BASE LINE ENVIRONMENTAL MONITORING REPORT

For

M/s: Subhas Chand Mukesh Chand
for an area of 123.66 Hectare. M.L No.-03/ 93A
Village – Bonda Gav, Tehsil - Weir,
District – Bharatpur,
RAJASTHAN.

Season: Summer

(1st March -2016 to 31st May-2016)

Sponsor

M/s. Enkay Enviro Services Pvt Ltd
L-G-6, Lower Ground Floor, Corporate Park,
Gopal Bari, Ajmer Road,
Jaipur – 302 001

CONDUCTED BY:

VISON LABS
Analytical Services & Environmental Consultants

H.No.16-11-23/37/A, 2nd Floor
Opp: R.T.A Office, Musaarambagh, Hyderabad
Tel Fax No: 040 -24544320, 65792001.
Email: info@visonlabs.com & vison.labs@gmail.com
Website: www.visonlabs.com

Accredited by: MOEF&CC, NABET (QCI), NABL, ISO:9001:2008 & OHSAS:180001:2007

R E P O R T

For

M/s.Subhas Chand Mukesh Chand for an area of 123.66 Hectare. M.L No.-03/ 93A Village – Bonda Gav, Tehsil - Weir, District – Bharatpur,

RAJASTHAN.

For and behalf of Vison Labs

Approved By : T Laxmikanth Reddy

Signed :

Position : Chief Executive

Date : June - 2016

This report has been prepared by Vison Labs with all reasonable skill, care and diligence within the terms of the contract with the client, incorporating our General Terms and Conditions of Business and taking account of the resources devoted to it by agreement with the client.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known, any such party relies on the report at their own risk.

1.0 SCOPE OF WORK

M/s. Enkay Enviro Services Pvt Ltd entrusted the job of environmental monitoring, sampling analysis and data generation to M/s Vison Labs, Hyderabad as per EESPL/ADM/WO/002-M/Gen./2015-16/001/VL-067 dated 24.02.2016 for Summer season 2015-2016 (March 1st 2016 to May 31.05.2016)

Monitoring of Meteorological Data, Ambient Air Quality, Water quality, Soil Quality and Ambient Noise Quality measurement are part of the scope of work given to M/s Vison Labs. The environmental monitoring has been carried out at the following locations:

A] Meteorological Station at Project Site. **N 27^{0}0'00.5 E 77^{0}8'25.9"**

B] Ambient Air Quality Locations:

Location Code	Location Name	Sample Collection Details	CO-Ordinates
AAQ- 1	Mine Site	Office Building	N 27^{0}0'00.5 E 77^{0}8'25.9"
AAQ- 2	Jagjiwanpura	Mr.Doulat S/o.Komal Singh	N 27^{0}1'56.7E 77^{0}7'58.6"
AAQ- 3	Bhondagaon	Mr.Hari Singh S/o Mr.Jagan	N 27^{0}1'10.9E 77^{0}8'52.5"
AAQ- 4	Raipur	MrThan Singh S/o Mr.Set Singh	N 27^{0}0'06.1E 77^{0}8'43.3"
AAQ- 5	Sita	Mr.Guman Singh S/o Mr.Khuvi Ram	N 27^{0}59'19.9 E 77^{0}7'20.7"
AAQ- 6	Hathori	Mr.Beenvodh S/o Mr.Prathivodh	N 26^{0}59'46.2 E 77^{0}6'33.2"
AAQ- 7	Nimli	Mr.Mahesh S/o Mr.Ram dayal	N 27^{0}01'51.5 E 77^{0}6'04.6"

C] Ambient Noise Quality Locations:

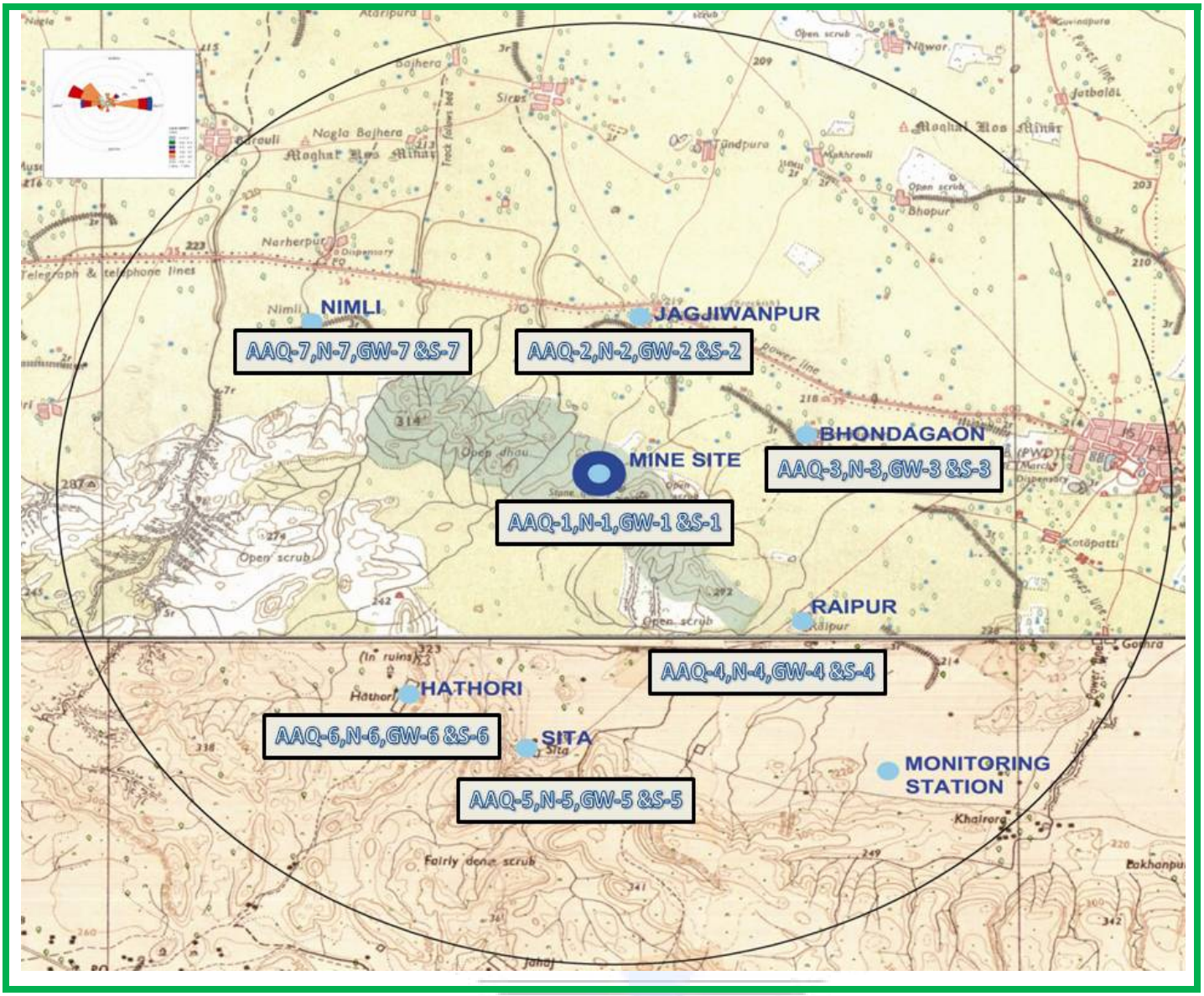
Location Code	Location Name	Sample Collection Details	Co-ordinates
N – 1	Mine Site	Entrance Gate of Mines	N 27^{0}0'00.5 E 77^{0}8'25.9"
N – 2	Jagjiwanpura	Primary School	N 27^{0}1'56.7E 77^{0}7'58.6"
N – 3	Bhondagaon	Near Hanuman ji Temple	N 27^{0}1'10.9E 77^{0}8'52.5"
N – 4	Raipur	Primary School	N 27^{0}0'06.1E 77^{0}8'43.3"
N – 5	Sita	Primary School	N 26^{0}59'19.9 E 77^{0}7'20.7"
N – 6	Hathori	Primary School	N 26^{0}59'46.2 E 77^{0}6'33.2"
N – 7	Nimli	Near Hanuman Temple	N 27^{0}01'51.5 E 77^{0}6'04.6"

D] Water Quality Locations:

Location Code	Location Name	Sample Collection Details	Co-Ordinates
GW-1	Mine Site	Back Side of Mine office Building	N 27^{0}0'00.7 E 77^{0}8'25.1"
GW-2	Jagjiwanpura	Near Sivaji Temple	N 27^{0}1'56.6E 77^{0}7'43.6"
GW-3	Bhondagaon	Near Hanuman ji Temple	N 27^{0}1'13.6E 77^{0}8'44.8"
GW-4	Raipur	Back Side of Primary School	N 27^{0}0'01.9E 77^{0}8'34.4"
GW-5	Sita	Near Bus Stand	N 26^{0}7'47.5 E 77^{0}7'47.6"
GW-6	Hathori	Near Primary School	N 27^{0}00'6.1 E 77^{0}6'29.2"
GW-7	Nimli	Near Govt School	N 27^{0}02'10.1 E 77^{0}6'08.3"

E] Soil Quality Locations:

Location Code	Location Name	Sample Collection Details	Co-ordinates
S – 1	Mine Site	Beside of Office Building	N 27^{0}0'00.1 E 77^{0}8'24.8"
S – 2	Jagjiwanpura	Near Sivaji Temple	N 27^{0}1'52.6E 77^{0}8'06.8"
S – 3	Bhondagaon	Near Hanuman ji Temple	N 27^{0}1'09.3E 77^{0}8'42.7"
S – 4	Raipur	Back Side of Primary School	N 27^{0}0'06.7E 77^{0}8'37.5"
S – 5	Sita	Near Primary School	N 26^{0}59'25.2 E 77^{0}7'21.2"
S – 6	Hathori	Near Mr.Beenvodh House	N 26^{0}59'45.1 E 77^{0}6'29.2"
S– 7	Nimli	Near Govt School	N 27^{0}02'10.1 E 77^{0}6'08.3"



MONITORING AND ANALYSIS METHODOLOGY

The consultant had Pre-identified the monitoring stations for Meteorological Data, Air, Water, Soil and Noise. Time bound program for carrying out fieldwork was prepared and was followed as far as possible. The IS methods are followed to decide the monitoring stations, analysis of different sample and also alternative methods are used, where the cross verification is required, alternative methods are used.

