINTED ON FRIDAY FEBRUARY 15, 2013 AT 13:29

130

## 5.2 Encoder/Decoder Operating Temperature and Humidity Verification

### 5.2.1 Test Objective

The objective of this test is to verify that both the encoder and decoder meet operating temperature and humidity requirements:

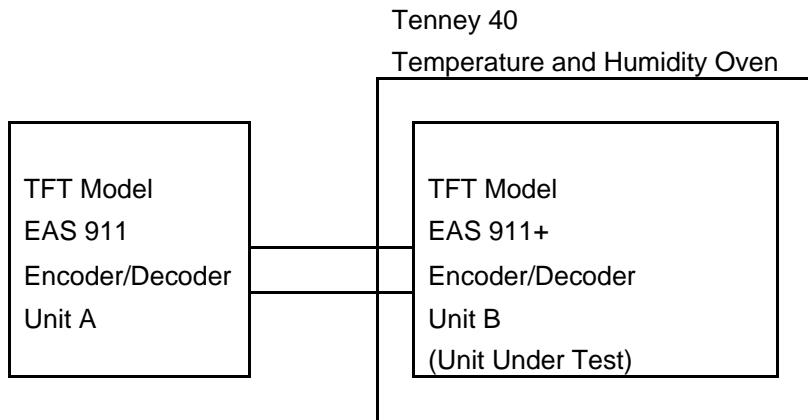
#### §11.32(b)

*Operating Temperature and Humidity. Encoders shall have the ability to operate with the above specifications within an ambient temperature range of 0 to +50 degrees C and a range of relative humidity of up to 95%.*

#### §11.33(b)

*Decoders shall be capable of operation within the tolerances specified in this section as well as those in§§ 11.32(b), (c), and (d).*

### 5.1.2 Test Block Diagram



### 5.1.3 Test Methodology

The test message ZCZC-EAN-EAN-000000+0015-2491518-WAAA/FM - is sent through from the encoder to decoder through audio channel 1. Successful decode is verified at 0 and 50 degrees C. Each test temperature is stabilized for 1 hour prior to running message transfer. Humidity was increased to 95% during 50 degree C test.

The test message ZCZC-EAN-EAN-000000+0015-2491518-WAAA/FM- is sent through from the encoder to decoder through the standard protocol data channel. Successful decode is verified at 0 and 50 degrees C. Each test temperature is stabilized for 1 hour prior to running message transfer. Humidity was increased to 95% during 50 degree C test.

Note: The purpose of the temperature and Humidity tests are to verify the Unit Under Test can actually operate normally under the test conditions. Although the originator code of EAN was used for the tests, it clearly demonstrated the 911+ can encode and decode properly. The use of another originator code would not affect the results of the temperature and humidity tests. Therefore we used the original data as tested.

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Temperature and Humidity oven  
Test set up



