

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram

1. Dr. Pramod Deo, Chairperson
2. Shri R.Krishnamoorthy, Member
3. Shri S.Jayaraman, Member
4. Shri V. S. Verma, Member

**Petition No 80/2009
(Suo-motu)**

In the matter of

Maintenance of Grid Discipline – Compliance of provisions of the Indian Electricity Grid Code.

And in the matter of

1. Transmission Corporation of Andhra Pradesh Ltd., Hyderabad
2. Shri Suthirtha Bhattacharya, Chairman & Managing Director,
Transmission Corporation of Andhra Pradesh Ltd., Hyderabad Respondents

ORDER

In exercise of powers conferred under Section 178 of the Electricity Act, 2003 (the Act), the Central Electricity Regulatory Commission (the Commission) has specified Indian Electricity Grid Code (the Grid Code). Paras 5.4.2(a) and 6.4.4 of the Grid Code enjoin upon the State utilities to endeavor to restrict their net drawal from the grid to their respective drawal schedule whenever the system frequency is below 49.5 Hz. Extracts of relevant paras of the Grid Code are reproduced below:

"5.4.2 Manual Demand Disconnection

(a) As mentioned elsewhere, the constituents shall endeavour to restrict their net drawal from the grid to within their respective drawal schedules whenever the system frequency is below 49.5 Hz. When the frequency falls below 49.0 Hz, requisite load shedding (manual) shall be carried out in the concerned State to curtail the over-drawal."

6.4 Demarcation of responsibilities

4. Provided that the States, through their SLDCs, shall always endeavour to restrict their net drawal from the grid to within their respective drawal schedules, whenever the system frequency is below 49.5 Hz. When the

frequency falls below 49.0 Hz, requisite load shedding shall be carried out in the concerned State(s) to curtail the over-drawal."

2. Para 5.4.2 has been amended by the Indian Electricity Grid Code (Amendment) Regulations, 2009 dated 30.3.2009, (the amendment regulations) which have come into force with effect from 1.4.2009 whereby the figures and words "49.0 Hz.", have been substituted by the figures and word "49.2 Hz. Similarly, para 6.4 has also been amended by the amendment regulations and after amendment para 6.4.7 corresponds to pre-amended para 6.4.4. Para 6.4.7, as amended with effect from 1.4.2009, provides as under:

"6.4 Demarcation of responsibilities

7. *Provided that the States, through their SLDCs, shall always endeavour to restrict their net drawal from the grid to within their respective drawal schedules, whenever the system frequency is below 49.5 Hz. When the frequency falls below 49.2 Hz, requisite load shedding shall be carried out in the concerned State(s) to curtail the over-drawal."*

3. In keeping with the above noted provisions of the Grid Code, manual load shedding had to be carried out to curtail over-drawal when the grid frequency fell below 49.0 Hz till 31.3.2009 and thereafter when frequency fell below 49.2 Hz.

4. Chairman & Managing Director, Power Grid Corporation of India Ltd, the Central Transmission Utility who presently operates the Regional Load Despatch Centres, on observing the deteriorating grid conditions as a result of excessive over-drawal by the first respondent (to the extent of 3-5 Mu daily), by his DO No C: CMD: SEBs/160 dated 4.3.2009 urged upon the second respondent to take immediate measures for restricting drawals. The second respondent, in his DO reply dated 7.3.2009, while explaining the reasons for excessive drawals from the grid and delineating the steps being taken to limit over-drawals assured the Chairman & Managing Director, Power Grid Corporation of India Ltd that all out