Meteorological Data:

An auto weather monitoring station was installed during the study period to record various meteorological parameters on hourly basis to understand the wind pattern, Temperature variation, solar insulation and relative humidity variation etc.

Ambient Air Quality Monitoring:

Fine Particulate Samplers (FPS) has been used for $PM_{2.5}$ Sampling. Respirable Dust Samplers (RDS) with gaseous attachment have been used for PM_{10} Sampling. RDS with Gaseous attachment assembly is used for the collection of gaseous pollutants such as SO_2 & NO_2. The details of the instrument used for sampling, testing methods are given below:

Ambient Air monitoring instruments

Instrument	Make	Model No.	Range and Sensitivity	
Dust Sampler (DS)	M/s. ECO TECH Instruments Pvt. Ltd	COMBO-AAS-271	2.3 m^3/hr ±0.03 m^3/min (PM-10) 1.0m^3/hr ($PM_{2.5}$) ±0.03 m^3/min	0 – 3 LPM ± 0.2 LPM (gases)

Testing Method to be followed for Ambient Air Quality

Particular		Testing Method to be Followed
Ambient Air Monitoring Parameters		
A	PM_{10}	IS-5182 (part – 23) 2006
B	$PM_{2.5}$	RTI(Research Triangle Institute) (Gravimetric Ana Revision-07 Aug14-2003)
C	SO_2 (Sulfur Dioxide)	IS 5182 (Part – II) 2001, with Improved West & Gaeke Method
D	NO_2 (Oxides of Nitrogen)	Modified Jacobs – Hochheiser Method / Arsenite Method (IS 5182 Part IV)2011
E	Carbon Monoxide	NDIR Spectroscopy method

Noise Level Measurement

Instant sound level meter is used for the collection of data related to noise at an interval of one hour per reading. Noise level for 24 hours was conducted during one week period at pre-decided location. The details of the instrument used for the sampling is mentioned in the separate annexure under the heading of Details of instruments & Apparatus.

Noise (Sound) Measuring Instrument

Instrument	Make	Model No.	Instrument Identification	Detection Limit
Integrated Sound Level Measurement Instrument Standard Accessories	HTC	SL-1352	EHS/INST/158	Lo 30-80dB Hi 80-130dB

Testing Method to be followed

Particular		Testing Method to be Followed
A	Noise Level in dB (A) for continuous 24 hours at 1 hour interval	IS:9876 2001, IS:4758,1968

Water and Soil Quality Survey

Water samples were collected in Pre-sterilized sampling container. Chemical and Metals analysis was carried out as per standard Methods for water and Surface water Analysis, Published by AWWA, APHA, etc.

Quality Assurance

VISON LABS is accredited and Recognized by Ministry of Environment Forests and Climat Change, GOVT. OF INDIA and follows quality systems as per ISO 9001:2008. The QA/QC procedures are laid prior to sample collection and laboratory analysis. It includes the standard procedures of sample collection, preservation, transportation and laboratory analysis with all documented procedures and continuous monitoring of Quality Control Division.

Results of Survey Data

The Survey results of Meteorological Data, Ambient Air Quality, Ambient Noise Monitoring, Soil and Water Sampling analysis are presented below.

Meteorological Data

Percentage frequencies of wind in 16 directions have been computed from the recorded data during the study period [1st March 2016 to 31st May 2016] for 24 hourly intervals to plot wind rose. Fig. Represents the summary of the wind pattern is given blow of the study period. The hourly meteorological data recorded is given in **Annexure-I.**

THE SUMMARY OF THE WIND PATTERN

S.No	Wind Direction	0.5-2.1 Speed m/s	>= 2.1 Speed m/s	Total
1.	N	19	26	45
2.	NNE	16	17	33
3.	NE	9	7	16
4.	ENE	27	40	67
5.	E	35	18	53
6.	ESE	41	30	71
7.	SE	6	18	24
8.	SSE	1	16	17
9.	S	3	12	15
10.	SSW	12	36	48
11.	SW	262	513	775
12.	WSW	120	281	401
13.	W	25	80	105
14.	WNW	11	14	25
15.	NW	8	13	21
16.	NNW	9	16	25
Sub-Total				1741
Calms				466
Missing/Incomplete				1
Total				2208

SITE SPECIFIC WIND ROSE

The predominant wind direction during this Study period is observed to be blowing SSW,SW directions Wind speed during this period is 2.17 m/s. Calm wind during this period 21.11 %. The recorded meteorological data summer of study period at project site is given below.

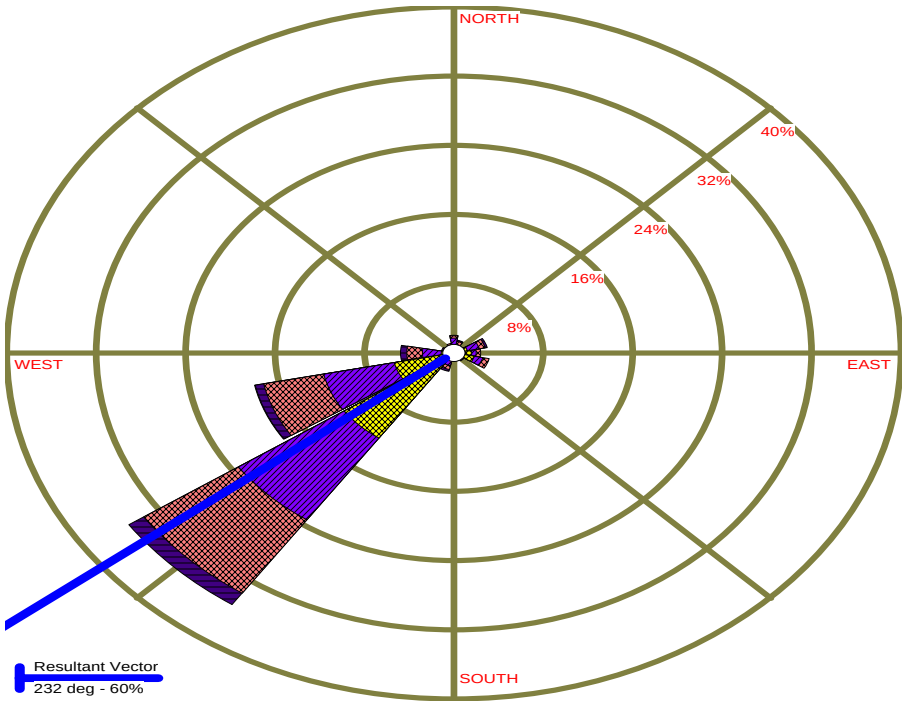
Month	**Temperature (^{0}C)**		**Relative Humidity (%)**		**Rainfall in mm**		**Wind Speed mph**	
	Max	Min	Max	Min	Max	Min	Max	Min
March – 2016	38.7	11.6	69	5	0	0	16	<1.0
April – 2016	41.8	19.1	49	4	0	0	16	<1.0
May – 2016	46.5	21.9	88	4	0	0	20	< 1.0

WIND ROSE PLOT:

Station # 12 - Subhas Chand Mukesh Chand Village - Bonda Gav, Tehsil - Weir, District - Bharatpur, RJ

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:

Wind blowing SW and SSW directions only

DATA PERIOD:

Start Date: 3/1/2016 - 00:00
End Date: 5/31/2016 - 23:00

TOTAL COUNT:	CALM WINDS:
2207 hrs.	**21.11%**

AVG. WIND SPEED:

2.17 m/s

COMPANY NAME:

Vison Labs,Hyderabad

MODELER:

Vijay Kumar Reddy.Kuchuru

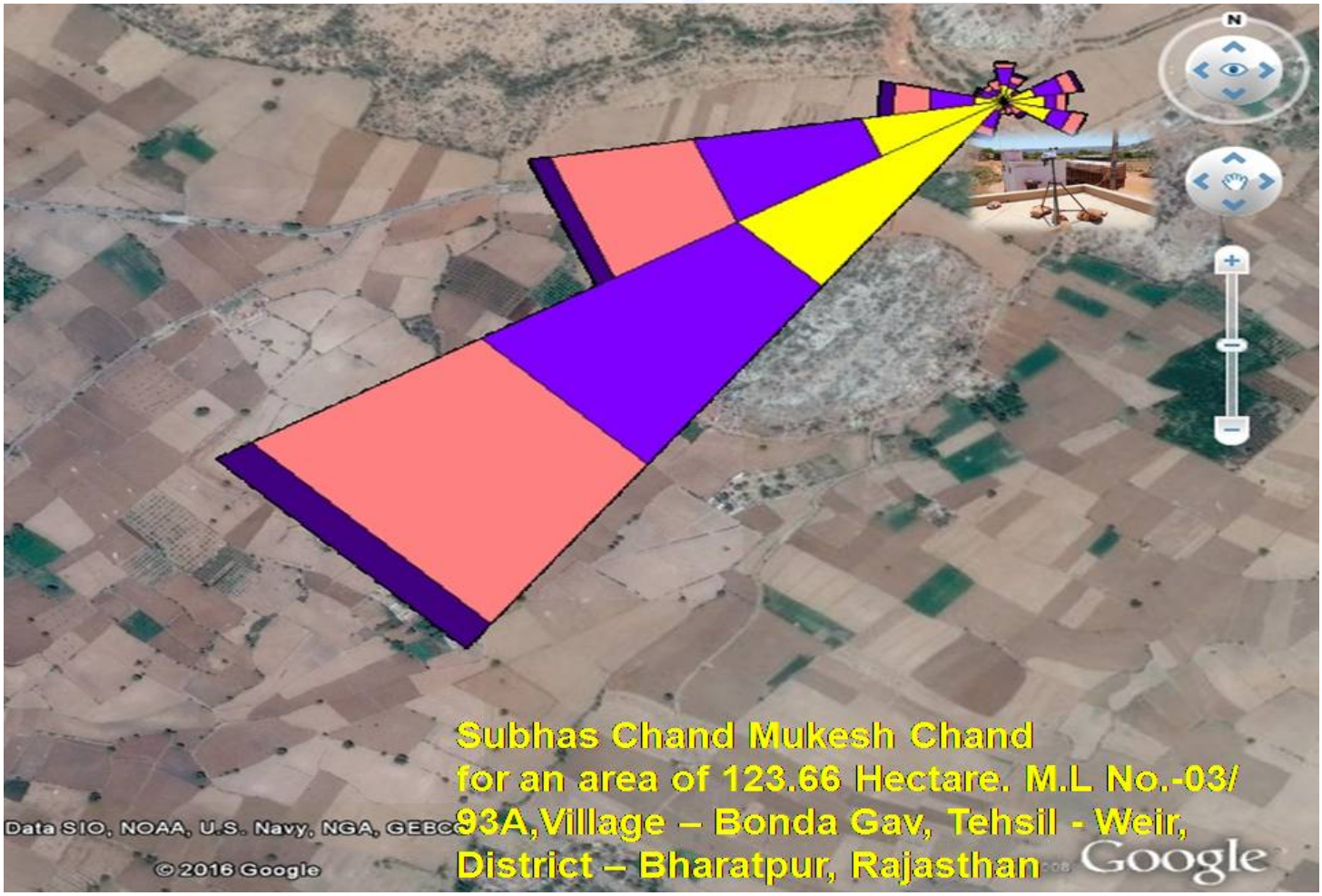
DATE:

