

Govt. of India
Ministry of Communications and IT
Department of Telecommunications
(Security-TERM Wing)

No. 17-1/2010-SI/1

Dated 02nd Nov 2010

To,

All DDsG (TERM) Cells

Sub: Measurements of EMF (Electromagnetic Field) Radiations from Base Transceiver Stations

Reference is invited to the License Agreement Amendment dated 04.11.2008 which prescribes that the CMTS//UASL Licensees shall conduct audit and provide self certification annually as per procedure prescribed by Telecom Engineering Centre (TEC) / or any other agency authorized by Licensor from time to time confirming that the emissions from the Base Station antennae are within the limits for general public exposure as prescribed by International Commission on Non- Ionizing Radiation Protection (ICNIRP) from time to time.

2. Further, DOT vide letter No. 800-15/2010-VAS Dated 08.04.2010 issued detailed instructions to Telecom Service Providers (TSPs) for meeting ICNIRP guidelines on above mentioned subject. Existing BTSs must be ICNIRP compliant for meeting radiation norms by 08.05.2010 and self certification was to be submitted to respective TERM Cells up to 15.05.2010. Vide DOT letter no. 800-15/2010-VAS Dated 08.06.2010 the time line for self certification was extended to 15.11.2010. Similarly, as per the instructions all new BTS installed after 08.05.2010 should be self certified before they start radiating. DOT letter No. 800-15/2010-VAS-III-67 Dated 27.08.2010 & clarification issued vide no. 800-15/2010-VAS-III Dated 03.08.2010 & 30.09.2010 may also be referred to in this regard.

3. TEC has issued the test procedure on the subject vide GR no. TEC/ TP/EMF/001.01 SEP2009 and supplement procedure vide Addendum (TEC Doc. No. TEC/ TP/ EMF /001/01.SEP-2009) Issue 2: Aug 2010. The same are to be followed for self certification and measurement of EMF Radiation from BTS. Format for submitting the Self Certification is also provided in the above referred GR of TEC.

4. Self Certification by TSPs for meeting the ICNIRP limits as specified in TEC GR and DOT letter dated 08.04.2010, may be based on any of the methods specified in TEC Addendum (Issue 2) as referred in para 3. However, TERM cells evaluation will be based on measurements only. It is also to mention that for this purpose 10% of ICNIRP general public reference level is to be taken for E field limit. (Refer sub clause (d) of clause 2.0 of TEC Addendum Issue 2)

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5. A site may be compliant or non-compliant on the basis of above evaluation. A compliant site may become non compliant at a later date due to change in the surroundings like a building coming up in the range of measurement from the BTS or addition of new sites in the area or any other reasons including engineering changes by Service Providers and if the such cases comes to the notice of TERM Cell by public complaint or otherwise, the same may also be tested.

6. TERM cells shall select up to 10% of new BTS installed after 08.05.10 on random basis but with a larger proportion of shared sites. Additionally, the BTS sites against which there are public complaints shall also be tested by TERM Cells.

7. In order to simplify the process, TSPs may be asked to deposit a test fee of Rs. 250000/- (Rupees Two Lac and Fifty Thousand only for 25 BTS @ Rs.10000/- per BTS sites) in advance to TERM Cells. After completion of testing of 25 BTS sites, a test fee for another 25 sites may be deposited to the respective TERM cells and so on. The fee may be deposited by Demand Draft in favor of Communication Accounts officer, o/o CCA concerned .TERM cells will keep appropriate record of no. of sites tested against each round of fee deposited.

8. TSPs shall provide test instruments to TERM Cells as and when required. At least one test instruments set should be available with TSPs for each TERM Cell which is to be made available to TERM Cells on 24 hrs notice along with Licensee Representative who will accompany the TERM Cell officer for testing at randomly selected site(s). In case TERM Cells require one more set for testing, the same may be made available within 48 hrs. Similar procedure will be followed in the case of complaint based testing.

10. The following instruments are generally required for EMF testing and same should be made available to TERM Cells. (One set with generally consists of following equipment)

- Isotropic Antenna (three orthogonal E-field dipoles) to sample the RF fields in the frequency range of 30MHz to 3 GHz.
- Spectrum Analyzer for analysis of electromagnetic fields by integration over frequency bands (GSM, DCS, UMTS etc.) in the frequency range of 30 MHz to 3 GHz, Automatic Resolution Bandwidth at least from 1 KHz to 1 MHz depending upon narrowest user defined service bandwidth.
- Software for numeric & graphic display of results.
- Built in or otherwise GPS Receiver for Longitude-Latitude logging.
- Tripod for mounting Isotropic Probe 2 meters above the Test level (Ground/Roof).
- Laser Distance Meter.
- Digital Camera
- Magnetic Compass for azimuth measurement.
- Measuring Tape

11. Instrument which will be provided by TSP will carry valid calibration certificate from OEM (Original Equipment Manufacturer) or any national/international accredited Lab.

