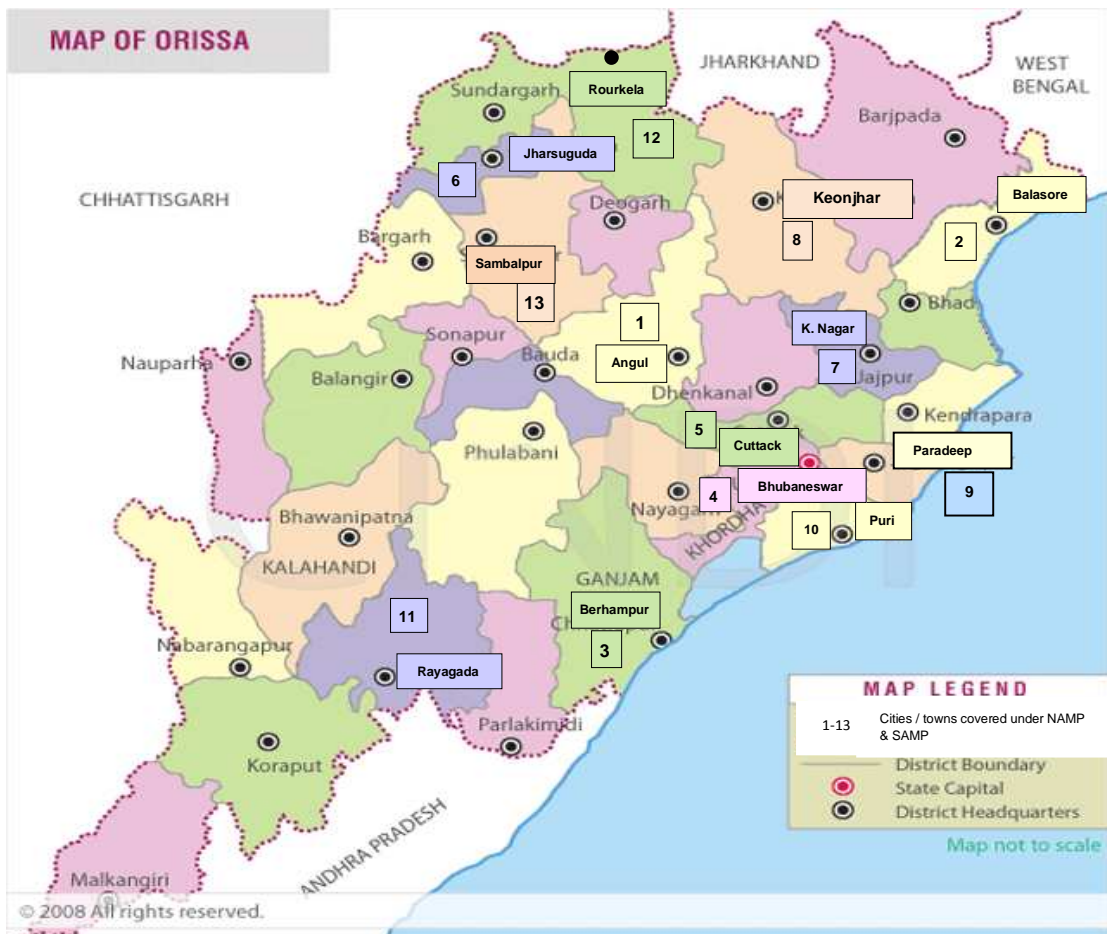


## AMBIENT NOISE LEVEL AND AIR QUALITY DURING DEEPAWALI, 2016 OF MAJOR CITIES / TOWNS OF ODISHA



### AMBIENT AIR QUALITY STANDARDS IN RESPECT OF NOISE

Category of Area/Zone	Limits in dB(A) Leq	
	Day Time (6.00 a.m. - 10.00 p.m.)	Night Time (10.00 p.m. - 6.00 a.m.)
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40

### NATIONAL AMBIENT AIR QUALITY STANDARDS (24 HOURLY)

SO <sub>2</sub> (µg/m <sup>3</sup> )	NO <sub>x</sub> (µg/m <sup>3</sup> )	PM <sub>10</sub> (µg/m <sup>3</sup> )	PM <sub>2.5</sub> (µg/m <sup>3</sup> )
80	80	100	60

## AMBIENT NOISE LEVEL AND AIR QUALITY DURING DEEPAWALI,2016 OF MAJOR CITIES/TOWNS OF ODISHA

### 1. ANGUL

- Latitude & Longitude :20<sup>0</sup>49'90.0''N /85<sup>0</sup>06'52.5''E
- Climate/Meteorology: Dry
- Population-43,795(as per 2011 census)
- Major land use: Residential& Commercial

#### DESCRIPTION OF MONITORING AREA:

1. Location-A (Residential Zone) - Amalapada
2. Location-B (Commercial Zone) - Bazar Chhak
3. Location-C (Silence Zone) - District Head Quarter Hospital
4. Location-D (Industrial Zone) - Hakimpada

#### NOISE LEVEL DURING DEEPAWALI FESTIVAL, 2016:

Location : A Amalapada	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
Time duration	Residential	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		51.6	102.2	66.5	47.8	98.5	70.6	Day time	55
19:00 to 20:00 Hr		52.7	93.3	61.6	48.6	109.9	80.5		
20:00 to 21:00 Hr		48.3	99.8	69.2	47.9	112.1	79.2		
21:00 to 22:00 Hr		47.1	90.3	63.7	48.1	112.0	80.1		
22:00 to 23:00 Hr		47.6	77.3	58.9	42.4	105.1	72.4	Night Time	45
23:00 to 24:00 Hr		38.8	81.4	54.3	42.4	100.1	73.7		

Location : B Bazar Chhak	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
Time duration	Commercial	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		57.0	104.9	71.9	63.6	107.1	74.3	Day time	65
19:00 to 20:00 Hr		59.1	99.5	65.3	62.8	107.0	78.2		
20:00 to 21:00 Hr		55.9	95.1	66.9	62.7	107.1	75.3		
21:00 to 22:00 Hr		62.2	107.0	75.2	60.1	107.0	75.7		
22:00 to 23:00 Hr		50.5	87.5	66.5	53.0	107.1	69.1	Night Time	55
23:00 to 24:00 Hr		40.8	96.0	65.1	53.8	100.5	66.6		

Location : C District Head Quarter Hospital	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
Time duration	Silence	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		49.3	102.0	66.3	48.7	93.8	66.4	Day time	50
19:00 to 20:00 Hr		46.0	88.8	60.9	48.9	96.2	68.9		
20:00 to 21:00 Hr		48.5	88.2	62.1	50.5	97.7	68.2		
21:00 to 22:00 Hr		45.1	96.4	62.7	51.4	102.6	71.3		
22:00 to 23:00 Hr		44.2	84.1	56.3	44.8	83.8	63.1	Night Time	40
23:00 to 24:00 Hr		39.8	71.9	49.6	43.6	102.4	69.9		

Location : D Hakimpada	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
Time duration	Industrial	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		48.4	90.5	58.8	51.2	105.6	68.6	Day time	75
19:00 to 20:00 Hr		47.3	91.7	61.1	60.2	107.0	67.6		
20:00 to 21:00 Hr		47.7	86.1	55.5	57.5	101.8	69.9		
21:00 to 22:00 Hr		47.3	90.0	60.2	45.9	91.4	54.3		
22:00 to 23:00 Hr		36.0	87.4	53.4	45.3	100.4	60.5	Night Time	70
23:00 to 24:00 Hr		48.6	69.7	53.6	42.5	94.0	54.8		