6/16/2016

PROJECT NO.:

as Chand Mukesh Cl

WRPLOT View - Lakes Environmental Software



WIND ROSE DIAGRAMS

Ambient Air Quality Monitoring Tested Results

The Ambient Air Quality has been monitored at Seven locations as per work order. The tables showing Ambient Air Quality tested Results in three months winter season.

Location Name : Mine Area (Mine - AAQ-1)					**Sampling Duration 24 hrs period**	
Date		**PM_{10} µg/m^3**	**$PM_{2.5}$ µg/m^3**	**SO_2 µg/m^3**	**NO_2 µg/m^3**	**CO µg/m^3**
Standards		**100 max**	**60 max**	**80 max**	**80 max**	**2000 max**
March-2016						
1st Week	07.03.2016	56.0	31.4	5.1	21.2	658
	08.03.2016	61.8	31.5	5.9	18.6	958
2nd Week	14.03.2016	58.9	31.8	6.4	14.6	684
	15.03.2016	51.3	27.2	5.8	19.9	758
3rd Week	21.03.2016	59.9	32.9	6.9	16.7	986
	22.03.2016	62.5	36.9	6.4	13.8	587
4th Week	28.03.2016	57.9	29.0	5.8	19.7	586
	29.03.2016	68.8	36.5	6.4	16.8	986
April-2016						
5th Week	04.04.2016	70.3	38.0	5.9	19.6	849
	05.04.2016	71.0	41.2	6.4	16.5	896
6th Week	11.04.2016	65.3	35.3	5.1	14.9	987
	12.04.2016	64.9	34.4	4.9	16.3	859
7th Week	18.04.2016	71.6	40.8	5.6	18.0	864
	19.04.2016	75.3	38.4	6.8	17.6	798
8th Week	25.04.2016	65.9	34.9	5.9	19.0	986
	26.04.2016	63.0	32.1	5.8	14.8	958
May-2016						
9th Week	2.05.2016	60.4	33.8	5.4	16.3	867
	03.05.2016	72.5	39.9	5.6	20.0	894
10th Week	09.05.2016	73.8	41.3	5.9	18.9	688
	10.05.2016	61.9	33.4	5.0	16.4	956
11th Week	16.05.2016	68.0	37.4	5.8	18.0	787
	17.05.2016	70.3	40.1	5.0	16.4	896
12th Week	23.05.2016	65.6	34.1	5.8	18.3	912
	24.05.2016	59.9	31.7	5.9	14.9	946
13th Week	30.05.2016	64.3	36.0	6.0	15.6	896
	31.05.2016	72.5	41.3	6.3	16.8	936
Arithmetic mean		**65.1**	**35.4**	**5.8**	**17.3**	**853**
Maximum		**75.3**	**41.3**	**6.9**	**21.2**	**987**
Minimum		**51.3**	**27.2**	**4.9**	**13.8**	**586**
Standard Deviation		**6.1**	**4.0**	**0.5**	**1.9**	**123.7**
98th percentile		**74.6**	**41.3**	**6.9**	**20.6**	**986.5**

Location Name : Jagjiwanpura (AAQ-2)					Sampling Duration 24 hrs period	
Date		**PM_{10} µg/m^3**	**$PM_{2.5}$ µg/m^3**	**SO_2 µg/m^3**	**NO_2 µg/m^3**	**CO µg/m^3**
Standards		**100 max**	**60 max**	**80 max**	**80 max**	**2000 max**
March-2016						
1st Week	07.03.2016	51.6	28.9	5.3	16.8	846
	08.03.2016	54.8	27.9	5.9	17.0	997
2nd Week	14.03.2016	53.6	28.9	6.4	19.6	968
	15.03.2016	58.9	31.2	5.8	18.3	986
3rd Week	21.03.2016	59.9	32.9	5.9	16.8	948
	22.03.2016	61.5	36.3	5.4	17.9	846
4th Week	28.03.2016	52.5	26.3	5.9	16.8	879
	29.03.2016	54.8	29.0	6.1	16.0	958
April - 2016						
5th Week	04.04.2016	55.0	29.7	5.6	17.9	976
	05.04.2016	56.2	32.6	5.3	18.3	989
6th Week	11.04.2016	51.8	28.0	5.8	16.7	869
	12.04.2016	53.4	28.3	5.9	19.0	798
7th Week	18.04.2016	56.9	32.4	5.7	16.5	689
	19.04.2016	58.9	30.0	5.3	14.9	960
8th Week	25.04.2016	64.2	34.0	5.9	16.9	946
	26.04.2016	61.3	31.3	5.3	18.0	950
May - 2016						
9th Week	2.05.2016	58.9	33.0	5.1	16.2	968
	03.05.2016	63.6	35.0	5.9	17.9	978
10th Week	09.05.2016	67.2	37.6	6.0	19.3	936
	10.05.2016	59.7	32.2	5.4	16.9	943
11th Week	16.05.2016	56.3	31.0	5.6	17.3	989
	17.05.2016	61.0	34.8	5.8	19.3	942
12th Week	23.05.2016	55.4	28.8	5.9	17.3	946
	24.05.2016	58.0	30.7	5.4	18.9	875
13th Week	30.05.2016	56.9	31.9	5.1	19.0	936
	31.05.2016	64.2	36.6	6.2	16.1	846
Arithmetic mean		**57.9**	**31.5**	**5.7**	**17.5**	**921.7**
Maximum		**67.2**	**37.6**	**6.4**	**19.6**	**997**
Minimum		**51.6**	**26.3**	**5.1**	**14.9**	**689**
Standard Deviation		**4.1**	**3.0**	**0.3**	**1.2**	**72.0**
98th percentile		**65.7**	**37.1**	**6.3**	**19.5**	**993**

Location Name : Bhondagaon (AAQ-3)					Sampling Duration 24 hrs period	
Date		**PM_{10} µg/m^3**	**$PM_{2.5}$ µg/m^3**	**SO_2 µg/m^3**	**NO_2 µg/m^3**	**CO µg/m^3**
Standards		**100 max**	**60 max**	**80 max**	**80 max**	**2000 max**
March-2016						
1st Week	09.03.2016	48.9	27.4	5.6	18.9	789
	10.03.2016	57.6	29.6	5.8	17.0	689
2nd Week	16.03.2016	52.6	28.4	5.7	16.9	987
	17.03.2016	53.4	28.3	5.9	19.4	758
3rd Week	23.03.2016	57.9	31.8	5.3	16.9	769
	24.03.2016	56.0	33.0	5.6	18.8	869
4th Week	30.03.2016	51.3	25.7	6.3	16.9	849
	31.03.2016	54.6	28.9	5.9	17.9	897
April - 2016						
5th Week	06.04.2016	56.9	30.7	6.4	13.8	868
	07.04.2016	58.3	33.8	6.8	16.9	846
6th Week	13.04.2016	52.3	28.2	6.0	18.0	826
	14.04.2016	51.9	27.5	6.3	16.4	819
7th Week	20.04.2016	58.9	33.6	6.4	19.9	869
	21.04.2016	60.4	30.8	6.8	17.3	934
8th Week	27.04.2016	51.3	27.2	6.9	18.6	758
	28.04.2016	56.9	29.0	5.9	16.4	946
May - 2016						
9th Week	04.05.2016	58.9	33.0	6.0	16.9	589
	05.05.2016	61	33.6	6.4	18.4	965
10th Week	11.05.2016	52.4	29.3	6.8	19.3	849
	12.05.2016	56.8	30.7	5.9	17.5	684
11th Week	18.05.2016	53.8	29.6	6.3	16.9	798
	19.05.2016	61.8	35.2	6.0	14.9	869
12th Week	25.05.2016	58.0	30.2	6.9	16.0	946
	26.05.2016	52.3	27.7	6.4	15.3	583
13th Week	01.06.2016	56.9	31.9	6.1	16.9	679
	02.06.2016	60.4	34.4	6.9	18.0	947
Arithmetic mean		**55.8**	**30.4**	**6.2**	**17.3**	**822.4**
Maximum		**61.8**	**35.2**	**6.9**	**19.9**	**987**
Minimum		**48.9**	**25.7**	**5.3**	**13.8**	**583**
Standard Deviation		**3.5**	**2.6**	**0.5**	**1.4**	**110.3**
98th percentile		**61.4**	**34.8**	**6.9**	**19.7**	**976.0**

