



CENTRAL POLLUTION CONTROL BOARD
Bio-Lab, CPCB, Delhi



Inter laboratory comparison for Bio-monitoring of water quality

S.No.	Name of Laboratories	Date of Receiving sample	Name of water body	Z-Score
1.	Zonal Office –CPCB, Kolkatta	17.09.2012	River Ganga at Behrampur	Excellent
2.	Regional laboratory, Davengiri, Karnataka SPCB	06.02.2013	River Tungbhadra at Honnali bridge	Excellent
3.	Zonal Office, Bhopal, CPCB	30.01.2013	River Narmada at Budhni ghat	Good
4.	Regional laboratory, Aurangabad, Maharashtra SPCB	01.01.2013	River Godavari at Nathsagar,, Jaikwadi Dam	Excellent
5.	Bio-lab, CPCB, Delhi	20.02.2013	River Yamuna at Palla, Delhi	Improvement required
6.	Bio-lab, CPCB, Delhi	20.02.2013	River Yamuna at Nizamuddin, Delhi	Improvement required
7.	Bhubaneshwar, Orissa SPCB	18.02.2013	River Daya, distributary of Kuakhai	Excellent
8.	Lamphelpat, Manipur SPCB	25.02.2013	River Nambul atHeirongoithong	Excellent
9.	Shilong, Meghalaya SPCB	01.04.2013	River Rilang at Mawkyrwat	Excellent
10.	Lucknow, Uttar Pradesh Pollution Control Board	15.05.2013	River Gomti at Gau ghat	Excellent
11.	Bio-lab, CPCB, Delhi	23.04.2013	River Yamuna at Palla, Delhi	Excellent
12.	Bio-lab, CPCB, Delhi	23.04.2013	River Yamuna at Nizamuddin, , Delhi	Super excellent
13.	Central laboratory, Gandhi Nagar, Kochi, Kerala SPCB	11.6.2013	River Chalakudyat Pulicalkadavu	Excellent
14.	Zonal Office, Bhopal, CPCB	17.06.2013	River Narmada at Budhni ghat	Excellent
15.	Regional laboratory, Davengiri, Karnataka SPCB	10.07.2013	River Tungbhadra at Honnali bridge	Excellent
16.	Bhubaneshwar, Orissa SPCB	10.07.2013	River Daya, distributary of Kuakhai	Excellent
17.	Bio-lab, CPCB, Delhi	12.07.2013	River Yamuna at Nizamuddin, Delhi	Excellent
18.	Bio-lab, CPCB, Delhi	12.07.2013	River Yamuna at Palla, Delhi	Good
19.	Lamphelpat, Manipur SPCB	20.06.2013	River Nambul at Heirongoithong	Excellent
20.	National Environmental Engineering Research Institute(NEERI), Nagpur (October,2013)	27.01.2014	Gorewada Lake at Nagpur	Excellent
21.	National Environmental Engineering Research Institute(NEERI), Nagpur (December,2013)	27.01.2014	Gorewada Lake at Nagpur	Excellent
22.	Punjab Pollution Control Board, Ludhiana	7.01.2014	River Satluj at Nangal	Good
23.	Regional laboratory, Davengiri, Karnataka SPCB	15.01.2014	River Tungbhadra at Honnali bridge	Excellent
24.	Bio-lab, CPCB, Delhi	9.12.2013	River Yamuna at Palla, Delhi	Excellent
25.	Bio-lab, CPCB, Delhi	9.12.2013	River Yamuna at Nizamuddin, Delhi	Excellent
26.	Gujarat Pollution Control Board, Regional Office, Surat,	06.01.2014	Baleshwar Khadi	Good
27.	Madhya Pradesh Pollution Control Board, Singrauli	11.02.2014	River Mayar, Mayar Bridge, Tusa Khand	Excellent
28.	Goa State Pollution Control Board	08.01.2014	River Khandepar, upstream OPA	Excellent
29.	Goa State Pollution Control Board	08.01.2014	River Khandepar, downstream Codli	Excellent