## AMBIENT AIR MONITORING DURING DEEPAWALI FESTIVAL, 2016

Monitoring Location	Parameters monitored					
	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)		
	SO <sub>2</sub>	NO <sub>x</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	PM <sub>10</sub>
1. Industrial Estate, Hakimpada	6.8	24.2	83	8.1	29.3	140
2. Nalco Township	7.2	25.0	75	10.2	27.7	197
3. Talcher Thermal	10.1	24.7	76	11.4	26.9	150
4. MCL area, Talcher	9.6	22.7	98	12.2	28.7	168
<b>NAAQ Standards</b>	<b>80</b>	<b>80</b>	<b>100</b>	<b>80</b>	<b>80</b>	<b>100</b>
• All values (24 hourly Average) are in µg/m <sup>3</sup>						

## 2. BALASORE

- Latitude & Longitude :21°30'22.3"N/86°55'8.8"
- Climate/Meteorology: Dry
- Population :1,44,373(as per 2011 census)
- Major land use: Residential & Commercial

### DESCRIPTION OF MONITORING AREA:

1. Location-A (Residential Zone)-Sahadevkhunta
2. Location-B (Commercial Zone)- Motiganj
3. Location-C (Silence Zone) -District Head Quarter Hospital
4. Location-D (Industrial Zone) -Balasore Industrial Estate

### NOISE LEVEL DURING DEEPAWALI FESTIVAL, 2016:

Location : A Sahadevkhunta	Area/ Zone	Normal Day (24.10.2016)			Deepawali day (30.10.2016)			Standard	
Time duration	Residential	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		51.4	62.3	56.2	63.2	74.4	68.2	Day time	55
19:00 to 20:00 Hr		54.3	67.2	60.4	71.3	82.6	75.4		
20:00 to 21:00 Hr		52.6	63.4	58.6	76.4	89.2	82.6		
21:00 to 22:00 Hr		46.2	59.6	52.4	73.6	85.3	78.3		
22:00 to 23:00 Hr		41.4	53.2	46.3	68.4	79.2	72.2	Night Time	45
23:00 to 24:00 Hr		37.2	48.4	42.2	61.2	72.3	60.4		

Location : B Motiganj	Area/ Zone	Normal Day (24.10.2016)			Deepawali day (30.10.2016)			Standard	
Time duration	Commercial	Lmin	Lmax	Leq dB(A)	Lmin	Lmax	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		55.6	66.4	60.2	72.6	86.2	78.4	Day time	65
19:00 to 20:00 Hr		62.2	71.5	66.3	77.4	88.4	82.2		
20:00 to 21:00 Hr		59.3	69.2	64.4	82.3	94.3	85.6		
21:00 to 22:00 Hr		54.6	63.4	58.6	87.4	98.6	90.3		
22:00 to 23:00 Hr		50.4	61.2	55.9	79.2	91.2	84.2	Night Time	55
23:00 to 24:00 Hr		47.2	58.4	52.6	72.3	83.3	67.3		

Location : C District Head Quarter Hospital	Area/ Zone	Normal Day (24.10.2016)			Deepawali day (30.10.2016)			Standard	
Time duration	Silence	Lmin	Lmax	Leq dB(A)	Lmin	Lmax	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		49.2	61.6	52.2	56.2	66.4	60.2	Day time	50
19:00 to 20:00 Hr		52.4	62.3	55.3	60.3	70.4	64.3		
20:00 to 21:00 Hr		49.6	58.2	51.2	66.2	78.3	68.2		
21:00 to 22:00 Hr		43.4	53.6	47.4	63.3	75.4	62.3		
22:00 to 23:00 Hr		38.2	49.3	42.3	59.2	68.3	60.2	Night Time	40
23:00 to 24:00 Hr		33.3	42.6	38.6	51.4	62.3	48.3		

Location : D Balasore Industrial Estate	Area/ Zone	Normal Day (24.10.2016)			Deepawali day (30.10.2016)			Standard	
Time duration	Industrial	Lmin	Lmax	Leq dB(A)	Lmin	Lmax	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		59.6	68.4	64.2	63.3	74.2	68.6	Day time	75
19:00 to 20:00 Hr		62.2	73.6	67.4	68.2	78.4	73.4		
20:00 to 21:00 Hr		57.3	68.2	63.2	73.4	84.2	78.3		
21:00 to 22:00 Hr		53.4	65.6	59.6	61.2	72.3	66.2		
22:00 to 23:00 Hr		50.6	62.3	56.2	57.3	67.2	62.4	Night Time	70
23:00 to 24:00 Hr		48.3	58.4	52.3	53.2	62.6	58.6		

### AMBIENT AIR MONITORING DURING DEEPAWALI FESTIVAL, 2016

Monitoring Location	Parameters Monitored					
	Normal Day (24.10.2016)			Deepawali day (30.10.2016)		
	SO <sub>2</sub>	NO <sub>2</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>2</sub>	PM <sub>10</sub>
1.Sahadevkhunta	BDL	10.9	77.0	BDL	14.5	121.0
2.Motiganj bazar	BDL	13.5	92.0	5.3	17.4	146.0
3.Dist. HQ Hospital	BDL	9.8	66.0	BDL	10.6	77.0
NAAQ Standards	80	80	100	80	80	100

• All values(24 hourly Avg) are in µg/m<sup>3</sup>

N.B:- BDL- Below Detectable Limit, SO<sub>2</sub>≤4

### 3. BERHAMPUR

- Latitude & Longitude :19°18'N/84°51'E
- Climate/ Meteorology :Dry
- Population :3,56,598(as per 2011 census)
- Major land use: Residential & Commercial

#### DESCRIPTION OF MONITORING AREA:

- 1 Location-A (Residential Zone) - Brahmanagar
- 2 Location-B (Commercial Zone) - Girija Market square
- 3 Location-C (Silence Zone) - MKCG Medical College Hospital Campus
- 4 Location-D (Industrial Zone) - Industrial Estate, Ankuli

#### NOISE LEVEL DURING DEEPAWALI FESTIVAL, 2016:

Location : A Brahmanagar	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
		Lmin	Lmax	Leq dB(A)	Lmin	Lmax	Leq dB(A)	Leq dB(A)	
Time duration	Residential							Day time	55
18:00 to 19:00 Hr		63.3	84.2	65.2	67.8	98.3	72.3		
19:00 to 20:00 Hr		64.5	81.1	71.0	65.2	93.7	72.8		
20:00 to 21:00 Hr		62.3	85.7	77.8	58.2	110.0	83.3		
21:00 to 22:00 Hr		65.1	80.6	63.4	66.4	115.1	76.3		
22:00 to 23:00 Hr		49.5	77.8	58.6	51.2	102.4	79.8	Night Time	45
23:00 to 24:00 Hr		42.7	70.6	53.8	55.7	78.3	59.0		

Location : B Girija Market square	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
		Lmin	Lmax	Leq dB(A)	Lmin	Lmax	Leq dB(A)	Leq dB(A)	
Time duration	Commercial							Day time	65
18:00 to 19:00 Hr		71.5	108.3	86.0	85.0	113.4	88.6		
19:00 to 20:00 Hr		73.2	115.3	88.4	87.1	118.5	91.5		
20:00 to 21:00 Hr		75.8	112.8	86.7	88.3	117.6	95.8		
21:00 to 22:00 Hr		68.4	118.4	82.6	94.8	105.9	88.5		
22:00 to 23:00 Hr		67.6	105.3	77.9	77.5	99.6	80.7	Night Time	55
23:00 to 24:00 Hr		65.3	82.6	72.4	75.4	95.7	80.5		

