

Mailing Address: SCO 32, Sector 26-D, Madhya Marg, Chandigarh-160 019 Phone: 0172 4646846 • Fax: 0172 4646802

E-mail: sk.narang@larsentoubro.com

Ref: NPL/SKN/MOEF/ 1854 Dated: 20th Feb. 2013

To,

Mr. Surendra Kumar
Director (S),
Government of India,
Ministry of Environment & Forests
Northern Regional Office,
Chandigarh-160030, Punjab

Sub: 1400 MW Rajpura Thermal Power Project at village Nalash, District Patiala, Punjab by M/s Nabha Power Limited- Environmental Clearance regarding

Ref: Your Letter No. 5-120/2008-RO (NZ)/2166 dated 14th Jun, 2011

Letter No. 5-120/2008-RO (NZ) dated 16th May, 2011

Letter No J-13011/44/3008-IA.II(T) dated 03rd Oct, 2008

Letter No J-13011/44/3008-IA.II(T) dated 15th Nov, 2010

Dear Sir,

With reference to the environmental clearance accorded to 2x700 MW Super Critical Thermal Power Plant, we are submitting herewith the Environment Monitoring Report for the month of January, 2013 for your kind reference.

Thanking you,

Yours faithfully

For Nabha Power Limited

Suresh K Narang Project Director

Cc: Sr. Environmental Engineer, Punjab Pollution Control Board, Patiala.





Ph: - 91-11-40522000, 41611000 Fax: 91-11-40503150, 40503151 care@spectro.in www.spectro.in

TEST REPORT

Issued To: NABHA POWER LTD.

VILLAGE- NALASH.

Report No.:

130108093/1301080260

Date: 14-Jan-2013

DOR 08-Jan 2013

TEHSIL RAJPURA, DISTT- PATIALA

Sample Description: NOISE MONITORING

Phone/Fax: Kind Attn. :

Your Ref. No.:

ID: 1301080260

NOISE MONITORING REPORT

Name of the Sample Collecting Officer	Mr. Ishan Jain
Date of Monitoring	08/01/2013
Noise Standards in Ambient Air for Industrial Zone	Day Time – 75 dB(A)

S. No.	Location	Results dB(A)
1	Near Coal Handling Plant	61
2	Near Admn. Block	64
3	Near Boiler & Chimney Area	69
4	Near Fabrication Yard	68
5	Near Switch Yard	63













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VILLAGE- NALASH,

TEHSIL RAJPURA, DISTT- PATIALA

Report No .:

130108094/1301080261

Date: 14-Jan-2013

DOR 08-Jan 2013

Sample Description:

AMBIENT AIR QUALITY

Phone/Fax: Kind Attn. :

Your Ref. No.:

ID: 1301080261

AMBIENT AIR QUALITY ANALYSIS REPORT

Name of the Sample Collecting Officer	Mr. Ishan Jain
Date of Sample Collection	08/01/2013
Duration of Monitoring, minutes	1440
Average Flow Rate, m ³ /min	1.01
Volume of air sampled, m ³	1454.4

S. No.	Parameters	Results	*Standard (µg/m³)	Method
, d.,	Sulphur Dioxide (SO ₂), μg/m ³	14.2	80 Max.	APHA-Air(Improved West & Gaek Method)
2.	Nitrogen Dioxide(NO ₂), μg/m ³	45.5	80 Max.	Emission Regulation-III(Modified Jacob & Hochheiser Method)
3.	Particulate Matter(PM ₁₀), μg/m ³	78	100 Max.	APHA-Air(Gravimetric)
4.	Particulate Matter(PM _{2.5}), μg/m ³	46	60 Max.	APHA-Air(Gravimetric)
5.	Ozone(O ₃), µg/m ³	12	180 Max.	APHA-Air(UV Photometric)
6.	Lead as Pb, μg/m ³	N.D.	1.0 Max.	APHA-Air by AAS
7.	Carbon Monoxide(CO), µg/m ³	920	4000 Max.	IS: 5182 (P-10)
8.	Ammonia(NH ₃), μg/m ³	N.D.	400 Max.	APHA-Air(Indophenols' Blue Method)
9.	Benzene(C ₆ H ₆), μg/m ³	N.D.	5 Max.	Adsorption & Desorption followed by GC Analysis
10.	Benzo(a) Pyrene (BaP)- Particulate Phase only, μg/m ³	N.D.	1 Max.	Solvent Extraction followed by GC Analysis
11.	Arsenic(As), μg/m ³	N.D.	6 Max.	APHA-Air by AAS
12.	Nickel(Ni), μg/m ³	N.D.	20 Max.	APHA-Air by AAS

