

F.No. 302-22/2012-QoS

Dated: 16<sup>th</sup> May 2013

To

1. All Access Service Providers.
2. All empanelled auditors of metering and billing system.

**Sub: Implementation of the Quality of Service (Code of Practice for Metering and Billing Accuracy) (Amendment) Regulations, 2013 (4 of 2013) dated 25<sup>th</sup> March, 2013**

TRAI has issued the Quality of Service (Code of Practice for Metering and Billing Accuracy) (Amendment) Regulations, 2013 (4 of 2013) on 25<sup>th</sup> March, 2013, amending the Quality of Service (Code of Practice for Metering and Billing Accuracy) Regulation 2006 (5 of 2006) dated the 21<sup>st</sup> March, 2006. With the publication in the Gazette of India, the Quality of Service (Code of Practice for Metering and Billing Accuracy) (Amendment) Regulations, 2013 has come into effect from 25<sup>th</sup> March, 2013. In this regard the attention of all access service providers and empanelled auditors of metering and billing are invited to the following provisions of the Quality of Service (Code of Practice for Metering and Billing Accuracy) (Amendment) Regulations, 2013:

*(i) Sub-regulation (3) of regulation 6 provides that "The Authority may, from time to time, issue such guidelines and checklist, as it may deem fit for audit of the metering and billing system of the service provider and every service provider shall arrange audit of their metering and billing system in accordance with such guidelines and checklist".*

*(ii) Clause (c) of sub-regulation (2) of regulation 6B provides that every auditor shall "submit to the Authority report on progress of audit in such format and at such intervals as the Authority may specify from time to time".*

*(iii) Clause (f) of sub-regulation (2) of regulation 6B provides that every auditor shall "submit to the Authority, a monthly progress report on action taken by the service provider on instances of overcharging*

*reported under regulation 6A, in such format, as may be specified by the Authority, from time to time”.*

2. In accordance with the provisions contained in sub-regulation (3) of regulation 6, the Authority issues herewith the guidelines and checklist for audit of the metering and billing system of service providers. All the access service providers and empanelled auditors shall undertake the audit of the metering and billing system in accordance with these guidelines and checklist of audit. enclosed at Annex.1 of this letter.

3. The Authority has considered the periodicity for submitting progress report of audit by the auditor, in accordance with clause (c) of sub-regulation (2) of regulation 6B and it has been decided that the periodicity of submitting such report shall be Quarterly. The empanelled auditor has to submit the progress report in respect of the audit of the metering and billing system being undertaken by him, separately for basic telephone service (wireline) and cellular mobile telephone service, in the Format No. TRAI/M&B Audit/3 annexed with this letter. The Quarterly report has to be submitted to TRAI within 21 days from the end of the respective Quarter.

4. The empanelled auditor also has to submit monthly progress report in respect of action taken by the service provider on instances of overcharging reported under regulation 6A, separately for basic telephone service (wireline) and cellular mobile telephone service, in the Format No. TRAI/M&B Audit/4 annexed with this letter. The monthly progress report has to be submitted to TRAI, in accordance with clause (f) of sub-regulation (2) of regulation 6B, within 10 days from the end of the respective month.

**(A. Robert J. Ravi)**  
**Advisor (CA&QOS)**

Copy to:

1. Cellular Operators Association of India (COAI),  
14, Bhai Veer Singh Marg, New Delhi – 110 001.
2. Association of Unified Service Providers of India (AUSPI),  
B-601, Gauri Sadan, 5 Haili Road, New Delhi- 110 001.

## **GUIDELINES FOR AUDIT OF THE METERING AND BILLING SYSTEM**

1. The auditor shall undertake audit of the metering and billing system of service provider in accordance with regulation 6A and 6B of the Quality of Service (Code of Practice for Metering and Billing Accuracy) Regulation 2006 dated 21-03-2006, as amended by Quality of Service (Code of Practice for Metering and Billing Accuracy) (Amendment) Regulations, 2013 dated 25-03-2013, and also in accordance with these guidelines for audit and checklist for audit issued by the Authority, from time to time.
2. The auditor may associate providers of revenue assurance services/solutions in their audit work. However, such providers should not be associated with or should not have provided revenue assurance solution to any of the telecom service providers in India. TRAI shall be intimated forthwith the details of any tie up arrangement, if any, with revenue assurance service provider.
3. The auditor must be independent of telecom service providers and avoid direct involvement in the design, construction, operation or maintenance of electronic communications networks or communications metering and / or billing solutions of a service provider. They shall not represent parties engaged in these activities. These restrictions do not, however, preclude the possibility of exchanges of technical information, including discussion of the means of meeting the requirements, between such organisations and the Agency.
4. The staff of the auditor assigned for audit of the metering and billing system must have:
  - (i) sound professional and technical qualifications;
  - (ii) a satisfactory knowledge of the evaluations required to be carried out and adequate experience of such assessments; and

