



Report No.11/2016/16020

Date: 19.12.2016

TEST CERTIFICATE
(Ambient Air Quality Monitoring)

- | | | |
|---------------------------------|---|--|
| 1. Name of Customer | : | M/s N.S Corporation
Kirauli Soapstone Mine
Mota Haldu, Near Gas plant, Baraily Road,
Haldwani-263139 Distt. Nanital India |
| 2. Purchase order Number | : | NSC/HLD/16-17/ Dated-21.06.2016 |
| 3. Date of Sampling | : | 21.11.2016 |
| 4. Sample received on | : | 30.11.2016 |
| 5. Period of Analysis | : | 30.11.2016 to 05.12.2016 |
| 6. Name of Location | : | Mine Face Area |
| 7. Method of Sampling | : | IS:5182(Part 2,Part 6,Part23) & Instrument Manual |

S. No	Monitoring Details	Unit	Results
1	Duration of Survey	Minutes	486
2	Average Flow rate for PM 10	M ³ / Min	1.075
3	Ambient Temperature	°C	12.5
4	Relative Humidity	%	45.6

Results Ambient Air Quality

S. No	Parameters	Test Method Reference	Unit	Results
1.	PM10	IS:5182 (Part 23)2006	µg/m3	62.49
2.	SO ₂	IS:5182 (Part 2)2001	µg/m3	7.00
3.	NO ₂	IS:5182 (Part 6)2006	µg/m3	13.53

Tested By

(G.S. Laxkar)
Chemist



Authorized Signatory

Dr. S. K. Yadav
Chief Manager (Environment)
Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

Note

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Certificate No.: 32024-A111



Chemical - T-2016
Biological - T-3512



Report No.11/2016/16021

Date: 19.12.2016

TEST CERTIFICATE

(Ambient Air Quality Monitoring)

1. **Name of Customer** : M/s N.S Corporation
Kirauli Soapstone Mine
Mota Haldu, Near Gas plant, Baraily Road,
Haldwani-263139 Distt. Nanital India
2. **Purchase order Number** : NSC/HLD/16-17/Dated- 21.06.2016
3. **Date of Sampling** : 21.11.2016
4. **Sample received on** : 30.11.2016
5. **Period of Analysis** : 30.11.2016 to 05.12.2016
6. **Name of Location** : Nr. Metal Road Kirauli Village
7. **Method of Sampling** : IS:5182(Part 2,Part 6,Part23) & Instrument Manual

S. No	Monitoring Details	Unit	Results
1	Duration of Survey	Minutes	480
2	Average Flow rate for PM 10	M3/ Min	1.140
3	Ambient Temperature	0C	10.9
4	Relative Humidity	%	46

Results Ambient Air Quality

S. No	Parameters	Test Method Reference	Unit	Results
1.	PM10	IS:5182 (Part 23)2006	µg/m ³	55.65
2.	SO ₂	IS:5182 (Part 2)2001	µg/m ³	8.57
3.	NO ₂	IS:5182 (Part 6)2006	µg/m ³	12.49

Tested By

(G.S/Laxkar)
Chemist

Authorized Signatory

Dr. S. K. Yadav
Chief Manager (Environment)
Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)



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Certificate No.: 32024-A111

Chemical - T-2016
Biological - T-3512



Report No.11/2016/16022

Date: 19.12.2016

TEST CERTIFICATE (Ambient Air Quality Monitoring)

1. **Name of Customer** : M/s N.S Corporation
Kirauli Soapstone Mine
Mota Haldu, Near Gas plant, Baraily Road,
Haldwani-263139 Distt. Nanital India
2. **Purchase order Number** : NSC/HLD/16-17/Dated- 21.06.2016
3. **Date of Sampling** : 21.11.2016
4. **Sample received on** : 30.11.2016
5. **Period of Analysis** : 30.11.2016 to 05.12.2016
6. **Name of Location** : Surkhali Village
7. **Method of Sampling** : IS:5182(Part 2,Part 6,Part23) & Instrument Manual

