

### Billing Proforma for Ambient Air Quality Monitored by : Jharkhand State Pollution Control Board

Name of city : Dhanbad  
Name of State : Jharkhand

S.No.	Sampling Location	Station Type	Station Code	Month	Year	Parameters Monitored	Remarks
1	Regional Office Dhanbad	R	44	December	2007	Meteorological Data SO <sub>2</sub> , NO <sub>x</sub> , RSPM, SPM	
2	MADA, Jharia	I	332	December	2007	SO <sub>2</sub> , NO <sub>x</sub> , RSPM, SPM	
3	PDIL, Sindi	R	46	December	2007	SO <sub>2</sub> , NO <sub>x</sub> , RSPM, SPM	

Kindly fill in 'R' if station falls in Residential Area 'I' if station in Industrial Area 'S' if station falls in Sensitive area

Total number of monitoring stations. = 03 (Three)

Amount to be released = Rs 4266 × 3 = 12798.00

In words (Rs. Twelve Thousand Seven Hundred Ninty Eight Only )

J.S.A

E.E

(S.S. Hoda)  
R.O. Dhanbad

**TABLE C : Summary of Ambient Air Quality Data Monitored by : Jharkhand State Pollution Control Board**

Name of City : Dhanbad  
Name of State : Jharkhand

S. No.	Sampling Location Address	Station Type	Station Code	Month and Year	SO <sub>2</sub>				NO <sub>x</sub>				RSPM					SPM				
					n	A.M.	S.D.	Max.	n	A.M.	S.D.	Max.	n	A.M.	G.M.	S.D.	Max.	n	A.M.	G.M.	S.D.	Max.
1	R.O Dhanbad	R	44	December 2007	39	21.37	5.45	40.80	39	51.54	7.95	89.52	20	162.04	166.67	43.25	245.00	20	303.04	266.26	191.83	875.00
2	MADA Jharia	I	332	December 2007	48	19.49	2.43	34.52	48	47.23	6.90	91.83	24	226.91	222.23	51.85	351.00	24	312.41	302.88	89.54	514.00
3	PDIL Sindri	R	46	December 2007	48	18.59	3.47	37.66	48	49.48	7.74	89.52	24	179.28	174.11	45.24	330.00	24	259.41	256.77	46.61	445.00

\* Kindly fill in 'R' if station falls in Residential Area 'I' if station in Industrial Area 'S' if station falls in Sensitive area

\* Kindly fill in Whether conditions as Clear / Cloudy/ Rainy/ Cycione/ Dust Storm/ Calm condition (one or more may be applicable)

Note n = No of observation (in days)  
A.M = Arithmetic mean in ug/m<sup>3</sup>  
S.D = Standard Deviation  
Max = Max value (24 hours average in ug/m<sup>3</sup>)  
G.M = Geometric Mean in ug/m<sup>3</sup>

(J.S.A)

