



**Flom Test Labs**  
EMI, EMC, RF Testing Experts Since 1963

toll-free: (866) 311-3268  
fax: (480) 926-3598  
<http://www.flomlabs.com>  
[info@flomlabs.com](mailto:info@flomlabs.com)

Date: November 22, 2006

Applicant: Safe Zone, Inc.  
7700 Ouray NW  
Albuquerque, NM 87120

Attention of: Coda C. Roberson  
President  
505/833-1840  
505/833-1842 FAX  
[c.roberson@robersonhomesabq.com](mailto:c.roberson@robersonhomesabq.com)

Equipment: CTD-1000

FCC ID:

FCC Rules: Radiofrequency Radiation Exposure Limits  
47 CFR 1.1310  
MPE - Mobiles \_\_\_\_\_

Fixed Based Station \_\_\_\_\_

Gentlemen:

Enclosed please find your copy of the Supplemental Test Data Report, the whole for Environmental Assessment (MPE) of the referenced equipment as shown.

Please allow from 8-12 weeks to hear from the Commission, who may request additional data or information, and even a sample for pre-grant audit testing.

Should you need any clarification, just fax or phone. Thank you again for this order - it has been a pleasure to be of service.

Sincerely yours,

Hoosamuddin S. Bandukwala, Lab  
Director

enclosure(s)  
HSB/hsb

Flom Test Labs  
3356 North San Marcos Place, Suite 107  
Chandler, Arizona 85225-7176  
(866) 311-3268 phone, (480) 926-3598 fax

FCC ID: UQACDT1000  
FTL p0690010, d06b0029



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[info@flomlabs.com](mailto:info@flomlabs.com)

Date: November 22, 2006

Federal Communications Commission  
Via: Electronic Filing

Attention: Authorization & Evaluation Division

Applicant: Safe Zone, Inc.  
Equipment: CTD-1000  
FCC ID: UQA CTD1000  
FCC Rules: Radiofrequency Radiation Exposure Limits  
47 CFR 1.1310  
MPE - Mobiles \_\_\_\_\_ Fixed Based Station X

Gentlemen:

On behalf of the Applicant, enclosed please find the Supplemental Test Data Report, the whole for Environmental Assessment (MPE) of the referenced equipment as shown.

We trust the same is in order. Should you need any further information, kindly contact the writer who is authorized to act as agent.

Sincerely yours,

Hoosamuddin S. Bandukwala, Lab  
Director

enclosure(s)  
cc: Applicant  
HSB/hsb

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## Environmental Assessment

for

### Mobiles/Fixed Base Station

for

**FCC ID:** UQA CTD1000

Model: CTD-1000

to

### Federal Communications Commission

#### 47 CFR 1.1310 (MPE)

Radiofrequency Radiation Exposure Limits

**Date Of Report:** November 22, 2006

**On the Behalf of the Applicant:**

Safe Zone, Inc.

**At the Request of:**

Safe Zone, Inc.  
7700 Ouray NW  
Albuquerque, NM 87120

Attention of:

Coda C. Roberson  
President  
505/833-1840  
505/833-1842 FAX  
[c.roberson@robersonhomesabq.com](mailto:c.roberson@robersonhomesabq.com)

Supervised By:

Hoosamuddin S. Bandukwala, Lab  
Director

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

a)

**Test Report (Supplemental)**

b) Laboratory:  
(FCC: 31040/SIT)  
(Canada: IC 2044)

M. Flom Associates, Inc.  
3356 N. San Marcos Place, Suite 107  
Chandler, AZ 85225

c) Report Number:

d06b0029

d) Client:

Safe Zone, Inc.  
7700 Ouray NW  
Albuquerque, NM 87120

e) Identification:

CTD-1000

Description:

Concealed Threat Detector (Radar)

f) EUT Condition:

Not required unless specified in individual tests.

g) Report Date:

November 22, 2006

EUT Received:

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:

Hoosamuddin S. Bandukwala, Lab  
Director

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.

**Identification of the Equipment Under Test (EUT)****Name and Address of Applicant:**

Safe Zone, Inc.  
7700 Ouray NW  
Albuquerque, NM 87120

**Manufacturer:**

Safe Zone, Inc.  
7700 Ouray NW  
Albuquerque, NM 87120

**FCC ID:**

**Model Number:** CTD-1000

**Description:** Concealed Threat Detector (Radar)

**Type of Emission:**

**Frequency Range, MHz:** 9.5 GHz to 10.55GHz

**Power Rating, Watts:** 0.1  
 Switchable       Variable       N/A

**Modulation:**  
 AMPS  
 TDMA  
 CDMA  
 OTHER

**Antenna:**  
 Helical  
 Monopole  
 Whip  
 Other

**Note:** For RF Safety test antenna gain taken at the upper range of expected gain (i.e. 0 dBd) and RF Power set to highest nominal power across all channels.

## Standard Test Conditions and Engineering Practices

### A2LA

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“A2LA has accredited Flom Test Labs, Inc. Chandler, AZ for technical competence in the field of Electrical Testing. The accreditation covers the specific tests and types of tests listed on the agreed scope of accreditation. This laboratory meets the requirements of ISO 17025:2005 ‘General Requirements for the Competence of Testing and Calibration Laboratories’ and any additional program requirements in the identified field of testing.”

Please refer to [www.a2la.org](http://www.a2la.org) for current scope of accreditation.