Authorised Signatory
No. Description of the Property of the Pr

BIS, DGS & D, DDA, MOEF, DGCA approved,

ISO-17025, ISO - 9001: 2008, ISO-14001: 2004 & OHSAS-18001:2007 Certified Laboratory







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VILLAGE- NALASH,

TEHSIL RAJPURA, DISTT- PATIALA

Report No.:

130108094/1301080261

Date: 14-Jan-2013

DOR 08-Jan-2013

Sample Description :

AMBIENT AIR QUALITY

Phone/Fax: Kind Attn. :

Your Ref. No.:

ID: 1301080261

AMBIENT AIR QUALITY ANALYSIS REPORT

Name of the Sample Collecting Officer	Mr. Ishan Jain
Date of Sample Collection	08/01/2013
Duration of Monitoring, minutes	1440
Average Flow Rate, m³/min	1.03
Volume of air sampled, m ³	1483.2

S. No.	Parameters	Results	*Standard (µg/m³)	Method
1.	Sulphur Dioxide (SO2), µg/m³	15.1	80 Max.	APHA-Air(Improved West & Gaek Method)
2.	Nitrogen Dioxide(NO ₂), µg/m ³	29.7	80 Max.	Emission Regulation-III(Modified Jacob & Hochheiser Method)
3.	Particulate Matter(PM ₁₀), µg/m ³	62	100 Max.	APHA-Air(Gravimetric)
4.	Particulate Matter(PM _{2.5}), µg/m ³	44	60 Max.	APHA-Air(Gravimetric)
5.	Ozone(O ₃), µg/m ³	10	180 Max.	APHA-Air(UV Photometric)
6.	Lead as Pb, µg/m³	N.D.	1.0 Max.	APHA-Air by AAS
7.	Carbon Monoxide(CO), µg/m ³	842	4000 Max.	IS: 5182 (P-10)
8.	Ammonia(NH ₃), μg/m ³	N.D.	400 Max.	APHA-Air(Indophenols' Blue Method)
9.	Benzene(C ₆ H ₆), μg/m ³	N.D.	5 Max.	Adsorption & Desorption followed by GC Analysis
10.	Benzo(a) Pyrene (BaP)- Particulate Phase only, µg/m³	N.D.	1 Max.	Solvent Exatration followed by GC Analysis
11.	Arsenic(As), µg/m ³	N.D.	6 Max.	APHA-Air by AAS
12.	Nickel(Ni), µg/m³	N.D.	20 Max.	APHA-Air by AAS

*NAAQS, CPCB New Notification, dated 18.11.2009 (for Industrial, Residential, Rural and other Area) N.D. - Not Detected





Authorised Signatory

TRA - 031891

BIS,DGS & D, DDA, MOEF, DGCA approved,

ISO-17025, ISO - 9001: 2008, ISO-14001 : 2004 & OHSAS-18001:2007 Certified Laboratory





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VILLAGE- NALASH,

TEHSIL RAJPURA, DISTT- PATIALA

Report No .:

130108094/1301080261

Date: 14-Jan-2013

DOR 08-Jan-2013

Sample Description:

AMBIENT AIR QUALITY

Phone/Fax: Kind Attn. :

Your Ref. No. :

ID: 1301080261

AMBIENT AIR QUALITY ANALYSIS REPORT

Name of the Sample Collecting Officer	Mr. Ishan Jain
Date of Sample Collection	08/01/2013
Duration of Monitoring, minutes	1440
Average Flow Rate, m³/min	1.03
Volume of air sampled, m ³	1483.2