- (iii) the ability to draw up the certificates, records and reports required to authenticate the performance of the assessments.
5. The auditor and its staff must carry out the tasks for which they have been accredited with the highest degree of professional integrity and technical competence. They must be free from all pressures and inducements and possess personal integrity beyond doubt, particularly financial, which might influence their judgment or the results of any assessment, especially from persons or groups of persons with an interest in such results.
  6. The impartiality of inspection staff must be guaranteed. Their remuneration must not depend on the number of assessments carried out or on the results of such assessments. The auditor is similarly expected to ensure the impartiality of any contract staff.
  7. The staff of the auditor is bound to observe professional secrecy with regard to all information gained in carrying out its tasks, although this does not preclude information-sharing with TRAI.
  8. The auditor shall comply with all the instructions, guidelines etc. issued by TRAI, from time to time, for the purpose of conducting the auditing of the metering and billing system of service providers and reporting thereof. TRAI officials may also associate with the auditor in the conduct of such audit and the auditor shall carry out instructions, if any, given by such officials in writing.
  9. The auditor shall not undertake audit of metering and billing system of any service provider to whom he is also statutory auditor or internal auditor or concurrent auditor or where he is the consultant to the service provider.
  10. The auditor shall not undertake audit of the metering and billing system of any service provider consecutively for not more than two years.
  11. The auditor shall notify TRAI before it begins the auditing process (on a service by service basis) to enable tracking of the implementation of the audit of the Metering and Billing System of service providers.

12. The auditor shall assess service providers' metering and billing system and certify that service providers' metering and billing system is compliant to the Code of Practice for metering and billing accuracy as laid down in the Quality of Service (Code of Practice for Metering and Billing Accuracy) Regulation 2006 dated 21-03-2006, as amended by Quality of Service (Code of Practice for Metering and Billing Accuracy) (Amendment) Regulations, 2013 dated 25-03-2013.
13. The auditor shall evaluate inter alia the correctness of the following: -
  - (i) The generation process of the Call Data Records (CDR) - raw CDRs.
  - (ii) Of the entries in the direction table which is used for rating the raw CDRs.
  - (iii) Of the rated CDR vis-à-vis the rate applied, duration mentioned, origination and destination codes.
  - (iv) In charging of VAS services to the subscribers.
  - (v) In charging of the roaming services to the mobile subscribers.
  - (vi) In charging of SMS on blackout days.
  - (vii) In charging of processing fee on Top Up Vouchers.
14. The auditor shall undertake the verifications of billing and charging by service providers both for prepaid and postpaid customers in accordance with the Code of Practice for Metering and Billing Accuracy in a representative manner within the overall sample size. The number of sample size to be checked in each tariff plan verification should be such so as to achieve a confidence level of ninety five percent with a confidence interval of three percent.
15. The one month period of the CDRs shall be selected in such a manner that it would be easy for the service providers to effect refunds, if any, when the CDRs are live on the billing system. As far as possible, CDR audit for a Quarter shall be conducted within the same Quarter.

16. The auditor shall take the raw CDRs post-mediated and unrated and process the same to generate the bill and then verify with already generated bill for any discrepancy. In all cases metering and mediation process is to be checked first by sample test calls to ascertain that metering and mediation process is accurate and no systemic deficiency is noticed. After doing the functional testing of the mediation process/software, unrated post-mediated CDRs may be used for generating the bills for audit analysis.
17. In the case of prepaid, rated CDRs are produced by the IN system. In the absence of any un-rated CDRs, sample test calls shall be made using test SIM Cards/ telephone for every possible charge scenario and corresponding accuracy of rating procedures by the IN system may be established. Backward reconciliation of rated CDRs from IN system shall be done to further establish correctness of rating procedures.
18. The auditor shall also undertake backward reconciliation of billing complaints both for post-paid and pre-paid to establish correctness of rating procedures.
19. The Audit Agency shall analyse the discrepancy if detected, and find out the root cause of the same. The discrepancy analysis is done by execution of the rating engine that performs analysis of the rated CDRs in order to establish causes of the discrepancy based on CDR, subscriber and pricing plan data. After several cycles of event level discrepancy analysis and database adjustment, when all the event level discrepancies are taken care of, the next step is of bill level discrepancy. The bill level discrepancy reports shall be produced and analysed by the auditor. The auditor shall perform verification of successful implementation of the corrective action.
20. The auditor shall, while undertaking audit of the metering and billing system of service provider, check whether, in accordance with the directions of the Authority dated 12<sup>th</sup> June, 2012, (i) a Master Table is maintained, service area-wise, to record the events relating to configuration of new number series and (ii) a Master Table is maintained, service area-wise, to record the

events relating to configuration of new tariff plans and shall record his findings in the audit report after auditing the entries therein.

21. Areas of concern identified by the auditor during the assessment of a service provider's Metering and Billing System against each item of the Code of Practice for Metering and Billing Accuracy may be identified in the form of:

(a) A non-compliance ~ an instance of failure to comply with an established requirement. The nature of the failure and the requirement in question need to be made explicit in documenting any non-compliance.

(b) A Deficiency ~ an instance of a lack of adequacy in meeting a requirement. An example might be where a billing system has no facility to detect duplication of records for the same service usage. This would be likely to lead to a breach of Code of Practice for Metering and Billing Accuracy, but the absence of a detection facility only causes a problem when such duplication occurs.

(c) An observation ~ a comment about something that has been seen during an assessment, but is not considered sufficiently serious to be a deficiency. However, it may possibly lead to corrective and / or preventative action.