Location : C MKCG Medical College Hospital Campus	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
		Lmin	Lmax	Leq dB(A)	Lmin	Lmax	Leq dB(A)	Leq dB(A)	
Time duration	Silence							Day time	50
18:00 to 19:00 Hr		52.7	92.7	70.6	77.1	94.2	82.1		
19:00 to 20:00 Hr		55.9	92.4	62.5	62.2	98.1	72.3		
20:00 to 21:00 Hr		53.2	86.5	63.5	55.8	108.1	76.3		
21:00 to 22:00 Hr		54.7	82.7	63.2	65.8	100.5	75.5		
22:00 to 23:00 Hr		50.3	71.9	54.8	61.5	92.4	64.0	Night Time	40
23:00 to 24:00 Hr		46.3	77.4	53.2	54.7	86.6	64.7		

Location : D Industrial Estate, Ankuli	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
Time duration	Industrial	Lmin	Lmax	Leq dB(A)	Lmin	Lmax	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		65.4	93.0	68.5	71.5	102.6	80.6	Day time	75
19:00 to 20:00 Hr		68.1	91.6	82.1	68.5	105.6	85.6		
20:00 to 21:00 Hr		56.2	85.8	63.3	73.6	107.6	84.0		
21:00 to 22:00 Hr		50.9	80.2	52.5	61.5	98.8	80.4		
22:00 to 23:00 Hr		55.4	77.9	62.0	60.5	92.4	77.2	Night Time	70
23:00 to 24:00 Hr		41.5	71.3	52.2	52.6	77.6	64.6		

### AMBIENT AIR MONITORING DURING DEEPAWALI FESTIVAL, 2016

Monitoring Location	Parameters Monitored					
	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)		
	SO <sub>2</sub>	NO <sub>2</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>2</sub>	PM <sub>10</sub>
1.Brahmanagar	BDL	22.5	68	20.1	35.2	264
2.Girija market square	BDL	33.5	80	36.5	47.2	320
3.MKCG Medical College& Hospital	BDL	25.3	71	12.5	22.5	205
4.Industrial Estate, Ankuli	BDL	34.2	85	22.5	32.6	335
NAAQ Standards	80	80	100	80	80	100
*All values(24 hourly Avg) are in µg/m <sup>3</sup>						

N.B:- BDL- Below Detectable Limit,SO<sub>2</sub>≤4

## 4. BHUBANESWAR

- Latitude & Longitude : 20°16'48.2"N/85°48'46.2"E
- Climate/Meteorology :Dry
- Population :8,85,363(As per Census-2011)
- Major land use: Residential& Commercial

### DESCRIPTION OF MONITORING AREA:

1. Location-A(Residential Zone) - Nayapalli
2. Location-B(Commercial Zone) - Sahid Nagar
3. Location-C(Silence Zone) - Capital Hospital
4. Location-D(Industrial Zone) - Rasulgarh

### NOISE LEVEL DURING DEEPAWALI FESTIVAL, 2016:

Location: A Nayapalli	Area/ Zone	Normal day (24.10.2016)			Deepawali day (30.10.2016)			Standard	
Time duration	Residential	Lmin	Lmax	Leq dB(A)	Lmin	Lmax	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		50.7	85.0	64.8	52.7	83.1	66.1	Day time	55
19:00 to 20:00 Hr		56.0	82.1	69.1	55.8	95.3	77.5		
20:00 to 21:00 Hr		53.1	80.4	65.0	58.2	101.1	79.7		
21:00 to 22:00 Hr		56.9	77.8	67.3	55.3	81.2	67.5		
22:00 to 23:00 Hr		49.4	71.0	61.5	57.7	89.1	70.6	Night Time	45
23:00 to 24:00 Hr		51.4	77.0	63.3	40.6	86.7	63.9		
Location: B Sahid Nagar	Area/ Zone	Normal day (24.10.2016)			Deepawali day (30.10.2016)			Standard	
Time duration	Commercial	Lmin	Lmax	Leq dB(A)	Lmin	Lmax	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		57.1	98.1	73.0	62.9	85.1	73.9	Day time	65
19:00 to 20:00 Hr		62.3	97.0	76.1	64.4	99.8	77.0		
20:00 to 21:00 Hr		58.6	83.8	70.7	62.5	89.9	73.2		
21:00 to 22:00 Hr		58.5	86.4	71.5	62.3	91.2	74.8		
22:00 to 23:00 Hr		56.2	75.0	63.9	65.0	91.5	77.4	Night Time	55
23:00 to 24:00 Hr		45.8	71.1	57.5	43.5	89.4	70.0		
Location: C Capital Hospital	Area/ Zone	Normal day (24.10.2016)			Deepawali day (30.10.2016)			Standard	
Time duration	Silence	Lmin	Lmax	Leq dB(A)	Lmin	Lmax	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		50.3	74.5	59.7	51.2	82.6	61.3	Day time	50
19:00 to 20:00 Hr		49.7	86.5	62.6	57.0	84.8	69.5		
20:00 to 21:00 Hr		50.2	86.9	62.1	57.5	80.8	68.2		
21:00 to 22:00 Hr		50.2	72.9	57.9	49.5	81.3	59.9		
22:00 to 23:00 Hr		42.8	67.2	54.5	48.0	89.1	65.6	Night Time	40
23:00 to 24:00 Hr		39.5	67.8	46.6	45.5	82.7	61.5		
Location: D Rasulgarh	Area/ Zone	Normal day (24.10.2016)			Deepawali day (30.10.2016)			Standard	
Time duration	Industrial	Lmin	Lmax	Leq dB(A)	Lmin	Lmax	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		58.6	86.8	71.9	60.5	87.8	74.3	Day time	75
19:00 to 20:00 Hr		58.3	84.4	71.4	62.5	90.6	77.0		
20:00 to 21:00 Hr		53.7	88.1	73.6	63.9	93.0	76.2		
21:00 to 22:00 Hr		55.3	85.0	66.7	62.6	99.7	70.9		
22:00 to 23:00 Hr		40.8	75.6	58.5	59.3	92.1	72.6	Night Time	70
23:00 to 24:00 Hr		39.4	69.2	55.8	43.8	91.2	64.7		

## AMBIENT AIR MONITORING DURING DEEPAWALI FESTIVAL, 2016

Monitoring Location	Parameters monitored							
	Normal day (24.10.2016)				Deepawali day (30.10.2016)			
	SO <sub>2</sub>	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
1.Office Building	BDL	27.5	76	31	18.1	28.5	190	107
2.IRC Nayapalli	BDL	26.7	88	36	27.3	26.9	324	189
3.Capital Police Station	BDL	17.0	129	32	18.0	37.5	166	103
4.Patrapada	BDL	16.2	108	35	20.6	19.2	240	151
5.Chandrasekharapur	BDL	13.7	96	26	7.9	17.8	100	35
6.Palasuni water works	BDL	10.5	135	22	8.4	13.0	221	103
<b>NAAQ Standards</b>	<b>80</b>	<b>80</b>	<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>100</b>	<b>60</b>

- All values (24 hourly Average) are in  $\mu\text{g}/\text{m}^3$

N.B:- BDL- Below Detectable Limit,  $\text{SO}_2 \leq 4$

### 5. CUTTACK

- Latitude & Longitude : 20°01' N/84°58' E
- Climate/Meteorology: Dry
- Population :6,10,189 (as per 2011 census)
- Major land use: Residential & Commercial