S. No.	Parameters	Results	*Standard (µg/m³)	Method
1. 1	Sulphur Dioxide (SO2), µg/m³	15.7	80 Max.	APHA-Air(Improved West & Gaek Method)
2.	Nitrogen Dioxide(NO ₂), μg/m ³	69.4	80 Max.	Emission Regulation-III(Modified Jacob & Hochheiser Method)
3.	Particulate Matter(PM ₁₀), µg/m ³	75	100 Max.	APHA-Air(Gravimetric)
4.	Particulate Matter(PM _{2.5}), µg/m ³	40	60 Max.	APHA-Air(Gravimetric)
5.	Ozone(O ₃), µg/m ³	11	180 Max.	APHA-Air(UV Photometric)
6.	Lead as Pb, µg/m³	N.D.	1.0 Max.	APHA-Air by AAS
7.	Carbon Monoxide(CO), µg/m³	916	4000 Max.	IS: 5182 (P-10)
8.	Ammonia(NH ₃), μg/m ³	N.D.	400 Max.	APHA-Air(Indophenols' Blue Method)
9.	Benzene(C ₆ H ₆), μg/m ³	N.D.	5 Max.	Adsorption & Desorption followed by GC Analysis
10.	Benzo(a) Pyrene (BaP)- Particulate Phase only, µg/m³	N.D.	1 Max.	Solvent Exatration followed by GC Analysis
11.	Arsenic(As), µg/m ³	N.D.	6 Max.	APHA-Air by AAS
12.	Nickel(Ni), μg/m ³	N.D.	20 Max.	APHA-Air by AAS

*NAAQS, CPCB New Notification, dated 18.11.2009 (for Industrial, Residential, Rural and other Area) ALYTIC



AnalysuD-PBI3IRA000IIA6067







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TEST REPORT

Issued To: NABHA POWER LTD.

VILLAGE- NALASH,

TEHSIL RAJPURA, DISTT- PATIALA

Report No.:

130108095/1301080262

Date: 14-Jan-2013

DOR 08-Jan-2013

Phone/Fax: Kind Attn. :

Your Ref. No.:

SOIL SAMPLE

Sample Description:

ID: 1301080262

SOIL QUALITY ANALYSIS REPORT

Name of the Sample Collecting Officer	Mr. Ishan Jain
Date & Time of Sample Collection	08/01/2013 at 4:00 P.M.

S. No.	Parameter	Results
1	Moisture (%)	16.4
2	Texture	Loamy Soil
3	pH	7.9
4	Electrical Conductivity (µmho/cm)	482
5	Organic Carbon, (%)	2.9
6	Available Nitrogen (as N), mg/100 gm	41
7	Available Phosphorous (as P), %	0.89
8	Available Potassium (as K), %	1.42
9	Available Magnesium, (mg/kg)	73
10	Available Calcium, (mg/100 gm)	7.7
11	Cation Exchange Capacity (meq/100 gm)	17.4













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TEST REPORT

NABHA POWER LTD. Issued To:

VILLAGE- NALASH.

Report No .:

130108095/1301080262

Date: 14-Jan-2013

DOR 08-Jan-2013

TEHSIL RAJPURA, DISTT- PATIALA

Sample Description:

SOIL SAMPLE

Phone/Fax: Kind Attn. :

Your Ref. No. :

ID: 13014080262

SOIL QUALITY ANALYSIS REPORT

Name of the Sample Collecting Officer	Mr. Ishan Jain
Date & Time of Sample Collection	08/01/2013 at 04:30 P.M.

S. No.	Parameter	Results
1 St. 1	Moisture (%)	15.7
2	Texture	Loamy Soil
3	Hq Hq Market Mar	8.7
4	Electrical Conductivity (µmho/cm)	598
5	Organic Carbon, (%)	1.37
6	Available Nitrogen (as N), mg/100 gm	43
7 00	Available Phosphorous (as P), %	0.44
8	Available Potassium (as K), %	1.36
9	Available Magnesium, (mg/kg)	59
10,00	Available Calcium, (mg/100 gm)	5.8
11	Cation Exchange Capacity (meq/100 gm)	24.9













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TEHSIL RAJPURA, DISTT- PATIALA

Report No.:

130108095/1301080262

Date: 14-Jan-2013

DOR 08-Jan-2013

Phone/Fax: Kind Attn. :

Your Ref. No. :

SOIL SAMPLE

Sample Description:

ID: 1301080262

SOIL QUALITY ANALYSIS REPORT

Name of the Sample Collecting Officer	Mr. Ishan Jain
Date & Time of Sample Collection	08/01/2013 at 04:15 P.M.