efforts would be made to stop over-drawal when frequency was below 49 Hz. Meanwhile, the Southern Regional Load Despatch Centre, vide its letter No. AGM/SRLDC/2008 dated 7.3.2009 addressed to Member-Secretary, Southern Regional Power Committee (the Member-Secretary), with copy to the second respondent, brought to the notice of the Member-Secretary the relevant details of frequency profile, over-drawals from the grid by different States in the region under severe low frequency conditions and the messages sent to the State Load Despatch Centres pointing to them violations of the Grid Code, during the period 25.2.2009 to 6.3.2009 in terms of para 1.5 of the Grid Code. This letter from the Southern Regional Load Despatch Centre was followed up by the Member-Secretary's letter No. SRPC/SE-II/2009 dated 9.3.2009 wherein the Member Secretary called upon the first respondent to terminate over-drawals and initiate urgent corrective measures so as to remain within frequency range specified in the Grid Code. The question of maintaining the grid frequency above 49.0 Hz was also discussed at OCC meeting held on 18.3.2009 whereat all the constituents of Southern Region are reported to have agreed to take necessary measures in that direction. The frequency profile in the region was reviewed by the Southern Regional Load Despatch Centre on 19.3.2009 when it found that the position had declined and frequency was straying below 49.0 Hz for more than 8% of the time because of over-drawal by the first respondent, among others. The position was again brought to the notice of all concerned by the Southern Regional Load Despatch Centre by its letter No. AGM/SRLDC/2009 date 20.3.2009 calling upon them to take necessary measures, in the interest of safety and security of the grid, to avoid over-drawal during low frequency operation. The Southern Regional Load Despatch Centre also brought to their notice the frequency profile for the period 16.3.2009 to 19.3.2009.

5. As noted above, the amendments made to the Grid Code vide notification dated 30.3.2009 came into force with effect from 1.4.2009. The Member-Secretary, under his letter

No. SRPC/SE-II/2009/2184-89 dated 31.3.2009 brought to the notice of the constituents of the region the revised frequency band of 50.3 Hz to 49.2 Hz and at the same time soliciting their co-operation in the direction of the safe and secure operation of the grid. Similarly, the Southern Regional Load Despatch Centre, while bringing to their notice the revised permissible frequency band and the adverse frequency profile on 1st and 2nd April 2009, by its letter No. AGM/SRLDC/2009 dated 3.4.2009 urged the constituents to take necessary measures to avoid persistent over-drawal during low frequency operation. The request was reiterated in the letter dated 6.4.2009 from the Southern Regional Load Despatch Centre whereto frequency profile for 3rd, 4th and 5th April was annexed. Through another letter (No. GM/SRLDC/09/0401) of the same date, the General Manager, Southern Regional Load Despatch Centre reported the matter to the Member-Secretary in terms of para 1.5 of the Grid Code annexing thereto the consolidated frequency profile for the period 1st April to 5th April 2009. The latter letter was also endorsed to the respondents. On receipt of the communication from the General Manager, Southern Regional Load Despatch Centre, the Member-Secretary by his two letters, both dated 8.4.2009 again brought to the notice of the regional constituents the frequency profile pinpointing that the respondents were violating the provisions of the Grid Code by indulging in over-drawals at frequency below 49.2 Hz. Chairman & Managing Director Power Grid Corporation of India Ltd, again, by his DO letter dated 8.4.2009 sought personal intervention of the second respondent for taking measures to restrict over-drawals at low frequency.

6. It has thus been reported that despite continuous goading by Chairman & Managing Director, Power Grid Corporation of India Ltd, the Southern Regional Load Despatch Centre and the Member-Secretary as noticed above and assurances by the respondents, during March 2009 and 1.4.2009 to 9.4.2009, the first respondent had over-drawn electricity recklessly. The date-wise details of over-drawals by the first respondent from 1.4.2009 to

9.4.2009, compiled based on the Real Time SCADA values received at the Southern Regional Load Despatch Centre are given hereunder:

STATEMENT OF OVER-DRAWL

Ser No	Date	Over-drawl in MU APRIL 2009	Over-drawl in MW
1.	1-Apr-09	1.60	662
2.	2-Apr-09	1.90	665
3.	3-Apr-09	1.09	414
4	4-Apr-09	1.61	523
5.	5-Apr-09	1.45	652
6.	6-Apr-09	3.02	618
7.	7-Apr-09	0.92	422
8.	8-Apr-09	1.39	316
9.	9-Apr-09	1.49	480

7. The time-block-wise details of over-drawal by the first respondent at frequency below 49.2 Hz from 1.4.2009 to 9.4.2009 also based on the Real Time SCADA values received at the Southern Regional Load Despatch Centre, are contained in the **Annexure** attached.