#### DESCRIPTION OF MONITORING AREA:

1. Location-A (Residential Zone)- Suryavihar, Link Road
2. Location-B (Commercial Zone)- Badambadi
3. Location-C (Silence Zone - SCB Medical College & Hospital
4. Location-D (Industrial Zone) - Khapuria Industrial Estate

#### NOISE LEVEL DURING DEEPAWALI FESTIVAL, 2016:

Location : A Suryavihar Link Road	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
Time duration	Residential	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		57.4	87.2	64.2	61.7	95.1	67.2	Day time	55
19:00 to 20:00 Hr		57.6	84.5	70.0	59.0	102.2	74.9		
20:00 to 21:00 Hr		59.4	89.4	70.4	68.1	99.2	77.2		
21:00 to 22:00 Hr		59.7	88.6	72.6	63.1	106.0	77.4		
22:00 to 23:00 Hr		58.5	92.0	70.5	60.1	105.0	79.0	Night Time	45
23:00 to 24:00 Hr		57.7	90.7	71.9	52.4	99.1	73.6		

Location : B Badambadi	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
Time duration	Commercial	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		63.0	108.2	78.4	60.8	109.2	79.8	Day time	65
19:00 to 20:00 Hr		50.0	91.4	73.4	57.6	96.6	75.4		
20:00 to 21:00 Hr		58.9	101.9	77.6	70.7	107.6	79.1		
21:00 to 22:00 Hr		58.5	94.7	76.7	70.7	99.1	78.2		
22:00 to 23:00 Hr		59.5	97.5	74.9	61.1	103.8	77.4	Night Time	55
23:00 to 24:00 Hr		58.1	92.4	73.7	61.7	94.8	74.1		



Location : C SCB Medical College & Hospital	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
<b>Time duration</b>	<b>Silence</b>	<b>L<sub>min</sub></b>	<b>L<sub>max</sub></b>	<b>Leq dB(A)</b>	<b>L<sub>min</sub></b>	<b>L<sub>max</sub></b>	<b>Leq dB(A)</b>	<b>Leq dB(A)</b>	
18:00 to 19:00 Hr		45.6	92.4	61.0	48.1	81.9	69.8	Day time	<b>50</b>
19:00 to 20:00 Hr		57.0	90.4	72.9	52.5	106.7	74.4		
20:00 to 21:00 Hr		52.6	85.6	69.2	64.2	126.2	78.0		
21:00 to 22:00 Hr		52.8	87.8	66.6	59.1	107.2	73.7		
22:00 to 23:00 Hr		54.8	90.8	70.6	66.4	107.5	77.1	Night Time	<b>40</b>
23:00 to 24:00 Hr		49.9	94.1	66.9	52.1	90.9	70.2		

Location : D Khapuria Industrial Estate	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
<b>Time duration</b>	<b>Industrial</b>	<b>L<sub>min</sub></b>	<b>L<sub>max</sub></b>	<b>Leq dB(A)</b>	<b>L<sub>min</sub></b>	<b>L<sub>max</sub></b>	<b>Leq dB(A)</b>	<b>Leq dB(A)</b>	
18:00 to 19:00 Hr		58.6	89.3	73.3	59.0	109.3	77.1	Day time	<b>75</b>
19:00 to 20:00 Hr		50.4	57.0	62.9	52.6	111.8	79.1		
20:00 to 21:00 Hr		59.8	83.0	61.8	61.3	92.4	74.8		
21:00 to 22:00 Hr		52.1	85.5	65.6	67.1	110.3	85.1		
22:00 to 23:00 Hr		58.0	92.8	74.2	66.9	112.9	87.5	Night Time	<b>70</b>
23:00 to 24:00 Hr		56.3	97.7	66.1	58.0	96.4	73.4		

#### AMBIENT AIR MONITORING DURING DEEPAWALI FESTIVAL, 2016

Monitoring Location	Parameters monitored							
	Normal Day (24.10.2016)				Deepawali Day (30.10.2016)			
	SO <sub>2</sub>	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
1.On the Roof of PHD Office near Barabati Stadium	2.0	29.3	74.0	51.0	6.0	36.8	152.0	113.0
2.On the Roof of Regional Office Building, Suryavihar	2.0	28.7	70.0	42.0	5.4	33.3	177.0	140.0
3.On The Roof of Traffic Tower Badambadi	2.0	33.5	79.0	46.0	6.5	37.6	256.0	167.0
<b>NAAQ Standards</b>	<b>80</b>	<b>80</b>	<b>100</b>	60	<b>80</b>	<b>80</b>	<b>100</b>	60

• All values (24 hourly Average) are in µg/m<sup>3</sup>

N.B:- BDL- Below Detectable Limit, SO<sub>2</sub>≤4

## 6. JHARSUGUDA

- Latitude & Longitude :21°85'N/84°30'E
- Climate/Meteorology: Dry
- Population :97,730(as per 2011 census)
- Major land use: Residential & Commercial

#### DESCRIPTION OF MONITORING AREA:

1. Location-A (Residential Zone)- Near Puruna Basti
2. Location-B (Commercial Zone)- Near Jhanda Chowk
3. Location-C (Silence Zone)- Near District Head Quarter Hospital
4. Location-D (Industrial Zone)- Near Bombay Chowk

### NOISE LEVEL DURING DEEPAWALI FESTIVAL, 2016:

Location : A Near Puruna Basti	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
Time duration	Residential	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		58.6	69.0	63.5	72.0	84.5	78.5	Day time	55
19:00 to 20:00 Hr		55.9	70.5	61.7	80.4	86.7	84.6		
20:00 to 21:00 Hr		59.6	72.9	67.3	82.1	94.9	90.8		
21:00 to 22:00 Hr		54.8	68.8	63.4	76.4	91.8	84.7		
22:00 to 23:00 Hr		53.0	56.7	55.1	68.9	82.4	78.9	Night Time	45
23:00 to 24:00 Hr		48.4	53.6	51.9	61.8	73.3	69.0		

Location :B Near Jhanda Chowk	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
Time duration	Commercial	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		61.1	70.5	66.3	74.2	84.9	81.7	Day time	65
19:00 to 20:00 Hr		66.9	76.9	72.9	78.9	88.2	85.3		
20:00 to 21:00 Hr		68.3	78.4	75.8	86.4	91.7	89.0		
21:00 to 22:00 Hr		65.4	69.7	67.2	77.5	81.6	79.1		
22:00 to 23:00 Hr		56.0	61.6	59.1	68.3	75.0	73.4	Night Time	55
23:00 to 24:00 Hr		48.6	52.9	51.0	64.1	66.8	65.6		

Location : C District Head Quarter Hospital	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
Time duration	Silence	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		45.6	52.3	48.4	56.4	61.4	59.3	Day time	50
19:00 to 20:00 Hr		47.2	55.8	52.1	58.6	63.8	61.8		
20:00 to 21:00 Hr		46.8	57.4	53.9	55.9	66.9	63.7		
21:00 to 22:00 Hr		43.4	56.9	51.5	58.7	63.4	61.2		
22:00 to 23:00 Hr		41.5	50.7	46.8	48.0	60.7	56.5	Night Time	40
23:00 to 24:00 Hr		39.0	46.4	44.6	45.9	59.5	52.9		