CENTRAL POLLUTION CONTROL BOARD
Bio-Lab, CPCB, Delhi
Scoring for Sampling event details data entry in Field Protocol

S.No.	Name of Laboratories	Scoring for Sampling event details						
		Water body	Location	Date of sampling	Starting time of sampling	Ending time of sampling	Sampling team	Total score
		0.5	0.5	0.5	0.5	0.5	0.5	3
1.	Zonal Office –CPCB, Kolkatta	√	√	√	√	√	√	3
2.	Regional laboratory, Davengiri, Karnataka SPCB	√	√	√	√	√	√	3
3.	Zonal Office, Bhopal, CPCB	√	√	√	×	×	√	2
4.	Regional laboratory, Aurangabad, Maharashtra SPCB	√	√	√	√	√	√	3
5.	Bio-lab, CPCB, Delhi	×	√	√	√	×	√	2
6.	Bio-lab, CPCB, Delhi	×	√	√	√	√	√	2.5
7.	Bhubaneshwar, Orissa SPCB	√	√	√	√	√	√	3
8.	Lamphelpat, Manipur SPCB	√	√	√	√	√	√	3
9.	Shilong, Meghalaya SPCB	√	√	√	√	√	√	3
10.	Lucknow, Uttar Pradesh Pollution Control Board	√	√	√	√	√	√	3
11.	Bio-lab, CPCB, Delhi	√	√	√	√	×	√	2.5
12.	Bio-lab, CPCB, Delhi	√	√	√	√	√	√	3
13.	Central laboratory, Gandhi Nagar, Kochi, Kerala SPCB	√	√	√	√	√	√	3
14.	Zonal Office, Bhopal, CPCB	√	√	√	√	√	√	3
15.	Regional laboratory, Davengiri, Karnataka SPCB	√	√	√	√	√	√	3
16.	Bhubaneshwar, Orissa SPCB	×	×	√	√	√	√	2
17.	Bio-lab, CPCB, Delhi	√	√	√	√	√	√	3
18.	Bio-lab, CPCB, Delhi	×	×	√	√	√	√	2
19.	Lamphelpat, Manipur SPCB	√	√	√	√	√	√	3
20.	National Environmental Engineering Research Institute (NEERI), Nagpur	√	√	√	√	√	×	2.5
21.	National Environmental Engineering Research Institute (NEERI), Nagpur (December, 2013)	√	√	√	√	√	×	2.5
22.	Punjab Pollution Control Board, Ludhiana	√	√	√	√	√	√	3
23.	Regional laboratory, Davengiri, Karnataka SPCB	√	√	√	√	√	√	3
24.	Bio-lab, CPCB, Delhi	×	√	√	√	√	√	2.5
25.	Bio-lab, CPCB, Delhi	√	√	√	√	√	√	3
26.	Gujarat Pollution Control Board, Regional Office, Surat,	√	√	√	√	√	√	3
27.	Madhya Pradesh Pollution Control Board, Singrauli	√	√	√	√	√	√	3
28.	Goa State Pollution Control Board, OPA	√	√	√	√	√	√	3
29.	Goa State Pollution Control Board, Codli	√	√	√	√	√	√	3