8. On perusal of the details *prima facie*, we are satisfied that the first respondent is guilty of contravention of and non-compliance with the provisions of the Grid Code.

9. The first respondent is directed to show cause as to why it should not be held guilty of contravention of and non-compliance with the provisions of the Grid Code and penalty under Section 142 of the Act be not imposed on it for over-drawal of electricity on for each occasion in contravention of the provisions of the Grid Code. The reply may be submitted latest by 15.4.2009.

10. The second respondent, the Chairman of the first respondent, is directed to show cause, latest by 15.4.2009, as to why as the person in charge of and responsible to the first respondent for conduct of its business he should also not been deemed guilty of the offence

of contravention of and non-compliance with the provisions of the Grid Code, and punished accordingly along with the first respondent.

11. The Member-Secretary and the General Manager, Southern Regional Load Despatch Centre or their representatives shall assist the Commission in the present proceedings.

12. List this petition for further directions on 16.4.2009.

Sd/- [V. S. VERMA] MEMBER	Sd/- [S. JAYARAMAN] MEMBER	Sd/- [R. KRISHNAMOORTHY] MEMBER	Sd/- [DR. PRAMOD DEO] CHAIRPERSON
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New Delhi, dated 13th April 2009

Annexure

STATEMENT OF OVERDRAWAL BY APTRANSCO
AT FREQUENCY BELOW 49.2

Sl.No	Date	Block	Frequency	Overdrawal (MW)
1.	1-Apr-09	1	48.74	20
2.	1-Apr-09	2	49.00	98
3.	1-Apr-09	3	49.15	15
4.	1-Apr-09	6	49.08	30
5.	1-Apr-09	7	49.05	8
6.	1-Apr-09	8	49.16	7
7.	1-Apr-09	10	49.14	467
8.	1-Apr-09	11	49.14	368
9.	1-Apr-09	14	48.94	533
10.	1-Apr-09	15	49.15	287
11.	1-Apr-09	17	49.06	342
12.	1-Apr-09	18	49.06	264
13.	1-Apr-09	19	48.98	229
14.	1-Apr-09	20	49.11	156
15.	1-Apr-09	22	48.92	115
16.	1-Apr-09	23	49.07	84
17.	1-Apr-09	26	49.11	400
18.	1-Apr-09	27	49.02	243
19.	1-Apr-09	28	49.03	211
20.	1-Apr-09	30	49.08	150
21.	1-Apr-09	31	49.17	129
22.	1-Apr-09	33	49.19	344
23.	1-Apr-09	37	49.14	160
24.	1-Apr-09	38	49.07	185
25.	1-Apr-09	39	49.04	200
26.	1-Apr-09	41	49.02	23
27.	1-Apr-09	42	49.01	106
28.	1-Apr-09	46	49.01	6
29.	1-Apr-09	47	48.95	101
30.	1-Apr-09	50	49.07	17
31.	1-Apr-09	52	48.73	3
32.	1-Apr-09	54	48.70	6
33.	1-Apr-09	58	49.19	31
34.	1-Apr-09	63	49.19	30
35.	1-Apr-09	79	49.08	120
36.	1-Apr-09	84	49.12	30
37.	1-Apr-09	86	49.18	16
38.	1-Apr-09	93	49.14	75
39.	1-Apr-09	95	49.18	106