22. The areas of concern identified during audit shall be categorised into three categories as described below:-

(a) Category 1: An important matter of non-compliance or deficiency for which corrective action must be undertaken urgently. In view of the grave consequences of a Category 1 matter, it is expected that a service provider shall resolve it as a matter of utmost importance. In any event a detailed corrective action plan must be agreed within one month and put into effect immediately.

(b) Category 2: A matter of concern, which is to be resolved within a period, agreed with the auditor. In any event a detailed corrective action plan must be agreed and put into effect within three-months.

(c) Category 3: A matter worthy of consideration by the service provider, possibly leading to corrective and / or preventative action, but not of sufficient importance to warrant Category 1 or 2 status.

23. The auditor shall check the integration of Billing System in respect of rent rebate of basic service during the audit and see whether rent rebate is being given to customers in respect of faults not rectified within three days, in accordance with the Standards of Quality of Service of Basic Telephone Service (Wireline) and Cellular Mobile Telephone Service Regulations, 2009 (7 of 2009).
24. The auditor shall verify from the system of the service providers whether there has been any case of levy or collection of migration charges from its subscribers which have been prohibited vide TRAI's direction dated 15.3.2001 and include such findings in the audit report.
25. The auditor shall verify whether TRAI's direction dated 27.06.2005 and 07.06.2005 relating to credit limit is being complied with.
26. The auditor shall verify whether the tariff for any item in the tariff plan with validity of more than six months, including tariff plans with lifetime or unlimited validity and also involving an upfront payment to be made by the subscriber towards such validity period, is increased during the validity period of such plans. The auditor shall verify whether the tariff for any item in other tariff plan is not increased within six months of enrolment in the tariff plan in accordance with the Telecommunication Tariff (43<sup>rd</sup> Amendment) Order notified on 21.03.2006.
27. The auditor shall verify whether CLIP charge is levied as a compulsory item in the tariff plan.
28. The auditor shall verify, check and report to TRAI the true and correct position about specific instances of billing complaints having systemic/generic implications that are referred to it by TRAI from time to time.



29. The auditor shall obtain from the service provider the audit report, action taken report and details of any unresolved or outstanding matters of previous year of audit and shall verify the action taken on such audit report and action taken report. He shall record his observations thereon in the audit report.
30. The auditor shall check the metering electronically using software or equipments and there shall not be any manual checking of metered duration. He shall record his findings in the audit report along with the details of the test calls made.
31. The auditor shall submit its progress report on a quarterly basis within three weeks from the date of closure of the quarter.
32. The auditor shall prepare the audit report expeditiously in the format prescribed by the Authority, in accordance with clauses (i) and (j) of sub-regulation (2) of regulation 6B of in the Quality of Service (Code of Practice for Metering and Billing Accuracy) Regulation 2006 dated 21-03-2006, as amended by Quality of Service (Code of Practice for Metering and Billing Accuracy) (Amendment) Regulations, 2013 dated 25-03-2013, checklist for audit and guidelines for audit so as to enable the service provider to submit the audit report to the Authority by 31<sup>st</sup> July of every year.
33. The auditor shall not delay the preparation of the audit report, waiting for the comments of the service provider on any audit observation.
34. The auditor shall report to Advisor (QOS), TRAI in all matters.
35. The auditor shall treat all the information provided by the service provider as confidential and shall not share this information without the written approval of the service providers.
36. The auditor shall after completing audit of a License Service Area (LSA) of a service provider for Mobile or Basic Service shall submit to TRAI key findings of the audit report along with the process/procedure and shall also make a presentation to TRAI.

37. TRAI may call the auditor for meetings/ presentation on audit findings or audit reports or for seeking/ providing clarifications or for reviewing the progress of audit. The auditor shall attend such meetings/ presentation at their own expenses.
38. During the audit, TRAI may entrust the auditor to undertake special audit on any issue. The auditor shall undertake audit on such issue as part of the annual audit of metering and billing system and shall report to TRAI about the findings of such audit in such format and in such time frame TRAI may specify in this regard.

**Checklist for audit as per Quality of Service (Code of Practice for Metering and Billing Accuracy) Regulation, 2006, as amended by Quality of Service (Code of Practice for Metering and Billing Accuracy) (Amendment) Regulations, 2013**

**Preliminary**

1. Obtain from the service providers list of officers in each billing centre who can be contacted for audit purposes.
2. Establish with the service provider the chain of reporting of audit observations to the service provider for comments.
3. Obtain from the service provider the billing centres of the service provider.
4. Obtain from the service provider the details of the billing system and software deployed by them.
5. Establish with the service provider the contact point(s) for obtaining call data records.
6. Obtain from the service provider the contact details of the complaint centre.
7. Familiarise with the Quality of Service (Code of Practice for Metering and Billing Accuracy) Regulation, 2006 dated 21.3.2006, the Quality of Service (Code of Practice for Metering and Billing Accuracy) (Amendment) Regulations, 2013 dated 25.3.2013, Guidelines for Audit, Checklist for Audit, formats for (i) audit report; (ii) action taken report; (iii) quarterly progress report; (iv) monthly report on action taken by service provider on instances of overcharging, various Tariff Orders, Directions and Regulations relating to tariff.