CENTRAL POLLUTION CONTROL BOARD
Bio-Lab, CPCB, Delhi



A) Scoring for Sampling Location details data entry in Field Protocol

S.No.	Name of Laboratories	Scoring for Sampling Location details					Total score
		Average depth in meter	Average width in meter	Main stream flow (m/s)	Description of water body	Substratum composition	
	Marks for Individual event	1.0	0.5	05	0.5	05	12
1.	Zonal Office –CPCB, Kolkatta	×	×	×	√	√	5.5
2.	Regional laboratory, Davengiri, Karnataka SPCB	√	√	√	√	√	12
3.	Zonal Office, Bhopal, CPCB	√	√	×	√	√	7
4.	Regional laboratory, Aurangabad, Maharashtra SPCB	√	×	×	√	√	6.5
5.	Bio-lab, CPCB, Delhi	√	√	√	√	√	12
6.	Bio-lab, CPCB, Delhi	√	√	√	√	√	12
7.	Bhubaneshwar, Orissa SPCB	√	√	√	√	√	12
8.	Lamphelpat, Manipur SPCB	√	√	√	√	√	12
9.	Shilong, Meghalaya SPCB	√	√	√	√	√	12
10.	Lucknow, Uttar Pradesh Pollution Control Board	√	×	×	√	√	6.5
11.	Bio-lab, CPCB, Delhi	√	√	√	√	√	12
12.	Bio-lab, CPCB, Delhi	√	√	√	√	√	12
13.	Central laboratory, Gandhi Nagar, Kochi, Kerala SPCB	√	√	√	√	√	12
14.	Zonal Office, Bhopal, CPCB	√	√	×	√	√	7
15.	Regional laboratory, Davengiri, Karnataka SPCB	√	√	√	√	√	12
16.	Bhubaneshwar, Orissa SPCB	√	√	√	√	√	12
17.	Bio-lab, CPCB, Delhi	√	√	√	√	√	12
18.	Bio-lab, CPCB, Delhi	×	√	×	√	√	6.5
19.	Lamphelpat, Manipur SPCB	√	√	√	√	√	12
20.	National Environmental Engineering Research Institute (NEERI), Nagpur	√	√	√	√	√	12
21.	National Environmental Engineering Research Institute (NEERI), Nagpur (December, 2013)	√	√	√	√	√	12
22.	Punjab Pollution Control Board, Ludhiana	√	×	√	√	√	7
23.	Regional laboratory, Davengiri, Karnataka SPCB	√	√	√	√	√	12
24.	Bio-lab, CPCB, Delhi	√	√	√	√	√	12
25.	Bio-lab, CPCB, Delhi	√	√	√	√	√	12
26.	Gujarat Pollution Control Board, Regional Office, Surat,	√	√	√	√	√	12
27.	Madhya Pradesh Pollution Control Board, Singrauli	√	√	√	√	√	12
28.	Goa State Pollution Control Board, OPA	√	√	√	√	×	7
29.	Goa State Pollution Control Board, Codli	√	√	√	√	×	7



CENTRAL POLLUTION CONTROL BOARD
Bio-Lab, CPCB, Delhi



C) Scoring for Sampling Location details data entry in Field Protocol

Name of Laboratories	Scoring for Sampling Location details						Total score
	Human influence	Wetland plants, Macrophytic cover/name, birds/wildlife habitat/Name	Surrounding land use	Sun's intensity	Approx. Altitude (m)	Discharges, confluence and drawing of sampling location	
Marks for Individual event	01	01	01	0.5	0.5	01	5
Zonal Office –CPCB, Kolkata	√	×	×	√	×	×	1.5
Regional laboratory, Davengiri, Karnataka SPCB	√	√	√	√	×	×	3.5
Zonal Office, Bhopal, CPCB	√	√	√	√	×	√	4.5
Regional laboratory, Aurangabad, Maharashtra SPCB	√	√	√	√	×	√	4.5
Bio-lab, CPCB, Delhi	√	√	√	√	×	×	4
Bio-lab, CPCB, Delhi	√	√	√	√	×	×	4
Bhubaneshwar, Orissa SPCB	√	√	√	√	√	√	6
Lamphelpat, Manipur SPCB	√	×	√	√	×	×	3
Shilong, Meghalaya SPCB	√	×	√	√	√	×	3
Lucknow, Uttar Pradesh Pollution Control Board	√	×	√	√	×	×	2.5
Bio-lab, CPCB, Delhi	√	√	√	√	×	√	4.5
Bio-lab, CPCB, Delhi	√	√	√	√	×	√	4.5
Central laboratory, Gandhi Nagar, Kochi, Kerala SPCB	√	√	√	√	×	×	4
Zonal Office, Bhopal, CPCB	√	√	√	√	×	√	4.5
Regional laboratory, Davengiri, Karnataka SPCB	√	×	√	√	×	√	3.5
Bhubaneshwar, Orissa SPCB	√	×	√	×	√	√	3.5
Bio-lab, CPCB, Delhi	√	√	√	√	√	√	6
Bio-lab, CPCB, Delhi	√	√	√	√	√	√×	5
Lamphelpat, Manipur SPCB	√	×	√	√	×	√	3.5
National Environmental Engineering Research Institute (NEERI), Nagpur	√	√	√	√	√	√	5
National Environmental Engineering Research Institute (NEERI), Nagpur (December, 2013)	√	√	√	√	√	√	5
Punjab Pollution Control Board, Ludhiana	√	×	√	√	×	√	3.5
Regional laboratory, Davengiri, Karnataka SPCB	√	×	√	√	√	√	4.5
Bio-lab, CPCB, Delhi	√	×	√	√	√	×	3.5
Bio-lab, CPCB, Delhi	√	×	√	√	√	×	3.5
Gujarat Pollution Control Board, Regional Office, Surat,	√	√	√	√	×	√	4.5
Madhya Pradesh Pollution Control Board, Singrauli	√	×	√	√	√	√	4.5
Goa State Pollution Control Board, OPA	√	×	√	√	√	√	4.0
Goa State Pollution Control Board, Codli	√	×	√	√	√	√	4.0