Location Name : Raipur (AAQ-4)					Sampling Duration 24 hrs period	
Date		**PM_{10} µg/m^3**	**$PM_{2.5}$ µg/m^3**	**SO_2 µg/m^3**	**NO_2 µg/m^3**	**CO µg/m^3**
Standards		**100 max**	**60 max**	**80 max**	**80 max**	**2000 max**
March-2016						
1st Week	11.03.2016	58.9	33.0	5.6	18.6	895
	12.03.2016	61.3	31.3	5.8	19.9	689
2nd Week	18.03.2016	58.9	31.8	5.4	20.5	879
	19.03.2016	56.9	30.2	6.0	18.6	924
3rd Week	25.03.2016	51.6	28.4	5.9	15.6	896
	26.03.2016	62.3	36.8	5.0	17.9	689
April - 2016						
4th Week	01.04.2016	57.8	28.9	5.6	16.9	780
	02.04.2016	60.9	32.3	5.8	19.5	798
5th Week	08.04.2016	58.0	31.3	5.9	15.	698
	09.04.2016	64.3	37.3	5.4	18.9	987
6th Week	15.04.2016	58.9	31.8	5.1	16.3	856
	16.04.2016	63	33.4	5.6	19.3	952
7th Week	22.04.2016	64.2	36.6	5.9	14.8	946
	23.04.2016	61.3	31.3	5.8	17.3	935
8th Week	29.04.2016	68.9	36.5	5.7	18.0	846
	30.04.2016	60.3	30.8	5.9	19.2	973
May - 2016						
9th Week	06.05.2016	62.5	35.0	6.1	16.9	926
	07.05.2016	59.7	32.8	5.4	20.1	910
10th Week	13.05.2016	64.3	36.0	5.9	21.6	899
	14.05.2016	60.3	32.6	5.4	18.2	856
11th Week	20.05.2016	63.8	35.1	5.8	19.8	954
	21.05.2016	65.8	37.5	6.0	16.7	768
12th Week	27.05.2016	59.9	31.1	5.3	19.3	976
	28.05.2016	61.3	32.5	5.8	16.9	689
13th Week	03.06.2016	63.4	35.0	5.3	24.8	789
	04.06.2016	64.0	36.3	5.9	20.3	873
Arithmetic mean		**61.3**	**33.3**	**5.7**	**18.5**	**861**
Maximum		**68.9**	**37.5**	**6.1**	**24.8**	**987**
Minimum		**51.6**	**28.4**	**5.0**	**14.8**	**689**
Standard Deviation		**3.4**	**2.6**	**0.3**	**2.2**	**95.1**
98th percentile		**67.4**	**37.4**	**6.1**	**23.2**	**981.5**

Location Name : Sita (AAQ-5)					Sampling Duration 24 hrs period	
Date		**PM_{10} µg/m^3**	**$PM_{2.5}$ µg/m^3**	**SO_2 µg/m^3**	**NO_2 µg/m^3**	**CO µg/m^3**
Standards		**100 max**	**60 max**	**80 max**	**80 max**	**2000 max**
March-2016						
1st Week	07.03.2016	36.5	20.4	4.6	12.6	658
	08.03.2016	32.6	16.6	4.1	14.5	554
2nd Week	14.03.2016	34.9	18.8	4.6	13.6	516
	15.03.2016	36.9	19.6	4.8	18.9	586
3rd Week	21.03.2016	38.0	20.9	4.2	14.3	594
	22.03.2016	42.5	25.1	4.9	13.9	536
4th Week	28.03.2016	31.9	16.0	4.1	14.8	578
	29.03.2016	36.9	19.6	4.9	13.0	526
April - 2016						
5th Week	04.04.2016	35.6	19.2	4.6	16.8	546
	05.04.2016	32.6	18.9	4.3	14.3	532
6th Week	11.04.2016	38.9	21.0	4.8	16.4	516
	12.04.2016	40.0	21.2	4.9	18.6	536
7th Week	18.04.2016	43.6	24.9	4.2	14.9	625
	19.04.2016	35.8	18.3	4.0	13.4	605
8th Week	25.04.2016	38.9	20.6	5.0	12.6	548
	26.04.2016	34.6	17.6	4.7	18.0	589
May - 2016						
9th Week	2.05.2016	39.9	22.3	4.6	13.4	539
	03.05.2016	40.5	22.3	4.3	16.9	568
10th Week	09.05.2016	36.9	20.7	4.2	11.0	524
	10.05.2016	38.6	20.8	4.9	16.4	568
11th Week	16.05.2016	41.0	22.6	4.6	18.9	536
	17.05.2016	39.9	22.7	4.2	12.1	598
12th Week	23.05.2016	42.5	22.1	4.9	11.9	548
	24.05.2016	34.8	18.4	4.1	16.0	569
13th Week	30.05.2016	38.9	21.8	4.8	12.9	516
	31.05.2016	44.5	25.4	4.6	13.7	535
Arithmetic mean		**38.0**	**20.7**	**4.5**	**14.8**	**559.5**
Maximum		**44.5**	**25.4**	**5.0**	**18.9**	**658**
Minimum		**31.9**	**16**	**4.0**	**11.0**	**516**
Standard Deviation		**3.4**	**2.4**	**0.3**	**2.3**	**36.3**
98th percentile		**44.1**	**25.3**	**5.0**	**18.9**	**641.5**

Location Name : Hathori (AAQ-6)					Sampling Duration 24 hrs period	
Date		**PM_{10} µg/m^3**	**$PM_{2.5}$ µg/m^3**	**SO_2 µg/m^3**	**NO_2 µg/m^3**	**CO µg/m^3**
Standards		**100 max**	**60 max**	**80 max**	**80 max**	**2000 max**
March-2016						
1st Week	09.03.2016	35.6	19.9	4.6	11.6	513
	10.03.2016	34.5	17.6	4.2	15.5	548
2nd Week	16.03.2016	35.6	19.2	4.0	14.3	568
	17.03.2016	31.9	16.9	4.6	16.9	628
3rd Week	23.03.2016	42.6	23.4	4.8	13.4	679
	24.03.2016	32.6	19.2	4.9	14.9	548
4th Week	30.03.2016	35.8	17.9	4.6	16.2	689
	31.03.2016	39.9	21.1	5.0	12.3	625
April - 2016						
5th Week	06.04.2016	34.6	18.7	4.3	14.8	548
	07.04.2016	31.6	18.3	4.0	15.2	589
6th Week	13.04.2016	35.0	18.9	4.5	13.6	538
	14.04.2016	36.9	19.6	4.6	14.9	547
7th Week	20.04.2016	34.8	19.8	4.3	13.6	596
	21.04.2016	36.9	18.8	4.8	12.6	535
8th Week	27.04.2016	34.1	18.1	4.6	11.9	642
	28.04.2016	41.6	21.2	4.8	16.4	684
May - 2016						
9th Week	04.05.2016	43.5	24.4	4.1	13.4	569
	05.05.2016	36.8	20.2	4.9	15.8	536
10th Week	11.05.2016	39.4	22.1	4.6	16.9	586
	12.05.2016	35.2	19.0	4.3	12.3	597
11th Week	18.05.2016	32.6	17.9	4.1	14.8	658
	19.05.2016	38.9	22.2	4.9	16.9	635
12th Week	25.05.2016	36.0	18.7	4.6	13.8	589
	26.05.2016	34.8	18.4	4.4	15.4	548
13th Week	01.06.2016	38.9	21.8	4.1	13.1	596
	02.06.2016	40.3	23.0	4.5	12.9	624
Arithmetic mean		**36.6**	**19.9**	**4.5**	**14.4**	**592.9**
Maximum		**43.5**	**24.4**	**5**	**16.9**	**689**
Minimum		**31.6**	**16.9**	**4**	**11.6**	**513**
Standard Deviation		**3.2**	**2.0**	**0.3**	**1.6**	**50.6**
98th percentile		**43.1**	**23.9**	**5.0**	**16.9**	**686.5**

Location Name : Nimli (AAQ-7)					Sampling Duration 24 hrs period	
Date		**PM_{10} µg/m^3**	**$PM_{2.5}$ µg/m^3**	**SO_2 µg/m^3**	**NO_2 µg/m^3**	**CO µg/m^3**
Standards		**100 max**	**60 max**	**80 max**	**80 max**	**2000 max**
March-2016						
1st Week	09.03.2016	34.6	19.4	4.6	12.6	550
	10.03.2016	38.9	19.8	4.8	14.2	564
2nd Week	16.03.2016	41.6	22.5	4.9	10.6	582
	17.03.2016	35.6	18.9	5.1	13.5	569
3rd Week	23.03.2016	32.6	17.9	4.6	14.8	458
	24.03.2016	38.0	22.4	4.9	15.0	586
4th Week	30.03.2016	39.9	20.0	4.3	16.2	654
	31.03.2016	41.2	21.8	4.5	13.4	586
April - 2016						
5th Week	06.04.2016	40.6	21.9	4.6	15.8	594
	07.04.2016	35.2	20.4	4.9	12.9	586
6th Week	13.04.2016	38.9	21.0	4.6	13.0	648
	14.04.2016	34.8	18.4	4.1	15.6	568
7th Week	20.04.2016	37.9	21.6	4.0	14.2	563
	21.04.2016	41.6	21.2	4.6	13.6	582
8th Week	27.04.2016	45.6	24.2	4.3	14.2	548
	28.04.2016	43.5	22.2	4.8	13.4	658
May - 2016						
9th Week	04.05.2016	32.5	18.2	4.94.1	13.6	648
	05.05.2016	38.9	21.4	4.6	14.9	538
10th Week	11.05.2016	40.6	22.7	4.3	13.3	593
	12.05.2016	39.4	21.3	4.9	12.0	548
11th Week	18.05.2016	36.8	20.2	4.8	14.8	756
	19.05.2016	42.6	24.3	4.6	15.9	648
12th Week	25.05.2016	38.1	19.8	4.1	16.2	539
	26.05.2016	36.9	19.6	4.6	11.9	569
13th Week	01.06.2016	38.9	21.8	4.3	12.0	512
	02.06.2016	39.0	22.2	4.8	13.9	539
Arithmetic mean		**38.6**	**21.0**	**4.6**	**13.9**	**584.1**
Maximum		**45.6**	**24.3**	**5.1**	**16.2**	**756**
Minimum		**32.5**	**17.9**	**4.0**	**10.6**	**458**
Standard Deviation		**3.2**	**1.7**	**0.3**	**1.4**	**58.3**
98th percentile		**44.6**	**24.3**	**5.0**	**16.2**	**707.0**

Observations:

PM_{10}: The maximum value for PM_{10} observed at Mine **75.3** µg/m^3 and minimum value for PM_{10} observed at Hathori Village **31.6** µg/m^3. The 24 hours applicable limit for industrial, Residential Rural and Other Areas is 100 µg/m^3.