Temperature = 0°C  
Relative Humidity = 98%



Temperature = 50.3°C  
Relative Humidity = 95%



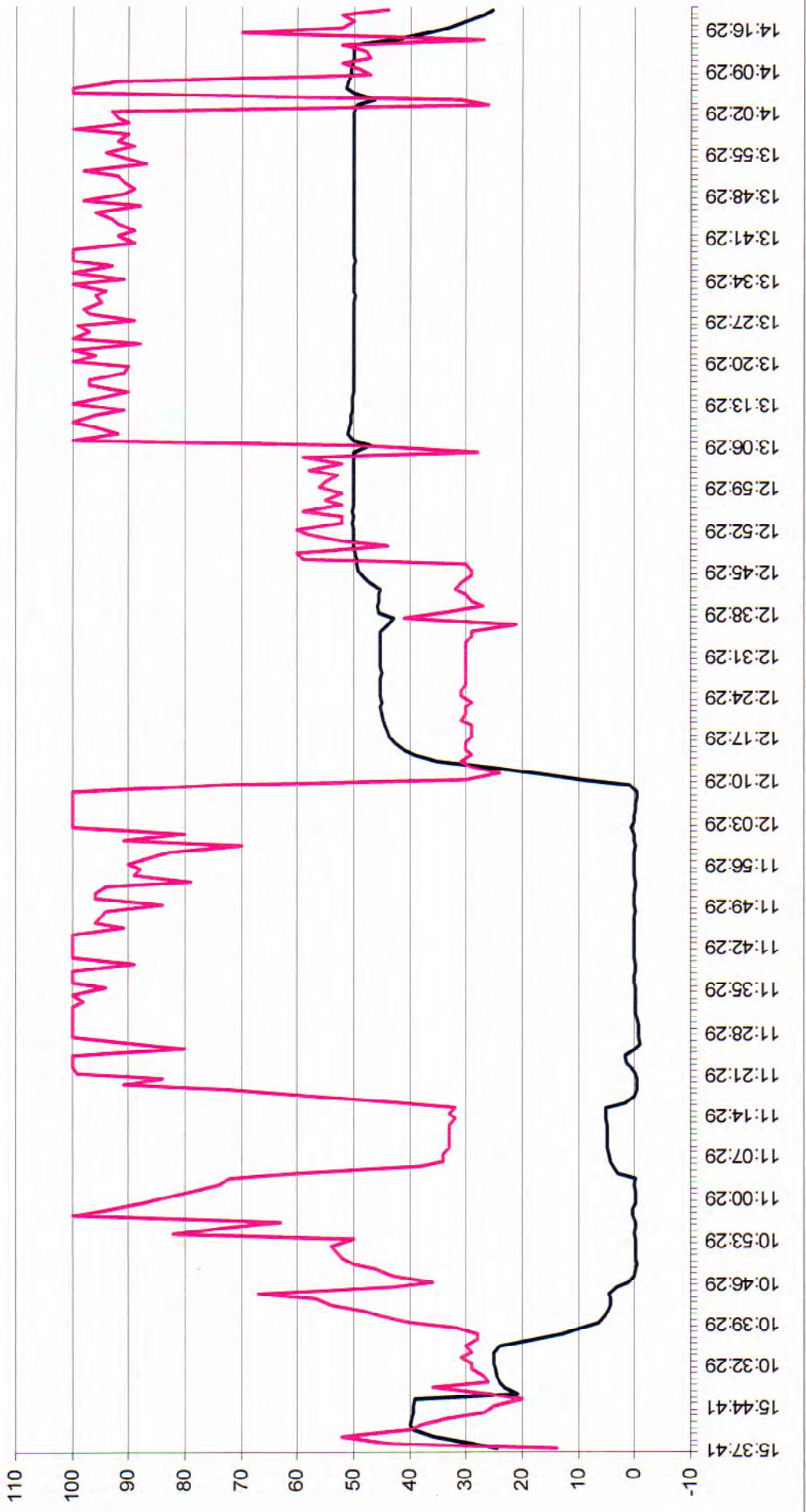


SANTA CLARA, CALIFORNIA

TFT INC

TEMPERATURE HUMIDITY TEST

—  $T_1$ (degC) — %R.H.



JOB NO. : QL-13-0105

TEST IN THE CHAMBER 30

02-04-13

CERTIFIED REPORT OF MEASUREMENT FOR TFT, INC.

FCC PART 11 TESTING

TFT MODEL EAS911+

EAS-CAP

FCC ID: BIOEAS911PLUS

COMPLIANCE TEST NUMBER: 5.2 Encoder/Decoder Operating Temperature and Humidity Verification

COMPLIANCE TEST RESULTS - SEE THE FOLLOWING 2 PAGES.

J. C.

134

0°C 98% Rel. Humid.  
encoder unit A

STATION TRANSMIT LOG:

THE EMERGENCY ACTION  
NOTIFICATION NETWORK HAS  
ISSUED A NATIONAL  
EMERGENCY ACTION  
NOTIFICATION FOR THE  
FOLLOWING  
COUNTIES/AREAS:  
UNITED STATES  
AT 11:58 AM  
ON FEB 4, 2013  
EFFECTIVE  
UNTIL 12:13 PM.

MESSAGE TRANSMITTED  
AT 11:58  
ON FEB 4, 2013  
BY WAAA/FM.