## Process Review

### Compliance with regard to Code of Practice for Metering and Billing Accuracy

(Table – A)

Sr. No	Audit Area (item name)	Test to be performed	Observation	Observation Category
1	<b>Information relating to Tariffs</b>			
1.1	Before a customer is enrolled for any telecommunication service, he shall be provided the detailed information relating to the tariff applicable for that service.	<ul style="list-style-type: none"> <li>▪ Verify the process for enrolment of a customer and check whether he was given information relating to tariff.</li> </ul>		
1.2	<p>(a) The customer shall be provided a copy of the Customer Acquisition Form at the time of enrollment</p> <p>(b) The customer shall also be informed in writing, in accordance with the regulations, directions and orders issued by the Authority, not later than one week after the activation of service, about ----</p> <p>(i) the tariff plan subscribed by him;</p> <p>(ii) quantity related charges such as the charge for each SMS message, or kilobyte of data etc.;</p> <p>(iii) accuracy of measurement of time, duration and of quantity, and also the resolution and rounding rules, including the underlying units,</p>	<ul style="list-style-type: none"> <li>▪ Verify the process for giving copy of the Customer Acquisition Form (CAF) and also verify on sample basis whether the customer has been provided a copy of the CAF.</li> <li>▪ Verify whether the customer has been informed in writing, within one week after activation of service, about the tariff plan subscribed by him and other charges applicable (take sample cases and test check).</li> <li>▪ Verify availability of accuracy of measurement and</li> </ul>		

Sr. No	Audit Area (item name)	Test to be performed	Observation	Observation Category
	<p>used when calculating the charges for an individual event or an aggregation of event; and</p> <p>(iv) contractual terms and conditions for provision, restriction and termination of service:</p>	<p>rounding rules and whether information relating to this has been provided to customer within one week after activation of service.</p> <ul style="list-style-type: none"> <li>▪ Verify contractual terms and conditions for provision, restriction and termination of service and whether information relating to this has been provided to customer within one week after activation of service.</li> <li>▪ Verify contractual terms and conditions with reference to bill printed.</li> </ul> <p>(Information at item(i), (ii), (iii) and (iv) can be given along with the Start-up Kit (SUK) or in the CAF, a copy of which is given to the customer)</p>		
1.3	<p>Where a value-added service (e.g. download of content, such as a film clip or ring tone) or entry to an interactive service (such as a game) can be selected through a choice of the service user (e.g. by dialing a specific number) then the charge for the service must be provided to him before he commits to use the service.</p>	<ul style="list-style-type: none"> <li>▪ Take a list of all such value-added services.</li> <li>▪ Take sample from each value-added services and check the procedures completely.</li> <li>▪ Verify whether the charge for the service is indicated before subscriber commits to use the service</li> </ul>		
1.4	<p>The information about the</p>	<ul style="list-style-type: none"> <li>▪ Obtain website URL.</li> </ul>		

Sr. No	Audit Area (item name)	Test to be performed	Observation	Observation Category
	tariff plans, Plan Vouchers, Top Up Vouchers, Special Tariff Vouchers and Combo Vouchers on offer shall be available on the website of the service provider in accordance with the regulations, directions and orders issued by the Authority, from time to time.	<ul style="list-style-type: none"> <li>▪ Log onto website and verify whether mentioned details are available for each Tariff plan.</li> <li>▪ Establish whether above information is available on the website in accordance with TRAI directives dated 16.1.2012.</li> </ul>		
2	<b>Provision of Service</b>			
	The services provided to the customer and all subsequent changes therein shall be those agreed with him in writing prior to providing the service or changing its provisions.	<ul style="list-style-type: none"> <li>▪ Verify procedures to log customer requests for services</li> <li>▪ Verify procedures for applying such customer requests</li> </ul>		
3	<b>Accuracy of Measurement</b>			
3.1	All charges levied for telecommunication services levied on the customer shall be consistent with the tariff applicable to the customer.	<ul style="list-style-type: none"> <li>▪ Verify with one month CDRs in each Quarter with reference to tariff plan selected for audit and also by making calls in each selected plan</li> </ul>		
3.2	<p>Unless otherwise specified in the published Tariff or previously agreed Tariff, a charge shall be determined in accordance with the following limits:</p> <p>a) Where the charge is dependent upon duration, the recorded duration shall be measured to within:</p> <ul style="list-style-type: none"> <li>▪ Between +1 seconds and –1 second; or</li> <li>▪ Between +0.01% (1:10,000) to –0.02% (1:5,000) whichever is less stringent; and</li> </ul>	<ul style="list-style-type: none"> <li>▪ Test check on sample basis electronically or using software to establish correctness of recorded duration.</li> </ul>		