$PM_{2.5}$: The maximum value for $PM_{2.5}$ observed at Mine **41.3** µg/m^3 and minimum value for $PM_{2.5}$ observed at Sita Village **16.0** µg/m^3. The 24 hours applicable limit for industrial, Residential Rural and Other Areas is 60 µg/m^3.

SO_2: The maximum value for SO_2 observed at Mine **6.2** µg/m^3 and minimum value for SO_2 observed at Gorahanpura and Sita,Hathori and Nimli Villages **4.0** µg/m^3. The 24 hours applicable limit for industrial, Residential Rural and Other Areas is 80 µg/m^3.

NO_2: The maximum value for NO_2 observed at Raipur Village **24.8** µg/m^3 and minimum value for NO_2 observed at Nimli Village **10.6** µg/m^3. The 24 hours applicable limit for industrial, Residential Rural and Other Areas is 80 µg/m^3.

CO: The maximum value for CO observed at **Jagjiwanpura 997** µg/m^3 and minimum value for CO observed at Nimli Village **458** µg/m^3. The 8 hours applicable limit for Industrial, Residential Rural and other areas is 2000 µg/m^3.

Results and Conclusions:

The results of the monitored data indicate that the ambient air quality of the region in general is conformity with respect to norms of National Ambient Air Quality standards, at all locations monitored.

CHEMICAL CHARACTERIZATION ANALYSIS OF PM_{10}

Location Name : Project Site (AAQ1)		**Date of Sampling : 11.04.2016**	
S.No	**Characteristics**	**Units**	**Project Site**
1.	Respirable Particulate Matter (PM_{10})	µg/m^3	65.3
2.	Calcium as Ca	µg/m^3	1.68
3.	Magnesium as Mg	µg/m^3	0.54
4.	Sodium as Na	µg/m^3	0.09
5.	Silica as Si	µg/m^3	25.6
6.	Potassium as K	µg/m^3	<0.01
7.	Chromium as Cr	µg/m^3	<0.01
8.	Aluminum as Al	µg/m^3	<0.01
9.	Lead as Pb	µg/m^3	<0.01
10.	Zinc as Zn	µg/m^3	<0.01
11.	Iron as Fe	µg/m^3	<0.01
12.	Nickel as Ni	µg/m^3	<0.01
13.	Barium as Ba	µg/m^3	<0.01
14.	Cadmium as Cd	µg/m^3	< 0.01
15.	Mercury as Hg	µg/m^3	<0.001
16.	Arsenic as As	µg/m^3	<0.01

AMBIENT AIR QUALITY MONITORING

Location : : Project Site (AAQ1)				
	Date	VOC PPM	Hydro Carbons(HC) mg/m^3	
			Methane	Non-Methane
1.	21.03.2016	BDL	BDL	BDL
2.	22.03.2016	BDL	BDL	BDL
3.	28.03.2016	BDL	BDL	BDL
4.	29.03.2016	BDL	BDL	BDL
5.	04.04.2016	BDL	BDL	BDL
6.	05.04.2016	BDL	BDL	BDL
7.	16.05.2016	BDL	BDL	BDL
8.	17.05.2016	BDL	BDL	BDL
9.	23.05.2016	BDL	BDL	BDL
10.	24.05.2016	BDL	BDL	BDL
11.	30.05.2016	BDL	BDL	BDL
Arithmetic Mean		**BDL**	**BDL**	**BDL**
Maximum		**BDL**	**BDL**	**BDL**
Minimum		**BDL**	**BDL**	**BDL**
50th percentile		**BDL**	**BDL**	**BDL**
98th percentile		**BDL**	**BDL**	**BDL**

Note:-

1. VOC analyzed through VOC Analyzer

Model PhoCheck 1000
Handheld PID Detector for VOCs
Wide Detection Range : 0.1 to 4000 ppm
(BDL is <0.1ppm)

2. HC (Methane & Non- Methane (GC/FID)

In view of the use of this detector in methods 101,108 & 130. This expanded discussion is provided here. A Flame Ionization Detector(FID) is a device which incorporate regulated fuel air and sample delivery systems, an internal burner and associated electronics for measuring the ion current produced by species introduced in to the flame. The FID is used to sense and measure small amount of gases organic type components present in the carrier gas stream leaving the column of a gas chromatography(GC) or to monitor methane and / or total hydrocarbon concentrations in ambient air samples.

Range & sensitivity: 0.1-13mg/m^3

BDL is < 0.1mg/m^3

CHEMICAL CHARACTERIZATION ANALYSIS OF PM 10

S.N0	Characteristics		Units	Values
1.	Particulate Matter (PM10) 11.04.2016 (1220 m^3 sample Volume)		$\mu g/m^3$	65.3
2.	Silica		$\mu g/m^3$	25.6
3.	**POLY-AROMATIC HYDROCARBONS (PAH)**			
	Compound (PAH)		**Minimum Detection Limit (ug/L)**	**Result (ug/L)**
	LC Column PAH (HC-ODC SIL-X eq			
	I	Naphthalene	1.8	1.9
	II	Acenaphthalene	2.3	2.4
	III	Acenaphthene	1.8	1.8
	IV	Fluorene	0.21	<0.21
	GC Column 3% OV-17 Chromosorb			
	A	Anthracene (Group + Phenanthrene)	28.7	28.8
	B	Pyrene	3.4	3.4
	C	Benzo Fluranthene	3.1	< 3.1
	D	Benao (a) pyrene	4.0	< 4.0
	E	Fluoranthene	3.0	< 3.0
	F	Chrysene	4.2	< 4.2
	Note: Total PAH observed in the Air Volume are 38.3 µg/L which is represented by actual sample volume of 1220 m^3. The volume of total PAH PM10 works out <0.05 $\mu g/m^3$. The above results interpreted in light of the AAQ standards, indicated that the Ambient Air quality of the sampling location was free of PAH contamination at the time of sampling.			

Noise Monitoring

The statistical analysis is done for measured noise levels at Nine locations in the study area. The parameters are analyzed for Leq_{day} and $Leq_{night.}$ The statistical analysis results are given below:

AMBIENT NOISE LEVELS IN THE STUDY AREA

Sample code .NO	Location Name	Noise Monitoring Date
N – 1	Mine Site	10.03.2016
N – 2	Jagjiwanpura	17.03.2016
N – 3	Bhondagaon	19.03.2016
N – 4	Raipur	22.03.2016
N – 5	Sita	30.03.2016
N – 6	Hathori	06.04.2016
N – 7	Nimli	08.04.2016

Time	N-1	N-2	N-3	N-4	N-5	N-6	N-7
Day time	**Units in Log Leq day dB (A)**						
7.00	62.2	58.2	53.6	50.9	48.8	46.2	46.2
8.00	63.8	61.9	60.2	54.5	51.2	48.9	49.1
9.00	65.5	66.2	61.5	57.2	53.1	51.8	52.2
10.00	71.2	67.8	62.9	58.5	55.5	54.9	54.5
11.00	67.9	66.1	59.6	56.6	52.8	52.3	53.1
12 Noon	71.6	66.5	57.7	54.3	51.5	53.8	49.5
13.00	74.5	65.6	56.3	53.5	54.0	52.2	50.6
14.00	71.0	65.2	59.6	56.7	54.8	50.8	51.9
15.00	72.2	62.5	57.8	56.2	52.6	54.2	53.5
16.00	72.8	66.1	61.2	57.5	53.8	55.3	51.2
17.00	73.3	69.2	61.5	56.3	55.8	53.6	48.4
18.00	71.0	65.1	55.3	57.3	52.5	51.5	52.5
19.00	68.5	62.5	53.2	54.5	50.6	49.6	49.4
20.00	62.9	59.3	49.9	50.6	46.8	47.3	46.9
21.00	56.8	55.5	46.3	44.9	42.6	45.9	43.5
Night time	**Log Leq night dB(A)**						
22.00	50.5	54.3	44.5	43.5	41.8	43.6	41.2
23.00	45.8	51.4	42.3	42.3	40.5	41.3	38.8
24.00	42.3	50.6	41.3	40.3	36.6	40.5	32.6
1.00	42.0	49.3	41.3	40.3	35.2	35.6	30.6
2.00	42.3	48.6	41.3	40.3	36.9	34.3	30.6
3.00	42.0	49.9	41.3	40.3	37.2	33.6	30.0
4.00	45.2	51.2	44.5	40.3	44.2	37.3	33.9
5.00	48.9	53.8	48.1	43.9	45.5	40.9	38.4
6.00	54.4	58.1	51.8	48.8	46.8	43.8	43.5
Leq day	**70.3**	**65.1**	**58.8**	**55.6**	**52.7**	**52.1**	**51.0**
Leq night	**48.3**	**53.0**	**45.8**	**43.3**	**42.3**	**40.4**	**38.1**
Leq day & Nt	**68.6**	**63.4**	**57.2**	**54.0**	**51.3**	**50.4**	**49.4**

Observations

a) **Day Time Noise Levels (Leq_{day})**

Study Area

The daytime (Leq_{day}) noise levels are observed to be in the range of 70.3 – 51.0 dB(A) which are within the prescribed limit of 55 dB(A).

b) **Night time Noise Levels (Leq_{night})**

Study Area

The nighttime (Leq_{night}) Noise levels are observed to be in the range of 53.0 – 38.1 dB(A) Which are within the prescribed limit of 45 dB(A).