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Bio-Lab, CPCB, Delhi



D) Scoring for the Field measurements

Name of Laboratories	Scoring for the Field measurements						
	Time	Date	Water Temperature	Air Temperature	Dissolved Oxygen (mg/l)	pH (Strip)	Total score
Marks for Individual event	0.5	0.5	01	01	01	01	5
Zonal Office –CPCB, Kolkatta	×	√	√	√	√	×	4.5
Regional laboratory, Davengiri, Karnataka SPCB	√	√	√	√	√	√	5
Zonal Office, Bhopal, CPCB	√	√	√	√	√	√	5
Regional laboratory, Aurangabad, Maharashtra SPCB	√	√	√	√	√	√	5
Bio-lab, CPCB, Delhi	√	√	√	√	√	√	5
Bio-lab, CPCB, Delhi	√	√	√	√	√	√	5
Bhubaneshwar, Orissa SPCB	×	×	×	×	×	×	0
Lamphelpat, Manipur SPCB	√	√	√	√	√	√	5
Shilong, Meghalaya SPCB	√	√	√	√	√	√	5
Lucknow, Uttar Pradesh Pollution Control Board	√	√	√	√	√	√	5
Bio-lab, CPCB, Delhi	√	√	√	√	√	√	5
Bio-lab, CPCB, Delhi	√	√	√	√	√	√	5
Central laboratory, Gandhi Nagar, Kochi, Kerala SPCB	√	√	√	√	√	√	5
Zonal Office, Bhopal, CPCB	√	√	√	√	√	√	5
Regional laboratory, Davengiri, Karnataka SPCB	√	√	√	√	√	√	5
Bhubaneshwar, Orissa SPCB	×	×	×	×	×	×	0
Bio-lab, CPCB, Delhi	√	√	√	√	√	√	5
Bio-lab, CPCB, Delhi	√	√	√	√	√	√	5
Lamphelpat, Manipur SPCB	√	√	√	√	√	√	5
National Environmental Engineering Research Institute (NEERI), Nagpur	√	√	√	√	√	√	5
National Environmental Engineering Research Institute (NEERI), Nagpur (December, 2013)	√	√	√	√	√	√	5
Punjab Pollution Control Board, Ludhiana	√	√	√	√	√	√	5
Regional laboratory, Davengiri, Karnataka SPCB	√	√	√	√	√	√	5
Bio-lab, CPCB, Delhi	√	√	√	√	√	√	5
Bio-lab, CPCB, Delhi	√	√	√	√	√	√	5
Gujarat Pollution Control Board, Regional Office, Surat,	√	√	√	√	×	√	4
Madhya Pradesh Pollution Control Board, Singrauli	√	√	√	√	√	√	5
Goa State Pollution Control Board, OPA	×	×	√	√	√	√	4
Goa State Pollution Control Board, Codli	×	×	√	√	√	√	4