S. No.	Parameter	Results	
1.0	Moisture (%)	15.3	
2	Texture	Loamy Soil	
3	pH of A photography and the photography are the photography and the photography are the photography and the photography are th	7.72	
4	Electrical Conductivity (µmho/cm)	416	
5	Organic Carbon, (%)	1.91	
6	Available Nitrogen (as N), mg/100 gm	27	
7	Available Phosphorous (as P), %	0.92	
8	Available Potassium (as K), %	1.47	
9	Available Magnesium, (mg/kg)	71	
10	Available Calcium, (mg/100 gm)	7.3	
11	Cation Exchange Capacity (meq/100 gm)	49.7	











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TEST REPORT

Issued To: NABHA POWER LTD.

VILLAGE- NALASH,

TEHSIL RAJPURA, DISTT- PATIALA

Report No.:

130109083/1301090303

Date: 01-Feb-2013

DOR 09-Jan 2013

Sample Description:

GROUND WATER

Phone/Fax: Kind Attn.:

Your Ref. No. :

ID: 1301090303

GROUND WATER ANALYSIS REPORT

Name of the Sample Collecting Officer	Mr. Ishan Jain
Date & Time of Sample Receipt in Lab.	09/01/2013 at 09.30 A.M.

S. No.	Parameter	Results	Desirable Limit (IS 10500)
1.00	Colour (Hazen unit)	3 3 4 3	5
2	Odour	Unobjectionable	Unobjectionable
3	Taste de la companya del companya de la companya de la companya del companya de la companya de l	Agreeable	Agreeable
4	Turbidity (NTU)	A 35 A 3 A A 3	A 500 A 100
5	pH of the photography of the pho	7.1	6.5-8.5
6	Total Hardness (as CaCO ₃), mg/l	275	300
7	Total Alkalinity (as CaCO ₃), mg/l	124	200
8	Iron (as Fe) mg/l	0.34	1.0
9	Chloride (as Cl) mg/l	.52	250
10	Residual Free Chlorine, mg/l	Not Detected	0.20
11	Calcium Hardness, mg/l	178	200
12	Magnesium Hardness, mg/l	97	100
13	Total Dissolved Solids, mg/l	432	500
14	Suspended Solids, mg/l	Not Detected	A RESTORATION AND ASSESSMENT
15	Sulphate (as SO ₄), mg/l	37	200
16	Fluoride ,(as F), mg/l	0.45	1.0
17	Nitrate, (as NO ₃), mg/l	4.7	45
18	Cyanide, (as CN), mg/l	Not Detected	0.05
19	Phenolic Compounds (as C ₆ H ₅ OH), mg/l	Not Detected	0.001
20	Chromium (as Cr ⁶⁺), mg/l	Not Detected	0.05
21	Manganese, mg/l	Not Detected	0.3
22	Zinc, mg/l	1.00	A 5 4 5 4 5
23	Lead, mg/l	Not Detected	0.05
24	Arsenic, mg/l	Not Detected	0.05
25	Selenium, mg/l	Not Detected	0.01
26	Cadmium, mg/l	Not Detected	0.01
27	Mercury, mg/l	Not Detected	0.001
28	Aluminum, mg/l	Not Detected	0.2
29	Copper (Cu), mg/l	Not Detected	0.01
30	Boron, mg/l	Not Detected	5.01
31	Oil & Grease, mg/l	Not Detected	0.01/27
32	Coliform Organisms, MPN/100ml	Absent	Less than 10
33	E- Colli, per 100 ml	Absent	Absent Lu

Analyso D-PB14\RA000\IA12202 Authorised Signatory

TRA - 031897

BIS, DGS & D, DDA, MOEF, DGCA approved,

ISO-17025, ISO - 9001: 2008, ISO-14001: 2004 & OHSAS-18001:2007 Certified Laboratory





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TEST REPORT

Issued To:

NABHA POWER LTD.

VILLAGE- NALASH,

TEHSIL RAJPURA, DISTT-PATIALA

Report No.:

130109083/1301090303

Date: 01-Feb-2013

DOR 09-Jan-2013

Sample Description : GROUND WATER

Phone/Fax: Kind Attn. :

Your Ref. No. :

ID: 1301090303

GROUND WATER ANALYSIS REPORT

Name of the Sample Collecting Officer	Mr. Ishan Jain
Date & Time of Sample Receipt in Lab.	09/01/2013 at 09.30 A.M.