EAS PROTOCOL TEXT:  
ZCZC-EAN-EAN-000000+0015  
-0351958-WAAA/FM -

PRINTED ON MONDAY  
FEBRUARY 4, 2013 AT  
11:58.

\*\*\*\*\*

0°C 98% Rel. Humid.  
decoder Unit B EAS 911+ (NUT)

STATION KAAA\_AM RECEIVE LOG MESSAGE:

THE EMERGENCY ACTION NOTIFICATION NETWORK HAS ISSUED A NATIONAL EMERGENCY ACTION  
NOTIFICATION FOR THE FOLLOWING COUNTIES/AREAS:

UNITED STATES

AT 11:58 AM

ON FEB 4, 2013

EFFECTIVE

UNTIL 12:13 PM.

MESSAGE RECEIVED

AT 11:58

ON FEB 4, 2013

FROM WAAA/FM

ON CHANNEL 1.

EAS PROTOCOL TEXT:

ZCZC-EAN-EAN-000000+0015-0351958-WAAA/FM -

PRINTED ON MONDAY FEBRUARY 04, 2013 AT 12:01

0°C 98% Rel. Humid.  
Encoder Unit B EAS911+ (UUT)

STATION KAAA\_AM TRANSMIT LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:  
UNITED STATES  
AT 12:01 PM  
ON FEB 4, 2013  
EFFECTIVE  
UNTIL 12:16 PM.  
MESSAGE FROM KAAA\_AM.

MESSAGE ISSUED BY A BROADCAST STATION OR CABLE SYSTEM AND TRANSMITTED  
AT 12:01  
ON FEB 4, 2013  
BY KAAA\_AM.

EAS PROTOCOL TEXT:  
ZCZC-EAS-EAN-000000+0015-0352001-KAAA\_AM -

PRINTED ON MONDAY FEBRUARY 04, 2013 AT 12:01

0°C 98% Rel. Humid.  
recorder      Unit A

STATION RECEIVE LOG:

A NATIONAL EMERGENCY  
ACTION NOTIFICATION HAS  
BEEN ISSUED FOR THE  
FOLLOWING  
COUNTIES/AREAS:  
UNITED STATES  
AT 12:01 PM  
ON FEB 4, 2013  
EFFECTIVE  
UNTIL 12:16 PM.  
MESSAGE FROM KAAA\_AM.

MESSAGE ISSUED BY A  
BROADCAST STATION OR  
CABLE SYSTEM AND  
RECEIVED  
AT 12:01  
ON FEB 4, 2013  
FROM KAAA\_AM  
ON CHANNEL 2.

EAS PROTOCOL TEXT:  
ZCZC-EAS-EAN-000020+0015  
-0352981-KAAA\_AM -

PRINTED ON MONDAY  
FEBRUARY 04, 2013 AT  
12:01.

50°C 95% Rel. Humid.  
encoder      unit A

STATION TRANSMIT LOG:

THE EMERGENCY ACTION  
NOTIFICATION NETWORK HAS  
ISSUED A NATIONAL  
EMERGENCY ACTION  
NOTIFICATION FOR THE  
FOLLOWING  
COUNTIES/AREAS:  
UNITED STATES  
AT 2:01 PM  
ON FEB 4, 2013  
EFFECTIVE  
UNTIL 2:16 PM.

MESSAGE TRANSMITTED  
AT 14:01  
ON FEB 4, 2013  
BY WAAA/FM.

EAS PROTOCOL TEXT:  
ECC0-EAM-EAH-000000-0015  
--0352201-WAAA/FM -

PRINTED ON MONDAY  
FEBRUARY 04, 2013 AT  
14:01.

50°C 95% Rel. Humid.  
Decoder Unit B EAS 911+ (cut)

STATION KAAA\_AM RECEIVE LOG MESSAGE:

THE EMERGENCY ACTION NOTIFICATION NETWORK HAS ISSUED A NATIONAL EMERGENCY ACTION  
NOTIFICATION FOR THE FOLLOWING COUNTIES/AREAS:

UNITED STATES

AT 2:01 PM

ON FEB 4, 2013

EFFECTIVE

UNTIL 2:16 PM.