(S.S. Hoda)  
R.O. Dhanbad

**TABLE D : Meteorological Data Monitored by : Jhankhand State Pollution Control Board**

Sampling Location Address : Regional Office, Dhanbad

Name of City : Dhanbad  
Name of State : Jharkhand

Station Type : R  
Station Code : 44  
Month : December  
Year : 2007

S. N O	Hrs	06-10				10-14				14-18				18-22				22-02				06-02				Weather Conditions	Remark	
		Date	Temp	R.H	W.S	W.D.	Temp	R.H	W.S	W.D.	Temp	R.H	W.S	W.D.	Temp	R.H	W.S	W.D.	Temp	R.H	W.S	W.D.	Temp.	R.H	W.S			W.D.
1	4/5-12-07	17.00	72.72	0.000	NNE	20.25	75.75	0.025	NNE	19.000	91.00	0.300	WWS	17.500	81.00	0.850	WWS	15.75	90.00	0.100	NNE	14.00	90.00	0.275	WWS	Clear		
2	6/7-12-07	16.25	74.60	0.025	NNE	19.30	77.50	0.075	NNE	18.25	86.25	0.326	WWS	16.50	83.25	0.475	NNE	-	-	-	-	-	-	-	-	-	Clear	
3	11/12-12-07	18.00	69.25	0.350	EEN	22.250	69.00	0.500	NNE	21.25	72.00	0.000	EEN	18.500	74.00	0.000	NNE	16.75	70.25	0.000	EEN	13.000	81.00	0.000	EEN	Clear		
4	13/14-12-07	17.500	70.25	0.100	NNE	22.25	65.00	0.375	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Clear		
5	17/18-12-07	13.50	67.60	0.850	NNE	16.250	75.75	0.925	EEN	19.125	79.75	0.375	NNE	17.75	74.00	0.275	WWN	16.125	76.50	0.400	WWN	14.125	72.50	0.475	WWN	Clear		
6	19/20-12-07	13.760	67.75	0.975	WWN	16.75	70.75	0.275	WWN	19.125	75.00	0.325	WWN	16.00	80.00	0.075	WWN	14.500	73.75	0.075	WWN	13.00	67.50	0.176	WWN	Clear		
7	26/27-12-07	13.250	62.60	0.060	NNE	17.50	76.25	0.375	NNE	18.50	40.00	0.000	NNE	17.00	32.75	0.000	WWS	14.75	57.50	0.025	WWS	12.75	62.75	0.025	WWS	Clear		
8	28/29-12-07	12.500	49.50	0.100	WWN	16.500	65.00	1.050	WWN	19.500	58.50	0.250	WWN	18.00	56.75	0.250	WWN	16.000	55.00	0.300	WWN	12.500	52.26	0.200	WWN	Clear		

\* Kindly fill in 'R' if station falls in Residential Area 'I' if station in Industrial Area 'S' if station falls in Sensitive area

\* Kindly fill in Whether conditions as Clear / Cloudy / Rainy/ Cycione/ Dust Storm/ Calm condition (one or more may be applicable)

Note Temp = Average Temperature ( in C)  
R.H = Average Relative Humidity (in %)

W.S = Average Wind Speed (in Km/Hr)  
W.D = Predominant Wind Direction

(J.S.A)

(S.S. Hoda)  
R.O. Dhanbad

**TABLE A : Ambient Air Quality Data for SO<sub>2</sub> and NO<sub>x</sub> Monitoring by : Jharkhand State Pollution Control Board**

Sampling Location Address : Regione Office Dhanbad

City : Dhanbad

State : Jharkhand

Station Code : 44

Station Type : R

Month: December

Year : 2007

Parameter	Units
SO <sub>2</sub>	ug/M <sup>3</sup>
NO <sub>x</sub>	ug/ m <sup>3</sup>

S. No	Hrs. Date	SO <sub>2</sub>								NO <sub>x</sub>								Weather Conditions	Remarks
		06-10	10-14	14-18	18-22	22-02	02-06	4 Hrs Max	24 Hrs-Avg	06-10	10-14	14-18	18-22	22-02	02-06	4 Hrs. Max	24 Hrs. Avg		
1	4/5-12-07	-	-	19.52	23.49	25.10	18.49	25.49	21.65	-	-	45.71	52.13	50.79	36.55	52.13	49.29	Clear	
2	6/7-12-07	18.13	17.43	16.73	19.52	-	-	19.52	17.52	41.90	44.44	45.71	49.52	-	-	49.52	45.39	Clear	
3	11/12-12-07	19.92	16.34	16.73	25.15	18.30	18.83	25.15	19.21	45.71	37.659	38.09	59.26	44.76	48.71	59.26	45.71	Clear	
4	13/14-12-07	20.22	26.74	-	-	25.10	24.55	26.74	24.15	45.71	62.98	-	-	55.23	50.63	55.23	51.11	Clear	
5	17/18-12-07	14.64	-	16.73	17.28	-	-	17.28	16.21	44.76	-	40.95	74.53	-	-	74.53	53.41	Clear	
6	19/20-12-07	27.20	20.22	21.62	34.52	23.71	40.80	40.80	28.01	68.57	48.28	52.06	81.90	58.41	89.52	89.52	66.45	Clear	
7	26/27-12-07	30.33	24.22	18.19	26.50	24.96	26.48	30.33	29.52	66.66	49.45	53.33	49.52	65.49	68.52	68.52	58.82	Clear	
8	28/29-12-07	15.34	16.73	14.64	13.25	13.60	16.03	16.73	14.76	44.44	39.36	49.52	44.44	36.19	39.28	49.52	42.20	Clear	

\* Kindly fill in 'R' if station falls in Residential Area 'I' if station in Industrial Area 'S' if station falls in Sensitive area