40.	1-Apr-09	96	49.18	72
41.	2-Apr-09	1	48.98	267
42.	2-Apr-09	2	49.12	205
43.	2-Apr-09	4	49.19	103
44.	2-Apr-09	5	49.17	107
45.	2-Apr-09	6	49.10	133
46.	2-Apr-09	7	49.13	87
47.	2-Apr-09	9	49.13	481
48.	2-Apr-09	10	48.94	304
49.	2-Apr-09	11	49.08	194
50.	2-Apr-09	13	49.11	299
51.	2-Apr-09	14	49.06	213
52.	2-Apr-09	15	49.20	191
53.	2-Apr-09	16	49.19	204
54.	2-Apr-09	17	49.11	268
55.	2-Apr-09	18	48.97	357
56.	2-Apr-09	19	49.00	330
57.	2-Apr-09	20	49.04	353
58.	2-Apr-09	21	49.06	209
59.	2-Apr-09	22	48.96	224
60.	2-Apr-09	23	49.14	123
61.	2-Apr-09	24	49.14	45
62.	2-Apr-09	26	49.01	330
63.	2-Apr-09	27	49.13	269
64.	2-Apr-09	28	49.19	203
65.	2-Apr-09	30	49.17	208
66.	2-Apr-09	31	49.18	201
67.	2-Apr-09	34	49.18	243
68.	2-Apr-09	36	49.18	179
69.	2-Apr-09	37	49.16	171
70.	2-Apr-09	38	49.19	281
71.	2-Apr-09	39	49.06	327
72.	2-Apr-09	43	49.06	128
73.	2-Apr-09	46	49.13	142
74.	2-Apr-09	47	48.99	208
75.	2-Apr-09	48	49.15	130
76.	2-Apr-09	50	49.14	46
77.	2-Apr-09	51	49.19	83
78.	2-Apr-09	58	49.15	30
79.	2-Apr-09	66	49.19	84
80.	2-Apr-09	76	48.86	214
81.	2-Apr-09	82	49.13	2
82.	2-Apr-09	83	49.14	10
83.	2-Apr-09	86	49.16	109
84.	2-Apr-09	87	49.19	85
85.	2-Apr-09	89	48.75	30
86.	2-Apr-09	93	48.99	69
87.	2-Apr-09	95	49.15	13
88.	3-Apr-09	1	48.96	172
89.	3-Apr-09	2	49.15	45

90.	3-Apr-09	6	49.16	137
91.	3-Apr-09	10	49.14	269
92.	3-Apr-09	17	49.14	159
93.	3-Apr-09	18	49.13	126
94.	3-Apr-09	19	49.16	68
95.	3-Apr-09	20	49.14	41
96.	3-Apr-09	21	49.13	257
97.	3-Apr-09	22	49.01	175
98.	3-Apr-09	23	49.03	70
99.	3-Apr-09	30	49.16	44
100.	3-Apr-09	31	49.14	26
101.	3-Apr-09	32	49.19	25
102.	3-Apr-09	33	49.18	304
103.	3-Apr-09	34	49.02	184
104.	3-Apr-09	37	49.19	139
105.	3-Apr-09	38	49.10	217
106.	3-Apr-09	42	49.05	79
107.	3-Apr-09	43	49.09	48
108.	3-Apr-09	47	49.17	247
109.	3-Apr-09	54	48.91	4
110.	3-Apr-09	55	49.02	40
111.	3-Apr-09	56	48.94	42
112.	3-Apr-09	58	49.08	85
113.	3-Apr-09	59	49.13	110
114.	3-Apr-09	60	49.10	18
115.	3-Apr-09	61	49.13	19
116.	3-Apr-09	68	49.06	8
117.	3-Apr-09	76	49.15	86
118.	3-Apr-09	79	49.15	7
119.	3-Apr-09	80	49.15	8
120.	3-Apr-09	85	48.97	182
121.	3-Apr-09	86	49.07	102
122.	3-Apr-09	88	49.10	207
123.	3-Apr-09	89	48.88	115
124.	3-Apr-09	90	48.69	14
125.	3-Apr-09	93	48.72	43
126.	4-Apr-09	3	49.19	1
127.	4-Apr-09	4	49.19	23
128.	4-Apr-09	6	49.16	161
129.	4-Apr-09	7	49.15	218
130.	4-Apr-09	8	49.18	290
131.	4-Apr-09	10	49.16	367
132.	4-Apr-09	11	49.13	357
133.	4-Apr-09	18	49.18	127
134.	4-Apr-09	19	49.18	71
135.	4-Apr-09	21	49.11	119
136.	4-Apr-09	22	49.10	54
137.	4-Apr-09	28	49.16	70
138.	4-Apr-09	29	49.18	23
139.	4-Apr-09	30	49.19	71