Location : D Near Bombay Chowk	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
Time duration	Industrial	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		68.9	74.3	72.4	72.0	78.6	76.5	Day time	75
19:00 to 20:00 Hr		71.8	79.2	75.7	73.9	81.3	77.8		
20:00 to 21:00 Hr		73.1	77.8	75.6	70.3	84.2	81.0		
21:00 to 22:00 Hr		70.6	81.5	75.2	73.7	77.1	77.1		
22:00 to 23:00 Hr		65.7	75.1	71.9	72.1	80.4	78.9	Night Time	70
23:00 to 24:00 Hr		54.9	63.7	58.2	59.4	78.5	73.4		

### AMBIENT AIR MONITORING DURING DEEPAWALI FESTIVAL, 2016

Monitoring Location	Parameters monitored					
	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)		
	SO <sub>2</sub>	NO <sub>x</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	PM <sub>10</sub>
1.On the roof of Regional Office, SPCB Jharsuguda	13.3	24.0	72.0	26.2	34.0	107.0
NAAQ Standards	80	80	100	80	80	100

• All values (24 hourly Average) are in µg/m<sup>3</sup>

## 7. KALINGANAGAR

- Latitude & Longitude :20° 94' 60" N, 86° 13'01" E
- Climate/Meteorology : Dry
- Population :56,946(as per 2011 census)
- Major Land use : Residential & Commercial

### DESCRIPTION OF MONITORING AREA:

- 1 Location-A (Residential Zone)- Sapagadia
- 2 Location-B (Commercial Zone)- Gopabandhu Chowk
- 3 Location-C (Silence Zone)-Inside the premises of CHC, Jajpur road (Silence area)
4. Location-D (Industrial Zone)-Near Tata gate No.3,KNIC, Kalinganagar

### NOISE LEVEL DURING DEEPAWALI FESTIVAL, 2016:

Location : A Sapagadia	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
Time duration	Residential	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		44.3	79.8	53.3	52.2	114.7	87.1	Day time	55
19:00 to 20:00 Hr		43.0	65.9	54.9	60.5	106.9	90.1		
20:00 to 21:00 Hr		42.8	64.1	53.2	49.0	98.7	75.8		
21:00 to 22:00 Hr		40.3	71.4	50.2	45.3	88.4	74.6		
22:00 to 23:00 Hr		41.3	82.6	58.8	41.0	73.6	53.4	Night Time	45
23:00 to 24:00 Hr		45.1	73.0	51.3	45.7	93.2	66.8		

Location : B Gopabandhu Chowk	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
Time duration	Commercial	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		56.2	93.8	74.9	52.3	99.2	85.2	Day time	65
19:00 to 20:00 Hr		55.8	95.2	73.9	50.5	109.4	84.0		
20:00 to 21:00 Hr		45.1	83.7	66.9	53.6	98.9	86.2		
21:00 to 22:00 Hr		46.7	84.2	64.8	46.0	88.4	69.5		
22:00 to 23:00 Hr		45.9	84.9	62.9	45.8	91.3	72.1	Night Time	55
23:00 to 24:00 Hr		43.0	82.4	63.1	45.1	89.2	75.8		

Location : C Inside the premises of CHC, Jajpur road	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
Time duration	Silence	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		40.1	71.0	51.8	51.6	96.4	71.0	Day time	50
19:00 to 20:00 Hr		40.9	73.6	52.8	51.9	97.4	73.6		
20:00 to 21:00 Hr		37.1	77.9	53.2	48.5	93.8	77.9		
21:00 to 22:00 Hr		38.9	76.8	53.9	47.9	94.6	76.8		
22:00 to 23:00 Hr		40.5	84.2	66.0	45.1	88.6	84.2	Night Time	40
23:00 to 24:00 Hr		40.0	74.3	51.1	44.6	83.7	74.3		

Location : D Near Tata gate No.3 KNIC, Kalinganagar	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
Time duration	Industrial	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		45.2	93.1	73.9	56.0	110.6	83.8	Day time	75
19:00 to 20:00 Hr		44.2	92.4	72.9	58.0	122.6	91.8		
20:00 to 21:00 Hr		44.8	81.8	62.7	53.9	81.2	65.3		
21:00 to 22:00 Hr		48.2	92.4	63.9	54.5	88.8	78.3		
22:00 to 23:00 Hr		46.2	90.0	64.4	55.6	86.9	66.9	Night Time	70
23:00 to 24:00 Hr		44.7	98.1	66.1	53.0	84.9	72.4		

### AMBIENT AIR MONITORING DURING DEEPAWALI FESTIVAL, 2016

Monitoring Location	Parameters monitored					
	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)		
	SO <sub>2</sub>	NO <sub>x</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	PM <sub>10</sub>
1.Roof of Tata steel officers' mess, Duburi	BDL	11.6	92	BDL	14.6	149
2.Roof of NINL Guest House	BDL	9.2	97	BDL	12.9	137
3.Regional Office Building, Common Facility Centre, Kalinganagar	BDL	9.4	91	BDL	11.6	114
NAAQ Standards	80	80	100	80	80	100
<ul style="list-style-type: none"> <li>All values (24 hourly Average) are in µg/m<sup>3</sup></li> </ul>						

N.B:- BDL- Below Detectable Limit, SO<sub>2</sub>≤4

### 8. KEONJHAR

- Latitude & Longitude :21<sup>0</sup> 39.270 N /85<sup>0</sup> 36.577 E
- Climate/Meteorology: Dry
- Population :60,590(as per 2011 census)
- Major land use: Residential& Commercial

### DESCRIPTION OF MONITORING AREA:

1. Location-A (Residential Zone)-Baniapat chowk
2. Location-B (Commercial Zone) -Punjabi Chowk
3. Location-C (Silence Zone)-Govt. Hospital

### Noise Level during Deepawali festival, 2016:

Location : A Baniapat chowk	Area/ Zone	Normal Day (24.10.2016)			Deepawali day (30.10.2016)			Standard	
Time duration	Residential	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		52.8	89.2	68.3	54.0	82.1	71.6	Day time	55
19:00 to 20:00 Hr		54.8	86.5	72.5	68.2	95.4	81.9		
20:00 to 21:00 Hr		56.0	79.7	67.4	64.3	86.5	75.4		
21:00 to 22:00 Hr		55.1	85.2	68.0	55.1	93.6	75.2		
22:00 to 23:00 Hr		57.0	80.8	66.4	50.7	82.1	66.9	Night Time	45
23:00 to 24:00 Hr		40.5	55.3	48.9	44.1	58.2	52.6		

Location :B Punjabi Chowk	Area/ Zone	Normal Day (24.10.2016)			Deepawali day (30.10.2016)			Standard	
Time duration	Commercial	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		53.3	84.1	70.1	55.9	92.1	75.6	Day time	65
19:00 to 20:00 Hr		61.9	88.3	75.5	65.6	99.8	89.2		
20:00 to 21:00 Hr		68.1	92.4	82.7	58.9	110.3	91.9		
21:00 to 22:00 Hr		65.8	90.1	79.0	59.5	98.7	82.0		
22:00 to 23:00 Hr		60.1	81.4	68.3	51.9	84.4	75.0	Night Time	55
23:00 to 24:00 Hr		52.7	71.9	62.1	50.7	66.3	66.8		

Location : C Govt. Hospital	Area/ Zone	Normal Day (24.10.2016)			Deepawali day (30.10.2016)			Standard	
Time duration	Silence	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		52.7	78.6	66.7	53.2	89.5	72.3	Day time	50
19:00 to 20:00 Hr		55.4	81.3	70.1	59.0	92.9	75.9		
20:00 to 21:00 Hr		51.0	74.9	68.8	57.3	106.7	80.4		
21:00 to 22:00 Hr		49.9	69.9	60.1	55.8	87.4	72.5		
22:00 to 23:00 Hr		42.3	58.7	49.6	42.5	62.1	50.4	Night Time	40
23:00 to 24:00 Hr		39.8	50.1	46.3	40.5	55.3	48.1		