12. TSPs who have not submitted the self certified test results to TERM Cells yet may submit it immediately and in any case, not later than 15.11.2010. TERM Cells shall start the testing from 16.11.2010.

13. In case of shared sites or multiple sites in a prescribed area, it is individual as well as collective responsibility of all TSPs to keep site always EMR compliant. For shared sites each TSP shall not only submit the test results for his own BTS but also provide the test results of other BTS on that date and overall EMR compliance result due to all BTS taken together. Coordination among TSPs may be made for this activity. TERM Cells are at liberty to test the shared site upon receiving the self certification of any one of the TSP or after getting self certified test result from all TSPs.

14. For the sites found non-complaint by TERM Cells, a penalty of Rs 5,00,000/- (five lac only) per BTS shall be imposed on the TSPs as per DoT instructions referred above. Service Provider must meet the criterion within one month of the report of TERM Cell in such cases, failing which site will be shut down.

15. All the TSPs shall appoint a nodal officer and designate at least two of their employees as coordinators for this purpose and intimate their names and contact details to the respective TERM cells by 10.11.2010. These shall be the normal contact persons for communication in the matter of EMR testing and for accompanying TERM Cell officers to BTS sites.

16. The nodal officer or the employees as mentioned above shall normally accompany the TERM Cell team to the site. TERM cells, if required by them, may take the signatures of such representatives of licensee on the events/results of site visit. However, the TERM Cells shall be at liberty to visit the site alone and for this purpose the guards/owners at the site should be under instructions by TSPs to permit TERM officers to enter the site on production of their identity

17. The TSPs shall ensure the provision of proper signage showing prescribed warning for information of general public of the exclusion zones at the BTS site. The sign boards shall have the information, size, color code; background for visibility and their placement as prescribed in the test procedure on the subject vide GR no. TEC/ TP/EMF/001.01 SEP2009 and supplement procedure vide Addendum (TEC Doc. No. TEC/ TP/ EMF /001/01.SEP-2009) Issue 2: Aug 2010. A site may also be declared non-complaint due to improper signage if found or signage is absent.

18. TSPs shall submit the updated BTS data base monthly to TERM Cell (by 10th of each month) in following form in Excel format.

SNo.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Fields required.	CGI (In following order) MCC/ MNC/LAC/CI	Service Provider	LSA	Town	Complete Address of site	Longitude & Latitude	Shared/ Non shared	Name of TSPs with whom site is shared	Date of Commissioning of BTS of the reporting TSP	Type of BTS Site (Roof Top Tower / Ground Base Tower	Tower Height from AGL in case of GBT	Antenna height from AGL in case of GBT	Building height from AGL in case of RTT/RTP	Antenna Height from AGL in case of RTT/RTP	Self certified / TERM Certified

20. All other instructions issued by DOT/ TEC from time to time may also be followed in this regard.

21. TERM Cells shall issue EMR test result for all the sites whether EMR compliant or non-complaint in the format as per Annexure-1.


 (Harsh Kumar)
 ADG (Security-TERM)

Copy to:

1. All CMTS/ UASL Licensees
2. Sr. DDG(TEC)/ Advisor (Fin.)
3. All CCAs
4. DDG(AS)
5. Dir (IT) for putting on DOT website

Govt. of India
Ministry of Communications & IT
Department of Telecommunications
O/o Deputy Director General (TERM)

Annexure - I

Performa for EMR Compliance Result

No.....

Dated:.....

1.	Name of the Telecom Service Provide	
2.	Name of the LSA	
3.	Date of EMR Measurements done by TERM Cell	
4.	Name/ Identity & Address of the BTS	
5.	Longitude & Latitude of BTS	
6.	Compliance Method Adopted by TSP	EIRPth/ Software Simulation/ Broad Band Measurement/ Freq. Selective Measurement
7.	Result Indicated by TSP	
8.	Measurement Value by TERM Cell	
9.	Signage Status	Satisfactory/ Non-satisfactory/ Absent
10.	Site Compliant/ Non-Compliant with reasons	

Signature:

Name:

Designation (Director/ADG):

Date:

To,

TSP (Name / Address)