CENTRAL POLLUTION CONTROL BOARD
Bio-Lab, CPCB, Delhi

E) Scoring for Biological water quality assessment

Name of Laboratories	Diversity score, graphics	Taxonomic identification of Benthic macro-invertebrates					Saprobic score	BWQC	Total score
		Phylum	Class	Order	Family	Genus			
Marks for 100% correct taxa →	10	05	05	05	10	15	10	15	75
Zonal Office –CPCB, Kolkatta	08	2.5	2.5	2.5	5	0	10	15	45.5
Regional laboratory, Davengiri, Karnataka SPCB	08	4.782	4.34	2.82	3.043	0	10	15	47.99
Zonal Office, Bhopal, CPCB	10	4.64	4.64	4.52	3.57	0.35	0	0	27.73
Regional laboratory, Aurangabad, Maharashtra SPCB	08	2.857	2.85	2.85	3.57	0	10	15	45.14
Bio-lab, CPCB, Delhi	08	0	0	0	0	0	0	0	8
Bio-lab, CPCB, Delhi	08	0	0	0	0	0	0	0	8
Bhubaneswar, Orissa SPCB	10	5	5	4.77	5	0	10	10	49.77
Lamphepat, Manipur SPCB	10	5	4	5	6	3	10	10	53
Shilong, Meghalaya SPCB	10	4.68	4.68	4.53	8.43	0	10	15	47.343
Lucknow, Uttar Pradesh Pollution Control Board	08	4.5	4.5	4.5	9	0	8	15	53.5
Bio-lab, CPCB, Delhi	08	3.25	3.25	3.25	5	0	8	15	45.75
Bio-lab, CPCB, Delhi	08	1.785714	1.785714	1.4285	2.14285	0	8	15	38.14285
Central laboratory, Gandhi Nagar, Kochi, Kerala SPCB	08	4.5454545	4.545455	4.5454	4.545454	0	8	15	49.1818135
Zonal Office, Bhopal, CPCB	08	4.7916666	4.791666	4.791	7.08333	1.875	10	10	51.33333
Regional laboratory, Davengiri, Karnataka SPCB	05	4.6666666	4.333333	1	5.333333	6	8	15	49.3333326
Bhubaneswar, Orissa SPCB	10	1.136364	0.681818	3.18181	4.09090	0	5	15	39.090892
Bio-lab, CPCB, Delhi	08	1.875	0	3.125	5	0	8	15	41
Bio-lab, CPCB, Delhi	02	0	3.333333	0	3.333333	0	10	0	18.666666
Lamphepat, Manipur SPCB	10	0.8333333	1.666666	1.25	3.333333	0	8	15	40.0833323
National Environmental Engineering Research Institute (NEERI), Nagpur	10	3.75	3.75	3.75	3.3333333	0	8	15	47.5833333
National Environmental Engineering Research Institute (NEERI), Nagpur (December, 2013)	10	3.5	3.5	3.25	3	0	10	15	48.25
Punjab Pollution Control Board, Ludhiana	05	2.5	2.5	2.5	2	0	5	0	19.5
Regional laboratory, Davengiri, Karnataka SPCB	08	4.166667	4.166667	4.16666	5.833333	5	8	15	54.333334
Bio-lab, CPCB, Delhi	05	4.375	4.375	4.375	7.5	0	10	15	50.625
Bio-lab, CPCB, Delhi	05	4	4	3	6	0	10	15	47
Gujarat Pollution Control Board, Regional Office, Surat,	05	0.8333333	0.833333	0.83333	1.666666	0	0	0	9.1666623
Madhya Pradesh Pollution Control Board, Singrauli	08	4.64285714	4.642857	4.28571	6.42857	0	5	0	32.9999941
Goa State Pollution Control Board, OPA	08	4.642857	4.642857	4.28571	6.428571	0	10	10	47.999995
Goa State Pollution Control Board, Condli	10	4.444444	4.444444	4.44444	7.777778	0	8	0	39.111106