## AMBIENT AIR MONITORING DURING DEEPAWALI FESTIVAL, 2016

Monitoring Location	Parameters monitored					
	Normal Day (24.10.2016)			Deepawali day (30.10.2016)		
	SO <sub>2</sub>	NO <sub>x</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	PM <sub>10</sub>
1. Regional Office Building	BDL	13.6	65	BDL	21.3	106
2.Punjabi Chowk	BDL	23.1	176	BDL	29.7	223
NAAQ Standards	80	80	100	80	80	100

• All values (24 hourly Average) are in µg/m<sup>3</sup>

N.B:- BDL- Below Detectable Limit, SO<sub>2</sub>≤4

## 9. Paradeep

- Latitude & Longitude :20<sup>0</sup> 16' 27" N, 86<sup>0</sup> 38'24" E
- Climate/Meteorology : Dry
- Population :68585 (as per 2011 census)
- Major Land use : Residential, Commercial & Industrial

### DESCRIPTION OF MONITORING AREA:

- 4 Location-A (Residential Zone)- PPT Colony, Madhuban, Paradeep
- 5 Location-B (Commercial Zone)- Badpadia Market, Paradeep
- 6 Location-C (Silence Zone)- Community Health Centre, Paradeep
5. Location-D (Industrial Zone)- IFFCO Ltd. Paradeep

**NOISE LEVEL DURING DEEPAWALI FESTIVAL, 2016:**

Location : A PPT Colony, Madhuban, Paradeep	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
<b>Time duration</b>	<b>Residential</b>	<b>L<sub>min</sub></b>	<b>L<sub>max</sub></b>	<b>Leq dB(A)</b>	<b>L<sub>min</sub></b>	<b>L<sub>max</sub></b>	<b>Leq dB(A)</b>	<b>Leq dB(A)</b>	
18:00 to 19:00 Hr		48.5	83.4	61.0	45.6	83.8	63.4	Day time	<b>55</b>
19:00 to 20:00 Hr		39.7	68.3	50.8	58.9	119.4	77.4		
20:00 to 21:00 Hr		41.0	100.7	70.9	50.3	91.5	72.4		
21:00 to 22:00 Hr		41.9	77.5	53.9	49.9	107.1	81.1		
22:00 to 23:00 Hr		44.9	63.9	51.3	52.8	112.5	66.5	Night Time	<b>45</b>
23:00 to 24:00 Hr		38.0	88.3	54.1	37.5	81.8	58.9		

Location : B Badpadia Market, Paradeep	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
<b>Time duration</b>	<b>Commercial</b>	<b>L<sub>min</sub></b>	<b>L<sub>max</sub></b>	<b>Leq dB(A)</b>	<b>L<sub>min</sub></b>	<b>L<sub>max</sub></b>	<b>Leq dB(A)</b>	<b>Leq dB(A)</b>	
18:00 to 19:00 Hr		53.9	91.1	69.2	51.0	96.3	70.8	Day time	<b>65</b>
19:00 to 20:00 Hr		49.8	81.2	59.5	40.8	92.7	72.9		
20:00 to 21:00 Hr		43.4	81.9	60.0	51.5	99.1	72.5		
21:00 to 22:00 Hr		48.9	89.2	68.0	50.8	90.9	70.1		
22:00 to 23:00 Hr		58.1	99.3	61.7	41.2	83.6	64.5	Night Time	<b>55</b>
23:00 to 24:00 Hr		41.7	93.5	58.9	47.0	80.4	71.7		

Location : C Community Health Centre, Paradeep	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
<b>Time duration</b>	<b>Silence</b>	<b>L<sub>min</sub></b>	<b>L<sub>max</sub></b>	<b>Leq dB(A)</b>	<b>L<sub>min</sub></b>	<b>L<sub>max</sub></b>	<b>Leq dB(A)</b>	<b>Leq dB(A)</b>	
18:00 to 19:00 Hr		41.1	85.1	56.9	48.9	96.7	75.1	Day time	<b>50</b>
19:00 to 20:00 Hr		44.7	77.8	64.4	53.6	96.4	71.0		
20:00 to 21:00 Hr		45.7	86.0	56.0	52.9	93.0	67.6		
21:00 to 22:00 Hr		43.9	85.5	58.5	48.6	101.7	74.2		
22:00 to 23:00 Hr		42.2	75.8	53.5	46.4	86.3	64.5	Night Time	<b>40</b>
23:00 to 24:00 Hr		37.1	80.9	49.9	45.7	82	61.5		

Location : D IFFCO Ltd. Paradeep	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
<b>Time duration</b>	<b>Industrial</b>	<b>L<sub>min</sub></b>	<b>L<sub>max</sub></b>	<b>Leq dB(A)</b>	<b>L<sub>min</sub></b>	<b>L<sub>max</sub></b>	<b>Leq dB(A)</b>	<b>Leq dB(A)</b>	
18:00 to 19:00 Hr		56.0	83.8	61.1	53.8	80.0	63.1	Day time	<b>75</b>
19:00 to 20:00 Hr		53.0	89.1	65.4	37.0	99.3	70.6		
20:00 to 21:00 Hr		51.6	81.6	61.0	40.9	87.9	66.6		
21:00 to 22:00 Hr		44.9	84.0	55.9	40.8	78.3	63.3		
22:00 to 23:00 Hr		49.4	81.3	62.4	30.5	92.5	70.3	Night Time	<b>70</b>
23:00 to 24:00 Hr		57.9	93.1	55.7	39.8	85.0	69.5		

## AMBIENT AIR MONITORING DURING DEEPAWALI FESTIVAL, 2016

Monitoring Location	Parameters monitored					
	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)		
	SO <sub>2</sub>	NO <sub>x</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	PM <sub>10</sub>
1.On the roof of STP Building, IFFCO, Paradeep	21.7	12.0	184	32.0	18.6	191
2.On the roof PPL Guest House, PPL Paradeep	23.8	12.6	123	33.1	17.3	143
3.On the roof PPT Staff Quarters, PPT Paradeep	22.4	13.2	203	43.0	21.8	231
<b>NAAQ Standards</b>	<b>80</b>	<b>80</b>	<b>100</b>	<b>80</b>	<b>80</b>	<b>100</b>
<ul style="list-style-type: none"> <li>All values (24 hourly Average) are in µg/m<sup>3</sup></li> </ul>						

### 10. PURI

- Latitude & Longitude : 19°16'17.1" N/ 85°49'57.4" E
- Climate/Meteorology: Dry
- Population :2,00,564(as per 2011 census)
- Major land use: Residential

#### DESCRIPTION OF MONITORING AREA:

1. Location-A (Residential Zone)-Kumutisahi, Old Sadar lane
2. Location-B (Commercial Zone)-Gundicha Temple
3. Location-C (Silence Zone)-District Head Quarter Hospital