S. No	Monitoring Details	Unit	Results
1	Duration of Survey	Minutes	475
2	Average Flow rate for PM 10	M ³ / Min	1.120
3	Ambient Temperature	°C	11.6
4	Relative Humidity	%	42.3

Results Ambient Air Quality

S. No	Parameters	Test Method Reference	Unit	Results
1.	PM10	IS:5182 (Part 23)2006	µg/m ³	54.85
2.	SO ₂	IS:5182 (Part 2)2001	µg/m ³	8.96
3.	NO ₂	IS:5182 (Part 6)2006	µg/m ³	11.81

Tested By

(G.S. Laxkar)
Chemist

Authorized Signatory

Dr. S. K. Yadav
Chief Manager (Environment)
Environmental & Chemical Laboratory
Wolkem India Limited
E-102 M.I.A. UDAIPUR (Rajasthan)



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Certificate No.: 32024-A111



Chemical - T-2016
Biological - T-3512



Report No.11/2016/16023

Date: 19.12.2016

TEST CERTIFICATE (Ambient Air Quality Monitoring)

1. **Name of Customer** : M/s N.S Corporation
Kirauli Soapstone Mine
Mota Haldu, Near Gas plant, Baraily Road,
Haldwani-263139 Distt. Nanital India
2. **Purchase order Number** : NSC/HLD/16-17/Dated- 21.06.2016
3. **Date of Sampling** : 21.11.2016
4. **Sample received on** : 30.11.2016
5. **Period of Analysis** : 30.11.2016 to 05.12.2016
6. **Name of Location** : Odyar Village
7. **Method of Sampling** : IS:5182(Part 2,Part 6,Part23) & Instrument Manual

S. No	Monitoring Details	Unit	Results
1	Duration of Survey	Minutes	480
2	Average Flow rate for PM 10	M ³ / Min	1.105
3	Ambient Temperature	°C	12
4	Relative Humidity	%	45.8

Results Ambient Air Quality

S. No	Parameters	Test Method Reference	Unit	Results
1.	PM10	IS:5182 (Part 23)2006	µg/m ³	49.87
2.	SO ₂	IS:5182 (Part 2)2001	µg/m ³	8.27
3.	NO ₂	IS:5182 (Part 6)2006	µg/m ³	11.28

Tested By

(G.S. Laxkar)
Chemist

Authorized Signatory

Dr. S. K. Yadav
Chief Manager (Environment)
Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)



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Certificate No.: 32024-A111



Chemical - T-2016
Biological - T-3512



Report No.11/2016/16024

Date: 19.12.2016

TEST CERTIFICATE

(Water analysis)

1. Name of Customer : M/s N.S Corporation
Kirauli Soapstone Mine
Mota Haldu, Near Gas plant, Baraily Road,
Haldwani-263139 Distt. Nanital India
2. Purchase order Number : NSC/HLD/16-17/Dated- 21.06.2016
3. Date of Sampling : 21.11.2016
4. Sample Received On : 30.11.2016
5. Period of Analysis : 30.11.2016 to 14.12.2016
6. Name of Location : Kirauli Village Handpump water
7. Method of Sampling : IS:3025 (Pt1) 1987

S. No	Parameters	Test Method Reference	Unit	Test Results
1.	pH (at 25° C)	IS:3025(Pt11)1983	-	7.53
2.	Color	IS:3025(Pt4)1983	Hazen	<5
3.	Total Dissolve Solid	IS:3025(Pt16)1984	mg/L	398
4.	Hardness Total (As CaCO ₃)	IS:3025(Pt21)2009	mg/L	356
5.	Calcium (as Ca ²⁺)	IS:3025(Pt40)1991	mg/L	22.4
6.	Magnesium (as Mg ²⁺)	IS:3025(Pt46)1994	mg/L	72.0
7.	Alkalinity	IS:3025(Pt23)1986	mg/L	278
8.	Chlorides (as Cl ⁻)	IS:3025(Pt32)1988	mg/L	7.5
9.	Oil & Grease	IS:3025(Pt39)1991	mg/L	Traces
10.	Residual Chlorine	IS:3025 (Pt26)1986	mg/L	<0.01
11.	Chromium Hexavalent	IS:3025(Pt52)2003	mg/L	Nil
12.	Flouride (as F)	IS:3025(Pt60)2008	mg/L	0.20
13.	Sulphate (as SO ₄)	IS:3025(Pt24)1986	mg/L	8.53
14.	Nitrate as NO ₃	IS:3025-1964	mg/L	10.08