\* Kindly fill in Whether conditions as Clear / Cloudy / Rainy/ Cycione/ Dust Storm/ Calm condition (one or more may be applicable)

Note : 1- Kindly indicate reason if monitoring is not carried out for 24 hrs in a day or less than 8 days in a month

J.S.A

E.E

(S.S. Hoda)  
R.O. Dhanbad

**TABLE B : Ambient Air Quality Data for RSPM and SPM Monitoring by : Jharkhand State Pollution Control Board**

Sampling Location Address : Regione Office Dhanbad

City : Dhanbad

State : Jharkhand

Station Code : 44

Station Type : R

Month : December

Year : 2007

Parameter	Units
SO <sub>2</sub>	ug/m <sup>3</sup>
NO <sub>x</sub>	ug/ m <sup>3</sup>

S. No	Hrs. Date	RSPM					SPM					Weather Conditions	Remarks
		06-14	14-22	22-06	8 Hrs Max	24 Hrs Avg	06-14	14-22	22-06	8Hrs. Avg	24 Hrs. Avg		
1	4/5-12-07	-	116.00	126.00	126.00	121.00	-	165.00	170.00	170.00	167.50	Clear	
2	6/7-12-07	94.00	99.00	-	99.00	96.50	145.00	150.00	-	150.00	147.50	Clear	
3	11/12-12-07	226.00	224.00	182.00	228.00	210.66	779.00	875.00	786.00	875.00	746.66	Clear	
4	13/14-12-07	245.00	-	167.00	245.00	206.00	371.00	-	319.00	371.00	345.00	Clear	
5	17/18-12-07	165.00	150.00	-	165.00	157.50	210.00	200.00	-	210.00	205.00	Clear	
6	19/20-12-07	136.00	164.00	169.00	169.00	156.33	282.00	250.00	255.00	282.00	262.33	Clear	
7	26/27-12-07	207.00	188.00	233.00	233.00	209.33	320.00	310.00	326.00	326.00	318.66	Clear	
8	28/29-12-07	115.00	117.00	185.00	185.00	139.00	192.00	200.00	303.00	303.00	231.66	Clear	

\* Kindly fill in 'R' if station falls in Residential Area 'I' if station in Industrial Area 'S' if station falls in Sensitive area

\* Kindly fill in Whether conditions as Clear / Cloudy / Rainy/ Cyclone/ Dust Storm/ Calm condition (one or more may be applicable)

Note : 1- Kindly indicate reason if monitoring is not carried out for 24 hrs in a day or less than 8 days in a month

J.S.A

E.E

(S.S. Hoda)  
R.O. Dhanbad

**TABLE A : Ambient Air Quality Data for SO<sub>2</sub> and NO<sub>x</sub> Monitoring by : Jharkhand State Pollution Control Board**

Sampling Location Address : MADA, Jharia

City : Dhanbad

State : Jharkhand

Station Code : 332

Station Type : I

Month: December

Year : 2007

Parameter	Units
SO <sub>2</sub>	ug/M <sup>3</sup>
NO <sub>x</sub>	ug/M <sup>3</sup>

S. No	Hrs. Date	SO <sub>2</sub>								NO <sub>x</sub>								Weather Conditions	Remarks
		06-10	10-14	14-18	18-22	22-02	02-06	4 Hrs Max	24 Hrs-Avg	06-10	10-14	14-18	18-22	22-02	02-06	4 Hrs. Max	24 Hrs. Avg		
1	4/5-12-07	12.53	19.82	19.08	17.43	15.80	18.52	19.82	17.19	29.76	48.12	46.76	40.67	42.65	47.61	48.12	42.59	Clear	
2	6/7-12-07	19.61	20.70	22.75	24.22	20.16	19.90	24.22	21.22	41.66	43.65	49.45	50.79	42.68	40.37	50.79	44.76	Clear	
3	11/12-12-07	19.61	20.70	18.52	19.67	17.43	19.90	20.70	19.30	41.66	45.63	40.67	42.65	37.69	41.40	45.63	41.40	Clear	
4	13/14-12-07	16.73	26.16	20.92	18.83	16.89	15.80	26.16	19.22	39.04	49.60	49.52	43.80	47.61	42.65	49.60	45.65	Clear	
5	17/18-12-07	20.22	16.89	18.30	20.55	34.52	32.50	34.52	23.68	53.33	46.62	37.14	50.79	76.19	91.83	91.83	62.65	Clear	
6	19/20-12-07	16.73	18.83	15.16	15.35	16.21	19.33	19.33	16.93	46.66	44.76	43.80	52.79	50.47	44.51	52.79	47.16	Clear	
7	26/27-12-07	17.25	16.88	18.83	15.80	17.43	16.34	18.83	17.08	46.66	51.88	40.95	38.69	41.66	37.69	51.58	42.87	Clear	
8	28/29-12-07	17.43	21.62	24.41	18.83	21.79	23.71	24.41	21.29	47.61	63.49	53.33	41.90	39.99	58.41	63.49	50.78	Clear	