MESSAGE RECEIVED

AT 14:01

ON FEB 4, 2013

FROM WAAA/FM

ON CHANNEL 1.

EAS PROTOCOL TEXT:

ZCZC-EAN-EAN-000000+0015-0352201-WAAA/FM -

PRINTED ON MONDAY FEBRUARY 04, 2013 AT 14:02

140

50°C 95% Rel. Humid.  
Encoder Unit B EAS 911+ (Unit)

STATION KAAA\_AM TRANSMIT LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:

UNITED STATES

AT 2:02 PM

ON FEB 4, 2013

EFFECTIVE

UNTIL 2:17 PM.

MESSAGE FROM KAAA\_AM.

MESSAGE ISSUED BY A BROADCAST STATION OR CABLE SYSTEM AND TRANSMITTED AT 14:02

ON FEB 4, 2013

BY KAAA\_AM.

EAS PROTOCOL TEXT:

ZCZC-EAS-EAN-000000+0015-0352202-KAAA\_AM -

PRINTED ON MONDAY FEBRUARY 04, 2013 AT 14:03

50°C 95% Rel. Humid.  
Decoder Unit A

STATION RECEIVE LOG:

A NATIONAL EMERGENCY  
ACTION NOTIFICATION HAS  
BEEN ISSUED FOR THE  
FOLLOWING  
COUNTIES/AREAS:  
UNITED STATES  
AT 2:02 PM  
ON FEB 4, 2013  
EFFECTIVE  
UNTIL 2:17 PM.  
MESSAGE FROM KAAA\_AM.

MESSAGE ISSUED BY A  
BROADCAST STATION OR  
CABLE SYSTEM AND  
RECEIVED  
AT 14:02  
ON FEB 4, 2013  
FROM KAAA\_AM  
ON CHANNEL 2.

BAB PROTOCOL TEXT:  
2020-548-894-03202849815  
-2332232-KAAA\_AM -

PRINTED ON MONDAY  
FEBRUARY 04, 2013 AT  
14:02.

## 5.3 Encoder/Decoder Electromagnetic Field Susceptibility Verification

### 5.3.1 Test Objective

The objective of this test is to verify that both the encoder and decoder meet electromagnetic field susceptibility requirements:

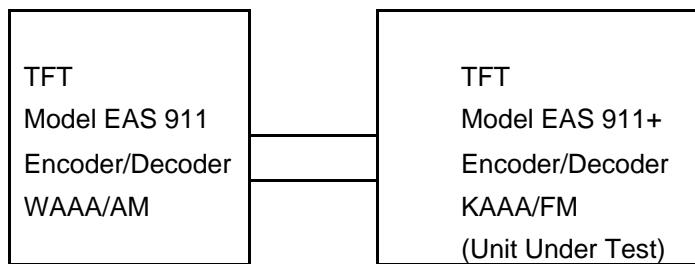
#### §11.32(d)

*Testing Encoder Units: Encoders not covered by §11.34(e) of this part shall be tested in a 10 V/m minimum RF field at an AM broadcast frequency and a 0.5 V/m minimum RF field at an FM or TV broadcast frequency to simulate actual working conditions.*

#### §11.33(b)

*Decoders shall be capable of operation within the tolerances specified in this section as well as those in §§ 11.32(b), (c), and (d).*

### 5.3.2 Test Block Diagram



### 5.3.3 Test Methodology

The test message ZCZC-EAN-EAN-000000+0015-2941518-WAAA/FM - is sent through from the encoder to decoder through audio channel 1 using each device alternately as encoder or decoder for two sets of tests. Successful decode is verified at an AM broadcast transmission field site with RF field levels at or exceeding 10 V/m.

The test message ZCZC-EAN-EAN-000000+0015-2941518-WAAA/FM – is sent through from the encoder to decoder through audio channel 1 using each device alternately as encoder or decoder for two sets of tests. Successful decode is verified at an FM broadcast transmission field site with RF field levels at or exceeding 0.5 V/m.