Tested By

Authorized Signatory


(Waheed Mohammed)
Sr. Chemist




Dr. S. K. Yadav
Chief Manager (Environment)
Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Certificate No.: 32024-A111



Chemical - T-2016
Biological - T-3512



Report No.11/2016/16025

Date: 19.12.2016

TEST CERTIFICATE

(Water analysis)

1. **Name of Customer** : M/s N.S Corporation
Kirauli Soapstone Mine
Mota Haldu, Near Gas plant, Baraily Road,
Haldwani-263139 Distt. Nanital India
2. **Purchase order Number** : NSC/HLD/16-17/Dated- 21.06.2016
3. **Date of Sampling** : 21.11.2016
4. **Sample Received On** : 30.11.2016
5. **Period of Analysis** : 30.11.2016 to 14.12.2016
6. **Name of Location** : Surkhali Village Handpump water
7. **Method of Sampling** : IS:3025 (Pt1) 1987

S. No	Parameters	Test Method Reference	Unit	Test Results
1.	pH (at 25° C)	IS:3025(Pt11)1983	-	7.47
2.	Color	IS:3025(Pt4)1983	Hazen	<5
3.	Total Dissolve Solid	IS:3025(Pt16)1984	mg/L	366
4.	Hardness Total (As CaCO ₃)	IS:3025(Pt21)2009	mg/L	324
5.	Calcium (as Ca ²⁺)	IS:3025(Pt40)1991	mg/L	68.8
6.	Magnesium (as Mg ²⁺)	IS:3025(Pt46)1994	mg/L	36.48
7.	Alkalinity	IS:3025(Pt23)1986	mg/L	316
8.	Chlorides (as Cl ⁻)	IS:3025(Pt32)1988	mg/L	15.0
9.	Oil & Grease	IS:3025(Pt39)1991	mg/L	Traces
10.	Residual Chlorine	IS:3025 (Pt26)1986	mg/L	<0.01
11.	Chromium Hexavalent	IS:3025(Pt52)2003	mg/L	Nil
12.	Flouride (as F)	IS:3025(Pt60)2008	mg/L	0.10
13.	Sulphate (as SO ₄)	IS:3025(Pt24)1986	mg/L	9.11
14.	Nitrate as NO ₃	IS:3025-1964	mg/L	3.91

Tested By

Authorized Signatory

(Wahed Mohammed)
Sr. Chemist

Dr. S. K. Yadav
Chief Manager (Environment)
Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)



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Certificate No.: 32024-A111

Chemical - T-2016
Biological - T-3512

Report No.11/2016/16026

Date: 19.12.2016

TEST CERTIFICATE

(Water analysis)

1. **Name of Customer** : M/s N.S Corporation
Kirauli Soapstone Mine
Mota Haldu, Near Gas plant, Baraily Road,
Haldwani-263139 Distt. Nanital India
2. **Purchase order Number** : NSC/HLD/16-17/Dated- 21.06.2016
3. **Date of Sampling** : 21.11.2016
4. **Sample Received On** : 30.11.2016
5. **Period of Analysis** : 30.11.2016 to 14.12.2016
6. **Name of Location** : Block A & B Natural Water
7. **Method of Sampling** : IS:3025 (Pt1) 1987