140.	4-Apr-09	33	49.19	192
141.	4-Apr-09	34	49.11	131
142.	4-Apr-09	35	49.04	143
143.	4-Apr-09	38	49.17	175
144.	4-Apr-09	39	49.08	122
145.	4-Apr-09	46	48.60	25
146.	4-Apr-09	47	48.75	92
147.	4-Apr-09	48	48.99	159
148.	4-Apr-09	52	49.15	128
149.	4-Apr-09	54	49.07	147
150.	4-Apr-09	55	49.06	177
151.	4-Apr-09	56	49.13	81
152.	4-Apr-09	58	48.98	285
153.	4-Apr-09	59	49.18	125
154.	4-Apr-09	60	49.08	178
155.	4-Apr-09	61	49.15	120
156.	4-Apr-09	62	49.09	102
157.	4-Apr-09	63	49.09	84
158.	4-Apr-09	67	49.15	360
159.	4-Apr-09	68	49.17	234
160.	4-Apr-09	79	49.13	2
161.	4-Apr-09	81	49.09	3
162.	4-Apr-09	82	49.13	13
163.	4-Apr-09	85	48.90	104
164.	4-Apr-09	86	49.15	169
165.	4-Apr-09	87	49.18	224
166.	4-Apr-09	89	48.84	229
167.	4-Apr-09	90	48.82	108
168.	4-Apr-09	91	48.81	39
169.	4-Apr-09	92	48.98	18
170.	4-Apr-09	94	49.01	60
171.	4-Apr-09	95	49.05	85
172.	4-Apr-09	96	49.10	192
173.	5-Apr-09	10	49.09	68
174.	5-Apr-09	11	49.05	81
175.	5-Apr-09	12	49.13	85
176.	5-Apr-09	13	49.10	201
177.	5-Apr-09	14	48.87	147
178.	5-Apr-09	15	48.95	71
179.	5-Apr-09	16	48.94	89
180.	5-Apr-09	17	48.95	151
181.	5-Apr-09	18	49.03	83
182.	5-Apr-09	19	49.04	18
183.	5-Apr-09	20	48.99	10
184.	5-Apr-09	21	49.03	203
185.	5-Apr-09	22	49.03	210
186.	5-Apr-09	23	49.18	284
187.	5-Apr-09	32	49.02	183
188.	5-Apr-09	33	48.71	459
189.	5-Apr-09	34	49.04	117

190.	5-Apr-09	37	49.18	5
191.	5-Apr-09	38	48.98	142
192.	5-Apr-09	39	49.00	127
193.	5-Apr-09	44	49.04	7
194.	5-Apr-09	46	49.11	137
195.	5-Apr-09	47	48.94	239
196.	5-Apr-09	50	48.71	94
197.	5-Apr-09	51	48.94	29
198.	5-Apr-09	55	48.80	46
199.	5-Apr-09	56	49.02	117
200.	5-Apr-09	57	49.15	111
201.	5-Apr-09	58	49.04	164
202.	5-Apr-09	59	49.07	82
203.	5-Apr-09	60	49.12	99
204.	5-Apr-09	61	48.98	109
205.	5-Apr-09	66	49.15	260
206.	5-Apr-09	85	49.11	4
207.	5-Apr-09	89	49.15	255
208.	5-Apr-09	90	49.10	269
209.	5-Apr-09	91	49.14	264
210.	5-Apr-09	93	49.09	220
211.	5-Apr-09	94	49.12	190
212.	6-Apr-09	1	48.86	174
213.	6-Apr-09	2	48.82	140
214.	6-Apr-09	3	49.05	150
215.	6-Apr-09	5	49.19	233
216.	6-Apr-09	6	49.14	280
217.	6-Apr-09	7	49.18	312
218.	6-Apr-09	10	48.92	280
219.	6-Apr-09	11	48.99	237
220.	6-Apr-09	12	49.03	246
221.	6-Apr-09	13	49.12	402
222.	6-Apr-09	14	48.93	441
223.	6-Apr-09	15	49.03	301
224.	6-Apr-09	18	49.04	252
225.	6-Apr-09	19	48.98	197
226.	6-Apr-09	20	48.90	214
227.	6-Apr-09	21	48.93	585
228.	6-Apr-09	22	48.77	532
229.	6-Apr-09	23	48.81	360
230.	6-Apr-09	24	49.15	414
231.	6-Apr-09	27	49.10	260
232.	6-Apr-09	28	49.16	182
233.	6-Apr-09	30	49.19	327
234.	6-Apr-09	31	49.16	360
235.	6-Apr-09	32	49.17	400
236.	6-Apr-09	33	49.19	549
237.	6-Apr-09	36	49.09	318
238.	6-Apr-09	37	49.11	250
239.	6-Apr-09	38	49.12	353