Certificate Number: **2152.01**

<b>Name of Test:</b>	Environmental Assessment
<b>Specification:</b>	FCC: 47 CFR 1.1310
<b>Measurement Guide:</b>	ANSI/IEEE C95.1 1992
<b>Test Equipment:</b>	Maximum Permissible Exposure (MPE) measurement system, consisting of: Narda 8717-1174R, Radiation meter Narda 8761D, E-field probe (300 kHz – 3 GHz) (Calibrated Nov-98)
<b>Measurement Procedure:</b>	<ol style="list-style-type: none"><li>1. The following measurements were performed with a Narda probe using ANSI/IEEE C95.1 as a guide.</li><li>2. Prior to making any measurements, the measurements system was calibrated in accordance with the manufacturer's procedures.</li><li>3. The EUT's radiating element (antenna) was placed on a 1 m tall table for ease of testing. For equipment normally operated on a metal surface, a ground plane was used.</li><li>4. The remaining equipment necessary to operate the EUT was maintained at a distance from the measurement arrangement suitable to minimize interference with the measurements.</li><li>5. The minimum safe distance was calculated from the formula Power Density = EIRP / <math>4\pi R^2</math> (Peak Watts/m<sup>2</sup>). The calculation is shown with the measurement data.</li><li>6. With the EUT operating at maximum power, a search was initiated for worst case emissions with the probe raised and lowered over a range of 0.2 to 2 meters in height and over a horizontal plane of 0° to 360°.</li><li>7. Average values were calculated for the whole body (0.2-2.0m), lower body (0.2-0.8m) and upper body (1.0-2.0m).</li></ol>
<b>Results:</b>	Attached.

**Name of Test:** R.F. Radiation Exposure

FCC Rules: 1.1307, 1.1310, 1.1311, 2.1091

Description, EUT: See page 2 of Test Report

Limits: Controlled Exposure 47 CFR 1.1310 Table 1, (A)	0.3-3.0 MHz: 3.0-30 MHz: 30-300 MHz: 300-1500 MHz 1500-100,000 MHz:	Limit [ $\text{mW/cm}^2$ ] = 100 Limit [ $\text{mW/cm}^2$ ] = $(900/f^2)$ Limit [ $\text{mW/cm}^2$ ] = 1.0 Limit [ $\text{mW/cm}^2$ ] = $f/300$ Limit [ $\text{mW/cm}^2$ ] = 5.0
Limits: Uncontrolled Exposure 47 CFR 1.1310 Table 1, (B)	0.3-1.234 MHz: 1.34-30 MHz: 30-300 MHz: 300-1500 MHz 1500-100,000 MHz:	Limit [ $\text{mW/cm}^2$ ] = 100 Limit [ $\text{mW/cm}^2$ ] = $(180/f^2)$ Limit [ $\text{mW/cm}^2$ ] = 0.2 Limit [ $\text{mW/cm}^2$ ] = $f/1500$ Limit [ $\text{mW/cm}^2$ ] = 1.0
Test Frequencies, MHz	9500	10550
Power, Conducted, W	= .200	
Antenna Gain	= 0 dB	
Antenna Model	Vertically polarized antenna	
Pre-test Calculations	$\text{Power}_{[\text{WEIRP}]} = \text{P}_{[\text{conducted}]} \times \text{G}_{[\text{antenna}]} = .200$ $\text{Limit}_{[\text{mW/cm}^2]} = 1.0$ $\text{Limit}_{[\text{W/m}^2]} = 10 \times \text{Limit}_{[\text{mW/cm}^2]} = 10.0$ $R_{[\text{m}]} = [\text{P}_{[\text{WEIRP}]} / (4\pi \times \text{Limit}_{[\text{W/m}^2]})]^{1/2} = .0399\text{m}$	

**(The following will be placed in the Instruction Manual)**

### **Mandatory Safety Instructions to Installers & Users**

Use only manufacturer or dealer supplied antenna.

**Antenna Minimum Safe Distance:** 1.57 inches.

Antenna Gain: zero dBi referenced to isotropic monopole.

The Federal Communications Commission has adopted a safety standard for human exposure to RF (Radio Frequency) energy, which is below the OSHA (Occupational Safety and Health Act) limits.

**Antenna Mounting:** The antenna supplied by the manufacturer or radio dealer must not be mounted at a location such that during radio transmission, any person or persons can come closer than the above-indicated minimum safe distance to the antenna i.e. 1.57 inches.

To comply with current FCC RF Exposure limits, the antenna must be installed at or exceeding the minimum safe distance shown above, and in accordance with the requirements of the antenna manufacturer or supplier.

**Base Station Installation:** The antenna should be fixed-mounted on an outdoor permanent structure. RF Exposure compliance must be addressed at the time of installation.

**Antenna Substitution:** Do not substitute any antenna for the one supplied or recommended by the manufacturer or radio dealer. You may be exposing person or persons to excess radio frequency radiation. You may contact your radio dealer or the manufacturer for further instructions.

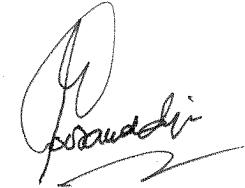
**Warning:** Maintain a separation distance from the antenna to a person(s) of at least **1.57 inches.**

You, as the qualified end-user of this radio device must control the exposure conditions of bystanders to ensure the minimum separation distance (above) is maintained between the antenna and nearby persons for satisfying RF Exposure compliance. The operation of this transmitter must satisfy the requirements of Occupational/Controlled Exposure Environment, for work-related use. Transmit only when person(s) are at least the minimum distance from the properly installed, externally mounted antenna.

**Testimonial  
and  
Statement of Certification**

**This is to certify that:**

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:

Hoosamuddin S. Bandukwala, Lab  
Director