CENTRAL POLLUTION CONTROL BOARD
Bio-Lab, CPCB, Delhi



F) Summary of scoring for Field Protocol

Name of Laboratories	Total score for event					Grand total score by each laboratory
	(A)	(B)	(C)	(D)	(E)	
Total Marks	3	12	5	5	75	100
Zonal Office –CPCB, Kolkatta	3	5.5	1.5	4.5	45.5	60
Regional laboratory, Davengiri, Karnataka SPCB	3	12	3.5	5	47.99991	71.49991
Zonal Office, Bhopal, CPCB	2	7	4.5	5	27.73804	46.23804
Regional laboratory, Aurangabad, Maharashtra SPCB	3	6.5	4.5	5	45.1428	64.1428
Bio-lab, CPCB, Delhi	2	12	4	5	08	31
Bio-lab, CPCB, Delhi	2.5	12	4	5	08	31.5
Bhubaneshwar, Orissa SPCB	3	12	6	0	49.77	70.77272
Lamphepat, Manipur SPCB	3	12	3	5	53	76
Shilong, Meghalaya SPCB	3	12	3	5	47.34375	70.34375
Lucknow, Uttar Pradesh Pollution Control Board	3	6.5	2.5	5	53.5	70.5
Bio-lab, CPCB, Delhi	2.5	12	4.5	5	45.75	69.75
Bio-lab, CPCB, Delhi	3	12	4.5	5	38.14285	62.64285
Central laboratory, Gandhi Nagar, Kochi, Kerala SPCB	3	12	4	5	49.1818135	73.1818135
Zonal Office, Bhopal, CPCB	3	7	4.5	5	51.33333333	70.83333333
Regional laboratory, Davengiri, Karnataka SPCB	3	12	3.5	5	49.3333326	72.8333326
Bhubaneshwar, Orissa SPCB	2	12	3.5	0	39.09089	56.59089
Bio-lab, CPCB, Delhi	3	12	6	5	41	67
Bio-lab, CPCB, Delhi	2	6.5	5.5	5	18.666666	37.666666
Lamphepat, Manipur SPCB	3	12	3.5	5	40.0833323	63.5833323
National Environmental Engineering Research Institute(NEERI), Nagpur	2.5	12	5	5	47.5833333	72.08333
National Environmental Engineering Research Institute(NEERI), Nagpur (December,2013)	2.5	12	5	5	48.25	72.75
Punjab Pollution Control Board, Ludhiana	3	7	3.5	5	19.5	38
Regional laboratory, Davengiri, Karnataka SPCB	3	12	4.5	5	54.333334	78.83333
Bio-lab, CPCB, Delhi	2.5	12	3.5	5	50.625	73.625
Bio-lab, CPCB, Delhi	3	12	3.5	5	47	70.5
Gujarat Pollution Control Board, Regional Office, Surat,	3	12	4.5	4	9.1666623	32.6666623
Madhya Pradesh Pollution Control Board, Singrauli	3	12	4.5	5	32.9999941	57.49999
Goa State Pollution Control Board, OPA	3	7	4.0	4	47.999995	66
Goa State Pollution Control Board,Codli	3	7	4.0	4	39.111106	57.11111

Event: A Scoring for sampling event details data entry in Field Protocol, B Scoring for Sampling Location details data entry in Field Protocol
 C Scoring for Sampling Location details data entry in Field Protocol,
 D Scoring for the Field measurement, E Scoring for Biological water quality assessment