240.	6-Apr-09	39	49.10	299
241.	6-Apr-09	40	49.19	244
242.	6-Apr-09	41	49.01	89
243.	6-Apr-09	42	48.76	53
244.	6-Apr-09	44	48.72	1
245.	6-Apr-09	47	48.80	180
246.	6-Apr-09	50	48.94	83
247.	6-Apr-09	51	48.68	42
248.	6-Apr-09	52	48.69	30
249.	6-Apr-09	53	48.97	52
250.	6-Apr-09	54	48.75	7
251.	6-Apr-09	56	48.87	16
252.	6-Apr-09	57	49.12	122
253.	6-Apr-09	58	49.05	118
254.	6-Apr-09	59	49.04	22
255.	6-Apr-09	60	48.97	22
256.	6-Apr-09	61	49.00	87
257.	6-Apr-09	62	49.12	100
258.	6-Apr-09	63	49.03	102
259.	6-Apr-09	64	49.01	25
260.	6-Apr-09	66	49.09	163
261.	6-Apr-09	67	49.17	266
262.	6-Apr-09	68	49.07	202
263.	6-Apr-09	69	49.16	320
264.	6-Apr-09	70	49.11	238
265.	6-Apr-09	71	49.10	210
266.	6-Apr-09	76	48.85	67
267.	6-Apr-09	81	48.90	111
268.	6-Apr-09	82	48.83	92
269.	6-Apr-09	85	48.86	2
270.	6-Apr-09	89	48.77	114
271.	6-Apr-09	90	48.74	100
272.	6-Apr-09	91	48.90	31
273.	7-Apr-09	13	49.05	52
274.	7-Apr-09	14	48.65	55
275.	7-Apr-09	15	48.62	38
276.	7-Apr-09	16	48.67	8
277.	7-Apr-09	17	48.91	32
278.	7-Apr-09	18	48.82	108
279.	7-Apr-09	19	48.96	67
280.	7-Apr-09	20	48.95	104
281.	7-Apr-09	21	48.95	91
282.	7-Apr-09	22	48.81	31
283.	7-Apr-09	26	49.16	84
284.	7-Apr-09	43	48.59	1
285.	7-Apr-09	45	48.82	21
286.	7-Apr-09	46	48.62	53
287.	7-Apr-09	47	48.73	8
288.	7-Apr-09	48	49.14	83
289.	7-Apr-09	51	48.89	72