Ground Water Quality

Seven Ground water samples around the project Area was collected and analyzed. The analytical results are given below.

Sample code .NO	Location Name	Date of sampling
GW-1	Mine Site	30.04.2016
GW-2	Jagjiwanpura	28.04.2016
GW-3	Bhondagaon	29.04.2016
GW-4	Raipur	28.04.2016
GW-5	Sita	29.04.2016
GW-6	Hathori	28.04.2016
GW-7	Nimli	29.04.2016

GROUND WATER ANALYSIS RESULTS AS PER IS: 10500-2012

Sr.No	Parameter	Requirement (Desirable Limits)	Permissible Limits in the Absence of Alternate Source	Units	GW1	GW2	GW3
1	pH @25 ^{O}C	6.5 – 8.5	NR	-	7.24	7.96	7.82
2	Color (Hazen units)	< 5	< 25	Hazen	<01	02	01
3	Taste	Agreeable	-	-	Agreeable	Agreeable	Agreeable
4	Odor	Unobjec-tionable	-	-	Unobjecti onable	Unobjecti onable	Unobjecti onable
5	Conductivity@25 ^{O}C	--	--	µS/cm	568	3998	1232
6	Turbidity (NTU)	< 5	< 10	NTU	1.3	1.1	1.2
7	Total Dissolve solids	< 500	< 2000	mg/L	362	2562	796
8	Total Hardness as $CaCO_3$	< 200	< 600	mg/L	230	830	390
9	Total Alkalinity	< 200	< 600	mg/L	180	820	280
10	Calcium as Ca	< 75	< 200	mg/L	52.0	168.0	80.0
11	Magnesium as Mg	< 30	< 100	mg/L	24.0	98.4	45.9
12	Residual Chlorine	< 0.2	-	mg/L	<0.02	<0.02	<0.02
13	Boron	< 1	< 5	mg/L	0.024	0.45	0.036
14	Chloride as Cl	< 250	< 1000	mg/L	40.0	500.2	155.1
15	Sulphate as SO_4	< 200	< 400	mg/L	36.1	413.3	91.8
16	Fluorides as F^-	< 1.0	< 1.5	mg/L	0.4	2.3	1.0
17	Nitrates as NO_3	< 45	NR	mg/L	5.6	27.1	13.2
18	Phenolic Compounds	< 0.001	< 0.002	mg/L	<0.001	<0.001	<0.001
19	Cyanide as CN	< 0.05	NR	mg/L	<0.001	<0.001	<0.001
20	Anionic Detergents	< 0.2	< 1.0	mg/L	<0.001	<0.001	<0.001
21	Mineral Oil	< 0.01	< 0.03	mg/L	<0.001	<0.001	<0.001
22	Cadmium as Cd	< 0.01	NR	mg/L	<0.001	0.045	<0.001
23	Arsenic as As	< 0.01	NR	mg/L	<0.001	<0.001	<0.001
24	Copper as Cu	< 0.05	< 1.5	mg/L	0.02	0.89	0.056
25	Lead as Pb	< 0.05	NR	mg/L	<0.001	<0.001	<0.001
26	Manganese as Mn	< 0.1	< 0.3	mg/L	<0.001	0.114	<0.001
27	Iron as Fe	< 0.3	NR	mg/L	0.14	0.36	0.18
28	Chromium as Cr^{6+}	< 0.05	NR	mg/L	<0.001	<0.001	<0.001
29	Zinc as Zn	< 5	< 15	mg/L	0.039	2.05	0.046
30	Aluminum as Al	< 0.03	< 0.2	mg/L	<0.001	<0.001	<0.001
31	Mercury as Hg	< 0.001	NR	mg/L	<0.0002	<0.0002	<0.0002
32	Selenium as Se	< 0.01	NR	mg/L	< 0.001	< 0.001	< 0.001
33	E-coli(Nos/100 ml)	Absent	-	-	Not detected	Not detected	Not detected
34	Coliform Organisms/100mL	<10	--	MPN/ 100 ml	Not detected	Not detected	Not detected

Results & Conclusions

It is recommended that the acceptable limit is to be implemented. Values in excess of those mentioned under :acceptable" render the water not suitable, but still may be tolerated in the absence of an alternative source but up to the limit indicated under 'permissible limit in the absence of alternate source' in Colum permissible, above which the source will have to be rejected. If E.coli or Total Coliform are detected immediate treatment is require as per IS: 10500-1991 (Reaffirmed 2012),

GROUND WATER ANALYSIS RESULTS AS PER IS: 10500-2012

Sr.No	Parameter	Requirement (Desirable Limits)	Permissible Limits in the Absence of Alternate Source	Units	GW4	GW5	GW6	GW7
1	pH @25 ^{O}C	6.5 – 8.5	NR	-	7.39	7.34	7.16	6.95
2	Color (Hazen units)	< 5	< 25	Hazen	<01	<01	<01	<01
3	Taste	Agreeable	-	-	Agreeable	Agreeable	Agreeable	Agreeable
4	Odor	Unobjectionable	-	-	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable
5	Conductivity@25 ^{O}C	--	--	µS/cm	556	512	1130	4668
6	Turbidity (NTU)	< 5	< 10	NTU	1.6	1.0	1.6	1.1
7	Total Dissolve solids	< 500	< 2000	mg/L	354	326	726	3006
8	Total Hardness as $CaCO_3$	< 200	< 600	mg/L	210	190	320	1020
9	Total Alkalinity	< 200	< 600	mg/L	200	150	180	400
10	Calcium as Ca	< 75	< 200	mg/L	56.0	48.0	68.0	208.0
11	Magnesium as Mg	< 30	< 100	mg/L	16.8	16.8	56.0	120.0
12	Residual Chlorine	< 0.2	-	mg/L	<0.02	<0.02	<0.02	<0.02
13	Boron	< 1	< 5	mg/L	0.02	0.016	0.035	0.94
14	Chloride as Cl	< 250	< 1000	mg/L	40.0	45.0	205.1	1210.5
15	Sulphate as SO_4	< 200	< 400	mg/L	26.5	29.4	74.1	172.9
16	Fluorides as F-	< 1.0	< 1.5	mg/L	0.3	0.3	1.0	2.2
17	Nitrates as NO_3	< 45	< 100	mg/L	7.6	6.9	11.3	30.2
18	Phenolic Compounds	< 0.001	< 0.002	mg/L	<0.001	<0.001	<0.001	<0.001
19	Cyanide as CN	< 0.05	NR	mg/L	<0.001	<0.001	<0.001	<0.001
20	Anionic Detergents	< 0.2	< 1.0	mg/L	<0.001	<0.001	<0.001	<0.001
21	Mineral Oil	< 0.01	< 0.03	mg/L	<0.001	<0.001	<0.001	<0.001
22	Cadmium as Cd	< 0.01	NR	mg/L	<0.001	<0.001	<0.001	0.029
23	Arsenic as As	< 0.01	NR	mg/L	<0.001	<0.001	<0.001	<0.001
24	Copper as Cu	< 0.05	< 1.5	mg/L	0.034	0.03	0.056	1.15
25	Lead as Pb	< 0.05	NR	mg/L	<0.001	<0.001	<0.001	<0.001
26	Manganese as Mn	< 0.1	< 0.3	mg/L	<0.001	<0.001	<0.001	0.114
27	Iron as Fe	< 0.3	< 1.0	mg/L	0.09	0.08	0.11	0.46
28	Chromium as Cr^{6+}	< 0.05	NR	mg/L	<0.001	<0.001	<0.001	<0.001
29	Zinc as Zn	< 5	< 15	mg/L	0.035	0.032	0.068	2.05
30	Aluminum as Al	< 0.03	< 0.2	mg/L	<0.001	<0.001	<0.001	<0.001
31	Mercury as Hg	< 0.001	NR	mg/L	<0.0002	<0.0002	<0.0002	<0.0002
32	Selenium as Se	< 0.01	NR	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
33	E-coli(Nos/100 ml)	Absent	-	-	Not detected	Not detected	Not detected	Not detected
34	Coliform Organisms/100mL	<10	--	MPN/ 100 ml	Not detected	Not detected	Not detected	Not detected

Results & Conclusions

It is recommended that the acceptable limit is to be implemented. Values in excess of those mentioned under :acceptable" render the water not suitable, but still may be tolerated in the absence of an alternative source but up to the limit indicated under 'permissible limit in the absence of alternate source' in Colum permissible, above which the source will have to be rejected. If E.coli or Total Coliform are detected immediate treatment is require as per IS: 10500-1991 (Reaffirmed 2012),

Soil Quality

Seven soil samples around the project Area was collected and analyzed. The analytical results are given in blow.