Sr. No	Audit Area (item name)	Test to be performed	Observation	Observation Category
	<p>b) where the charge is dependent upon the time of day, the time of day shall be recorded to within <math>\pm 1</math> second, traceable to an appropriate time reference; and</p>	<ul style="list-style-type: none"> <li>▪ Check the reference time used in the switches/exchanges and whether the reference time is uniform in the network.</li> <li>▪ Check whether variation is there between the reference time and timing of the switch/exchange</li> <li>▪ Test check sample records to establish correctness of parameters.</li> </ul>		
	<p>c) where the charges are dependent upon the counting of occurrences of a particular type, the count shall be accurate to no more than plus 1/25,000 (0.004%) or minus 1/1,000 (0.1%).</p>	<ul style="list-style-type: none"> <li>▪ Test check sample records to establish correctness of parameters.</li> </ul>		
3.3	<p>Where measurement under clauses 3.2 (a), (b) &amp; (c) reveals systematic errors in timing or counting that result in overcharged events which are not stated in published Tariffs then correction should take place to ensure accurate Bills.</p>	<ul style="list-style-type: none"> <li>▪ Verify with the records whether corrective action has been taken.</li> </ul>		
4	<p><b>Reliability of Billing</b></p>			
4.1	<p>The performance of a Total Metering and Billing System shall be, subject to the tolerances specified in clause 3.2:</p> <p>a) the numbers of items of service usage that are overcharged events or undercharged events, as a proportion of the total number of chargeable</p>	<p>Based on the audit procedures applied above, take the total deviation and verify whether the same is in accordance with the limits stated by TRAI</p>		

Sr. No	Audit Area (item name)	Test to be performed	Observation	Observation Category										
	<p>events, shall not exceed the limits shown in Table 1; and</p> <p><b>b)</b> the sum of the values of the errors in the overcharged events or undercharged events, as a proportion of the total value of the total number of Chargeable events, shall not exceed the limits shown in Table 1.</p> <p><b>Table 1 – Total Metering and Billing System reliability performance requirements</b></p> <table border="1"> <thead> <tr> <th>Chargeable Events</th> <th>Performance</th> </tr> </thead> <tbody> <tr> <td>Number under or not Charged</td> <td>0.1% (1 in 1000)</td> </tr> <tr> <td>Number overcharged</td> <td>0.004% (1 in 25,000)</td> </tr> <tr> <td>Value under or not charged</td> <td>0.05% (1 in 2000)</td> </tr> <tr> <td>Value overcharged</td> <td>0.002% (1 in 50,000)</td> </tr> </tbody> </table>	Chargeable Events	Performance	Number under or not Charged	0.1% (1 in 1000)	Number overcharged	0.004% (1 in 25,000)	Value under or not charged	0.05% (1 in 2000)	Value overcharged	0.002% (1 in 50,000)			
Chargeable Events	Performance													
Number under or not Charged	0.1% (1 in 1000)													
Number overcharged	0.004% (1 in 25,000)													
Value under or not charged	0.05% (1 in 2000)													
Value overcharged	0.002% (1 in 50,000)													
4.2	<p>Where implementation of an order for a service, feature or discount which depends on the number or duration of chargeable events is applied at variance with published Tariffs, each chargeable event within the scope of the incorrectly applied order shall be an undercharged event or an overcharged event, as appropriate, for the purposes of clause 4.1.</p>	<p>Verify with reference to tariff plan or Special Tariff Voucher activated by the customer to determine undercharged or overcharged events for the purpose of clause 4.1.</p> <p>Overcharged events to be considered for refunds.</p>												
4.3	<p>Where an item of service usage is completed other than intended, but the charge applied is correct for the</p>	<p>Observation</p>												



Sr. No	Audit Area (item name)	Test to be performed	Observation	Observation Category
	service as delivered, this shall not be regarded as either an undercharged event or an overcharged event.			
4.4	The increase in duration or number of items of service usage resulting from degraded transmission performance shall not be taken into account when computing the performance of the system.	Observation		
5	<b>Applying Credit to Accounts</b>			
5.1	<b>For post-pay accounts,</b> payments made by a customer shall be credited to his account within 3 working days of receipt of the cash/cheque. Where credit is given by the service provider, this shall be applied within one working day of its agreement.	<ul style="list-style-type: none"> <li>▪ Review the payment credit system.</li> <li>▪ Take payments sample to check whether the credit is applied correctly.</li> <li>▪ Check that the payments made by the customer are regularly updated in the billing system.</li> <li>▪ Updation in respect of post-pay customers to be credited within 3 working days of receipt of the cash/cheque.</li> </ul>		
5.2	<b>For pre-pay accounts,</b> top-up credit shall be applied to a customer's account within 15 minutes of its application. Where credit is given by the service provider, this shall be applied within 1 day of its agreement.	<ul style="list-style-type: none"> <li>▪ Review the system settings and take sample cases to test whether the conditions are met.</li> </ul>		
6	<b>Timeliness of Post Pay</b>			

Sr. No	Audit Area (item name)	Test to be performed	Observation	Observation Category
	<b>Billing</b>			
6.1	The timeliness of bill issue or bill data file issue shall be subject to systematic processes.	<ul style="list-style-type: none"> <li>▪ Review process and procedures for issuance of bill</li> </ul>		
6.2	Any chargeable events the details of which are not available when the bill is prepared shall be included in a subsequent bill, but not later than the fourth monthly bill after the chargeable events occurred. Any details not so presented shall be written off and if significant be counted against the performance for undercharged events in clause 4.1. Exceptionally, event details from a separate service provider may be billed up to three months after receipt.	<ul style="list-style-type: none"> <li>▪ Review the process of chargeable events.</li> <li>▪ Take sample for such cases (typically where the customers are National or International Roaming)</li> <li>▪ Obtain list of all such events (that have occurred) for the period under review</li> <li>▪ Review procedures of inclusion of such events in subsequent bill (Whether such charges are separately identifiable)</li> <li>▪ Review procedures for writing off of such charges.</li> <li>▪ Verify whether all such charges have been included for calculation of 'undercharged events'</li> <li>▪ Check that all calls billed are in respect of the billing period referred on the bill and also to verify whether the discounts, if any, have been properly passed on to the customers without any errors.</li> </ul>		
6.3	Agreement to extend the timescales described in clause 6.2 may be sought from the TRAI. An extension will only be available on an irregular basis. Decisions will be made on application for an			