S. No	Parameters	Test Method Reference	Unit	Test Results
1.	pH (at 25° C)	IS:3025(Pt11)1983	-	7.41
2.	Color	IS:3025(Pt4)1983	Hazen	<5
3.	Total Dissolve Solid	IS:3025(Pt16)1984	mg/L	330
4.	Hardness Total (As CaCO ₃)	IS:3025(Pt21)2009	mg/L	296
5.	Calcium (as Ca ²⁺)	IS:3025(Pt40)1991	mg/L	27.2
6.	Magnesium (as Mg ²⁺)	IS:3025(Pt46)1994	mg/L	54.72
7.	Alkalinity	IS:3025(Pt23)1986	mg/L	286
8.	Chlorides (as Cl ₁)	IS:3025(Pt32)1988	mg/L	22.5
9.	Oil & Grease	IS:3025(Pt39)1991	mg/L	Traces
10.	Residual Chlorine	IS:3025 (Pt26)1986	mg/L	<0.01
11.	Chromium Hexavalent	IS:3025(Pt52)2003	mg/L	Nil
12.	Flouride (as F)	IS:3025(Pt60)2008	mg/L	Nil
13.	Sulphate (as SO ₄)	IS:3025(Pt24)1986	mg/L	9.41
14.	Nitrate as NO ₃	IS:3025-1964	mg/L	4.38

Tested By

Authorized Signatory


(Waheed Mohammed)
Sr. Chemist




Dr. S. K. Yadav
Chief Manager (Environment)
Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Certificate No.: 32024-A111

Chemical - T-2016
Biological - T-3512



Report No.11/2016/16027

Date: 19.12.2016

TEST CERTIFICATE

(Water analysis)

1. **Name of Customer** : M/s N.S Corporation
Kirauli Soapstone Mine
Mota Haldu, Near Gas plant, Baraily Road,
Haldwani-263139 Distt. Nanital India
2. **Purchase order Number** : NSC/HLD/16-17/Dated- 21.06.2016
3. **Date of Sampling** : 21.11.2016
4. **Sample Received On** : 30.11.2016
5. **Period of Analysis** : 30.11.2016 to 14.12.2016
6. **Name of Location** : Block B & C Natural Water
7. **Method of Sampling** : IS:3025 (Pt1) 1987

S. No	Parameters	Test Method Reference	Unit	Test Results
1.	pH (at 25° C)	IS:3025(Pt11)1983	-	7.34
2.	Color	IS:3025(Pt4)1983	Hazen	<5
3.	Total Dissolve Solid	IS:3025(Pt16)1984	mg/L	110
4.	Hardness Total (As CaCO ₃)	IS:3025(Pt21)2009	mg/L	100
5.	Calcium (as Ca ²⁺)	IS:3025(Pt40)1991	mg/L	18.4
6.	Magnesium (as Mg ²⁺)	IS:3025(Pt46)1994	mg/L	12.96
7.	Alkalinity	IS:3025(Pt23)1986	mg/L	88
8.	Chlorides (as Cl ₂)	IS:3025(Pt32)1988	mg/L	10.5
9.	Oil & Grease	IS:3025(Pt39)1991	mg/L	Traces
10.	Residual Chlorine	IS:3025 (Pt26)1986	mg/L	<0.01
11.	Chromium Hexavalent	IS:3025(Pt52)2003	mg/L	Nil
12.	Flouride (as F)	IS:3025(Pt60)2008	mg/L	Nil
13.	Sulphate (as SO ₄)	IS:3025(Pt24)1986	mg/L	3.72
14.	Nitrate as NO ₃	IS:3025-1964	mg/L	0.96

Tested By

(Waheed Mohammed)
Sr. Chemist

Authorized Signatory

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Chief Manager (Environment)
Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)



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Certificate No.: 32024-A111



Chemical - T-2016
Biological - T-3512



Report No.11/2016/16028

Date: 19.12.2016

TEST CERTIFICATE

(Water analysis)

1. **Name of Customer** : M/s N.S Corporation
Kirauli Soapstone Mine
Mota Haldu, Near Gas plant, Baraily Road,
Haldwani-263139 Distt. Nanital India
2. **Purchase order Number** : NSC/HLD/16-17/Dated- 21.06.2016
3. **Date of Sampling** : 21.11.2016
4. **Sample Received On** : 30.11.2016
5. **Period of Analysis** : 30.11.2016 to 14.12.2016
6. **Name of Location** : Punger River upstream water
7. **Method of Sampling** : IS:3025 (Pt1) 1987