S. No.	Parameter	Results	Desirable Limit (IS 10500)
Carry Town	Colour (Hazen unit)	9 ×4 × 9 × 1	1 gall gall gas 5 gall gall gall
2	Odour	Unobjectionable	Unobjectionable
3 ,	Taste	Agreeable	Agreeable
4	Turbidity (NTU)	4 25 AV 45 AV	10 mm 1 m
5	pH state of the st	7.56	6.5-8.5
6	Total Hardness (as CaCO ₃), mg/l	265	300
7	Total Alkalinity (as CaCO ₃), mg/l	144	200
8	Iron (as Fe) mg/l	0.09	1.0
9	Chloride (as Cl) mg/l	34	250
10	Residual Free Chlorine, mg/l	Not Detected	0.20
H e	Calcium (as Ca) mg/l	170	200
12	Magnesium (as Mg) mg/l	95	100
13	Total Dissolved Solids, mg/l	455	500
14	Suspended Solids, mg/l	Not Detected	
15	Sulphate (as SO ₄), mg/l	29	200
16	Fluoride, (as F), mg/l	0.24	1.0 see see
47	Nitrate, (as NO ₃), mg/l	4.1	45
18	Cyanide, (as CN), mg/l	Not Detected	0.05
19	Phenolic Compounds (as C ₆ H ₅ OH), mg/l	Not Detected	0.001
20	Chromium (as Cr ⁶⁺), mg/l	Not Detected	0.05
21	Manganese, mg/f	Not Detected	0.3
22	Zinc, mg/l	0.9	5
23	Lead, mg/l	Not Detected	0.05
24	Arsenic, mg/l	Not Detected	0.05
25	Selenium, mg/l	Not Detected	0.01
26	Cadmium, mg/l	Not Detected	0.01
27	Mercury, mg/l	Not Detected	0.001
28	Aluminum, mg/l	Not Detected	The state of the state of
29	Copper (Cu), mg/l	Not Detected	0.2
30	Boron, mg/l	Hall and the second second	0.01
31	Oil & Grease, mg/l	Not Detected Not Detected	5
32	Coliform Organisms, MPN/100ml		0.01
Analy	CD-REVIRADOVA12202	Absent	Less than 10 Authorised S
12/1/20	The transfer of the transfer o	Absent	Absent

TRA - 031898

BIS, DGS & D, DDA, MOEF, DGCA approved,

ISO-17025, ISO - 9001: 2008, ISO-14001 : 2004 & OHSAS-18001:200

Subject to Terms & Conditions Overleaf

poratory





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TEST REPORT

Issued To: NABHA POWER LTD.

VILLAGE- NALASH,

TEHSIL RAJPURA, DISTT- PATIALA

Report No.:

130109083/1301090303

Date: 01-Feb-2013

DOR 09-Jan-2013

Sample Description:

GROUND WATER

Phone/Fax: Kind Attn.:

Your Ref. No.:

ID: 1301090303 GROUND WATER ANALYSIS REPORT

Name of the Sample Collecting Officer	Mr. Ishan Jain	The state of the state of
Date & Time of Sample Receipt in Lab.	09/01/2013 at 09.30 A.M.	