Sr. No	Audit Area (item name)	Test to be performed	Observation	Observation Category
	extension concerning: <b>a)</b> The method in which how customers will be informed of a protracted delay in rendering call records onto a subsequent bill; and <b>b)</b> The integrity of the billing process audit arrangements.	<ul style="list-style-type: none"> <li>▪ Review any exceptions sought from TRAI for extension.</li> <li>▪ Review the method in which such clients have been intimated and verify the process for such issues</li> <li>▪ Verify whether there is appropriate audit procedures implemented within the company to address such issues</li> </ul>		
6.4	The service provider shall contract with its delivery agent to ensure that an effectual bill or bill data file delivery schedule is in place. The existence of such a contract shall be subject to audit.	<ul style="list-style-type: none"> <li>▪ Obtain &amp; verify all bill delivery vendor contracts</li> <li>▪ Test &amp; establish effectiveness and adequacy of procedures and process</li> </ul>		
7	<b>Restriction and Removal of Service</b>			
	Where the service provider unilaterally intends to restrict or cease service to the customer, a notice shall be provided to the customer in advance of such action so that the customer has reasonable time to take preventive action to avoid restriction or cessation of service.	<ul style="list-style-type: none"> <li>▪ Understand related procedures and establish adequacy thereof</li> <li>▪ Test similar instances during review period and establish adherence</li> <li>▪ Check that proper notices are sent to the customer in advance where the service provider unilaterally intends to restrict or cease service to a customer.</li> <li>▪ In case of disconnection due to payment made beyond credit period, to check that the services get</li> </ul>		

Sr. No	Audit Area (item name)	Test to be performed	Observation	Observation Category
		restored once the payments are made within the period as stipulated by TRAI.		
8	<b>Complaint Handling</b>			
8.1	The service provider shall have a documented process for identifying, investigating and dealing with billing complaints and creating appropriate records thereof.	<ul style="list-style-type: none"> <li>▪ Check whether the service provider has a documented process for identifying, investigating and dealing with billing complaints.</li> </ul>		
8.2	The service provider shall carry out a root cause analysis for each upheld billing complaint, categorise the cause and establish proportionate remedial action to correct it.	<ul style="list-style-type: none"> <li>▪ Review the Billing Complaint system</li> <li>▪ Review process manual for addressing customer complaints and establish adequacy of procedures</li> </ul>		
8.3	Where the root cause affects multiple customer accounts, then all affected Bills shall, if practicable, be included in a recovery programme.	<ul style="list-style-type: none"> <li>▪ Test instances during review period and establish adherence to documented procedures</li> </ul>		
8.4	Where remedial action has not been completed and the cause is likely to affect other bills when issued, then the service provider shall take reasonable steps to ensure that they are checked and, if necessary, corrected, before being sent to the customer. If not checked and corrected such Bills shall be included in a recovery programme (clause 8.3).	<ul style="list-style-type: none"> <li>▪ Review &amp; verify procedures for root cause categorization and analyses</li> <li>▪ Check whether the service provider carries out root cause analysis for each upheld billing complaint and where the root cause affects multiple customers, whether all affected bills is included in a recovery program.</li> <li>▪ Test and verify instances of remedial action, including refund of overcharges to all affected customers.</li> <li>▪ Verify adequacy of procedures in this</li> </ul>		

Sr. No	Audit Area (item name)	Test to be performed	Observation	Observation Category
		regard ▪ Check the true and correct position about specific instance of billing complaints having systemic/generic implications as referred by TRAI.		
9	<b>Materiality</b>			
	<p>Compliance with the requirements contained in this regulation shall need to be demonstrated only in relation to products and services that have a material impact on the customer's bill. This materiality is deemed to be:</p> <p>a) where the service provider's turnover from a product or service comprises 5% or more of its total turnover with the customers targeted for that product or service; or</p> <p>b) where the number of customers subscribing to a product or service offered by the service provider comprises 5% or more of the customers targeted for that product or service; or</p> <p>c) at the specific direction of the TRAI.</p>	<p>When taking samples for test checking, the parameter shall be followed in selecting the sample category.</p>		
10	<b>Submission of Compliance</b>			
	<p>The service providers shall submit the compliance of above code of practice to TRAI on yearly basis.</p>	<p>Verify the circumstances for delay, if any, in submitting the audit report of the current year and audit report and action taken report of the previous year and report thereon.</p>		