#### NOISE LEVEL DURING DEEPAWALI FESTIVAL, 2016:

Location: A Kumutisahi, Old Sadar lane,Puri	Area/ Zone	Normal day (24.10.2016)			Deepawali day (30.10.2016)			Standard	
Time duration	Residential	Lmin	Lmax	Leq dB(A)	Lmin	Lmax	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		49.0	89.7	66.2	54.9	101.5	78.7	Day time	55
19:00 to 20:00 Hr		46.9	73.0	61.2	53.8	114.9	88.6		
20:00 to 21:00 Hr		46.8	83.3	66.1	53.5	120.2	91.8		
21:00 to 22:00 Hr		48.0	73.2	60.1	50.3	99.7	78.6		
22:00 to 23:00 Hr		45.4	74.0	57.7	55.7	100.6	77.2	Night Time	45
23:00 to 24:00 Hr		46.4	81.8	60.8	53.0	96.4	73.8		

Location: B Sri Mandir, Puri	Area/ Zone	Normal day (24.10.2016)			Deepawali day (30.10.2016)			Standard	
Time duration	Commercial	Lmin	Lmax	Leq dB(A)	Lmin	Lmax	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		65.9	95.1	76.3	61.3	97.2	77.9	Day time	65
19:00 to 20:00 Hr		64.9	92.7	73.3	61.6	106.4	84.0		
20:00 to 21:00 Hr		60.8	93.6	74.5	63.0	105.5	82.7		
21:00 to 22:00 Hr		60.8	83.0	68.6	56.3	93.7	76.3		
22:00 to 23:00 Hr		59.0	90.5	72.9	59.2	95.0	75.6	Night Time	55
23:00 to 24:00 Hr		56.3	82.8	67.1	57.0	93.8	71.9		

Location: C District Head Quarter Hospital	Area/ Zone	Normal day (24.10.2016)			Deepawali day (30.10.2016)			Standard	
Time duration	Silence	Lmin	Lmax	Leq dB(A)	Lmin	Lmax	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		50.5	79.2	62.1	55.4	93.8	73.0	Day time	50
19:00 to 20:00 Hr		54.3	65.6	59.0	56.5	95.5	73.5		
20:00 to 21:00 Hr		53.6	70.0	58.9	55.8	90.4	73.0		
21:00 to 22:00 Hr		51.6	66.2	57.9	51.8	94.6	76.2		
22:00 to 23:00 Hr		51.8	71.4	58.8	53.8	88.2	68.9	Night Time	40
23:00 to 24:00 Hr		51.6	69.6	57.5	50.3	79.2	65.3		

## AMBIENT AIR MONITORING DURING DEEPAWALI FESTIVAL, 2016

Monitoring Location	Parameters monitored					
	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)		
	SO <sub>2</sub>	NO <sub>x</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	PM <sub>10</sub>
Sadar Police station	BDL	17.1	199	16.3	17.9	367
Town Police Station	BDL	13.6	181	10.1	17.7	246
<b>NAAQ Standards</b>	<b>80</b>	<b>80</b>	<b>100</b>	<b>80</b>	<b>80</b>	<b>100</b>

• All values (24 hourly Average) are in µg/m<sup>3</sup>

N.B:- BDL- Below Detectable Limit, SO<sub>2</sub>≤4

## 11. RAYAGADA

- Latitude & Longitude : 19°10'.724'' N/83°25'.142'' E
- Climate/Meteorology: Dry
- Population : 71,208(as per 2011 census)
- Major land use: Residential & Commercial

### DESCRIPTION OF MONITORING AREA:

1. Location-A (Residential Zone)-Indiranagar
2. Location-B (Commercial Zone)-Main market
3. Location-C (Silence Zone)-District Head Quarter Hospital
4. Location-D (Industrial)-Tumbiguda

### NOISE LEVEL DURING DEEPAWALI FESTIVAL, 2016:

Location : A Indiranagar	Area/ Zone	Normal Day (24.10.2016)			Deepawali day (30.10.2016)			Standard	
Time duration	Residential	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		45.8	91.6	68.7	47.3	107.2	81.6	Day time	55
19:00 to 20:00 Hr		43.4	93.4	69.4	53.3	126.3	101.2		
20:00 to 21:00 Hr		42.6	88.1	65.7	48.1	97.4	80.2		
21:00 to 22:00 Hr		54.7	88.8	66.7	41.1	90.3	69.8		
22:00 to 23:00 Hr		40.4	84.8	57.8	38.8	92.1	65.1	Night Time	45
23:00 to 24:00 Hr		37.6	66.8	50.7	39.3	68.3	57.9		



Location : B Main market	Area/ Zone	Normal Day (24.10.2016)			Deepawali day (30.10.2016)			Standard	
Time duration	Commercial	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		60.9	99.3	77.7	57.1	120.2	91.3	Day time	65
19:00 to 20:00 Hr		56.5	96.4	74.5	46.5	108.0	80.5		
20:00 to 21:00 Hr		58.2	98.8	77.3	52.8	103.5	78.0		
21:00 to 22:00 Hr		56.5	97.1	69.9	41.1	90.1	74.5		
22:00 to 23:00 Hr		41.8	77.3	61.4	33.2	78.3	62.3	Night Time	55
23:00 to 24:00 Hr		25.6	83.3	61.7	51.6	84.2	63.7		

Location : C District Head Quarter Hospital	Area/ Zone	Normal Day (24.10.2016)			Deepawali day (30.10.2016)			Standard	
Time duration	Silence	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		42.7	82.4	61.0	45.5	96.2	72.6	Day time	50
19:00 to 20:00 Hr		38.2	76.5	61.1	47.8	98.2	76.1		
20:00 to 21:00 Hr		45.4	71.2	54.3	50.7	89.9	71.3		
21:00 to 22:00 Hr		43.5	60.9	49.3	42.0	90.7	68.7		
22:00 to 23:00 Hr		36.8	73.4	50.8	44.5	84.5	63.3	Night Time	40
23:00 to 24:00 Hr		40.6	65.9	51.0	50.9	83.1	62.1		

Location : D Tumbiguda	Area/ Zone	Normal Day (24.10.2016)			Deepawali day (30.10.2016)			Standard	
Time duration	Industrial	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		42.5	94.8	71.6	44.3	97.2	75.1	Day time	75
19:00 to 20:00 Hr		57.4	97.5	73.8	48.9	113.6	85.6		
20:00 to 21:00 Hr		39.4	83.1	68.5	39.2	98.9	73.8		
21:00 to 22:00 Hr		50.9	87.8	73.1	65.0	91.5	78.1		
22:00 to 23:00 Hr		48.1	80.6	58.0	41.1	87.4	67.1	Night Time	70
23:00 to 24:00 Hr		36.0	85.8	54.9	35.5	67.4	58.4		

### AMBIENT AIR MONITORING DURING DEEPAWALI FESTIVAL, 2016

Monitoring Location	Parameters monitored							
	Normal Day (24.10.2016)				Deepawali Day (30.10.2016)			
	SO <sub>2</sub>	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
1.On the roof of Regional office Building	BDL	18.3	85	42	13.6	27.0	166	114
<b>NAAQ Standards</b>	<b>80</b>	<b>80</b>	<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>100</b>	<b>60</b>
<ul style="list-style-type: none"> <li>All values (24 hourly Average) are in µg/m<sup>3</sup></li> </ul>								

## 12. ROURKELA

- Latitude & Longitude :22.2492°N, 84.8828°E
- Climate/Metrology :Dry
- Population :3,20,040(as per 2011 census)
- Major land use : Residential &Commercial

### DESCRIPTION OF MONITORING AREA:

1. Location-A (Residential Zone)- Sector-4
2. Location-B (Commercial Zone)- BisraChowk
3. Location-C (Silence Zone)- IGH, Steel Township
4. Location-D(Industrial Zone) - In front of main gate of RSP(SAIL)