CENTRAL POLLUTION CONTROL BOARD
Bio-Lab, CPCB, Delhi

G) Z-Score evaluation for individual Laboratory

Name of laboratories	Grand Total score of individual laboratories	Average grand Total Score	Standard Deviation	(Average –Individual lab score) =X	Z-score = X/Standard deviation	Assessment
Zonal Office –CPCB, Kolkatta	60	61.51453758	14.46859166	1.514537576	0.104677609	Excellent
Regional laboratory, Davengiri, Karnataka SPCB	71.49991	61.51453758	14.46859166	-9.985372424	-0.690141284	Excellent
Zonal Office, Bhopal, CPCB	46.23804	61.51453758	14.46859166	15.27649758	1.055838601	Good
Regional laboratory, Aurangabad, Maharashtra SPCB	64.1428	61.51453758	14.46859166	-2.628262424	-0.181652955	Excellent
Bio-lab, CPCB, Delhi	31	61.51453758	14.46859166	30.51453758	2.109019198	Improvement required
Bio-lab, CPCB, Delhi	31.5	61.51453758	14.46859166	30.01453758	2.074461584	Improvement required
Bhubaneshwar, Orissa SPCB	70.77272	61.51453758	14.46859166	-9.258182424	-0.639881382	Excellent
Lamphelpat, Manipur SPCB	76	61.51453758	14.46859166	-14.48546242	-1.001166027	Excellent
Shilong, Meghalaya SPCB	70.34375	61.51453758	14.46859166	-8.829212424	-0.610233023	Excellent
Lucknow, Uttar Pradesh Pollution Control Board	69.27272727	61.51453758	14.46859166	-7.758189697	-0.536209044	Excellent
Bio-lab, CPCB, Delhi	69.75	61.51453758	14.46859166	-8.235462424	-0.569195857	Excellent
Bio-lab, CPCB, Delhi	62.642848	61.51453758	14.46859166	-1.128310424	-0.077983431	Super excellent
Central laboratory, Gandhi Nagar, Kochi, Kerala SPCB	73.1818135	61.51453758	14.46859166	-11.66727592	-0.806386426	Excellent
Zonal Office, Bhopal, CPCB	70.83333333	61.51453758	14.46859166	-9.318795754	-0.644070686	Excellent
Regional laboratory, Davengiri, Karnataka SPCB	72.8333326	61.51453758	14.46859166	-11.31879502	-0.78230109	Excellent
Bhubaneshwar, Orissa SPCB	56.590892	61.51453758	14.46859166	4.923645576	0.340298883	Excellent
Bio-lab, CPCB, Delhi	67	61.51453758	14.46859166	-5.485462424	-0.379128982	Excellent
Bio-lab, CPCB, Delhi	37.666666	61.51453758	14.46859166	23.84787158	1.648251063	Good
Lamphelpat, Manipur SPCB	63.5833323	61.51453758	14.46859166	-2.068794724	-0.142985217	Excellent
National Environmental Engineering Research Institute (NEERI), Nagpur	72.0833333	61.51453758	14.46859166	-10.56879572	-0.730464718	Excellent
National Environmental Engineering Research Institute (NEERI), Nagpur (December, 2013)	72.75	61.51453758	14.46859166	-11.23546242	-0.776541538	Excellent
Punjab Pollution Control Board, Ludhiana	38	61.51453758	14.46859166	23.51453758	1.625212607	Good
Regional laboratory, Davengiri, Karnataka SPCB	78.833334	61.51453758	14.46859166	-17.31879642	-1.19699255	Excellent
Bio-lab, CPCB, Delhi	73.625	61.51453758	14.46859166	-12.11046242	-0.837017362	Excellent

Bio-lab, CPCB, Delhi	70.5	61.51453758	14.46859166	-8.985462424	-0.621032277	Excellent
Gujarat Pollution Control Board, Regional Office, Surat,	32.6666623	61.51453758	14.46859166	28.84787528	1.993827454	Good
Madhya Pradesh Pollution Control Board, Singrauli	57.49999	61.51453758	14.46859166	4.014543476	0.277466085	Excellent
Goa State Pollution Control Board	66	61.51453758	14.46859166	-4.485457424	-0.310013409	Excellent
Goa State Pollution Control Board	57.11111	61.51453758	14.46859166	4.403431576	0.304344174	Excellent

Z score = (- ve) = Excellent, (0) Super excellent, (0 – 1) Excellent, (1 – 2) Good, ≥ 2 Improvement required (Training), $\Rightarrow 2$ Rejected