2 Odou 3 Taste 4 Turbio 5 pH 6 Total 7 Total 8 Iron (a 9 Chlori 10 Resid 11 Calciu 12 Magne 13 Total 14 Suspe 15 Sulph 16 Fluorio 17 Nitrate 18 Cyanio 19 Pheno 20 Chrom 21 Manga 22 Zinc, r 23 Lead, 24 Arseni 25 Seleni 26 Cadmi 27 Mercu 28 Alumir 29 Coppe	Parameter	Results	Desirable Limit
3 Taste 4 Turbio 5 pH 6 Total 7 Total 8 Iron (a 9 Chlori 10 Resid 11 Calciu 12 Magni 13 Total 14 Suspe 15 Sulph 16 Fluoric 17 Nitrate 18 Cyani 19 Pheno 20 Chrom 21 Manga 22 Zinc, r 23 Lead, 24 Arseni 25 Seleni 26 Cadmi 27 Mercu 28 Alumir 29 Coppe	our (Hazen unit)	3 4 40 10	(IS 10500)
4 Turbio 5 pH 6 Total 7 Total 8 Iron (a 9 Chlori 10 Resid 11 Calciu 12 Magne 13 Total 14 Suspe 15 Sulph 16 Fluorie 17 Nitrate 18 Cyanie 19 Pheno 20 Chrom 21 Manga 22 Zinc, r 23 Lead, 24 Arseni 25 Seleni 26 Cadmi 27 Mercu 28 Alumir 29 Coppe		Unobjectionable	
5 pH 6 Total 7 Total 8 Iron (a 9 Chlori 10 Resid 11 Calciu 12 Magne 13 Total 14 Suspe 15 Sulph 16 Fluori 17 Nitrate 18 Cyani 19 Pheno 20 Chrori 21 Manga 22 Zinc, r 23 Lead, 24 Arseni 25 Seleni 26 Cadmi 27 Mercu 28 Alumir 29 Coppe		Agreeable	Unobjectionable
6 Total 7 Total 8 Iron (a 9 Chlori 10 Resid 11 Calciu 12 Magno 13 Total 14 Suspe 15 Sulph 16 Fluori 17 Nitrate 18 Cyani 19 Pheno 20 Chrom 21 Manga 22 Zinc, r 23 Lead, 24 Arseni 25 Seleni 26 Cadmi 27 Mercu 28 Alumir 29 Coppe	bidity (NTU)	3	Agreeable
7 Total 8 Iron (a 9 Chlori 10 Resid 11 Calciu 12 Magni 13 Total 14 Suspe 15 Sulph 16 Fluori 17 Nitrate 18 Cyani 19 Pheno 20 Chrom 21 Manga 22 Zinc, r 23 Lead, 24 Arseni 25 Seleni 26 Cadmi 27 Mercu 28 Alumir 29 Coppe	the time time the time the time the time time the time time the time time the time time time the time time time time the time time time time time time time tim	7.1	5
8 Iron (a 9 Chlori 10 Resid 11 Calciu 12 Magni 13 Total 14 Suspe 15 Sulph 16 Fluori 17 Nitrate 18 Cyani 19 Pheno 20 Chrom 21 Manga 22 Zinc, r 23 Lead, 24 Arseni 25 Seleni 26 Cadmi 27 Mercu 28 Alumir 29 Coppe	al Hardness (as CaCO ₃), mg/l	275	6.5-8.5
9 Chlori 10 Resid 11 Calciu 12 Magne 13 Total 14 Suspe 15 Sulph 16 Fluori 17 Nitrate 18 Cyani 19 Pheno 20 Chrori 21 Manga 22 Zinc, r 23 Lead, 24 Arseni 25 Seleni 26 Cadmi 27 Mercu 28 Alumir 29 Coppe	al Alkalinity (as CaCO ₃), mg/l	124	300
10 Resid 11 Calciu 12 Magne 13 Total 14 Suspe 15 Sulph 16 Fluorie 17 Nitrate 18 Cyanie 19 Pheno 20 Chrom 21 Manga 22 Zinc, r 23 Lead, 24 Arseni 25 Seleni 26 Cadmi 27 Mercu 28 Alumir 29 Coppe	(as Fe) mg/l	0.34	200
11 Calciu 12 Magne 13 Total 14 Suspe 15 Sulph 16 Fluoric 17 Nitrate 18 Cyanic 19 Pheno 20 Chrom 21 Manga 22 Zinc, r 23 Lead, 24 Arseni 25 Seleni 26 Cadmi 27 Mercu 28 Alumir 29 Coppe	oride (as CI) mg/l	52	1.0
11 Calciu 12 Magni 13 Total 14 Suspe 15 Sulph 16 Fluori 17 Nitrate 18 Cyani 19 Pheno 20 Chron 21 Manga 22 Zinc, r 23 Lead, 24 Arseni 25 Seleni 26 Cadmi 27 Mercu 28 Alumir 29 Coppe	sidual Free Chlorine, mg/l		250
12 Magnet 13 Total 14 Suspet 15 Sulph 16 Fluorid 17 Nitrate 18 Cyanid 19 Pheno 20 Chrom 21 Manga 22 Zinc, r 23 Lead, 24 Arseni 25 Seleni 26 Cadmi 27 Mercu 28 Alumir 29 Coppe		Not Detected	0.20