**Billing & Metering System Review (Transaction Review)  
(Table – B)**

Sr. No.	Audit Area (item name)	Test to be performed	Observation	Observation Category
1	<p>The auditing Agency shall evaluate inter alia the correctness of the following: -</p> <p>(a) In generation process of the CDR-raw CDRs.</p>	<ul style="list-style-type: none"> <li>▪ Test check procedures for CDR recording for both pre-paid and post-paid plans</li> <li>▪ Verify whether CDR's are editable</li> </ul>		
	<p>(b) Of the entries in the direction table which is used for rating the raw CDRs.</p>	<ul style="list-style-type: none"> <li>▪ Verify rating masters to establish procedures for creating and modification of service charges</li> <li>▪ Obtain information about all new tariff plans launched during the Quarter and</li> <li>▪ To verify the proper configuration of all the tariff plans, especially the new tariff plans, in billing system with reference to the entries in the Master Table prescribed vide direction dated 12.06.2012.</li> <li>▪ Obtain information about all the new number series and verify the correctness of the rating charges and configuration with reference to the entries in the Master Table prescribed vide direction dated 12.06.2012.</li> <li>▪ Verify rating masters to establish charges mapped to each tariff plan</li> <li>▪ Test whether rated CDR's are modifiable.</li> </ul>		

<p>(c) In charging of VAS services to the subscribers.</p>	<ul style="list-style-type: none"> <li>▪ Obtain list of all VAS services and its process and procedure for subscription/ activation and for unsubscription of service.</li> <li>▪ Verify procedures for mapping of charges to VAS services</li> <li>▪ Verify whether the processes and requirements prescribed by TRAI for obtaining the explicit consent of the consumer, as per directions of TRAI, were followed and whether any VAS provided without consumer's consent and charged.</li> <li>▪ In respect of services provided during "Free Trial Period" to subsequently check whether the customer has confirmed the continuance of services once the free trial period has ended and accordingly billed for.</li> <li>▪ Verify the availability of toll free facility of unsubscription of service as per TRAI directions and through common short code 155223.</li> <li>▪ Verify whether the customer is charged for unsubscribing any value added service.</li> <li>▪ Verify whether the records relating to explicit consent is preserved for one year.</li> </ul>	
<p>(d) Of the rated CDR vis-</p>	<ul style="list-style-type: none"> <li>▪ Verify procedures for</li> </ul>	

à-vis the rated applied, duration mentioned, origination and destination codes including STD/ISD destinations, both for mobile and fixed.

mapping of call origination and destination locations.

- Raw CDR's to be rated according to the Tariff Plans/Special Tariff Voucher and Rating Algorithms (set of tables/ rate masters)
- Check all billable activities occurring on the network are accurately captured, rated and billed in accordance with customer agreement.
- Check that there is no delay in updation of billing with latest agreed upon rates/tariff implementation.
- Due to non-updation / rating, a CDR generated may go to suspended CDR's pool which may be billed subsequently. In such cases to check that it is billed subsequently for the same period and is in line with the agreed Tariff Plans.
- To check discounts / schemes not forming part of the original contract are properly passed on by the Service Providers in respect of the various marketing schemes promoted by the Service Provider from time to time.
- To check the correctness of charging for calls to each of the new number series configured during the



		year.	
	(e) In charging of the roaming services to the mobile subscribers	<ul style="list-style-type: none"> <li>▪ Verify procedures for applying roaming charges and also evaluate inter alia the correctness as per the tariff applicable to the customer and orders of TRAI.</li> </ul>	
	(f) In charging of SMS on blackout days.	<ul style="list-style-type: none"> <li>▪ Obtain the list of blackout days.</li> <li>▪ Verify on sample basis the charges applied viz-a-vis the tariff as per the tariff plan subscribed by the customer.</li> <li>▪ Verify whether the direction dated 14.9.2012 are complied with.</li> </ul>	
	(g) In charging of processing fee on Top Up Vouchers.	<ul style="list-style-type: none"> <li>▪ Obtain the list of Top Up Voucher.</li> <li>▪ Verify on sample basis the processing fee levied on these vouchers viz-a-vis the process fee prescribed by TRAI.</li> </ul>	
	(h) In applying credit limits to postpaid customers	<ul style="list-style-type: none"> <li>▪ Verify on sample basis whether postpaid customers were informed about their credit limits in advance as per TRAI direction dated 27.06.2005 and 07.06.2006.</li> <li>▪ Verify whether the bills issued to customers contain information about their credit limit.</li> <li>▪ Verify whether the customers are informed when they reach 80% of their usage as per direction dated 27.7.2012.</li> <li>▪ Verify whether the service was discontinued in cases</li> </ul>	

	where the amount due is less than the security deposit.	
(i) In increasing any item of tariff in a tariff plan.	<ul style="list-style-type: none"> <li>▪ Verify from bills to ensure that no tariff item has been hiked during the prescribed validity period specified in the Tariff Plans.</li> <li>▪ Verify that no tariff item in a tariff plan is increased by the access provider -</li> </ul> <p>(a) In respect of tariff plans with prescribed periods of validity of more than six months including tariff plans with lifetime or unlimited validity and also involving an upfront payment to be made by the subscriber towards such validity period, during the entire period of validity specified in the tariff plan;</p> <p>(b) In respect of other tariff plans, within six months from the date of enrolment of the subscriber. Telecommunication Tariff Order (43rd amendment) notified on 21.03.06 refers.</p>	
(j) In the charging of CLIP charges	<ul style="list-style-type: none"> <li>▪ Verify from bills and also from details of new plans launched during the year to ensure that CLIP is not charged as a compulsory item in the tariff plan.</li> </ul>	
(k) In moving from one tariff plan to another tariff plan without	<ul style="list-style-type: none"> <li>▪ Verify from bills of subscribers who have changed their tariff</li> </ul>	