\* Kindly fill in 'R' if station falls in Residential Area 'I' if station in Industrial Area 'S' if station falls in Sensitive area

\* Kindly fill in Whether conditions as Clear / Cloudy / Rainy/ Cycione/ Dust Storm/ Calm condition (one or more may be applicable)

Note : 1- Kindly indicate reason if monitoring is not carried out for 24 hrs in a day or less than 8 days in a month

J.S.A

E.E

(S.S. Hoda)  
R.O. Dhanbad

**TABLE B : Ambient Air Quality Data for RSPM and SPM Monitoring by : Jharkhand State Pollution Control Board**

Sampling Location Address : MADA, Jharia

City : Dhanbad

State : Jharkhand

Station Code : 332

Station Type : I

Month : December

Year : 2007

Parameter	Units
SO <sub>2</sub>	ug/m <sup>3</sup>
NO <sub>x</sub>	ug/ m <sup>3</sup>

S. No	Hrs. Date	RSPM					SPM					Weather Conditions	Remarks
		06-14	14-22	22-06	8 Hrs Max	24 Hrs Avg	06-14	14-22	22-06	8Hrs. Avg	24 Hrs. Avg		
1	4/5-12-07	332.00	351.00	328.00	351.00	333.66	475.00	514.00	482.00	514.00	490.33	Clear	
2	6/7-12-07	191.00	314.00	272.00	314.00	259.00	318.00	492.00	417.00	492.00	409.00	Clear	
3	11/12-12-07	185.00	244.00	261.00	281.00	238.66	242.00	304.00	351.00	351.00	299.00	Clear	
4	13/14-12-07	177.00	247.00	254.00	254.00	226.00	225.00	313.00	318.00	318.00	285.00	Clear	
5	17/18-12-07	186.00	235.00	75.00	235.00	165.33	244.00	290.00	175.00	290.00	236.33	Clear	
6	19/20-12-07	180.00	205.00	210.00	210.00	198.33	233.00	263.00	266.00	266.00	254.00	Clear	
7	26/27-12-07	207.00	220.00	180.00	220.00	202.33	265.00	287.00	255.00	287.00	269.00	Clear	
8	28/29-12-07	191.00	201.00	190.00	201.00	194.00	252.00	263.00	254.00	263.00	256.33	Clear	

\* Kindly fill in 'R' if station falls in Residential Area 'I' if station in Industrial Area 'S' if station falls in Sensitive area

\* Kindly fill in Whether conditions as Clear / Cloudy / Rainy/ Cyclicone/ Dust Storm/ Calm condition (one or more may be applicable)

Note : 1- Kindly indicate reason if monitoring is not carried out for 24 hrs in a day or less than 8 days in a month

J.S.A

E.E

(S.S. Hoda)  
R.O. Dhanbad

**TABLE A : Ambient Air Quality Data for SO<sub>2</sub> and NO<sub>x</sub> Monitoring by : Jharkhand State Pollution Control Board**

Sampling Location Address : PDIL , Sindri

City : Dhanbad

State : Jharkhand

Station Code : 46

Station Type : R

Month: December

Year : 2007

Parameter	Units
SO <sub>2</sub>	ug/M <sup>3</sup>
NO <sub>x</sub>	ug/M <sup>3</sup>