The EAS911+ (unit under test) is identified as KAAA/AM. The EAS911 is identified as WAAA/FM.

Note: The purpose of the RF field tests are to verify the Unit Under Test can actually operate normally under the different RF environments. Although the originator code of EAN was used for the test, it clearly demonstrated the 911+ can encode and decode properly. The use of another originator code would not affect the results of the RF field tests. Therefore we used the original data as tested.

## 5.3.4 Test supporting documentation

## 5.3.4.1 Equipment Used

<u>Model Number &amp; Description</u>	<u>Manufacturer</u>	<u>Serial Number</u>
EAS911+ Encoder/Decoder	TFT, Inc.	S/N E201 (unit under test)
EAS911 Encoder/Decoder	TFT, Inc.	S/N 10103709
FIM-41 AM Field Set	Potomac Instruments	411 (calibrated 8/16/10)
FIM-71 FM Field Set	Potomac Instruments	529 (calibrated 4/9/91)

## 5.3.4.2 AM Site

## 5.3.4.2.1 Site Data

KFAX 1100 kHz 50 kW DA1 U  
 KTRB 860 kHz 50 kW DA  
 Hayward CA  
 37° 37' 56.00" N x 122° 07' 49.000W (NAD27)

## 5.3.4.2.2 AM Site Tower (1 of 4)



5.3.4.2.3 AM Site Doghouse Tower #1



5.3.4.2.4 AM Site Equipment Setup



## 5.3.4.2.5 AM Site FIM Close-Up (10 V/m/m field 1100 kHz)



## 5.3.4.2.6 AM Site Test Logs

## 5.3.4.2.6.1 EAS911 Encoder/EAS911+ Decoder

## 5.3.4.2.6.1.1 EAS911 Transmit Log of EAN

**STATION TRANSMIT LOG:**

THE EMERGENCY ACTION  
NOTIFICATION NETWORK HAS  
ISSUED A NATIONAL  
EMERGENCY ACTION  
NOTIFICATION FOR THE  
FOLLOWING  
COUNTIES/AREAS:  
UNITED STATES  
AT 2:51 PM  
ON OCT 24, 2012  
EFFECTIVE  
UNTIL 3:06 PM.

MESSAGE TRANSMITTED  
AT 14:51  
ON OCT 24, 2012  
BY WAAA/FM.

EAS PROTOCOL TEXT:  
ZCZC-EAN-EAN-000000+0015  
-2982151-WAAA/FM -

PRINTED ON WEDNESDAY  
OCTOBER 24, 2012 AT  
14:51.

5.3.4.2.6.1.2 EAS911+ Receipt Log of EAN

STATION KAAA\_AM RECEIVE LOG MESSAGE:

THE EMERGENCY ACTION NOTIFICATION NETWORK HAS ISSUED A NATIONAL EMERGENCY ACTION NOTIFICATION FOR THE FOLLOWING COUNTIES/AREAS:

UNITED STATES  
AT 2:51 PM  
ON OCT 24, 2012  
EFFECTIVE  
UNTIL 3:06 PM.

MESSAGE RECEIVED  
AT 14:51  
ON OCT 24, 2012  
FROM WAAA/FM  
ON CHANNEL 1.

EAS PROTOCOL TEXT:  
ZCZC-EAN-EAN-000000+0015-2982151-WAAA/FM -

PRINTED ON WEDNESDAY OCTOBER 24, 2012 AT 14:52

5.3.4.2.6.1.3 EAS911+ Forward Log of EAN

STATION KAAA\_AM TRANSMIT LOG MESSAGE:

THE EMERGENCY ACTION NOTIFICATION NETWORK HAS ISSUED A NATIONAL EMERGENCY ACTION NOTIFICATION FOR THE FOLLOWING COUNTIES/AREAS:

UNITED STATES  
AT 2:51 PM  
ON OCT 24, 2012  
EFFECTIVE  
UNTIL 3:06 PM.

MESSAGE TRANSMITTED  
AT 14:51  
ON OCT 24, 2012  
BY KAAA\_AM.