290.	7-Apr-09	52	48.69	104
291.	7-Apr-09	55	48.61	8
292.	7-Apr-09	56	48.68	42
293.	7-Apr-09	57	49.08	212
294.	7-Apr-09	58	48.98	248
295.	7-Apr-09	59	48.82	275
296.	7-Apr-09	60	48.83	55
297.	7-Apr-09	62	48.74	3
298.	7-Apr-09	63	48.81	22
299.	7-Apr-09	64	48.82	21
300.	7-Apr-09	66	48.97	52
301.	7-Apr-09	67	48.90	105
302.	7-Apr-09	68	49.06	20
303.	7-Apr-09	80	49.10	10
304.	7-Apr-09	81	49.17	29
305.	7-Apr-09	82	49.14	51
306.	7-Apr-09	83	49.11	92
307.	7-Apr-09	84	49.17	64
308.	7-Apr-09	85	49.12	91
309.	7-Apr-09	86	48.91	108
310.	7-Apr-09	87	49.08	74
311.	7-Apr-09	88	49.26	51
312.	7-Apr-09	89	48.75	184
313.	7-Apr-09	90	48.66	82
314.	7-Apr-09	91	48.68	77
315.	7-Apr-09	92	48.92	44
316.	7-Apr-09	93	49.05	51
317.	7-Apr-09	94	49.04	57
318.	7-Apr-09	95	49.14	73
319.	7-Apr-09	96	49.16	8
320.	8-Apr-09	17	49.12	17
321.	8-Apr-09	18	49.08	105
322.	8-Apr-09	19	49.05	141
323.	8-Apr-09	20	48.99	116
324.	8-Apr-09	21	48.83	85
325.	8-Apr-09	22	48.64	85
326.	8-Apr-09	35	49.18	31
327.	8-Apr-09	37	49.19	75
328.	8-Apr-09	38	49.09	168
329.	8-Apr-09	39	49.05	120
330.	8-Apr-09	40	49.11	78
331.	8-Apr-09	41	49.16	77
332.	8-Apr-09	42	49.01	160
333.	8-Apr-09	43	49.01	123
334.	8-Apr-09	44	49.05	29
335.	8-Apr-09	45	49.05	60
336.	8-Apr-09	46	48.87	67
337.	8-Apr-09	47	48.98	99
338.	8-Apr-09	50	49.17	189
339.	8-Apr-09	51	48.98	143

340.	8-Apr-09	52	49.03	129
341.	8-Apr-09	54	49.06	161
342.	8-Apr-09	55	48.97	183
343.	8-Apr-09	56	49.01	203
344.	8-Apr-09	57	49.13	129
345.	8-Apr-09	58	48.88	156
346.	8-Apr-09	59	49.01	191
347.	8-Apr-09	60	48.83	132
348.	8-Apr-09	61	48.96	163
349.	8-Apr-09	62	49.05	182
350.	8-Apr-09	63	49.15	209
351.	8-Apr-09	64	49.16	125
352.	8-Apr-09	66	49.11	141
353.	8-Apr-09	67	49.16	106
354.	8-Apr-09	68	49.17	129
355.	8-Apr-09	69	49.16	66
356.	8-Apr-09	76	49.07	171
357.	8-Apr-09	78	49.14	135
358.	8-Apr-09	79	48.94	12
359.	8-Apr-09	87	49.15	165
360.	8-Apr-09	89	48.96	179
361.	8-Apr-09	90	48.84	48
362.	8-Apr-09	91	48.76	12
363.	8-Apr-09	92	48.70	90
364.	8-Apr-09	93	48.80	99
365.	8-Apr-09	94	49.01	83
366.	8-Apr-09	95	49.09	25
367.	8-Apr-09	96	49.09	58
368.	9-Apr-09	2	48.90	36
369.	9-Apr-09	3	49.12	17
370.	9-Apr-09	8	49.16	12
371.	9-Apr-09	10	48.99	197
372.	9-Apr-09	11	49.06	155
373.	9-Apr-09	13	49.08	149
374.	9-Apr-09	14	49.18	67
375.	9-Apr-09	16	49.14	76
376.	9-Apr-09	17	48.95	411
377.	9-Apr-09	18	49.13	206
378.	9-Apr-09	20	48.98	223
379.	9-Apr-09	21	49.11	150
380.	9-Apr-09	22	49.14	236
381.	9-Apr-09	23	49.05	213
382.	9-Apr-09	27	49.07	276
383.	9-Apr-09	28	49.18	151
384.	9-Apr-09	33	49.18	116
385.	9-Apr-09	34	49.18	109
386.	9-Apr-09	35	49.14	84
387.	9-Apr-09	38	49.18	81
388.	9-Apr-09	39	49.05	98
389.	9-Apr-09	42	49.18	105

390.	9-Apr-09	46	49.12	124
391.	9-Apr-09	47	49.06	223
392.	9-Apr-09	51	49.09	80
393.	9-Apr-09	53	49.19	64
394.	9-Apr-09	54	49.12	184
395.	9-Apr-09	55	49.08	255
396.	9-Apr-09	56	49.10	262
397.	9-Apr-09	57	49.12	156
398.	9-Apr-09	58	49.14	121
399.	9-Apr-09	61	49.12	212
400.	9-Apr-09	62	49.14	191