S. No	Hrs. Date	SO <sub>2</sub>								NO <sub>x</sub>								Weather Conditions	Remarks
		06-10	10-14	14-18	18-22	22-02	02-06	4 Hrs Max	24 Hrs-Avg	06-10	10-14	14-18	18-22	22-02	02-06	4 Hrs. Max	24 Hrs. Avg		
1	4/5-12-07	11.50	16.88	12.55	19.82	14.64	15.80	19.82	15.19	33.33	50.79	34.26	45.44	39.99	40.67	50.79	40.75	Clear	
2	6/7-12-07	20.22	23.49	14.64	23.71	16.89	22.21	23.71	20.19	41.90	49.95	34.28	50.79	37.69	49.69	50.79	47.80	Clear	
3	11/12-12-07	19.52	21.29	21.62	22.02	16.21	17.43	22.02	19.66	55.87	61.48	59.66	40.95	42.85	47.61	61.48	51.40	Clear	
4	13/14-12-07	30.33	37.66	20.92	19.52	17.26	28.29	37.66	25.63	89.52	81.48	46.66	64.76	41.90	63.31	89.52	61.51	Clear	
5	17/18-12-07	14.71	15.69	16.73	15.16	17.26	15.16	17.28	15.78	44.64	44.76	46.19	39.04	41.90	43.80	44.76	41.72	Clear	
6	19/20-12-07	19.87	15.80	13.62	20.40	19.61	25.06	25.06	15.66	45.71	51.88	55.55	50.47	59.52	56.54	59.52	53.22	Clear	
7	26/27-12-07	18.83	14.64	18.83	14.16	20.70	29.99	29.99	19.52	41.90	48.57	67.30	55.55	58.53	72.28	72.28	57.37	Clear	
8	28/29-12-07	13.60	15.16	16.76	24.84	14.12	18.11	24.84	17.09	36.19	34.28	39.99	53.57	45.71	42.87	53.57	42.06	Clear	

\* Kindly fill in 'R' if station falls in Residential Area 'I' if station in Industrial Area 'S' if station falls in Sensitive area

\* Kindly fill in Whether conditions as Clear / Cloudy / Rainy/ Cycione/ Dust Storm/ Calm condition (one or more may be applicable)

Note : 1- Kindly indicate reason if monitoring is not carried out for 24 hrs in a day or less than 8 days in a month

J.S.A

E.E

(S.S. Hoda)  
R.O. Dhanbad

**TABLE B : Ambient Air Quality Data for RSPM and SPM Monitoring by : Jharkhand State Pollution Control Board**

Sampling Location Address : PDIL , Sindri

City : Dhanbad

State : Jharkhand

Station Code : 46

Station Type : R

Month : December

Year : 2007

Parameter	Units
SO <sub>2</sub>	ug/m <sup>3</sup>
NO <sub>x</sub>	ug/ m <sup>3</sup>

S. No	Hrs. Date	RSPM					SPM					Weather Conditions	Remarks
		06-14	14-22	22-06	8 Hrs Max	24 Hrs- Avg	06-14	14-22	22-06	8Hrs. Avg	24 Hrs. Avg		
1	4/5-12-07	106.00	120.00	111.00	120.00	112.33	192.00	210.00	195.00	210.00	199.00	Clear	
2	6/7-12-07	144.00	135.00	132.00	144.00	137.00	240.00	216.00	217.00	240.00	224.33	Clear	
3	11/12-12-07	158.00	179.00	198.00	198.00	178.33	268.00	300.00	298.00	300.00	288.66	Clear	
4	13/14-12-07	330.00	210.00	221.00	330.00	253.66	445.00	282.00	291.00	445.00	339.33	Clear	
5	17/18-12-07	149.00	137.00	160.00	160.00	148.66	206.00	200.00	226.00	226.00	210.66	Clear	
6	19/20-12-07	202.00	193.00	231.00	231.00	208.66	272.00	261.00	302.00	302.00	278.33	Clear	
7	26/27-12-07	166.00	211.00	229.00	229.00	202.00	236.00	288.00	310.00	310.00	278.00	Clear	
8	28/29-12-07	186.00	192.00	203.00	203.00	193.66	254.00	264.00	253.00	264.00	257.00	Clear	

\* Kindly fill in 'R' if station falls in Residential Area 'I' if station in Industrial Area 'S' if station falls in Sensitive area

\* Kindly fill in Whether conditions as Clear / Cloudy / Rainy/ Cycione/ Dust Storm/ Calm condition (one or more may be applicable)

Note : 1- Kindly indicate reason if monitoring is not carried out for 24 hrs in a day or less than 8 days in a month

J.S.A

E.E

(S.S. Hoda)  
R.O. Dhanbad