EAS PROTOCOL TEXT:  
ZCZC-EAN-EAN-000000+0015-2982151-KAAA\_AM -

PRINTED ON WEDNESDAY OCTOBER 24, 2012 AT 14:52

5.3.4.2.6.1.4 EAS911+ Transmit Log of EAN

STATION KAAA\_AM TRANSMIT LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:

UNITED STATES  
AT 2:53 PM  
ON OCT 24, 2012  
EFFECTIVE  
UNTIL 3:08 PM.  
MESSAGE FROM KAAA\_AM.

MESSAGE ISSUED BY A BROADCAST STATION OR CABLE SYSTEM AND TRANSMITTED  
AT 14:53  
ON OCT 24, 2012  
BY KAAA\_AM.

EAS PROTOCOL TEXT:  
ZCZC-EAS-EAN-000000+0015-2982153-KAAA\_AM -

PRINTED ON WEDNESDAY OCTOBER 24, 2012 AT 14:54

## 5.3.4.2.6.1.5 EAS911 Receipt and Forward of EAN

## STATION RECEIVE LOG:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS: UNITED STATES AT 2:53 PM ON OCT 24, 2012 EFFECTIVE UNTIL 3:08 PM. MESSAGE FROM KAAA\_AM.

MESSAGE ISSUED BY A BROADCAST STATION OR CABLE SYSTEM AND RECEIVED AT 14:53 ON OCT 24, 2012 FROM KAAA\_AM ON CHANNEL 2.

EAS PROTOCOL TEXT:  
ZCZC-EAS-EAN-000000+0015  
-2982153-KAAA\_AM -

PRINTED ON WEDNESDAY OCTOBER 24, 2012 AT 14:53.

\*\*\*\*\*

## STATION TRANSMIT LOG:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS: UNITED STATES AT 2:53 PM ON OCT 24, 2012 EFFECTIVE UNTIL 3:08 PM. MESSAGE FROM WAAA/FM.

MESSAGE ISSUED BY A BROADCAST STATION OR CABLE SYSTEM AND TRANSMITTED AT 14:53 ON OCT 24, 2012 BY WAAA/FM.

EAS PROTOCOL TEXT:  
ZCZC-EAS-EAN-000000+0015  
-2982153-WAAA/FM -

PRINTED ON WEDNESDAY OCTOBER 24, 2012 AT 14:53.

\*\*\*\*\*

EOM RECEIVED  
AT 14:54  
ON OCT 24, 2012  
ON CHANNEL 2.

PRINTED ON WEDNESDAY OCTOBER 24, 2012 AT 14:54.

\*\*\*\*\*

### 5.3.4.3 FM Site

#### 5.3.4.3.1 Site Data

KXSC 104.9 MHz 6.7 kW TPO 6.0 kW ERP  
3903 Aborn Road, San Jose CA 95135  
37° 19' 22.00"N x 121° 45' 15"W (NAD27)

#### 5.3.4.3.2 Tower at FM Site



#### 5.3.4.3.3 FM Site Equipment Setup



## 5.3.4.3.4 FM Site FIM-71 Meter Close-Up 104.9 MHz 0.5V/m/m



## 5.3.4.3.4.1 FM Site Logs

## 5.3.4.3.4.1.1 EAS911 Transmit Log of EAN

**STATION TRANSMIT LOG:**

THE EMERGENCY ACTION  
NOTIFICATION NETWORK HAS  
ISSUED A NATIONAL  
EMERGENCY ACTION  
NOTIFICATION FOR THE  
FOLLOWING  
COUNTIES/AREAS:  
UNITED STATES  
AT 12:22 PM  
ON OCT 24, 2012  
EFFECTIVE  
UNTIL 12:37 PM.

MESSAGE TRANSMITTED  
AT 12:22  
ON OCT 24, 2012  
BY WAAA/FM.

EAS PROTOCOL TEXT:  
ZCZC-EAN-EAN-000000+0015  
-2981922-WAAA/FM -

PRINTED ON WEDNESDAY  
OCTOBER 24, 2012 AT  
12:22.