S. No	Parameters	Test Method Reference	Unit	Test Results
1.	pH (at 25° C)	IS:3025(Pt11)1983	-	7.25
2.	Color	IS:3025(Pt4)1983	Hazen	<5
3.	Total Dissolve Solid	IS:3025(Pt16)1984	mg/L	128
4.	Hardness Total (As CaCO ₃)	IS:3025(Pt21)2009	mg/L	94
5.	Calcium (as Ca ²⁺)	IS:3025(Pt40)1991	mg/L	15.2
6.	Magnesium (as Mg ²⁺)	IS:3025(Pt46)1994	mg/L	13.44
7.	Alkalinity	IS:3025(Pt23)1986	mg/L	76
8.	Chlorides (as Cl ₂)	IS:3025(Pt32)1988	mg/L	10.0
9.	Oil & Grease	IS:3025(Pt39)1991	mg/L	Traces
10.	Residual Chlorine	IS:3025 (Pt26)1986	mg/L	<0.01
11.	Chromium Hexavalent	IS:3025(Pt52)2003	mg/L	Nil
12.	Flouride (as F)	IS:3025(Pt60)2008	mg/L	0.10
13.	Sulphate (as SO ₄)	IS:3025(Pt24)1986	mg/L	2.65
14.	Nitrate as NO ₃	IS:3025-1964	mg/L	0.75

Tested By

Authorized Signatory

(Walid Mohammed)
Sr. Chemist

Dr. S. K. Yadav
Chief Manager (Environment)
Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Certificate No.: 32024-A111

Chemical - T-2016
Biological - T-3512



Report No.11/2016/16029

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TEST CERTIFICATE

(Water analysis)

1. **Name of Customer** : M/s N.S Corporation
Kirauli Soapstone Mine
Mota Haldu, Near Gas plant, Baraily Road,
Haldwani-263139 Distt. Nanital India
2. **Purchase order Number** : NSC/HLD/16-17/Dated- 21.06.2016
3. **Date of Sampling** : 21.11.2016
4. **Sample Received On** : 30.11.2016
5. **Period of Analysis** : 30.11.2016 to 14.12.2016
6. **Name of Location** : Punger River Downstream water
7. **Method of Sampling** : IS:3025 (Pt1) 1987

S. No	Parameters	Test Method Reference	Unit	Test Results
1.	pH (at 25° C)	IS:3025(Pt11)1983	-	7.31
2.	Color	IS:3025(Pt4)1983	Hazen	<5
3.	Total Dissolve Solid	IS:3025(Pt16)1984	mg/L	176
4.	Hardness Total (As CaCO ₃)	IS:3025(Pt21)2009	mg/L	108
5.	Calcium (as Ca ²⁺)	IS:3025(Pt40)1991	mg/L	20.8
6.	Magnesium (as Mg ²⁺)	IS:3025(Pt46)1994	mg/L	13.44
7.	Alkalinity	IS:3025(Pt23)1986	mg/L	88
8.	Chlorides (as Cl ₁)	IS:3025(Pt32)1988	mg/L	10.0
9.	Oil & Grease	IS:3025(Pt39)1991	mg/L	Traces
10.	Residual Chlorine	IS:3025 (Pt26)1986	mg/L	<0.01
11.	Chromium Hexavalent	IS:3025(Pt52)2003	mg/L	Nil
12.	Flouride (as F)	IS:3025(Pt60)2008	mg/L	0.10
13.	Sulphate (as SO ₄)	IS:3025(Pt24)1986	mg/L	3.23
14.	Nitrate as NO ₃	IS:3025-1964	mg/L	0.89

Tested By

Authorized Signatory

(Waqeem Mohammed)
Sr. Chemist



Dr. S. K. Yadav
Chief Manager (Environment)
Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Chemical - T-2016
Biological - T-3512