SOIL QUALITY ANALYSIS RESULTS

Sample Code .NO	Location Name	Date of sampling
S-1	Mine Site	30.04.2016
S-2	Jagjiwanpura	28.04.2016
S-3	Bhondagaon	29.04.2016
S-4	Raipur	28.04.2016
S-5	Sita	29.04.2016
S-6	Hathori	28.04.2016
S-7	Nimli	29.04.2016

S.No	PARAMETERES		UNITS	S-1	S-2	S-3	S-4
1	Texture		-	Sandy Clay	Sandy Clay	Sandy Clay	Sandy Clay
2.	Particle size Distributions	Sand	%	32	28	36	34
		Silt	%	16	18	13	19
		Clay	%	52	54	51	47
3.	Appearance		--	Brown Color	Brown Color	Brown Color	Brown Color
4.	Sodium as Na		mg/100grm	2.86	1.92	3.14	1.87
5.	pH (10% Slurry) @ 25 ^{o}C		-	7.26	7.59	7.28	7.06
6.	Conductivity @25 ^{o}C		µmhos/cm	125	136	148	156
7.	Bulk density		gram/cc	1.36	1.41	1.38	1.31
8.	Porosity		% v/v	46	38	44	46
9.	Total Organic Matter(TOM)		%	5.14	4.68	4.29	3.98
10.	Nitrogen as N		mg/100grm	325	286	314	364
11.	Potassium as K		mg/100grm	156	148	132	172
12.	Phosphorus as P		mg/100grm	86	79	102	87
13.	Zinc as Zn		mg/kg	3.6	4.58	3.58	4.67
14.	Cadmium as Cd		mg/kg	<0.01	<0.01	<0.01	<0.01
15.	Chlorides as Cl		mg/100grm	2.3	1.9	2.5	1.6
16.	Alkali Metals		mg/kg	3.6	3.5	3.8	4.1
17.	Permeability		Cm/h	4.5	5.6	5.2	4.9
18.	Water holding capacity		%	38	42	38	41
19.	Copper as Cu		mg/kg	0.05	0.09	0.08	0.07
20.	Iron as Fe		mg/kg	0.28	0.32	0.28	0.36
21.	Lithium		mg/kg	<0.01	<0.01	<0.01	<0.01
22.	Moisture Content		%	<1.0	<1.0	<1.0	<1.0
23.	Boron as B		mg/kg	0.15	0.19	0.25	0.32

SOIL QUALITY ANALYSIS RESULTS

S.No	PARAMETERES		UNITS	S-5	S-6	S-7
1	Texture		-	Clay	Sandy Clay	Sandy Clay
2.	Particle size Distributions	Sand	%	35	36	30
		Silt	%	18	19	21
		Clay	%	47	45	49
3.	Appearance		--	Brown Color	Brown Color	Brown Color
4.	Sodium as Na		mg/100grm	3.68	2.59	2.54
5.	pH (10% Slurry) @ 25 ^{o}C		-	7.68	7.29	7.46
6.	Conductivity @25 ^{o}C		µmhos/cm	135	156	138
7.	Bulk density		gram/cc	1.38	1.41	1.38
8.	Porosity		% v/v	42	39	44
9.	Total Organic Matter(TOM)		%	4.26	4.38	4.63
10.	Nitrogen as N		mg/100grm	326	248	298
11.	Potassium as K		mg/100grm	124	106	132
12.	Phosphorus as P		mg/100grm	88	75	72
13.	Zinc as Zn		mg/kg	3.26	4.12	4.35
14.	Cadmium as Cd		mg/kg	<0.01	<0.01	<0.01
15.	Chlorides as Cl		mg/100grm	3.2	2.16	2.56
16.	Alkali Metals		mg/kg	2.3	2.6	2.5
17.	Permeability		Cm/h	5.8	5.6	5.3
18.	Water holding capacity		%	36	42	39
19.	Copper as Cu		mg/kg	0.32	0.25	0.09
20.	Iron as Fe		mg/kg	0.26	0.21	0.25
21.	Lithium		mg/kg	<0.01	<0.01	<0.01
22.	Moisture Content		%	<1.0	<1.0	<1.0
23.	Boron as B		mg/kg	0.12	0.08	0.16

Results & Conclusions

The soil analysis results are presented in Table. The result obtained is compared with the standard soil classification given Agriculture Soil Limits. It has been observed that the soils are Clay in texture and neutral in nature. The nutrient and organic matter contents are medium and the soil is normally fertile.

PHOTO GRAPHS AT THE TIME OF MONITORING

रजिस्ट्री सं० डी० एल०-33004/99 REGD. NO. D. L.-33004/99

भारत का राजपत्र
The Gazette of India

असाधारण
EXTRAORDINARY
भाग II—खण्ड 3—उप-खण्ड (ii)
PART II—Section 3—Sub-section (ii)
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PUBLISHED BY AUTHORITY

सं. 1408] नई दिल्ली, बुधवार, जुलाई 2, 2014/आषाढ़ 11, 1936
No. 1408] NEW DELHI, WEDNESDAY, JULY 2, 2014/ASHADHA 11, 1936

पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय

अधिसूचना

नई दिल्ली, 2 जुलाई, 2014

का.आ. 1680(अ).—केन्द्रीय सरकार, पर्यावरण (संरक्षण) नियम, 1986 के नियम 10 के साथ पठित पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 12 की उप-धारा (1) के खंड (ख) और धारा 13 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, पर्यावरण और वन मंत्रालय, भारत सरकार की अधिसूचना संख्यांक का. आ.1174(अ) तारीख 18 जुलाई, 2007 में निम्नलिखित और संशोधन करती है, अर्थात् :--

उक्त अधिसूचना से संलग्न सूची में,-

(क) क्रम संख्यांक 59, संख्यांक 63 और संख्यांक 70 और उससे संबंधित प्रविष्टियों के स्थान पर निम्नलिखित क्रम संख्यांक और प्रविष्टियां रखी जाएंगी, अर्थात् :--

(1)	(2)	(3)	(4)
"59	मैसर्स एसजीएस इंडिया प्रा0 लि0, प्लॉट नं0 28 बी0/1 (एस0पी), 28 बी0/2, सेकण्ड मेन रोड़, अंबातूर औद्योगिक एस्टेट, एस0बी0आई0 बैंक के सामने, चेन्नई - 600083 (तमिल नाडू)	(1) श्री0 एस0 कालिया पदम्जा (2) श्री0 एम0 एलण्पन (3) श्री0 वी0 मूलुक्कुमार	02.07.2014 से 01.07.2019
63	मैसर्स आंकाक्षा एनालिटिकल एण्ड रिसर्च लैब, एस0नं0 613, प्लॉट नं0 5, गंगा धाम लैण्डमार्क रो हाऊसेस के सामने, फेस-1, बिबवेवाडी, पुणे- 411037 (महाराष्ट्र)	(1) श्री0 राहुल पी0 चारमूंगी (2) श्री0 अभिषेक एस0 मुलातकर (3) श्री0 शिवाजी रामचन्द्र वामूलकर	02.07.2014 से 01.07.2019
70	मैसर्स विसन लैब्स, हाऊस नं0 16-11-23/37/, फलैट नं0 205 और 206, द्वितीय तल, एन0 मार्ट भवन, मालाकपेट,	(1) श्री0 टी0 लक्ष्मीकांत रेड्डी (2) श्री0 के0 जितेन्द्र रेड्डी (3) श्री0 एल0 चन्द्रशेखर रेड्डी	02.07.2014 से 01.07.2019"।

	हैदराबाद - 500036 (तेलँगाना)		

[फा0 सं0 क्यू-15018/23/2013-सीपीडब्ल्यू]

डा0 राशिद हसन, सलाहकार

टिप्पण : मूल अधिसूचना भारत के राजपत्र, असाधारण, में संख्यांक. का.आ. 1174(अ), तारीख 18 जुलाई, 2007 द्वारा प्रकाशित की गई थी और तत्पश्चात् अधिसूचना सं0 का.आ. 1539(अ), तारीख 13 सितंबर, 2007, का.आ. 1811(अ), तारीख 24 अक्तूबर, 2007, का.आ. 55(अ), तारीख 9 जनवरी, 2008, का.आ. 428(अ), तारीख 4 मार्च, 2008, का.आ. 865(अ), तारीख 11 अप्रैल, 2008, का.आ. 1894(अ), तारीख 31 जुलाई, 2008, का.आ. 2728(अ), तारीख 25 नवंबर, 2008, का.आ. 1356(अ), तारीख 27 मई, 2009, का.आ.1802(अ) तारीख 22 जुलाई, 2009, का.आ.2399(अ) तारीख 18 सितंबर, 2009, का.आ. 3122(अ), तारीख 7 दिसंबर, 2009, का.आ. 3123(अ), तारीख 7 दिसम्बर, 2009, का.आ. 142(अ), तारीख 21 जनवरी, 2010, का.आ. 619(अ), तारीख 19 मार्च, 2010, का.आ. 1662(अ), तारीख 13 जुलाई, 2010, का.आ. 2390(अ), तारीख 30 सितंबर, 2010, का.आ. 2904 (अ), तारीख 8 दिसंबर, 2010, का.आ. 181(अ), तारीख 28 जनवरी, 2011, का.आ. 692(अ), तारीख 5 अप्रैल, 2011, का.आ. 1537(अ), तारीख 6 जुलाई, 2011, का.आ. 1754(अ), तारीख 28 जुलाई, 2011, का.आ. 2609(अ), तारीख 22 नवंबर, 2011, का.आ. 264(अ), तारीख 13 फरवरी, 2012, का.आ. 1150(अ), तारीख 22 मई, 2012, का.आ. 2039(अ), तारीख 5 सितंबर, 2012, का.आ. 2802(अ), तारीख 27 नवंबर, 2012 और का.आ. 2850(अ), तारीख 7 दिसम्बर, 2012 तथा का.आ. 592(अ), तारीख 8 मार्च, 2013, का.आ. 945(अ), तारीख 8 अप्रैल, 2013, का.आ. 2287(अ), तारीख 27 जुलाई, 2013, का.आ. 2288(अ), तारीख 27 जुलाई, 2013 और का.आ. 3489(अ), तारीख 26 नवंबर, 2013, का.आ. 21(अ), तारीख 3 जनवरी, 2014, का.आ. 561(अ), तारीख 26 फरवरी, 2014, का.आ. 1205 (अ), तारीख 1 मई, 2014, का.आ. 1190 (अ), तारीख 2 मई, 2014, द्वारा उसका संशोधन किया गया था ।

MINISTRY OF ENVIRONMENT, FORESTS AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 2nd July, 2014

S.O. 1680(E).— In exercise of the powers conferred by clause (b) of sub-section (1) of section 12 and section 13 of the Environment (Protection) Act, 1986 (29 of 1986) read with rule 10 of the Environment (Protection) Rules, 1986, the Central Government hereby makes the following further amendments in the notification of the Government of India in the Ministry of Environment and Forests, number S.O. 1174(E), dated the 18th July, 2007, namely :-