\*\*\*\*\*

## 5.3.4.3.4.1.2 EAS911+ Receipt of EAN

## STATION KAAA\_AM RECEIVE LOG MESSAGE:

THE EMERGENCY ACTION NOTIFICATION NETWORK HAS ISSUED A NATIONAL EMERGENCY ACTION  
NOTIFICATION FOR THE FOLLOWING COUNTIES/AREAS:  
UNITED STATES  
AT 12:22 PM  
ON OCT 24, 2012  
EFFECTIVE  
UNTIL 12:37 PM.

MESSAGE RECEIVED  
AT 12:22  
ON OCT 24, 2012  
FROM WAAA/FM  
ON CHANNEL 1.

EAS PROTOCOL TEXT:  
ZCZC-EAN-EAN-000000+0015-2981922-WAAA/FM -

PRINTED ON WEDNESDAY OCTOBER 24, 2012 AT 12:24

## 5.3.4.3.4.1.3 EAS911+ Forward of EAN

## STATION KAAA\_AM TRANSMIT LOG MESSAGE:

THE EMERGENCY ACTION NOTIFICATION NETWORK HAS ISSUED A NATIONAL EMERGENCY ACTION  
NOTIFICATION FOR THE FOLLOWING COUNTIES/AREAS:  
UNITED STATES  
AT 12:22 PM  
ON OCT 24, 2012  
EFFECTIVE  
UNTIL 12:37 PM.

MESSAGE TRANSMITTED  
AT 12:22  
ON OCT 24, 2012  
BY KAAA\_AM.

EAS PROTOCOL TEXT:  
ZCZC-EAN-EAN-000000+0015-2981922-KAAA\_AM -

PRINTED ON WEDNESDAY OCTOBER 24, 2012 AT 12:24

## 5.3.4.3.4.1.4 EAS911+ Transmit of EAN

## STATION KAAA\_AM TRANSMIT LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING  
COUNTIES/AREAS:  
UNITED STATES  
AT 12:25 PM  
ON OCT 24, 2012  
EFFECTIVE  
UNTIL 12:40 PM.  
MESSAGE FROM KAAA\_AM.

MESSAGE ISSUED BY A BROADCAST STATION OR CABLE SYSTEM AND TRANSMITTED  
AT 12:25  
ON OCT 24, 2012  
BY KAAA\_AM.

EAS PROTOCOL TEXT:  
ZCZC-EAS-EAN-000000+0015-2981925-KAAA\_AM -

PRINTED ON WEDNESDAY OCTOBER 24, 2012 AT 12:25

## 5.3.4.3.4.1.5 EAS911 Receipt and Forward of EAN

## STATION RECEIVE LOG:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS: UNITED STATES AT 12:25 PM ON OCT 24, 2012 EFFECTIVE UNTIL 12:40 PM. MESSAGE FROM KAAA\_AM.

MESSAGE ISSUED BY A BROADCAST STATION OR CABLE SYSTEM AND RECEIVED AT 12:25 ON OCT 24, 2012 FROM KAAA\_AM ON CHANNEL 2.

EAS PROTOCOL TEXT:  
ZCZC-EAS-EAN-000000+0015  
-2981925-KAAA\_AM -

PRINTED ON WEDNESDAY  
OCTOBER 24, 2012 AT  
12:25.

## STATION TRANSMIT LOG:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS: UNITED STATES AT 12:25 PM ON OCT 24, 2012 EFFECTIVE UNTIL 12:40 PM. MESSAGE FROM WAAA/FM.

MESSAGE ISSUED BY A BROADCAST STATION OR CABLE SYSTEM AND TRANSMITTED AT 12:25 ON OCT 24, 2012 BY WAAA/FM.

EAS PROTOCOL TEXT:  
ZCZC-EAS-EAN-000000+0015  
-2981925-WAAA/FM -

PRINTED ON WEDNESDAY  
OCTOBER 24, 2012 AT  
12:25.

EOM RECEIVED  
AT 12:25  
ON OCT 24, 2012  
ON CHANNEL 2.

PRINTED ON WEDNESDAY  
OCTOBER 24, 2012 AT  
12:25.