### NOISE LEVEL DURING DEEPAWALI FESTIVAL, 2016:

Location :A Sector-4	Area/ Zone	Normal Day (24.10.2016)			Deepawali day (30.10.2016)			Standard	
		L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
Time duration	Residential	46.6	59.1	48.7	47.3	60.3	49.5	Day time	55
18:00 to 19:00 Hr		47.3	61.3	49.3	50.8	72.5	52.8		
19:00 to 20:00 Hr		50.6	65.1	53.5	55.3	80.3	67.3		
20:00 to 21:00 Hr		51.3	66.6	53.8	56.4	81.5	67.7		
21:00 to 22:00 Hr		51.6	67.0	53.9	55.8	80.8	57.0	Night Time	45
22:00 to 23:00 Hr		49.3	65.5	50.3	48.5	61.6	51.2		
23:00 to 24:00 Hr									

Location : B Bisra Chowk	Area/ Zone	Normal Day (24.10.2016)			Deepawali day (30.10.2016)			Standard	
		L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
Time duration	Commercial	44.5	90.3	71.7	48.8	91.6	72.3	Day time	65
18:00 to 19:00 Hr		48.3	88.5	70.8	49.5	92.8	73.5		
19:00 to 20:00 Hr		48.5	89.3	70.3	51.5	92.5	72.8		
20:00 to 21:00 Hr		46.2	91.6	69.8	55.5	98.3	75.3		
21:00 to 22:00 Hr		47.7	87.5	70.0	54.6	96.3	74.2	Night Time	55
22:00 to 23:00 Hr		46.3	85.3	68.2	54.2	95.3	73.8		
23:00 to 24:00 Hr									

Location : C IGH, Steel Township	Area/ Zone	Normal Day (24.10.2016)			Deepawali day (30.10.2016)			Standard	
		L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
Time duration	Silence	41.2	55.3	43.4	42.8	60.3	44.6	Day time	50
18:00 to 19:00 Hr		42.5	56.0	43.5	40.3	61.5	44.8		
19:00 to 20:00 Hr		43.3	58.8	45.3	40.8	72.3	46.8		
20:00 to 21:00 Hr		43.8	59.6	45.5	45.3	75.5	48.3		
21:00 to 22:00 Hr		42.5	58.6	44.6	43.1	70.6	45.6	Night Time	40
22:00 to 23:00 Hr		40.0	57.2	43.0	43.2	70.0	45.1		
23:00 to 24:00 Hr									

Location : D In front of main gate of RSP(SAIL)	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
Time duration	Industrial	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		47.3	62.5	50.6	45.5	63.5	51.2	Day time	75
19:00 to 20:00 Hr		48.6	61.3	51.1	46.3	66.3	51.8		
20:00 to 21:00 Hr		43.8	60.9	51.3	47.7	67.4	53.2		
21:00 to 22:00 Hr		45.3	62.3	52.3	46.8	66.6	52.5		
22:00 to 23:00 Hr		46.4	63.3	51.2	45.5	65.6	51.5	Night Time	70
23:00 to 24:00 Hr		44.3	61.7	50.8	45.3	64.8	50.9		

#### AMBIENT AIR MONITORING DURING DEEPAWALI FESTIVAL, 2016

Monitoring Location	Parameters monitored					
	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)		
	SO <sub>2</sub>	NO <sub>x</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	PM <sub>10</sub>
1.RO SPCB, Rourkela	6.2	12.8	90	10.4	18.7	128
2.IDL, Sonaparbat	6.8	12.2	95	18.3	25.8	212
3.DISIR, Rajgangpur	15.3	16.0	111	29.6	34.6	143
<b>NAAQ Standards</b>	<b>80</b>	<b>80</b>	<b>100</b>	<b>80</b>	<b>80</b>	<b>100</b>
<ul style="list-style-type: none"> <li>All values (24 hourly Average) are in µg/m<sup>3</sup></li> </ul>						

### 13. SAMBALPUR

- Latitude & Longitude : 20<sup>0</sup>47'N / 83<sup>0</sup>97' E
- Climate/Meteorology :Dry
- Population :1,89,366(as per 2011 census)
- Major land use: Residential& Commercial

#### DESCRIPTION OF MONITORING AREA:

1. Location-A (Residential Zone) -Ainthapalli
2. Location-B (Commercial Zone) -Goal Bazar Chowk
3. Location-C (Silence Zone) -Dist Head Quarter Hospital, Modipara

#### NOISE LEVEL DURING DEEPAWALI FESTIVAL, 2016:

Location : A Ainthapalli	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
Time duration	Residential	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		38.2	68.3	55.2	42.6	92.3	64.2	Day time	55
19:00 to 20:00 Hr		34.0	64.3	52.0	36.4	90.5	66.3		
20:00 to 21:00 Hr		36.4	65.6	46.6	38.2	82.3	58.3		
21:00 to 22:00 Hr		32.4	58.2	44.4	44.1	78.1	52.3		
22:00 to 23:00 Hr		37.0	56.4	38.6	38.6	68.9	44.2	Night Time	45
23:00 to 24:00 Hr		30.2	52.5	36.2	32.4	64.4	42.5		

Location : B Goal Bazar Chowk	Area/ Zone	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)			Standard	
Time duration	Commercial	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		38.2	82.4	58.6	71.6	92.8	76.4	Day time	65
19:00 to 20:00 Hr		44.6	78.2	52.8	65.2	88.0	71.3		
20:00 to 21:00 Hr		36.8	67.4	61.2	56.4	82.8	67.2		
21:00 to 22:00 Hr		36.5	64.0	56.4	55.8	81.4	66.8		
22:00 to 23:00 Hr		37.0	55.6	40.0	44.2	80.2	59.3	Night Time	55
23:00 to 24:00 Hr		37.6	59.2	38.2	44.0	78.8	52.6		

Location : C Dist Head Quarter Hospital Modipara	Area/ Zone	Normal Day (24.10.2016)			Deepawali day (30.10.2016)			Standard	
Time duration	Silence	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	L <sub>min</sub>	L <sub>max</sub>	Leq dB(A)	Leq dB(A)	
18:00 to 19:00 Hr		40.8	73.2	61.4	57.3	95.9	69.6	Day time	50
19:00 to 20:00 Hr		39.6	70.8	59.9	59.2	97.2	71.1		
20:00 to 21:00 Hr		38.2	69.9	57.2	55.4	92.2	66.2		
21:00 to 22:00 Hr		37.2	69.8	54.4	54.2	90.1	64.4		
22:00 to 23:00 Hr		34.1	61.9	49.6	37.8	69.9	57.3	Night Time	40
23:00 to 24:00 Hr		32.8	59.6	44.2	36.1	65.8	52.6		

#### AMBIENT AIR MONITORING DURING DEEPAWALI FESTIVAL, 2016

Monitoring Location	Parameters monitored					
	Normal Day (24.10.2016)			Deepawali Day (30.10.2016)		
	SO <sub>2</sub>	NO <sub>x</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	PM <sub>10</sub>
1.Ainthapalli	4.3	17.8	75.0	7.2	24.3	103.0
2.Golebazar	5.2	21.8	90.0	8.3	29.5	109.0
3.Dist Head Quarter Hospital, Modipara	4.8	18.7	71.0	6.8	26.2	93.0
<b>NAAQ Standards</b>	<b>80</b>	<b>80</b>	<b>100</b>	<b>80</b>	<b>80</b>	<b>100</b>

• All values (24 hourly Average) are in µg/m<sup>3</sup>