	<p>paying any fee as the customer is free to move from one tariff plan to another without paying any fee for migration.</p>	<p>plans to ensure that no migration charges have been levied.</p> <ul style="list-style-type: none"> <li>▪ Verify on sample basis whether any charges were deducted from the accounts of prepaid customers for migration to another tariff plan.</li> </ul>	
2	<p>The audit Agency will take the raw CDRs &amp; process the same to generate the Bill and then verify with already generated bill for any discrepancy. The CDRs of one month in every Quarter are to be processed.</p>	<ul style="list-style-type: none"> <li>▪ Obtain CDR's for selected audit sample</li> <li>▪ Apply procedures on selected sample</li> <li>▪ Compare the results to ensure that the service provider systems are functionally correct.</li> </ul>	
3	<p>The audit Agency will analyse the discrepancy if detected, and find out the root cause of the same.</p> <p>Discrepancy Analysis: The discrepancy analysis is done by execution of the inference engine that performs analysis of the rated CDRs in order to establish causes of the discrepancy based on CDR, subscriber and pricing plan data.</p>	<ul style="list-style-type: none"> <li>▪ Discrepancy analysis of the rated CDR's to be done.</li> <li>▪ If required perform further functional testing on system to identify the cause</li> </ul>	
4	<p>Bill level discrepancy analysis: After several cycles of event level discrepancy analysis and database adjustment, when all the event level discrepancies are taken care of, the next step is of bill level discrepancy. The bill level discrepancy reports will be produced &amp; analysed by the audit Agency.</p>	<p>To analyze the bill level discrepancy reports as generated by the Service Provider.</p>	
5	<p>Verification of corrective actions: In this important stage, a verification of successful implementation</p>	<p>Analyse and test check the corrective actions.</p>	

	of the corrective action is performed		
6	Verification of complaints referred by TRAI	<ul style="list-style-type: none"> <li>• Verify from the complaint records the factual position of the complaint.</li> <li>• Investigate the complaint, including checking with the complainant</li> </ul>	
7	Billing system integration for rental rebates (for basic service). (Reference – The Standards of Quality of Service of Basic Telephone Service (Wireline) and Cellular Mobile Telephone Service Regulations, 2009)	<p>Verify that the billing system is integrated so as to ensure that proper rental rebates are passed on to the customer in cases where the faults are not rectified within three days (for basic service).</p> <ul style="list-style-type: none"> <li>• Faults pending for &gt;3 days and ≤7 days: Rent rebate for 7 days.</li> <li>• Faults pending for &gt;7 days and ≤15 days: Rent rebate for 15 days</li> <li>• Faults pending for &gt;15 days: rent rebate for 1 month</li> </ul>	

## Format No. TRAI/M&B Audit/3

(Format for reporting progress report on audit of the metering and billing system)

**Progress report on audit of the metering and billing system of -----  
----- (service provider) for ----- (service) in ----- service  
area for the Quarter ending -----**

(Indicate service provider, service, service area and Quarter)

1. Details of tariff plans selected for audit along with sample size for prepaid tariff plans, Special Tariff Vouchers, prepaid data plans, postpaid tariff plans and postpaid data plans as per sub-regulation (1) of regulation 6A.
2. Date of request to the service provider for CDRs, separately for each category of tariff plan selected.
3. Date of provision of CDRs for the selected samples by the service provider, separately for each category of tariff plan selected.
4. Status of analysis of CDRs undertaken during the Quarter, separately for each category of tariff plan selected.
5. Details of cases of overcharging observed during CDR analysis, which has been accepted by the service provider.
6. Details of cases of overcharging observed during CDR analysis, which has been not been accepted by the service provider, along with the observations of the auditor.
7. Details of cases of overcharging observed during CDR analysis, on which comments of the service provider is pending.
8. Details of other activities undertaken during the Quarter with reference to the Checklist for audit, separately for items in Table A and Table B:

Item No.	Description of item	Details of action taken (with date of start of activity and date of completion of activity)

9. Status of verification of complaints referred by TRAI.

10. Status of verification of action taken on the audit observations in the preceding year.

11. Status of preparation of audit report, as may be applicable:

12. Constraints, if any, in undertaking the audit.

13. Items on which guidance of TRAI is required.

Place: (Name of the representative of the auditor)  
Date: Designation  
For ----- (Name of auditor)

**Format No. TRAI/M&B Audit/4**

(Format for the monthly progress report on action taken by the service provider on instances of overcharging reported during audit of the metering and billing system)

**Progress report on action taken by the service provider on instances of overcharging reported during audit of the metering and billing system of ----- (service provider) for ----- (service) in ----- service area for the month of -----**  
 (Indicate service provider, service, service area and month)

S No	Description of overcharging	Date of report to SP	Date of receipt of comments from SP accepting overcharge	Status of Refund					Remarks
				No of customers affected	Total amount involved	No of customers refunded	Amount of refund	Amount deposited in TCEPF	

SP = Service Provider  
 TCEPF = Telecom Consumers Education and Protection Fund

Place: (Name of the representative of the auditor)  
 Date: Designation  
 For ----- (Name of auditor)