13 Total 14 Suspect 15 Sulph 16 Fluorica 17 Nitrate 18 Cyanica 19 Pheno 20 Chrom 21 Manga 22 Zinc, ra 23 Lead, 24 Arseni 25 Seleni 26 Cadmi 27 Mercu 28 Alumira 29 Coppect 20 Coppect 21 Coppect 22 Cadmi 23 Coppect 24 Coppect 25 Coppect 26 Cadmi 27 Coppect 28 Coppect 29 Coppect 20 Coppect 21 Coppect 22 Coppect 23 Coppect 24 Coppect 25 Coppect 26 Coppect 27 Coppect 28 Coppect 29 Coppect 20 Coppect 21 Coppect 22 Coppect 23 Coppect 24 Coppect 25 Coppect 26 Coppect 27 Coppect 28 Coppect 29 Coppect 20 Coppect 20 Coppect 21 Coppect 22 Coppect 23 Coppect 24 Coppect 25 Coppect 26 Coppect 27 Coppect 28 Coppect 29 Coppect 20 Coppect 20 Coppect 21 Coppect 22 Coppect 23 Coppect 24 Coppect 25 Coppect 26 Coppect 27 Coppect 28 Coppect 29 Coppect 20 Coppect 20 Coppect 20 Coppect 21 Coppect 22 Coppect 23 Coppect 24 Coppect 25 Coppect 26 Coppect 27 Coppect 28 Coppect 28 Coppect 28 Coppect 29 Coppect 20 Coppect 20 Coppect 20 Coppect 21 Coppect 22 Coppect 23 Coppect 24 Coppect 25 Coppect 26 Coppect 27 Coppect 28 Coppect 28 Coppect 29 Coppect 20 Coppect 20 Coppect 20 Coppect 20 Coppect 21 Coppect 22 Coppect 23 Coppect 24 Coppect 25 Coppect 26 Coppect 27 Coppect 28 Coppect	cium Hardness, mg/l	178	200
14 Suspe 15 Sulph 16 Fluorid 17 Nitrate 18 Cyanid 19 Pheno 20 Chrom 21 Manga 22 Zinc, r 23 Lead, 24 Arseni 25 Seleni 26 Cadmi 27 Mercu 28 Alumir 29 Coppe	gnesium Hardness, mg/l	97	100
15 Sulph. 16 Fluorid 17 Nitrate 18 Cyanid 19 Pheno 20 Chrom 21 Manga 22 Zinc, r 23 Lead, 24 Arseni 25 Seleni 26 Cadmi 27 Mercu 28 Alumir 29 Coppe	al Dissolved Solids, mg/l	432	500
16 Fluorid 17 Nitrate 18 Cyanid 19 Pheno 20 Chrom 21 Manga 22 Zinc, r 23 Lead, 24 Arseni 25 Seleni 26 Cadmi 27 Mercu 28 Alumir 29 Coppe	pended Solids, mg/l	Not Detected	300
17 Nitrate 18 Cyanie 19 Pheno 20 Chrom 21 Manga 22 Zinc, r 23 Lead, 24 Arseni 25 Seleni 26 Cadmi 27 Mercu 28 Alumir 29 Coppe	ohate (as SO ₄), mg/l	37	200
18 Cyanin 19 Pheno 20 Chrom 21 Manga 22 Zinc, r 23 Lead, 24 Arseni 25 Seleni 26 Cadmi 27 Mercu 28 Alumir 29 Coppe	oride ,(as F), mg/l	0.45	1.0
19 Pheno 20 Chrom 21 Manga 22 Zinc, r 23 Lead, 24 Arseni 25 Seleni 26 Cadmi 27 Mercu 28 Alumir 29 Coppe	ate , (as NO ₃), mg/l	4.7	45
20 Chron 21 Manga 22 Zinc, r 23 Lead, 24 Arseni 25 Seleni 26 Cadmi 27 Mercu 28 Alumir 29 Coppe	nide, (as CN), mg/l	Not Detected	CT - ST -
21 Manga 22 Zinc, r 23 Lead, 24 Arseni 25 Seleni 26 Cadmi 27 Mercu 28 Alumir 29 Coppe	nolic Compounds (as C ₆ H ₅ OH), mg/l	Not Detected	0.05
22 Zinc, r 23 Lead, 24 Arseni 25 Seleni 26 Cadmi 27 Mercu 28 Alumir 29 Coppe	omium (as Cr ⁶⁺), mg/l	Not Detected	0.001
23 Lead, 24 Arseni 25 Seleni 26 Cadmi 27 Mercu 28 Alumir 29 Coppe	iganese, mg/l	Not Detected	0.05
24 Arseni 25 Seleni 26 Cadmi 27 Mercu 28 Alumir 29 Coppe		1.00	0.3
25 Seleni 26 Cadmi 27 Mercu 28 Alumir 29 Coppe		Not Detected	5
26 Cadmi 27 Mercu 28 Alumir 29 Coppe	enic, mg/l	Not Detected	0.05
27 Mercu 28 Alumir 29 Coppe	enium, mg/l	Not Detected	0.05
28 Alumir 29 Coppe	mium, mg/l	Not Detected	0.01
29 Coppe	cury, mg/l	Not Detected	0.01
	ninum, mg/l	Not Detected	0.001
30 Boron	per (Cu), mg/l	Not Detected	0.2
	on, mg/l	Not Detected	0.01 ELYT
	Grease, mg/l		5
32 Colifor	orm Organisms, MPN/100ml	Absent	0.01 MEST G
33 E- Coll	olli, per 100 ml	Absent	Less than 10 Absent