In the TABLE appended to the said notification,-

(a) for serial numbers 59, 63 and 70 and the entries relating thereto, the following serial numbers and entries shall be substituted, namely :-

(1)	(2)	(3)	(4)
"59	M/s SGS India Private Limited, Plot No. 28 B/1(SP), 28 B/2(SP), Second Main Road, Ambattur Industrial Estate, Opposite to SBI India Chennai – 600058 (Tamil Nadu)	(1) Ms. S. Kaila Padmaja (2) Mr. M. Ellappan (3) Mr. V. Muthukumar	02.07.2014 to 01.07.2019

63	M/s Akanksha Analytical & Research Lab, S.No. 613, Plot No.5, Ganga Dham, Phase-I, Opp. Ganga Landmark Row-Houses, Bibwewadi, Pune-411037 (Maharashtra)	(1) Mr. Rahul P. Chormunge (2) Mr. Abhishek S. Mulatkar (3) Mr. Shivaji Ramchandra Wamulkar	02.07.2014 to 01.07.2019
70	M/s Vison Labs, H.No.16-11-23/37/A, Flat No. 205 & 206, 2nd Floor, N-Mart Building, Malakpet Hyderabad - 500036 (Thelangana)	(1) Mr. T. Laxmikanth Reddy (2) Mr. K. Jitender Reddy (3) Mr. L. Chandra Sekhar Reddy.	02.07.2014 to 01.07. 2019".

[F.No. Q-15018/23/2013-CPW]

Dr. RASHID HASAN, Advisor

Note.- The principal notification was published in the Gazette of India, Extraordinary *vide* number S.O. 1174 (E), dated the 18th July, 2007 and subsequently amended *vide* notification numbers S.O. 1539 (E), dated the 13th September, 2007, S.O. 1811(E), dated the 24th October, 2007, S.O.55(E), dated 9th January, 2008, S.O. 428(E), dated the 4th March, 2008, S.O. 865(E) dated the 11th April, 2008, S.O. 1894(E) dated the 31st July, 2008, S.O. 2728(E) dated the 25th November, 2008, S.O. 1356(E) dated the 27 th May, 2009, S.O.1802(E) dated the 22nd July, 2009, S.O. 2399(E), dated the 18th September, 2009, S.O. 3122(E), dated the 7th December, 2009, S.O. 3123(E), dated the 7th December, 2009, S.O. 142(E), dated the 21st January, 2010, S.O. 619(E), 19th March, 2010, S.O. 1662(E) dated the 13th July, 2010, S.O. 2390(E), dated the 30th September, 2010, S.O. 2904(E), dated the 8th December, 2010, S.O. 181(E), dated the 28th January, 2011, S.O. 692(E), dated the 5th April, 2011, S.O. 1537(E), dated the 6th July, 2011 , S.O. 1754(E), dated the 28th July,2011 S.O. 2609 (E) dated the 22nd November, 2011, S.O. 264 (E), dated the 13 February, 2012, S.O. 1150(E), dated the 22nd May, 2012, S.O. 2039(E), dated the 5th September,2012, S.O. 2802(E) dated the 27th November, 2012, S.O. 2850(E), dated the 7th December, 2012, S.O. 592 (E), dated the 8th March, 2013, S.O. 945(E), dated the 8th April, 2013, S.O. 2287(E), dated the 27th July, 2013, S.O. 2288(E), dated the 27th July, 2013, S.O. 3489(E) dated the 26th November, 2013, S.O. 21(E), dated 3rd January, 2014, S.O. 561(E), the 26th February, 2014 , S.O. 1205(E), the 5th May, 2014 and S.O. 1190(E), the 2nd May, 2014.

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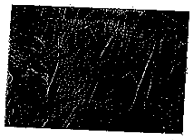
in the discipline of

CHEMICAL TESTING

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Certificate Number T-3216

Issue Date 26/11/2014



Valid Until 25/11/2016

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the additional requirements of NABL.

Signed for and on behalf of NABL

N. Venkateswaran
Program Manager

Anil Relia
Director

Prof. Ashutosh Sharma
Chairman

रा.प्र.प्र.बो.

राष्ट्रीय परीक्षण और अंशशोधन प्रयोगशाला प्रत्यायन बोर्ड

(विज्ञान एवं प्रौद्योगिकी विभाग, भारत सरकार के अधीन स्वायत्तशासी निकाय)

प्रत्यायन प्रमाण–पत्र

विसन लैब्स

का मूल्यांकन और प्रत्यायन निम्न मानक के अनुसार

आई.एस.ओ./आई.ई.सी. 17025:2005

"परीक्षण एवं अंशशोधन प्रयोगशालाओं की सक्षमता की सामान्य अपेक्षाएँ"

हैदराबाद, तेलंगाना

में स्थित इसकी सुविधाओं के लिए

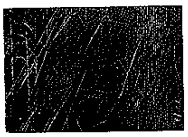
रासायनिक परीक्षण

के विषय क्षेत्र में किया गया।

(इस प्रयोगशाला के प्रत्यायन के विषय क्षेत्र की जानकारी एन ए बी एल वेबसाइट www.nabl-india.org से भी प्राप्त कर सकते हैं)

प्रमाण-पत्र संख्या प -3216

जारी करने की तिथि 26/11/2014



वैधता की तिथि 25/11/2016

यह प्रमाण-पत्र उपर्युक्त मानक तथा राष्ट्रीय परीक्षण और अंशशोधन प्रयोगशाला प्रत्यायन बोर्ड की अतिरिक्त अपेक्षाओं का निरंतर संतोषप्रद अनुपालन किए जाने पर अनुबंध में निर्दिष्टानुसार प्रत्यायन के क्षेत्र के लिए वैध रहेगा।

रा.प्र.प्र.बो. की ओर से हस्ताक्षरित

एन. वेंकटेस्वरन	अनिल रेलिया	आशुतोष शर्मा
एन. वेंकटेस्वरन	अनिल रेलिया	प्रो. आशुतोष शर्मा
कार्यक्रम प्रबन्धक	निदेशक	अध्यक्ष

National Accreditation Board
for Education and Training

May 07, 2012

The Managing Director
Vison Labs
H.No. 16-11-23/37/A, Flat No. 205,
2nd Floor, Sagar Hotel Building, Opp. RTA office, Musarambagh,
Malakpet, Hyderabad- 500036
(Kind Attention: **Mr. T. Laxmikanth Reddy)**

Dear Sir,

QCI – NABET Scheme for Accreditation of EIA Consultant Organization

This is with reference to your application for QCI – NABET Accreditation as EIA Consultant Organization.

We are pleased to inform you that based on Document & Office Assessments, the Accreditation Committee has recommended conditional accreditation of **Vison Labs** as per the scope given in **Annexure I (A & B).** Also find attached herewith the following:

a. Detailed terms & conditions of accreditation **(Annexure II).**
b. Results of various aspects of assessment of your organization **(Annexure III).**
c. The format which is to be followed for mentioning the names of the experts involved in the EIA reports prepared by you **(Annexure IV).**

Please confirm the correctness of spellings of the names of the experts mentioned in Annexure I B. Please check the QCI website for the Minutes of the Accreditation Committee Meeting held on March 20, 2012 for observations related to your application for compliance. You are also advised to visit QCI website to check clarifications on the Scheme issued from time to time for necessary actions at your end.

The accreditation of your organization will be for a period of three years starting March 06, 2012. The annual renewal of the accreditation will be confirmed after surveillance assessment every year. Surveillance assessments will be conducted to ensure compliance with NABET Scheme including the details mentioned in your Quality Manual and the terms & conditions mentioned in Annexure II.

May we request you for an early payment of the annual fees and your confirmation of acceptance of the terms and conditions attached. This will enable us to issue you the requisite accreditation certificate.

We thank you for your esteemed support in making this scheme successful and for your participation in this national cause.

Thanks and best regards,

Yours sincerely,

(Vipin Sahni)
Director

Institution of Engineers Building, 2nd Floor, Bahadur Shah Zafar Marg, New Delhi – 110 002, India
Tel : +91-11-2337 9321, 2337 8057 Fax : +91-11-2337 9621 email: nabet@qcin.org Website: www.qcin.org

OHSAS CERTIFICATE

Certificate of Registration

This certificate has been awarded to

Vison Labs

H.No. 16-11-23/37/A, Flat No.-205, 2nd Floor, N Mart Building, Opp. RTA Office, Musarambagh, Malakpet, Hyderabad, A.P., 500086, India

in recognition of the organization's Health and Safety Management System which complies with

OHSAS 18001:2007

The scope of activities covered by this certificate is defined below

Providing Environmental Consultancy and Analytical Services

Certificate Number:	Date of Issue: (Original)	Date of Issue:
60515/A/0001/UK/En	28 September 2013	28 September 2013
Issue No:	**Expiry Date:**	
1	27 September 2016	

Issued by: *On behalf of the Schemes Manager*

UKAS MANAGEMENT SYSTEMS
0043

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ISO CERTIFICATE

Certificate of Registration

This certificate has been awarded to

Vison Labs

H. No. 16-11-23/37/A, Flat No. 205, 2nd Floor, Sagar Hotel Building, Opposite R.T.A. Office, Musarambagh, Malakpet, Hyderabad, Andhra Pradesh, 500036, India

in recognition of the organization's Quality Management System which complies with

ISO 9001:2008

The scope of activities covered by this certificate is defined below

Providing Environmental Consulting and Analytical Services

Certificate Number:	Date of Issue: (Original)	Date of Issue:
45130/A/0001/UK/En	06 April 2011	06 April 2014
Issue No:	**Expiry Date:**	
2	05 April 2017	

Issued by: *On behalf of the Schemes Manager*

0043

If there is any doubt as to the authenticity of this certificate, please do not hesitate to contact the Head Office of the Group on info@ros-group.com.
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