TRA - 031899

BIS, DGS & D, DDA, MOEF, DGCA approved,

ISO-17025, ISO - 9001: 2008, ISO-14001 : 2004 & OHSAS-18001:2007 Certified







Ph: - 91-11-40522000, 41611000 Fax: 91-11-40503150, 40503151 care@spectro.in www.spectro.in

TEST REPORT

Issued To: NABHA POWER LTD.

VILLAGE- NALASH,

TEHSIL RAJPURA, DISTT- PATIALA

Report No.:

130109083/1301090303

Date: 01-Feb-2013

DOR 09-Jan 2013

Sample Description : GROUND WATER

Phone/Fax: Kind Attn. :

Your Ref. No.:

ID: 1301090303

GROUND WATER ANALYSIS REPORT

	the state of the s
Name of the Sample Collecting Officer	Mr. Ishan Jain
Date & Time of Sample Receipt in Lab.	09/01/2013 at 09:30 A.M.

S. No.	Parameter	Results	Desirable Limit (IS 10500)
2	Colour (Hazen unit)	Less than 4	(10 10000)
3	Odour	Unobjectionable	Unobjectionable
4	Taste	Agreeable	Agreeable
5	Turbidity (NTU)	3 3 4 4	45 A 4 A
6		7.38	6.5-8.5
7	Total Hardness (as CaCO ₃), mg/l	290	300
	Total Alkalinity (as CaCO ₃), mg/l	191	200
8	Iron (as Fe) mg/l	0.40	1.0
10	Chloride (as CI) mg/l	29	250
11	Residual Free Chlorine, mg/l	Not Detected	0.20
12	Calcium (as Ca) mg/l	192	200
13	Magnesium (as Mg) mg/l	98	100
- C) - C	Total Dissolved Solids, mg/l	489	500
14	Suspended Solids, mg/l	N.D.	3 3 3 3 3 3 3 3 3
15	Sulphate (as SO ₄), mg/l	33	200
16 17	Fluoride ,(as F), mg/l	0.40	1.0
18	Nitrate , (as NO ₃), mg/l	4.1	45
19	Cyanide, (as CN), mg/l	Not Detected	0.05
20	Phenolic Compounds (as C ₆ H ₅ OH), mg/l	Not Detected	0.001
21	Chromium (as Cr ⁶⁺), mg/l	Not Detected	0.05
0 56	Manganese, mg/l	Not Detected	0.3
22	Zinc, mg/l	0.29	and the state of the state of
23	Lead, mg/l	Not Detected	5
24	Arsenic, mg/l		0.05
25	Selenium, mg/l	Not Detected	0.05
26	Cadmium, mg/l	Not Detected	0.01
27	Mercury, mg/l	Not Detected	0.01
28	Aluminum, mg/l	Not Detected	0.001
29		Not Detected	0.2
30	Copper (Cu), mg/l Boron, mg/l	Not Detected	0.01
31	All I	Not Detected	5 5 5
32	Oil & Grease, mg/l	Not Detected	0.01
all the same	Coliform Organisms, MPN/100ml	Absent	Less than 10
32Anal	/E6D-PENIS/RATIONON1 22D2	Absent	Authorised S Absent

TRA - 031900

BIS, DGS & D, DDA, MOEF, DGCA approved,

ISO-17025, ISO - 9001: 2008, ISO-14001 : 2004 & OHSAS-18001:2007 Certified Laboratory

